

RESEARCH REPORT 47: Senior Secondary School Assessment in Queensland: Beacon of Hope or Cause for Despair?

Abstract

A review of Queensland's senior secondary school assessment and tertiary entrance processes was carried out in 2013-2014 by the Australian Council for Educational Research at the behest of the Queensland Government. While both the government and the reviewers sought to portray the exercise as a fairly straightforward assessment of whether these processes continued to operate as effectively as possible, the review and a prior parliamentary inquiry revealed that there are sharply divided views about Queensland's unique system of externally-moderated, school-based assessment. For some, it is a fundamentally flawed system foisted on Queensland students and the wider community by trendy educational theorists and presided over by a dictatorial assessment authority. For others, the system provides a shining example of a regime where assessments are 'more valid, demanding and not limited by the constraints of traditional, multiple-choice, paper and pencil formats' (Allen, 2012, p. xiii).

This paper describes the Queensland senior secondary assessment and tertiary entrance system, examines the cases for and against it, assesses the degree to which it is supported by stakeholders, and summarises the outcomes of the review. It concludes that while the review has resulted in some significant changes to the Queensland system, it is unlikely that these changes will put an end to debate about senior secondary assessment in Queensland.

Senior Secondary School Assessment in Queensland: Beacon of Hope or Cause for Despair?

Introduction¹

What is counted affects what counts in schooling today and is central to how educational accountability is framed. (Lingard, et al., 2016, p. 15)

Assessment, as it occurs in most schools, is far from a merely technical problem. (Black and Wiliam, 1998, p. 19)

In July 2013, then Queensland Minister for Education, Training and Employment, John-Paul Langbroek, announced a review of Queensland's senior secondary school assessment and tertiary entrance processes (Langbroek, 2013). The Minister stated that the review was justified owing to the fact that 'education has evolved significantly since school-based senior assessment was introduced in the early 1970s, followed by the Overall Position (OP) tertiary entrance system in 1992', noting that 'senior students are using many different pathways to reach their tertiary destinations' (Ibid.). The Australian Council for Education Research (ACER) was contracted to conduct the review and report back to the Government by 31 July 2014. Langbroek 'reassured families that any potential changes to the current system would be phased-in over several years' (Ibid.).

Simultaneously, ACER issued a press release stating that their review would:

... include public consultations with a broad range of stakeholders, including state and non-state schooling sectors, the Queensland Studies Authority, the Queensland Tertiary Admissions Centre, universities and other tertiary education providers, secondary school principals' associations, parents' associations, teacher unions and university staff associations. (ACER, 2013)

Both the Minister's and ACER's media releases sought to portray the review as emanating from a need to assess the impact of social and educational changes on the operation of the senior secondary assessment and tertiary entrance system. This was a theme that was picked up in the review's final report:

An interesting aspect of this Review is that there was no particular "problem to be solved" ... For the current Review there was no statement of a problem to be solved but, rather, there is a question to be answered: Are current processes as effective as they might be in meeting the future needs of students, employers and universities? (Matters and Masters, 2014, vol. 1, p. x)

This proposition has some weight. The Matters and Masters report provides a useful overview of changes in 'social patterns, policy agendas and patterns of student participation' since 1990 – see Vol 1, pp. 1-13) that have potential implications for reform of the Queensland senior secondary assessment and tertiary entrance procedures. A significant example is the adoption by all other states and territories of the Australian Tertiary Admissions Rank (ATAR).²

¹ Thanks to Leah Mertens, Allan Cook and John Dungan who provided useful information and/or comments.

² 'The Australian Tertiary Entrance Rank (ATAR) is the primary device for selecting Year 12 completers for entry to undergraduate courses in Australian universities. Introduced in 2009–2010, it was taken up by all states and territories except Queensland. An ATAR is a percentile rank reported between 30.00 and 99.95 in intervals of 0.05. It is based on an aggregate of individual subject scores. ATARs are calculated in different ways in different states and territories – for example, eligibility rules and scaling model are not the same across jurisdictions' (Matters and Masters, 2014, Vol 1, p. 12).

It is important to note, however, that the system as it has operated in Queensland has long been controversial and there has been an ongoing campaign against it.³ Those who oppose it were keen (to say the least) to provide input into the review with a view to changing it dramatically and would have disagreed with the view that there was 'no problem to be solved' in relation to the system.

It is not coincidental that the announcement of the review coincided with an inquiry by the State Parliament's Education and Innovation Committee into 'the assessment methods used in senior mathematics, chemistry and physics in Queensland schools' (Education and Innovation Committee, 2013). The parliamentary inquiry attracted 288 submissions. The degree of angst felt by some critics of the Queensland system is captured in the following statement by a senior academic to this inquiry: 'I have ... had to watch my children and their friends suffer under the appalling assessment regime' (P. Ridd, 2013, p. 3).

The parliamentary committee's report, tabled in Parliament on 14 October 2013 and critical of some key features of senior secondary assessment, included a number of recommendations to be referred to the ACER review. Among these were that an external exam constitute 50 per cent of marks in senior mathematics, chemistry and physics and that exam results be used to scale school-based assessment.

ACER provided an interim report to the Minister in May 2014, which was not made publicly available until September of that year. The final report was submitted in October 2014. In January 2015 the Queensland Government released its draft response to the report, but interestingly, consultation with 'education stakeholders and the broader Queensland community' (ACER website) continued until the end of March. In the midst of this there was a change of government (in late January 2015). In August 2015, the new Minister for Education and Minister for Tourism, Major Events, Small Business and the Commonwealth Games, Kate Jones, announced that new assessment and tertiary entrance systems for senior students would be introduced from 2018 (Jones, 2015a).

The new senior assessment model will differ significantly from the current system, combining school-based assessment developed and marked by teachers with external assessment developed and marked by the Queensland Curriculum and Assessment Authority (QCAA). At the time of writing, there is still considerable work to be done in relation to such matters as the development of new syllabuses, the processes for calculating Australian Tertiary Admission Ranks (ATAR) and the provision of professional development for teachers.

The Neo-Liberal Era of Educational Reform

An examination of neo-liberalism is well beyond the scope of this paper⁴ but it is important to note that neo-liberal economic theory sets the context for much current educational reform and that it has specific implications for debates about assessment. Neo-liberalism holds that, 'human well-being can be best advanced by the maximisation of entrepreneurial freedoms within an institutional framework characterised by private property rights, individual liberty, unencumbered markets and free trade' (Au and Ferrare, 2015, p. 3).

³ Plato Queensland, for example, is an organisation formed in 2010 that has actively lobbied for 'a proper external examination system ... like every other state in Australia' (Plato Qld website: <http://www.platoqld.com/>). In 2012, Plato activists lobbied the new LNP Education Minister at a community cabinet meeting in Townsville and two Plato activists (Dean, 2012; J. Ridd, 2012) published articles critical of the Queensland assessment system and calling for an inquiry in the magazine of the Liberal National Party (LNP) – a proposition that was subsequently taken up by the LNP government. The Plato Queensland website claims that the organisation is non-partisan and reports that it has also lobbied the Labor Party (with some success – Labor members of the parliamentary Education and Innovation Committee supported its recommendation for the introduction of external exams). Plato's position is discussed below.

⁴ For considerations of neo-liberal education reform see, for example, Lingard, et al. (2016); Au and Ferrare (2015).

One feature of neo-liberal policy is a shift from “government” to “governance”: ‘new forms of power, authority and governance must be created to fill the space that is created by the shrinking neo-liberal state (Ibid., p. 5). In the education policy sphere, enhanced accountability measures based on high-stakes, standardised testing have become an important accountability tool and a means of fostering competitive behaviour.

Globally, but particularly in Anglo-American and Asian nations, testing of various kinds has become an instrument for steering schooling systems in particular directions using accountability regimes ... Such steering through testing has had great effects on ... pedagogies, curricula and assessment ... as well as upon student learning and experiences of schooling. (Lingard et al., 2016, p. 1)⁵

The last ten years have seen a tremendous growth in the number and influence of standardised tests internationally. In Australia, we now have the National Assessment Program – Literacy and Numeracy (NAPLAN) tests carried out annually in Years 3, 5, 7 and 9 and results on international tests such as the Trends in International Mathematics and Science (TIMSS) and the Programme for International Student Assessment (PISA) now have considerable influence on educational policy.

Lingard and his colleagues argue that ‘policy as numbers and testing’ have become a ‘systemic meta-policy’ (Ibid., p. 2), which ‘functions to keep schooling systems going according to a technical criterion of efficiency’ with ‘reductive and de-professionalising impacts in schooling, particularly on the work of teachers and schools (Ibid., p. 8). There is need, in their view, for ‘more democratic and effective modes of accountability’ (Ibid., p. 14).

While it makes note of the potential adverse effects of standardised testing, the Matters and Masters report makes no explicit mention of neo-liberalism. However, the report notes that, despite strong support for school-based assessment and concerns about external assessment, ‘many stakeholders ... accepted the inevitability of ... the introduction of external assessment’ (Matters and Masters, 2014, vol. 1, p. 26).⁶ This sense of “inevitability” arose, at least in part, from a context in which the current senior secondary assessment regime in Queensland was seen to be out of touch with neo-liberal reform imperatives (and this was construed as a flaw rather than a virtue).⁷

An Alternative View of the Social/Political Context

In contrast to writers such as Lingard et al. (2016), who see ever increasing reliance on measurement of performance through standardised testing as an important context within which education policy is determined, at least some of the critics of the Queensland system see a context in which the ‘education establishment’ pursues an agenda fostering ‘non-numerate’ and unverifiable assessment (J. Ridd, 2013, p. 10). John Ridd⁸ (2012, 2013) cites evidence from the NAPLAN and TIMSS tests and from the ACER report *A Shared Challenge* to support the contention that in maths and sciences in particular, standards

⁵ Allen (2012, p. 12) describes the very different political and education policy environment that existed in Queensland in the late 1960s/early 1970s that facilitated the adoption of a system of school-based assessment.

⁶ As one example, in the midst of the review process, the state’s largest teacher union, the Queensland Teachers’ Union (QTU), altered its long-standing policy position of total opposition to external assessment to a position where external assessment might contribute up to a maximum of 25% of the total mark in a subject.

⁷ Matters and Masters ignore their own contribution to this sense of inevitability. Their initial discussion paper, which set out “focus questions” for the purposes of consultation, “suggested that [alongside school-based assessment] an externally set and marked assessment be used in some or all Authority subjects” (Matters and Masters, 2014, vol. 1, p. 18).

