

# Supplementary Questions for QSA

## Goals of an assessment system

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1. *The Department of Education, Training and Employment (DETE) in its briefing to the Committee on 6 March 2013 indicated that a senior assessment system should meet four goals:*

- *To ensure, fairly and consistently, what students know and can do against the curriculum content and common standards (that is, they are valid and reliable);*
- *They must reflect what students will be required to do in their future work and study;*
- *They must be appropriate in terms of student and teacher workloads; and*
- *They must provide an appropriate foundation for senior certification and for tertiary entrance.*

*Does the QSA also see these as the goals of an assessment system? Are