⁸ There are two persons with the surname “Ridd” who are prominent critics of the Queensland system. Dr John Ridd is a retired secondary maths head of department. Professor Peter Ridd is head of physics at James Cook University.

in Queensland schools are low and falling. He identifies the ‘education establishment’ as the main problem.⁹ This establishment consists of university faculties of education, some bureaucrats in the state education department and the Queensland Teachers’ Union. However, the ‘action wing’ of this establishment is the curriculum and assessment authority (at the time, the QSA): ‘they have strong authoritarian tendencies, and their assessment systems are laid down with absolute rigidity’ (J. Ridd, 2012, p. 11).

Dean (2012, 2013, 2014b) ascribes problems in secondary mathematics in Queensland to the fact that syllabuses reflect a ‘constructivist, anti-content approach’ (2013, p. 22) and that assessment is undertaken through an ‘experimental social moderation system’ (2014b, p. 2). These have been perpetuated by ‘educational theorists’, with roots in ‘1960s-70s radical politics’ (Ibid., p.1), who control with an iron hand the Queensland system: ‘academics from tertiary disciplines other than education theory have been excluded from significant involvement in our secondary system’ (2013, p. 23).

Peter Ridd argues that Queensland’s ‘strange assessment system’ is a part of a ‘fashionable education trend ... invented by Education Theorists’ (2013, p. 17). He notes criticism by university deans of science of the Queensland science syllabus and assessment processes as evidence that the ‘entire ideology of the educational theorists, in this case within the QSA [as it was then], is out of step with the real world’ (Ibid., p. 18). In Ridd’s view this ideology maintains its ascendancy through the support of ‘all our organisations associated with school education’ including ‘Education Queensland, teacher unions, and education faculties at universities’ (Ibid., p. 17). Importantly, in Ridd’s view, the curriculum and assessment authority maintains control of the system by use of its ‘enormous power’ (Ibid.), causing ‘widespread fear ... amongst teachers and especially parents’ (Ibid., p. 15).

An Overview of the Queensland System

Useful summaries of senior secondary assessment and tertiary entrance procedures in Queensland are contained in paper 1 in volume 2 of *Matters and Masters* (2014, pp. 3-29)¹⁰ and in Allen (2012). A history of senior secondary school assessment is provided in Wyatt-Smith and Colbert (2014, pp. 30-38).

Interestingly, given the role of the parliamentary inquiry into senior mathematics, chemistry and physics in setting a context for the current review, it was a controversy relating to the external senior physics examination in 1967 that led to the abandonment of external exams in 1973. In 1967 only 30 per cent of candidates passed the senior physics external examination, set by the University of Queensland, and there was widespread criticism of the exam. In the aftermath, the state government set up a review to be conducted by William Radford of ACER.

Radford’s report (1970) recommended the abolition of external examinations and their replacement by moderated school-based assessment. Oversight of senior secondary curriculum and assessment was vested, not in a university or universities, but in a statutory authority.¹¹ As noted by *Matters and Masters*, ‘to this day, Queensland and the ACT are the only state and territory in Australia where no external examinations exist in the senior years of schooling’ (Vol 2, p. 6).¹² While the Radford report enunciated

⁹ The assertion by various Plato aligned critics that academic standards in Queensland schools are low and falling and that this can be directly ascribed to the nature of the senior secondary assessment system deserves an extended analysis that is well beyond the scope of this paper.

¹⁰ Of particular note and usefulness is a chart in *Matters and Masters* (vol. 2, p. 11) that ‘maps the options available’ in constructing an assessment system, and depicts the options chosen in Queensland as a “decision tree” or flow chart.

¹¹ Originally the Board of Secondary School Studies (BSSS), 1971-1989; subsequently the Board of Senior Secondary School Studies (BSSSS), 1989-2002; the Queensland Studies Authority (QSA), 2002-2014; and the Queensland Curriculum and Assessment Authority (QCAA), 2014-present.

¹² As *Matters and Masters* acknowledge, this statement is not entirely accurate. External examinations have been and continue to be used in Queensland for part-time and correspondence students, including students

many of the basic principles on which senior secondary assessment and tertiary entrance procedures are based, the Queensland system has been reviewed and modified on a number of occasions. Matters and Masters (vol. 2, p. 9) identify ten 'significant' reviews, not including their own, since the Radford review of 1970.¹³

Notable changes to the system arising from these reviews include: replacement of norm-based assessment with criteria-based assessment, replacement of the tertiary entrance (TE) score with Overall Positions and Field Positions (OPs and FPs), replacement of the Australian Scholastic Aptitude Test (ASAT) with Queensland Core Skills (QCS) Test, and replacement of the Senior Certificate with the Queensland Certificate of Education (QCE). However, as noted by Kelly (2014, p. 34), following Radford, subsequent reviews were 'contributions to the narrative that was set in train by Radford, that is ... attempts to make the system of school-based assessment, and its application to tertiary entrance procedures, as effective, fair and useful as it could be', rather than attempts at 'striking out in a new direction'.

The Queensland system is described by Matters and Masters as 'externally moderated school-based standards-based assessment in a high stakes environment' (vol. 2, p. 10):

... [A]ssessments are devised and marked by teachers, teacher judgements are validated through the panel model of consensus moderation (for comparability) and grading is based on the application of a standards scheme. (Ibid.)

Radford's argument, and the *raison d'être* of the Queensland system, was that school-based assessment was superior, because it privileged and supported teacher professional judgement, and recognised and facilitated the 'complementary nature of formative and summative assessment – assessments along the way count towards the final results as well as providing feedback to the students during the course of study' (Ibid., p. 6).

A related premise is that assessment should occur as close as possible to learning – classroom teachers being in the best position to monitor student learning and judge the quality of their work. (Ibid.)

Queensland secondary schools offer a wide variety of studies. The focus here will be on "Authority subjects". It should be noted, however, that senior secondary schooling in Queensland can also include options such as:

- Authority-registered subjects – developed by schools from QCAA Subject Area Syllabuses (SAs), these can contribute towards the Queensland Certificate of Education (QCE), but are not used in the calculation of OPs and FPs.
- Vocational education and training (VET) – based on Training Packages approved by the Australian Industry and Skills Committee (AISC); as an approved delegate of the Australian Skills Quality Authority (ASQA), the QCAA registers and audits Queensland schools as Registered Training Organisations (RTOs).
- School-based apprenticeships and traineeships.
- Externally developed programs such as the International Baccalaureate (IB).

Authority subjects are those that have been developed and approved by the Queensland Curriculum and Assessment Authority and can count in the calculation of tertiary entrance ranks (results in Authority subjects are the most common selection devices used by the tertiary education sector in Queensland).¹⁴

who are unable to access a particular course because it is not offered at the school that they attend. The report recommends that these exams be discontinued.

¹³ Wyatt-Smith and Colbert (2014, pp. 30-38) provide a summary of the issues considered by the various reviews.

¹⁴ Not all students undertaking Authority subjects are seeking tertiary entrance.

As noted by Matters and Masters (vol. 2, p. 12), 'Authority subjects illustrate fully both school-based assessment (devised by teachers) and moderation of those assessments (through an external verification process)'.

The standards for assessment in Authority subjects are set out in syllabuses issued by the QCAA. Teachers and schools develop and carry out their own work programs and assessments based on the syllabuses. A variety of types of assessment can be used, such as written examinations, projects, assignments, orals and field studies.

A basic premise of this approach is that student performance can be improved if the teachers define and make available to students the criteria against which assessable work is to be judged. In principle, this means that students no longer need to guess at teacher expectations for a successful performance. Another related premise is that, in criteria-based assessment, students will feel as if their performance has been more judged against the specified criteria than against the teacher's implicit criteria (and standards). (Wyatt-Smith and Colbert, 2014, p. 34)

Syllabuses are revised from time to time according to a set schedule to reflect developments in the various subject areas and refine and improve provisions relating to curriculum content, delivery and assessment. This is another important avenue through which the Queensland system evolves over time. It is not, however, unproblematic. Changes in the senior maths, chemistry and physics syllabuses regarding the nature of assessment tasks and marking procedures in 2007/2008 created dissatisfaction amongst a significant number of teachers of these subjects and contributed to the impetus for the parliamentary inquiry in 2013.¹⁵

Assessment is marked by teachers and is described as "continuous" in that it is carried out over the course of study. A profile of student work is maintained and updated to provide evidence of a student's level of achievement at any point during the course of study. Student work is assessed at five possible levels: very high achievement (VHA), high achievement (HA), sound achievement (SA), limited achievement (LA) or very limited achievement (VLA). The final assessed level of achievement is meant to reflect the 'fullest and latest' information on the student's achievement (see Pitman, O'Brien and McCollow, 1999, p. 10). That is to say, where appropriate, information from more recent assessments can supersede information from earlier assessments. This approach stands in contrast to one in which results on assessment instruments are simply aggregated to arrive at the final mark:

... [I]n this approach, the judgement of the whole portfolio is based on considering the work as a whole, judging it against the stated requirements of the standards at the various levels ... [T]he overall grade cannot be arrived at by adding or summing up achievement in distinct criteria as component parts. In short, the whole can potentially be more than the sum of its parts. (Wyatt-Smith and Colbert, 2014, p.9)

However, Wyatt-Smith and Colbert (Ibid., p. 8) note that in practice, with the exception of the subjects of English and English Expression, 'the apparent assumption is that the judgement of overall quality of a student folio can be derived by adding achievement on component parts'. As discussed below, this is a highly contentious feature of the system.

Teacher judgements about student achievement are subject to moderation by panels of experienced teachers. Moderation consists of:

- Work program approval – the panel provides advice to the QCAA about whether a work program should be approved;

¹⁵ Revision of syllabuses in other subjects (e.g. English in 2008) has also generated unrest.

- Monitoring – district panels consider evidence that a school is implementing course and assessment requirements;
- Verification – district panels advise schools about Year 12 student achievement relative to syllabus standards;
- Comparability – state panels consider the extent to which judgements made about levels of achievement are comparable across the state.

Students completing Year 12 may receive one or more of the following:

- Senior Statement – records all learning and results achieved during the senior phase of learning, including a QCS Test result if applicable.
- Queensland Certificate of Education (QCE) – To be eligible for a QCE, student must achieve at least 20 credits of learning, including minimum literacy and numeracy standards. A minimum of 12 credits must come from completed core courses of study. These include Authority and Authority-registered subjects, VET courses, school-based apprenticeships and recognised international learning programs. The remaining eight credits can come from a combination of core, preparatory, enrichment or advanced courses.
- QCIA – Queensland Certificate of Individual Achievement – confirms learning outcomes for special needs students on individualised learning programs.
- Vocational Education and Training (VET) Certificate – certifies competence in a nationally accredited vocational education and training course or qualification level.
- Tertiary Entrance Statement – records a student’s Overall Position (OPs) and up to five Field Positions (FPs). To be eligible for an OP (and therefore for one or more FPs) a student must study a certain number of Authority subjects and satisfy other requirements including completion of Year 12 and the QCS Test. The basic eligibility requirement is 20 semester units of credit in Authority subjects with at least three subjects taken for four semesters. (See Matters and Masters, 2014, vol. 2, pp. 20-21)

Of particular concern historically for the Queensland system has been the construction of an “order of merit” for tertiary entrance purposes. As Matters and Masters (vol.2, p. 21) note: ‘when there are limitations in the number of [tertiary] places available in all or some courses, there must be a common measure of achievement’. For most of the 1970s, school-based assessments were scaled against a student’s results on the Australian Scholastic Aptitude Test (ASAT) to derive a tertiary entrance (TE) score, a three-digit figure that was the primary determinant of success or failure in achieving entrance into a desired tertiary course of study. ASAT was, as its name implies, an “aptitude test”, not based on any secondary syllabuses. As competition for tertiary places intensified and universities introduced quotas for most popular courses, the TE score came under increasing criticism over the decade of the 1980s (although as noted by Matters and Masters, criticism focused mainly on the use of a single score per se, rather than on how the TE score was calculated).

In the early 1990s, a new tertiary entrance system was introduced. The ASAT was replaced by the Queensland Core Skills (QCS) Test which was based on “common elements” in Queensland senior secondary syllabuses.¹⁶ The results of a student’s class and school cohort – not an individual student’s results – are used to scale student achievement for the purposes of tertiary entrance.¹⁷ TE scores were abandoned in favour of Overall Positions (OPs) and Field Positions (FPs).

¹⁶ Allen (2012, p.8) claims that the QCS has had a positive effect on teaching in that it has encouraged teachers to focus on cross-curricular skills.

¹⁷ Though each student’s individual QCS Test result is reported. It should be noted that ‘the QCS Test is not used to moderate school-based assessments. School-based assessments are validated through external

While moderation is designed to ensure that levels of achievement in a subject are equivalent across the state (e.g. a VHA in Biology), it is not designed to address equivalence across subjects (e.g. SA in Geography versus SA in Modern History) across or within schools. Further, levels of achievement are criteria-referenced, they are not rankings. For tertiary entrance purposes, schools are asked to rank each student's achievement relative to other students in the subject (highest to lowest). This is expressed as a subject achievement indicator (SAI). The QCS test results are then used to scale SAIs across subjects within schools to derive an overall achievement indicator (OAI). The OAIs themselves are then further scaled, again using QCS test results across all schools to determine into which of the 25 OP bands a student is placed. The mathematical scaling attempts to mitigate against subject and school bias.

FPs provide further information that can be considered, for example, when two students achieve the same OP rank. FPs provide information on up to five "fields": extended written expression; short written communication; basic numeracy; solving complex mathematical problems; and practical performance in physical or creative arts. Subjects are weighted differently in terms of their contribution to each field and the scaling procedures for FPs differ from those used for OPs.

For the lay person, the statistical procedures used to calculate OPs and FPs are complicated. Figures A and B provide a brief outline in relation to OPs. Further information is provided by *Matters and Masters* at vol. 2, pp. 20-25.

The Queensland Tertiary Admissions Centre (QTAC) processes applications for tertiary courses in Queensland¹⁸ and for some interstate institutions. Selection criteria include: tertiary institution admission rules (e.g. completion of Year 12); minimum course entry requirements (e.g. prerequisite courses); and, for OP-eligible students, OP rank. The focus here is on the use of OP ranks.¹⁹

Theoretically, for OP-eligible students, the selection process consists of consideration of the following:

- OP minimum cut-off point for the particular course;
- Where necessary, FPs;
- Where still necessary, other information (e.g. levels of achievement in senior secondary subjects, QCS results).

Interestingly, after years of being at the centre of controversies about the Queensland senior secondary system, as a result of recent moves to a "demand-driven" model of tertiary education, tertiary education 'selection is almost a non-issue, except for some courses in some universities' (*Matters and Masters*, 2014, vol.2, p. 7). In these "high-demand, high status" courses, universities have made increasing use of the Australian Tertiary Admissions Rank (ATAR), which is the ranking system used in all other Australian states.

As final note, it is worth noting that:

[The Queensland] approach to certification of secondary school students appears to be cheaper than traditional external examination programs used for the same purpose ... The school-based assessment program in Queensland is less than 60 per cent of the cost per student assessment of a comparable external examination program in Australia. (Allen, 2012, p. 11)

Figure A: Procedures in the Compilation of the OP (*Matters and Masters*, 2014, vol. 2, p. 23)

moderation' (*Matters and Masters*, 2014, vol. 2, p. 20). It is not compulsory for senior secondary students to sit for the QCS Test.

¹⁸ There are exceptions

¹⁹ For a description of the processes for students who do not have an OP, see: *Matters and Masters*, 2014, vol. 2, pp. 25-29.

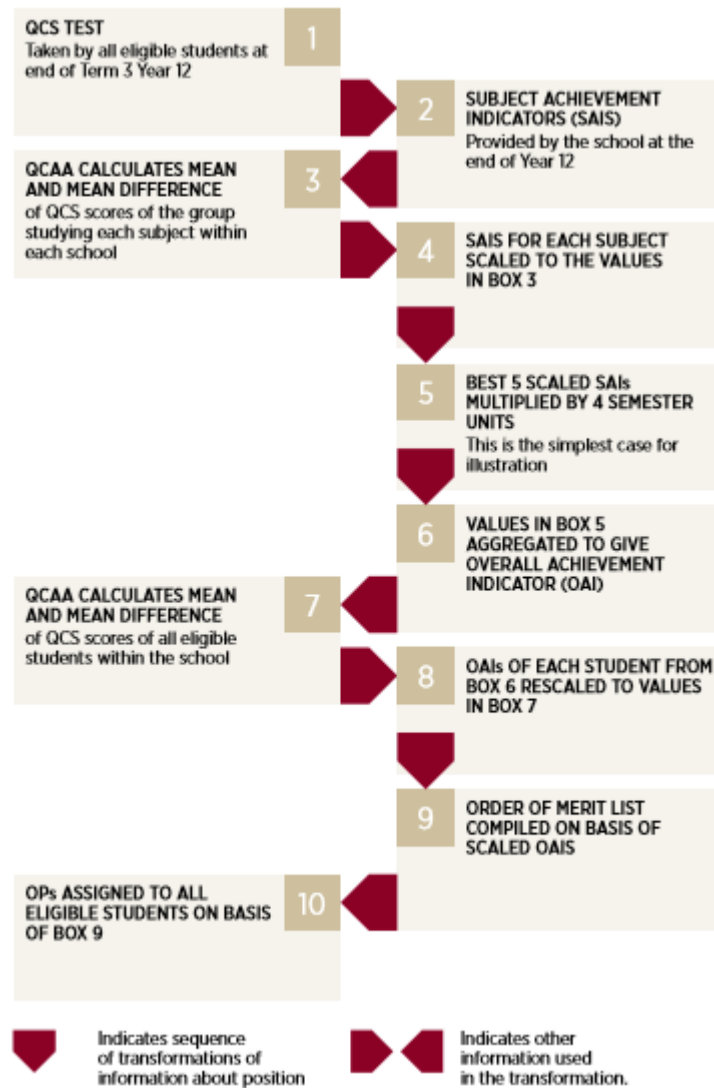
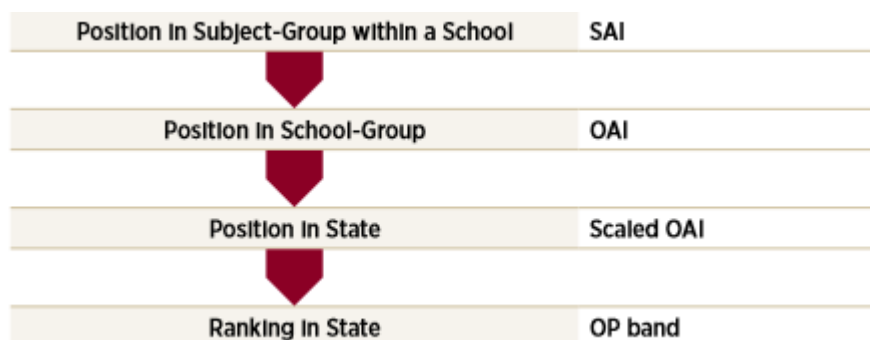


Figure B: The OP is a *position* in the state, based on *overall* achievement (Matters and Masters, 2014, vol. 2, p. 24)



To What Degree is the Queensland System Supported?

To what extent is the current system supported? The parliamentary committee of inquiry into assessment methods used in senior mathematics, chemistry and physics asked this question in relation to these senior subjects and noted that 'the majority of the individual submissions [from teachers] called for change to the current system' (Education and Innovation Committee, 2013, p. 33). The Plato Queensland

website claims that 82 per cent of the submissions to the inquiry supported the introduction of 'comprehensive, state-wide exams' (Dean, 2014a). John Ridd (2013) and Peter Ridd (2013) claim that opposition to the system is vastly understated because 'widespread fear exists amongst teachers and especially parents' (P. Ridd, 2013, p. 5).

On the other hand, the then Queensland Studies Authority argued that there was evidence of strong support for the system amongst teachers:

Teachers show their support for the system through their very representation on review panels ... [T]here is currently a network of over 4,000 panellists performing this role. There are also healthy attendance figures at assessment workshops where syllabus requirements are discussed and resources provided to assist teachers in developing effective assessment tasks, and feedback received about the quality of these workshops is positive. Satisfaction with the syllabuses is consistently over 80 per cent in the annual survey of schools. (Education and Innovation Committee, p. 32)

Importantly, parliamentary committee noted:

... [K]ey representative bodies including the Science Teachers' Association of Queensland, the Queensland Association of Mathematics Teachers; Brisbane Catholic Education and Independent Schools Queensland; the Queensland Teachers' Union and Queensland Independent Education Union; who all represent significant numbers of teachers or schools in Queensland, all indicated broad support for the current assessment methods and processes ...

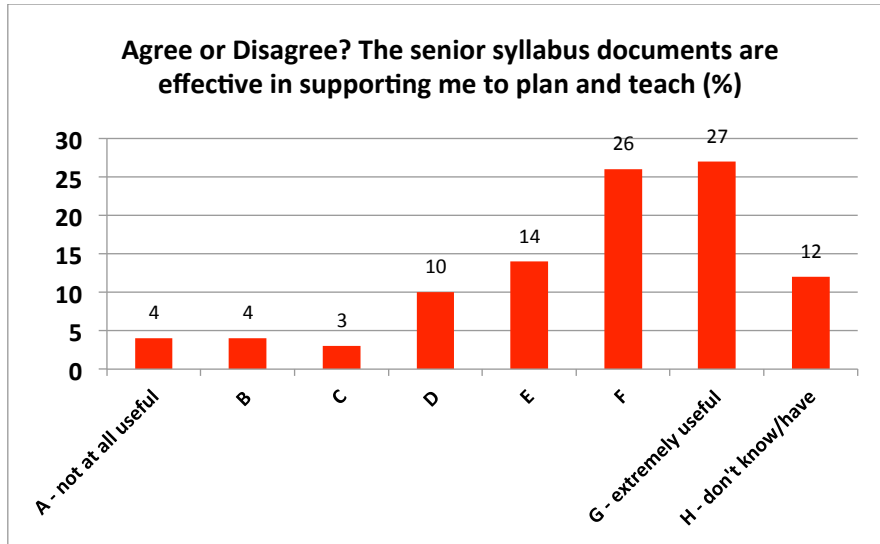
'Similarly, the submissions from tertiary education institutions were, with the exception of one, also broadly supportive of the current system ... and education academics were all supportive. (Ibid., pp. 33-34)

Individual discipline academics in physics, chemistry and mathematics were, however, 'fairly evenly divided in their broad support for [or opposition to] the system' (Ibid., p. 34).

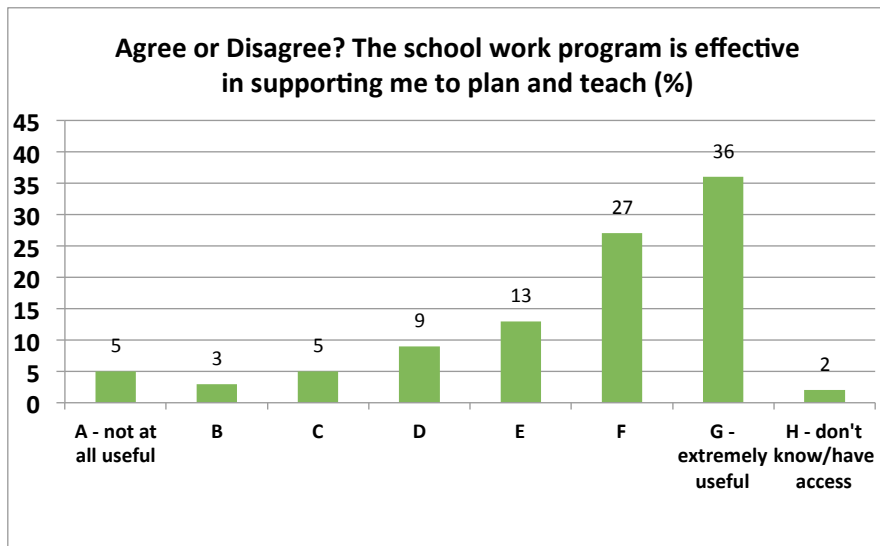
Aside from a few individual submissions to the parliamentary inquiry (or to the Matters and Masters review published on the Plato website), there is little evidence of the views of parents on the Queensland system. Matters and Masters (2014, vol. 2, pp. 221-224) provide brief summaries of the submissions from the Isolated Children's Parents Association (ICPA) and Queensland Council of Parents and Citizens Associations (QCPCA). The ICPA does not express a view on the merits of the Queensland system per se but notes that 'many parents and students ... have little understanding of current senior assessment methods or TE [tertiary entrance] processes' (Ibid., p. 222). The QCPCA is amongst the strongest supporters of the current system, stating that it 'fully supports preservation of school-based assessment' and that it sees 'no obvious advantage in an additional component [i.e. external exams] to the assessment process' (Ibid., pp. 221-222).

The parliamentary report deemed it worthwhile to note that, 'there were very few, if any, submissions who [sic] considered that the system was perfect' (Education and Innovation Committee, p. 34).

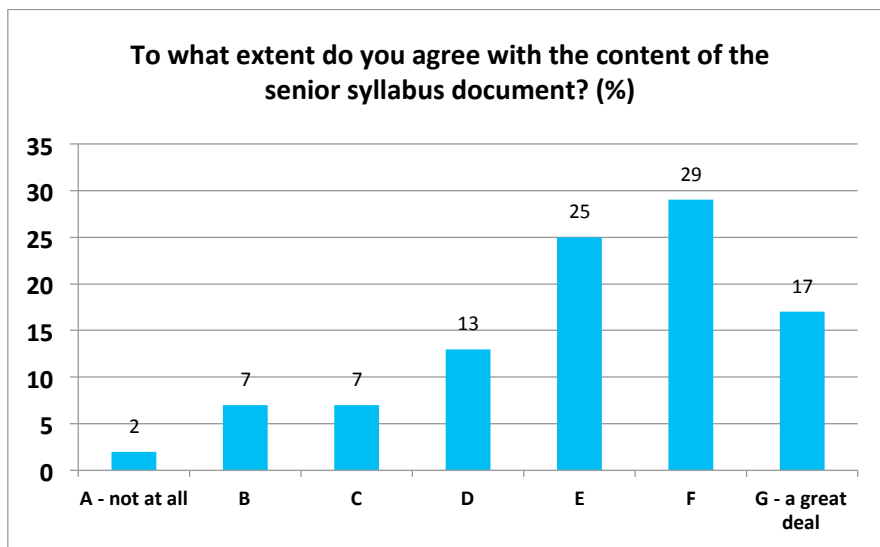
In an ARC-funded research project (QUT, 2010) carried out by researchers from the Queensland University of Technology in 2010 at the behest of the then Queensland Studies Authority, teachers in state secondary schools responded as shown in the charts below to questions about senior secondary syllabuses and work programs.



(figures may not add up to 100 due to rounding)



(figures may not add up to 100 due to rounding)



(figures may not add up to 100 due to rounding)

These results show that a majority of state secondary school teachers were supportive of the content of senior syllabuses and found them effective in supporting their classroom practice,²⁰ but they also show that between a quarter and a third of respondents were either unsupportive or unenthusiastic about the Queensland system in relation to the questions posed. The QUT survey did not ask specifically about assessment and the data was not disaggregated by subject area.

In its response to the parliamentary inquiry, the Science Teachers Association of Queensland (STAQ) reported on a survey it conducted of its members. In response to the proposition, 'school-based assessment is more valid than external examination', 63 per cent of science heads of departments and 55 per cent of science teachers agreed (STAQ, 2013, p. 2).²¹ Interestingly, 63 per cent of science heads of department and 55 per cent of teachers agreed that, 'the use of external exams would allow students to demonstrate their learning within the full range of syllabus standards' (Ibid.) and only 51 per cent of science heads of department and 40 per cent of science teachers agreed with the statement, 'I support the continued use of the senior science assessment processes that are currently in place in Queensland schools' (Ibid.).

The STAQ concluded that science teachers could be divided into three groups (the first two of which represented approximately 40 per cent each of survey respondents):

- Those who strongly supported the current system – a group 'based around the cohort that participated in the extensive curriculum trials²² (and thus received much greater support and professional development) and who, together with other senior teachers have developed skills and expertise to work with the syllabuses and assessment methods' (STAQ, 2013, p. 3);
- Those 'who have not embraced the new curricula [i.e. as set out in the revised 2007 syllabus]' (Ibid.);
- A 'smaller group ... who are ambivalent about the system' (Ibid.).

The STAQ noted that there was nearly unanimous support across all three groups for the proposition that 'teachers need more support if they are expected to do justice to the assessment of the chemistry and physics syllabuses' (Ibid.).

The Independent Education Union – Queensland and Northern Territory Branch (IEU) conducted a survey of teachers in non-government (Catholic and independent) schools in 2012 (IEU, 2013, pp. 5-20). Unlike the QUT survey, the survey focused specifically on issues of assessment and moderation and the results were reported by subject area. Some key results are depicted in the charts below.

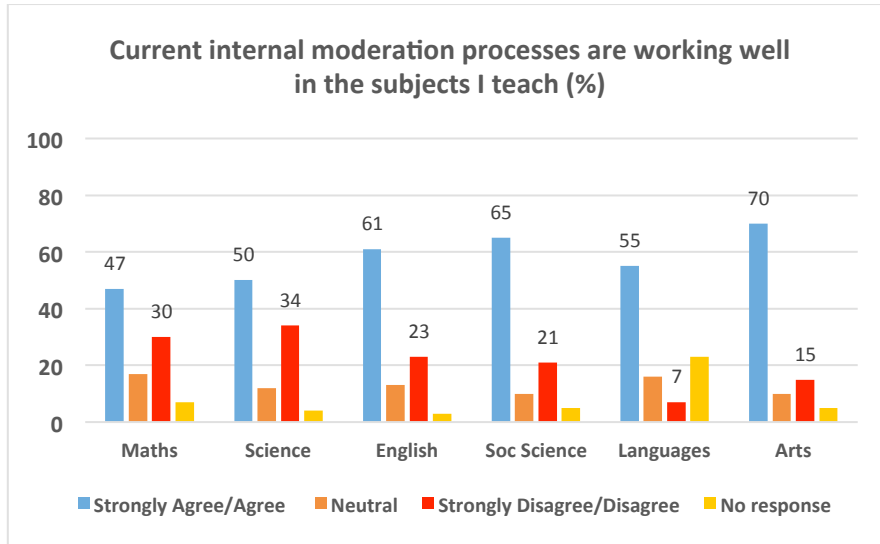
These data show that, in the non-government schooling sector at least, support for the Queensland system varies across subject areas.²³ While a majority of teachers outside of the maths and sciences believe that the system delivers "accurate grades" for students, less than 50 per cent of maths/science teachers agree – though the percentage of maths/science teachers who "disagree" is lower than the percentage that "agree". While the problem appears worse in the maths and sciences, the IEU data (like the QUT data) show that across all subject areas, there is a significant proportion of teachers who have concerns about the way the system is currently operating. Of particular concern for teachers are the external moderation procedures, with fewer than half of respondents in all subject areas, except languages, agreeing that it is "working well".

²⁰ It should be noted that many teachers would rely primarily on the school work program (based on the relevant syllabus) rather than on the syllabus directly for guidance on curriculum delivery and assessment.

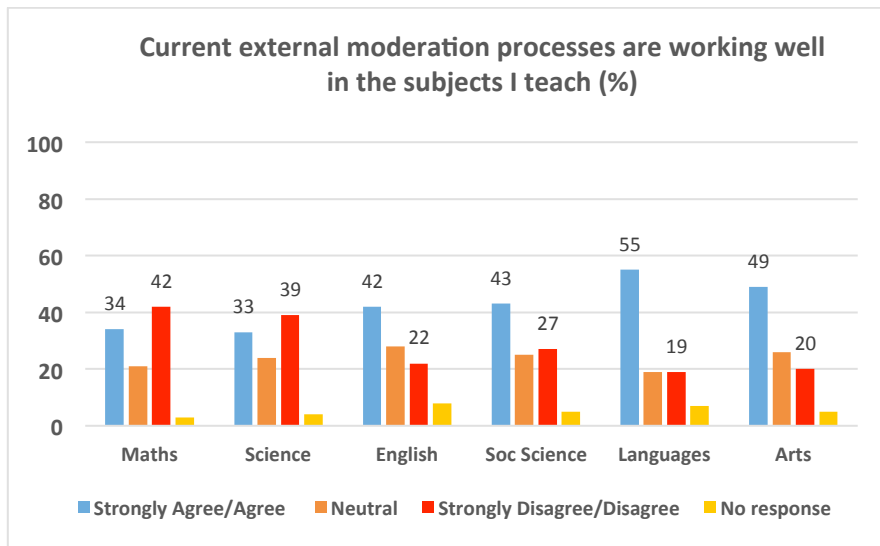
²¹ The STAQ submission aggregated "strongly agree", "agree" and "neutral" responses.

²² Revised senior chemistry and physics syllabuses were introduced over 2007-2010.

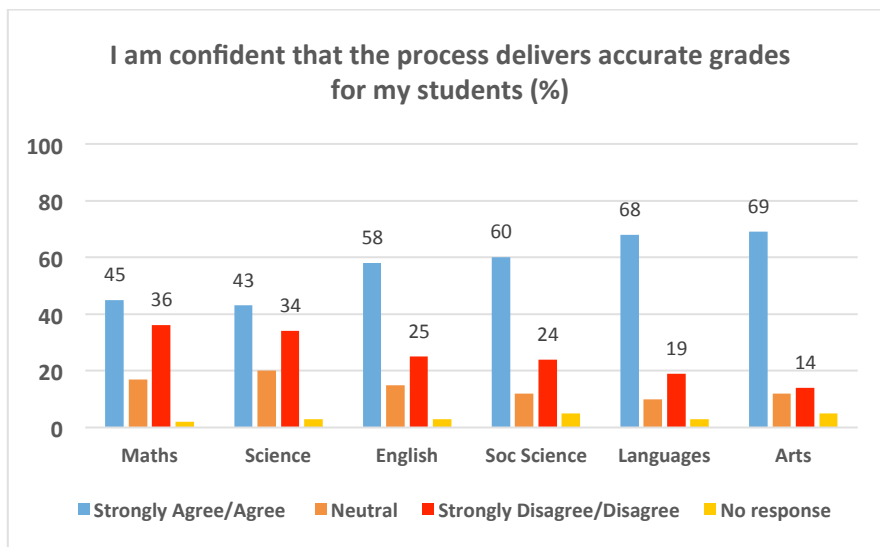
²³ There is no evidence to suggest that the views of state school teachers would be substantially different.



(figures may not add up to 100 due to rounding)



(figures may not add up to 100 due to rounding)



(figures may not add up to 100 due to rounding)

Reporting on their consultations, Matters and Masters (2014, vol. 2, p. 194) observe that ‘a majority of participants expressed significant support for preserving school-based assessment’. They noted, however, that a minority expressed support for external exams as an alternative, and that those expressing support also identified a number of problems with the current system. In their summary of submissions from ‘key stakeholder organisations’ (Ibid., pp. 211-230), they record that schooling systems, education authorities, teacher unions, parent groups, principal associations, and universities almost all expressed at least qualified support for school-based assessment. However, most expressed significant concerns about the current operation of the moderation system and either supported or did not oppose the introduction of some external assessment.

Writing in 2011, Maxwell and Cumming (p. 187) argued that:

Given the depth to which school-based assessment now infuses educational thinking and practice in Queensland, any attempt to return to external examinations would be difficult, even traumatic, and widely considered as retrograde and destructive.

Based on the survey evidence examined here, these comments appear to have over-estimated the degree to which school-based assessment is embedded in the psyche of Queensland teachers and the support within the profession for the current system. There is still significant support for school-based assessment, but that support has eroded over the years for reasons that are examined later in this paper. Nevertheless, dissatisfaction with the current processes does not necessarily equate with a desire to see it replaced with a system of external exams, and this is also a matter of subsequent discussion.

The Case for the Queensland System

A starting point for *the case for* the Queensland system of externally moderated school-based assessment can be *the case against* standardised external assessment systems. As noted above, writers such as Lingard et al. (2016) have pointed out the important role that large scale external assessment regimes play in creating and sustaining an “audit culture” in education as a part of a broader agenda of neo-liberalism.

Standardised external assessment regimes leave teachers “out of the loop” in relation to a key dimension of student learning. This is intentional: external assessment is designed to be an accountability mechanism for teachers and schools as much as an assessment of student achievement. That in standardised external assessment systems the accountability role of assessment has overwhelmed, if not obliterated, the other possible roles of student assessment, with deleterious effects on teaching and learning has been acknowledged in the “public policy statement” of the Gordon Commission. The Commission was established by the Educational Testing Service, one of the biggest developers of standardized tests, ‘to consider the nature and content of American education during the 21st century and how assessment can be used most effectively to advance that vision by serving the educational and informational needs of students, teachers and society’ (Gordon, 2013, p. 6).

The first and most important step in the right direction will require a fundamental shift in thinking about the purposes of assessment. Throughout the long history of educational assessment in the United States, it has been seen by policymakers as a means of enforcing accountability for the performance of teachers and schools ... But, as long as that remains their primary purpose, assessments will never fully realize their potential to guide and inform teaching and learning. Accountability is not the problem. The problem is that other purposes of assessment, such as providing instructionally relevant feedback to teachers and students, get lost when the sole goal of states is to use them to obtain an estimate of how much students have learned in the course of a year. (Ibid., p. 7)

Present testing practices enjoy broad support among policymakers because many people accept them as defining educational accomplishment. But this emphasis on measuring student performance at a single point in time and with assessments whose primary purpose is to provide information to constituencies external to the classroom has, to a large extent, neglected the other purposes of assessment. (Ibid., p. 10)

Further, as argued by Lingard et al. (2016, p. 15), the effects of standardised external assessment regimes extend beyond the classroom:

We cannot reject the need for accountability in education; rather, what we need to do is reconceptualise it, so that systems and schools are held accountable for their educative and social justice purposes ... social justice in education constituted around test performance data alone has very reductive effects on its meanings and possibilities.

Validity and reliability have long been identified as two cornerstones of assessment. Validity goes to issues such as: does an assessment instrument assess what it purports to assess? Is what it measures significant? Reliability goes to whether an assessment process can produce consistent and comparable results. Pitman, O'Brien and McCollow (1999, p. 2) argue that, in external assessment systems:

The problem is that, in the psychometric paradigm, defining reliability as a measure involving the calculation of differences between independent observations entails a significant degree of standardisation. A major tension thus arises between privileging standardisation (under the rubric of reliability) and calling for assessment to be more 'authentic'; that is, standardisation is at odds with a notion of assessment arising naturally from the learning situation (which pertains to its validity).

For some assessment regimes, reliability's perceived status as a precondition for validity has resulted in this tension being resolved in ways that elevate reliability concerns over validity concerns. (The proof is the degree to which standardisation is a hallmark of many regimes.)

Pitman, O'Brien and McCollow (p. 3) summarise the differences in philosophy and procedure between psychometric and hermeneutic approaches as follows:

Psychometric processes aggregate results or judgments and the aggregates are compared with standards. Hermeneutic processes expand the role of judgments to involve integrative interpretations of standards of work based on all relevant evidence. The latter countenances the use of contextualised teacher judgments in a climate where 'inconsistency in performance across tasks ... becomes a puzzle to be solved' (Moss 1994, p. 8) — not, as statistical models would have it, disruptions to be smoothed — and a critical dialogue among stakeholders is encouraged.

Despite the claim that external assessment regimes 'pressure schools and teachers to improve' (Gordon, 2012, p. 7), 'traditional assessment systems are often criticised because they typically do not contribute to improved teaching and learning' (Allen, 2012, p. 1) because 'standardised tests tell us nothing about the learning process itself (McCollow, 2006, p. 11) and so provide teachers and students with no guidance on *how* to improve (see Black and Wiliam, 1998, p. 140). As Goos (2013, p. 4) notes, 'good assessment ... involves making reliable judgements about the quality of students' learning — not just "how much" they know but "how well" they can use their knowledge'. Standardised external assessment systems are weak in providing information on the latter.

Where "high-stakes" standardised, external examinations are the main means of assessing and certifying student outcomes, curriculum and teaching are driven in particular directions. Writers such as Kohn (2015), Hursh (2008), Amrein and Berliner (2002a, 2002b) and Meisels et al. (2003) have noted that assessment systems that rely on standardised external exams tend to make school curriculum narrower and shallower, devaluing certain subject areas (i.e. those that are less amenable to standardised

assessment), privileging content over process and knowledge over critical judgement and higher order thinking. The capacity to adapt curriculum and teaching to local and individual needs is constrained. Further, a once-off summative exam puts significant pressure on students. Failure to perform well at a single opportunity on one specific date, for whatever reason, has serious consequences.

The weaknesses and undesirable effects of standardised external examinations prompted the Gordon Commission to call for 'radically different forms of assessments, including challenging performance tasks that better represent the learning activities that will help students develop the competencies they will need to succeed in the 21st century' (Gordon, 2013, p. 14).

In a paper commissioned by the World Bank (!), Allen (2012, p. xiii) argues that the Queensland senior secondary school-based assessment system can provide significant guidance on 'how to create assessments that are more valid, demanding and not limited by the constraints of traditional, multiple-choice, paper and pencil formats'. Similarly, American academics Darling-Hammond and McCloskey (2008, p. 265) include Queensland as one of the systems from which America 'can learn ... how assessments ... are linked to curriculum and integrated into the instructional process to shape and improve learning for students and teachers alike'. In 2011, a review commissioned by the Australasian Curriculum, Assessment and Certification Authorities commended Queensland for its 'internationally respected model of assessment' particularly for its 'ability to empower teachers and enhance their professional practice' (QSA, 2013, pp. 13-14).

In Queensland, 'teachers have the capacity to adopt a range of formative and summative assessment strategies and instruments to meet the specific needs of students and to enhance learning ... and construct assessment that engages students' higher order thinking skills' (McCollow, 2006, p. 11).

In the Queensland system, therefore, teachers have a central role and 'debates among teachers about the nature and meaning of assessment contribute to, rather than discredit, assessment validity' (Pitman, O'Brien and McCollow, 1999, p. 2). These debates provide valuable professional development and can foster improved pedagogical practice. Assessment is defined, not as in the psychometric paradigm as primarily a matter of "measurement", but in a hermeneutic paradigm as primarily a matter of contextualised professional "judgement" and "decision-making", and reliability is achieved through elucidation of explicit criteria and standards and through consultation and debate (moderation), rather than statistical interventions. As Allen (2012, p. 16) puts it: Queensland's system of senior secondary assessment 'is based on an assumption that the effectiveness of an assessment and certification program lies primarily in its capacity to drive excellence in student learning, rather than in its accuracy of measurement'.

The Case Against the Queensland System

As noted above, despite the claim by Matters and Masters that their inquiry was essentially an examination into whether 'current processes as effective as they might be' given social, demographic and educational changes in recent years – that there was 'no particular "problem to be solved"' (vol 1, p. x) – there has been an ongoing, and at times heated, debate about the efficacy of Queensland's peculiar approach to senior secondary assessment and tertiary entrance.

Criticism of the Queensland system has been strongest in relation to the senior science and mathematics subjects.²⁴ Most of the prominent activists lobbying against the Queensland system have a maths or

²⁴ This is not to imply that assessment and curriculum in other subject areas are uncontroversial. There was debate, for example, over a previous iteration of the senior English syllabus, which one writer stated took 'a critical approach to reading and writing that is predicated on Marxist and poststructuralist theories' (Spencer, 2011, Abstract). The controversy continued in relation to its replacement (see Johnstone, 2008). An interesting feature of this debate has been, as in the case of maths and sciences, that there appears a divide between the

science background and the largest body of submissions critical of the Queensland system is that arising from the parliamentary review of senior chemistry, physics and maths.²⁵ One difficulty that this presents is that while the case made by activists such as those associated with Plato is against the Queensland system generally, important aspects of their critique pertain specifically to senior chemistry, physics and mathematics. A second difficulty is that while assessment and curriculum are (and should be) intertwined, they are not the same. A significant element of the critique pertains mainly to curriculum. John Ridd (2013, p. 13) acknowledges this in his submission to the parliamentary inquiry where he argues that ‘an external exam ... could still be dodgy’ [in his view] if based on current curriculum/syllabus assumptions. Conversely, it could be argued – though Ridd most emphatically does not – that a number of the syllabus/curriculum issues he raises are capable of resolution without altering the assessment system.

Further, as noted by Matters and Masters (2014, vol. 1, pp. 17-34), the arguments as put in the submissions to the review (and to the previous parliamentary inquiry into senior maths, physics and chemistry assessment) were not between those advocating retention of the Queensland system in its present form and those seeking its abandonment, but between those seeking reform of the present system and those seeking its abandonment. Key areas for reform were identified as quality-control issues, in particular in relation to moderation: ‘views ranged from the [moderation] process needing strengthening, at the kindest, to its being broken beyond repair, at the harshest’ (Ibid., p. 24). This being the case, it is useful to divide a description of criticisms of the Queensland senior secondary assessment and tertiary entrance system into two types: those that identify aspects in need of reform, and those that seek to establish a case that the system is beyond repair.

Fixable Flaws?

Submissions to the parliamentary inquiry into assessment in senior secondary maths, chemistry and physics from teacher organisations such as the Queensland Teachers’ Union (QTU),²⁶ the Independent Education, Queensland and Northern Territory Branch (IEU)²⁷, and the Science Teachers’ Association of Queensland (STAQ) expressed support for the current system of assessment and opposed external exams. Nevertheless, all noted a number of problems, some of which appeared to relate specifically to senior maths, chemistry and physics, and some of which were endemic to the system generally.

All three of the teacher groups mentioned above identified a need for greater professional development for teachers, more time and better resources to develop and mark assessment, and more timely and consistent advice from QSA (as it was then) officers and review panels.

The QTU and STAQ focussed on the effects of recent syllabus changes in senior maths, chemistry and physics. According to the QTU (2013, p. 2) the effects of changes in assessment methods had been ‘massive’ for teachers in these subjects. The QTU argued that there had been inadequate professional development and that the workload implications had been ignored. Problems had been exacerbated by inconsistent interpretations and advice from the QSA.

Both the STAQ and QTU noted that implementation of the new syllabuses had led to greater use of extended assessment tasks. Both expressed a view that such tasks were potentially more ‘innovative and authentic’, and could encourage ‘students to engage in the scientific process of inquiry’ (QTU, 2013, p. 3), but also that these tasks could be ‘overly long and onerous’ (STAQ, 2013, p. 3) and ‘time and labour intensive’ (QTU, 2013, p. 3) for teachers and students. Both organisations called for more resources to

views of discipline-based tertiary academics and those based in education faculties. See, for example, Buckridge, 2007.

²⁵ Submissions to the Matters and Masters review were not made publicly available.

²⁶ The QTU represents approximately 43,000 member teachers in state schools and TAFE institutes.

²⁷ The IEU represents approximately 15,500 members (teachers and other education workers) in non-government schools and other education institutions.

support the development of appropriate assessment tasks, including for example, exemplar work programs, tasks and student responses.

A key issue for teachers, according to the QTU and many other submissions, was the use of numerical or quantitative marks (which can be added up to arrive at an overall mark). Some see this practice as inherently antithetical to the concept of assessing students on the basis of the “fullest and latest” information available. Others believe the practice can be accommodated into the Queensland system of criteria-based assessment, and is particularly suited for short-answer tasks.²⁸ In any case, use of numerical marks is a long and well-established practice, which, as mentioned above, Wyatt-Smith and Colbert (2014) found is actually more common than the use of the “fullest and latest” information. Further, the latter approach is more complex and time-consuming. According to the QTU, advice from the QSA on this issue was maddeningly inconsistent.²⁹ The result was that, in some cases, schools abandoned short-answer forms of assessment – an ironic outcome for a system that prides itself on the use of a wide range of assessment tasks.³⁰

In their summary of responses from stakeholder groups, Matters and Masters (2014, vol. 2, pp. 211-230) identify widespread concern about moderation processes, including about alleged “gaming” of the system by some schools to improve their results. Independent Schools Queensland (ISQ) stated that ‘current moderation processes [are] at breaking points in terms of rigour and consistency’ and argued that ‘inconsistencies in panels have undermined teacher confidence in the process’ (Ibid., p. 214). The ISQ noted that supporting the operation of the moderation system put a considerable strain on schools. All three schooling systems argued that more resources and support were needed to underpin the process. The Queensland Catholic Education Commission (QCEC) called for more professional development for teachers generally and for panellists (Ibid., p. 213). The Department of Education, Training and Employment (DETE) suggested the exploration of ways to attract more ‘expert, experienced teachers as panel members’ (Ibid., p. 215). The Queensland Secondary Principals’ Association (QSPA) also called for panellists’ skills to be strengthened (Ibid., p. 223).

In an article defending school-based assessment, McCollow (2006, p. 12) notes that ‘writers have identified a number of conditions that need to be met to ensure that the potential benefits of school-based assessment are met’ and that this potential ‘to deliver an intellectually challenging and relevant learning experience to all students often goes unrealised’.

In order to ensure quality (and assessment validity) school-based assessment must be accompanied by:

- a specific, systemic focus on aligning curriculum, assessment and reporting;
- identification of what is considered to be the essential learnings to be taught;
- specification of criteria and standards in relation to these learnings;
- support for the ongoing development of the professional capacities of teachers. (Ibid.)

Given the above, in order to ensure assessment reliability and comparability in a school-based assessment regime, there must be robust systems that provide: time for teachers to make judgements and reflect on them, internal moderation, and external moderation (Sadler, 1986, pp. 24-25).

In 2011, a study commissioned by the Australasian Curriculum, Assessment and Certification Authorities concluded that Queensland’s senior secondary ‘procedures for ensuring both within-year and year-to-year comparability were strong overall’ (QSA, 2013, p. 14). However, in a paper prepared for the Matters

²⁸ This is the position argued by the QTU.

²⁹ Matters and Masters (2014, vol.1, p. 44) observe, ‘although the QCAA has made it clear it is supportive of numerical marking, this is not the message heard by many teachers over recent years’.

³⁰ The inquiry report recommended that ‘in the context of standards-based assessment, numerical marking be strongly promoted in mathematics, chemistry and physics subjects’ (Education and Innovation Committee, 2013, p. xv).

and Masters review, Wyatt-Smith and Colbert (2014) identified some serious concerns about the moderation process that indicate that the procedures designed to meet the pre-conditions for quality, validity and reliability were less than optimal.

Wyatt-Smith and Colbert (2014, p. 33) observe that, at least since the introduction of criteria-based assessment, a feature of Queensland assessment has been that practice has proceeded ahead of theory:

The expectation ... was that teachers were the pioneers of a new approach to assessment. As such, they were “licensed” to work through the curriculum and assessment implications of so-called criteria-based assessment, outside of any existing theoretical framework for the system ...

In the 1980s, the assessment authority established an “assessment unit” as a sort of internal “think tank” to develop a sound theoretical base and address arising issues of practice. The unit developed a body of “discussion papers” to that end. Unfortunately, as noted by Wyatt-Smith and Colbert, the unit was disbanded largely due to budget cut-backs, and theoretical development ground to a halt so that ‘practice has continued to move well ahead of theory building’ (Ibid., p. 5).

One example is the failure to adequately theorise the concept of holistic assessment based on the “fullest and latest” information and explain how this is operationalised by teachers. This is relevant to the problems identified by teacher organisations in their submissions to the parliamentary inquiry regarding disputes over the use of numerical marks in maths, chemistry and physics. Another example is the failure to develop data systems that allow the assessment authority to review and analyse ‘performance issues across subjects for the purposes of identifying recurring and emerging system-wide assessment issues’ (Ibid., p. 22).

Wyatt-Smith and Colbert echo the call of the teacher organisations in their submissions to the parliamentary inquiry for the provision of greater support for teachers. They note that the assessment authority has laid an ‘increasing emphasis on process management with considerably less attention given to developing system infrastructure and self evaluation’ (Ibid., p. 36). In addition to the abolition of the assessment unit, they note that expenditure per student and per school has declined since the turn of the century and ‘there are decreasing numbers of SEOs [senior education officers] in place to support the growing number of schools and subjects’ (Ibid., p. 28). Additionally, they describe the burden on moderation panel members as ‘considerable’ (Ibid., p. 29).

Among the suggestions for greater support from Wyatt-Smith and Colbert are: better guidance for teachers on the characteristics of performance at the threshold and higher ends of each level of achievement; provision of exemplars of assessment items and student responses; development of discipline-specific standards; and the consideration of assessment instruments in the work program approval process.

Wyatt-Smith and Colbert also question whether important foundational assumptions underlying the Queensland assessment system continue to be well-understood, applicable and valid. They note that the Queensland system was predicated on what was once a strong consensus about the superiority of school-based assessment and a working partnership between the assessment authority and schools. However, they state, ‘it is not ... known whether the principles and assumptions underpinning criteria-based assessment match those underpinning classroom practices as there has been no sustained research on the issue’ (Ibid., p. 35).

Further, the partnership between the assessment authority and schools, which at one time was (arguably) well understood, has led over time to a muddying of lines of responsibility and accountability and to tensions between schools, school systems and the authority.³¹ Tensions arise, for example, in relation to such matters as the provision of time for teachers to undertake tasks mandated or

³¹ As evidenced by debates in QTU forums.

necessitated by the assessment authority, making teachers available for panel work, and professional development.

In contrast to the claims of some critics (e.g. P. Ridd, 2013; J. Ridd, 2012) that the assessment authority is authoritarian and wields enormous power to enforce its model of assessment with absolute rigidity, Wyatt-Smith and Colbert (p. 30) found that moderation panellists, under the partnership model, saw their roles as 'supporting school judgements', which diminished their capacity to pull into line teachers and schools that persistently ignored panel recommendations and advice. They recommended that the authority's capacity to hold schools accountable in relation to issues of quality, validity and reliability be enhanced.

It is important to note that, despite their criticisms of the current state of assessment in Queensland, Wyatt-Smith and Colbert do not recommend the introduction of external assessment. Indeed, they note that 'the international interest in the [Queensland] model is well-recognised' (Ibid., p. 6), and argue for a strengthening of the system through enhanced support and infrastructure, clarified and improved accountability procedures, and ongoing research and theoretical work:

Essentially the proposition ... is that the Queensland model of externally-moderated standards-reference assessment has moved ... to a point of readiness for clarified, considerably strengthened messages about assessment literacy in the context of standards-referenced assessment and moderation. (Ibid., p. 38)

Matters and Masters (vol. 1, p. 52) note that when it came to tertiary selection, 'the concerns of universities were not the same as the concerns of schools'. The main concern of universities was the perceived need for "finer-grained" information, such as that provided by the ATAR, to assist in selection of students for high-demand courses.

In a paper prepared for the Matters and Masters review, Allen (2014, p. 85) argues that a basic assumption underpinning the current tertiary selection processes is becoming increasingly untenable:

The assessments on which the OPs are determined, SAs, are based on a notion of a two-year cohort of senior students at a school completing study in a subject at the same time. The greater the mismatch between this assumption and practices the less workable the system. This is a fundamental rather than a technical difficulty. That is, as the trend towards more diverse approaches to senior studies strengthens ... the present OP system will have to change its fundamentals ...

According to Matters and Masters (2014, vol. 1, p. 53) universities expressed dissatisfaction that selection processes were different, and not comparable, for OP-eligible and OP-ineligible students. The latter group, who now constitute a significant number of those seeking tertiary entry³², receive a QTAC "selection rank". Unlike an OP rank, which is calculated on the basis of results in "authority subjects" only and which is scaled using QCS test results, the QTAC selection rank is based on all senior secondary courses undertaken and is not scaled.

Those in the schooling sector also expressed concerns about this situation, 'but for a different reason' (Ibid., p. 53). It was alleged that some schools were "gaming the system" by encouraging less able students to use the OP-ineligible track in an attempt to maximise their chances of being selected for university entrance and to maximise the QCS test scores and OP ranks of the remaining students. It was

³² As Cook (2014, pp. 1-2) notes, the declining proportion of OP-eligible school leavers is not due to a reduction in the number of OP-eligible students, which has remained 'reasonably steady', but to an increase in the number of OP-ineligible students (i.e. more students are staying on to complete Year 12): 'the declining proportion of OP-eligible students is not a factor of either students' changing enrolment patterns or concerns about the OP system itself'.

also alleged that some schools attempted to manipulate SAI distributions to maximise students' OPs. Matters and Masters conclude that, even if this SAI manipulation occurs, 'many of the [alleged] practices are unlikely to have the desired effect' (Ibid., p. 54). Even so, such allegations have the unfortunate effect of creating tensions within the system.

Related to this, most of the feedback received by Matters and Masters about the QCS test concerned the "industry" that had arisen around it, where 'there are now significant QCS test preparation businesses that schools are accessing' (Ibid., p. 53) and 'test preparation had become an impost, with significant negative effects on teaching time' (Ibid., p. 44) and teaching practices. This was related to schools' use of OP results as a marketing tool: 'the increasing use of the OP as a public measure of school performance is having a distorting effect on schools' practices' (Ibid., p. 53). Matters and Masters do not observe – though they might – that HSC-style external exams would be likely to exacerbate rather than ameliorate such behaviour.

Another area of concern about the QCS test was the 'perceived complexity of the scaling model' (Ibid., p. 44). Matters and Masters (Ibid., p. 45) observe that the low level of understanding of the test and its purpose was surprising given it has been in place for nearly a quarter of a century. Allen (2014, p. 94) observes that complexities have developed over time in the OP system in response to:

... the importance of deriving estimators of overall achievement in ways that are reasonably fair to the individual and align with policies for matters such as appropriate backwash effects on the senior secondary curriculum, diversity and flexibility in students' choice of subjects and locating key decisions about students' achievements with those best placed to know and understand these achievements in a full and rounded way. All this, however, presents a challenge in building community understanding of and confidence in the system. Paradoxically, there can be more community confidence in a system whose technical details are not defensible but is thought to be simple and straightforward – and therefore fair.

Cook (2014, p. 2) quotes a former Director of the Board of Senior Secondary School Studies as stating, 'you can have a complex system that is a fair one, or a simple system that is unfair'. Nevertheless, lack of understanding and concerns about its lack of transparency have undermined confidence in the Queensland system and, as noted below, some critics argue that it was deliberately designed to be as opaque as possible.

Beyond Repair?

As Allen (2012, p. 13) observes:

Some people doubt that Queensland's program is, or ever could be, effective or correct. Some think that a standardised test anonymously marked is the only way to ensure sufficient reliability, consistency, and fairness.

In their submissions to the parliamentary inquiry into assessment in senior mathematics, physics and chemistry, Dean (2013) and John Ridd (2013) argue that senior maths syllabuses misunderstand and misrepresent the nature of mathematics as a discipline. This is because the syllabuses align with the thinking of trendy education theorists rather than the views of "real" mathematicians. According to these critics, the syllabuses devalue foundational mathematical "knowledge and procedures" as "lower-order thinking" and promote a range of purportedly higher-order skills that are unrelated to mathematics. Assessment in these subjects, which 'overemphasises and/or artificially introduces "story questions" well beyond their importance within the discipline' (Dean, 2013, p. 9), reflects and fosters this. According to Dean (2014b, p. 2), the problem extends to physics and chemistry, from which 'mathematical reasoning has been removed'. John Ridd (2013, p. 3) claims that, as a result, 'many/most students are hopelessly unprepared for further study in numerical Science, Mathematics or Engineering'.

John Ridd (*Ibid.*, p. 3) argues that ‘various “assignments” under various names ... use huge amounts of time’, with the result that ‘workloads on the students are shocking’. Similarly, in his submission to the parliamentary inquiry, Peter Ridd (2013, p. 4) argues that ‘long written assessment ... [is] grossly overused’ in mathematics, chemistry and physics ‘turning these subjects into *de facto* English classes. Further, he asserts that ‘the long written assignments which are usually done at home mean that cheating is rampant because parents and tutors can give considerable help to a large fraction of the students’. Dean (2014b, p. 2) makes a similar claim.

Matters and Masters (2014, vol. 1, p. 42) observe:

Concerns were expressed to the Review that, in some subjects, the syllabus specifications limit the extent to which schools are able to provide appropriate balance in addressing intended syllabus outcomes. This was perceived to be a particular problem in mathematics and science subjects where the collection of assessment types required by the syllabus was seen by some to overemphasise evidence in the form of written investigative reports at the expense of evidence in the form of “objective” tests of factual and procedural knowledge and understanding. This problem was considered to be compounded when students take several subjects in which there is a perceived overemphasis on extended writing.

The general concern being expressed here relates to the validity of subject assessments. To the extent that the assessment processes required of teachers of a subject do not enable the balanced collection of evidence about the full range of valued learning outcomes, the validity of the assessment and certification process for that subject is limited.

Critics associated with Plato³³ are harsh in their criticism of holistic assessment based on the “fullest and latest information”. Peter Ridd (2013, p. 5) states that ‘teachers are effectively forbidden to use marks (numbers) and add them up to give a final result’ and characterises holistic assessment as ‘a fancy word for guess’. Dean (2013, p. 10) states that assessment standards are expressed in ‘subjective and unreliable terms like appropriate, life-related, simple, complex, and routine’. John Ridd (2013, p. 11) comments:

Because the modern Queensland assessment “system” is non-numerical the “methods” to estimate final student results are vague, wordy and depend on ‘overall judgement’. The student has no idea whatsoever as to the relative importance of a piece of work.

In the view of these critics, the Queensland system of assessment is not only highly subjective but also opaque. The processes are complex and explanations of them reek of ‘edu-babble’ (*Ibid.*, p. 11).

The position put by critics such as the Ridds and Dean is that a system of assessment based on non-numerical standards and marking, holistic judgements and “social moderation” is inherently incapable of achieving transparent, valid and reliable results for students. It follows that nothing short of the introduction of ‘comprehensive, pen-and-paper, state-wide exams in each subject’ (Dean, 2014b, p.1) will suffice to attain these ends³⁴:

This exam is worth a fixed percentage of their final grade (typically 50%) ... The remaining 50% of students’ final is independently assessed by each school [using numerical marking] (without micro-management by a central bureaucracy) ... As no two schools are the same, these “in-

³³ Peter Ridd and Matthew Dean are active in Plato, which describes itself as ‘more of an idea than an organisation’ (Plato Queensland website, <http://www.platoqld.com/>). Commentary by John Ridd appears on the Plato website.

³⁴ Dean (2013, p. 12) argues that these exams have additional benefits in that they ‘recognise and reward entering deeply into a subject internalising a large knowledge base’.

school” results are scaled to match the common standard of the state exam. This simple procedure maintains fairness across the state. (Ibid.)

What did the Review Recommend?

Matters and Masters (2014, vol. 1, p. 34) identify seven “themes” that emerged during their consultations. These were:

1. Current processes deemed too complex, which undermines confidence in the system;
2. General lack of understanding of the OP system, at all levels, and myths abound;
3. Some evidence of gaming by schools;
4. Broad acknowledgment of the strengths of school-based assessment, recognition of the centrality of teacher judgment in assessment, and respect for the endurance of the system for more than 40 years;
5. Serious attention required for revamping moderation, with special attention to the operation of review panels;
6. General acceptance of external assessment, recognition of the enhanced validity from gathering evidence about student learning in two styles – internal and external, but rejection of statistical moderation [i.e. scaling on the basis of external exams];
7. Push for national consistency in selection of applicants to university courses, embodied in an ATAR.

The Matters and Masters report makes 23 recommendations.

In relation to tertiary entry, the report recommends abolishing the OP/FP system and the QCS test. The QCAA will no longer have a role in tertiary selection processes, which will become entirely matters for universities and their agent QTAC. In particular, QTAC should assume responsibility for any scaling and aggregation of senior subject results to produce ranking for tertiary selection. (It is expected that tertiary institutions will choose to “construct an ATAR”.)

Matters and Masters (2014, p. 45) state that ‘the most reliable way to ensure comparability across schools within a subject is to have all students undertake the same types of assessment activities and to evaluate their performances using the same marking scheme’. On this basis, the report recommends that “subject results” be based on a set of four specified types of assessment activities, which will vary from subject to subject. The QCAA should ‘specify the nature of each activity, the conditions under which it is to be completed and the marking scheme’ (Matters and Masters, 2014, vol. 1, p. 61). For school-based assessments schools and teachers will design activities within these specifications.

One of the four assessment activities should be ‘externally set and marked by the QCAA’ (Ibid., p. 61) and ‘completed at the same time under the same supervised conditions in all schools, (Ibid., p. 64). It will not necessarily be a pen-and-paper exam; its nature will be determined on a subject by subject basis. ‘For the vast majority of senior subjects, the External Assessment should contribute 50 per cent of the Subject Result’ (Ibid.). Contrary to the recommendation of the parliamentary inquiry, however, the external assessment will not be used to scale the school-based assessment.

It is recommended that subject results be reported on a scale of 1 to 60 (30 marks for the external assessment and 30 marks in total for the school-based assessment activities). The subject result will be the ‘sum of a student’s marks’ (Ibid., p. 63) on the assessment activities (i.e. not a holistic judgement based on the “latest and fullest information”).

A number of the report’s recommendations are intended to improve and make more rigorous the moderation process (which will apply to school-based assessment only). The process is to be revised to include three phases:

- “endorsement” – of a proposed assessment activity prior to use;
- “confirmation” – that the marking scheme had been applied consistently; and
- “ratification” – post-hoc review including blind re-assessments of student work.

Unlike existing moderation processes, which review entire student folios of work, the process will be carried out separately for each of the three school-based assessments. The QCAA is to appoint assessment supervisors to lead the moderation process and to build teacher capacity. Additionally, the QCAA should ‘continue to build its staff capacity in educational assessment, educational measurement and information and communication technologies’ (Ibid., p, 74).

The report acknowledges that its recommendations will require additional funding and recommends that the government provide this. It also calls on the government to devise a ‘multi-platform information strategy’ (Ibid., p. 74) to explain the changes to the senior assessment system to stakeholders.

The Government Response

In December, 2014 the then LNP government issued a draft response to the Matters and Masters report (Queensland Government, 2014) which accepted in principle all of the key recommendations subject to their successful piloting. Full implementation would not occur until at least 2017. However, the LNP lost the state election of January 2015. The Labor Government announced in August 2015 (Jones, 2015a) that it was essentially adopting the same position as its predecessor and that it was appointing a “Senior Secondary Assessment Taskforce” comprised of stakeholder representatives to oversee implementation. As noted above, currently operational details of the new system are being worked through. The working out of these details (including the views of stakeholders) provides more than enough material for a separate paper, but it is worth noting some developments as of early 2016, which include some changes to the arrangements as proposed by Matters and Masters.

First, it was announced that implementation would be for students entering Year 11 in 2018. The OP system and the QCS test will be abandoned in favour of the use of an ATAR, with ATARs replacing OPs for students graduating in 2019. External assessment will also be introduced, but the government emphasised that it would be used as a means to ‘strengthen the current school based assessment process’ (Jones, 2015a, p. 2), not as a replacement for it. External assessment will commence in 2019.

During 2016, over 250 schools are participating in a trial of external assessment in the subjects of chemistry, English, geography, mathematics B and modern history (Jones, 2015b).³⁵ Endorsement of school-based assessments is also being trialled as are enhancements to moderation processes (Senior Secondary Assessment Taskforce, 2015a).

As recommended by Matters and Masters, four pieces of assessment (one of them external) will be used to determine a student’s final result in a senior secondary subject. For mathematics and science subjects, the external assessment will constitute 50 per cent of a student’s final result as recommended by Matters and Masters. For all other subjects, however, the external assessment will constitute 25 per cent of the final result. External assessment will not be used to scale school-based assessment. The QTU (2016) has reported that it has been advocating that, for maths and sciences, there be two external assessments worth 25 per cent each rather than one piece worth 50 per cent. It remains to be seen if this proposal is adopted.

In line with the recommendation of the Matters and Masters report, the senior secondary assessment taskforce has endorsed standards for each school assessment being linked to scores on a non-linear 15-point scale (i.e. A+, A, A-, etc.) (Senior Secondary Assessment Taskforce, 2015b). The taskforce also

³⁵ These got off to an inauspicious start when some schools were provided with draft mathematics B exams that contained a number of errors (Martyn-Jones, 2016).

endorsed the proposal in the Matters and Masters Report that students be provided with an overall numerical score, and a level of achievement aligned to descriptions of achievement based on syllabus standards (Ibid.).

In relation to tertiary entrance, the specific mechanisms for producing a common tertiary entrance rank for Queensland Year 12 students are still to be determined. It is proposed that an ATAR would be derived by a process of inter-subject scaling, similar to the practice in other jurisdictions (Senior Secondary Assessment Taskforce, 2016a). The taskforce has supported the proposal that 'responsibility for the calculation of a common Year 12 tertiary entrance rank could be transferred from the QCAA to QTAC, who would administer this process on behalf of participating tertiary institutions' (Ibid.). The taskforce has proposed that eligibility for an ATAR will be 'subject to satisfactory completion of an English subject, although a student's results in English will not be a mandatory inclusion in calculation of their ATAR' (Senior Secondary Assessment Taskforce, 2016b). It has also recommended that 'the calculation of an ATAR be based on a student's best five senior subjects' (Ibid.). As of May, 2016 the taskforce has noted that 'further consideration will be required as to the type and mix of senior subjects that may be included in the ATAR calculation, such as QCAA Authority subjects, Vocational Education and Training (VET) qualifications and Subject Area Syllabus subjects' (Ibid.).

What Should We Make of the Outcome?

In relation to senior secondary assessment, there were three broad options open for Matters and Masters to recommend:

- Abolition of Queensland's regime of moderated school-based assessment and its replacement by a regime of external exams, accompanied by school-based assessment scaled using external exam results (this might be called the "Plato option");
- Retention of Queensland's regime of moderated school-based assessment, albeit with reforms to its quality-control processes;
- Retention of Queensland's regime of moderated school-based assessment, with reforms to its quality-control processes, but, importantly, accompanied by the introduction of external assessment.

Matters and Masters adopt the latter option and, as noted in their report, most supporters of school-based assessment acknowledged that the introduction of external assessment was "inevitable".³⁶ It is probably the case that option 3 reflected most accurately the feedback received during the review. However, as Dean (2014b) notes, the introduction of "external assessment" falls short of the outcome sought by Plato Queensland and its supporters in at least three important ways:

- external assessments are not necessarily comprehensive, pen-and-paper, state-wide exams;
- school-based assessment will not be scaled on external exam results; and
- a curriculum and assessment authority (populated by educationists) will continue to oversee assessment.

For those who support school-based assessment, there will be concerns that once external assessment gets its figurative "foot in the door", it is only a matter of time till it becomes the dominant form of assessment driving out, subordinating or significantly influencing in undesirable ways school-based forms. A key question is the degree to which some of the basic principles of Queensland's system of externally-moderated school-based assessment have been compromised or abandoned. As noted above, the principle of assessing on the basis of the "fullest and latest information" has been abandoned and the concept of "continuous assessment" itself has, at the least, changed. To what extent do these changes present as abrogations of basic tenets of the system's philosophy? Additionally, the "flow-on" and "back-

³⁶ For the record, my personal preference was option 2.

wash” effects of external assessment and of the new tertiary entrance processes are yet to be seen. Additionally, that some subjects (i.e. maths and sciences) make greater use of external assessment than do others may create some unintended effects and tensions.

Cook (2014, p. 2) argues that, in a system marked by high levels of geographical, cultural and socio-economic diversity between schools (resulting in variations in the ‘quality of education on offer’), the complex scaling processes inherent in the OP system provided an assurance that ‘individual students were able to be ranked against each other on the basis of their demonstrated, academic capacity’. As Cook points out, ATAR processes will include inter-subject scaling within a school to ameliorate differences between results in different subjects, but will use cruder methods than previously, and there will be no cross-school processes. The abolition of OPs and their replacement with ATARs may signal a preference for simplicity and understandability over equity, with significant detrimental effects for Queensland students.

Finally, *how* the new system is implemented may be as important as *what* is implemented. From the classroom teachers’ point of view, time, support, resources, and professional development may loom larger than ideological debates over the merits of hermeneutic versus psychometric approaches to assessment. The public at large will judge the system largely on the basis of the degree to which it is perceived as understandable and transparent.

On this basis, it safe to predict that the debate over Queensland senior secondary school assessment will continue.

About the Author

John McCollow (now retired) has a PhD in education and has form as a secondary English teacher, a researcher for the then Queensland Board of Senior Secondary School Studies and as a teacher union officer. He has written several articles defending the Queensland senior secondary school assessment system, but then with his background he would, wouldn’t he.

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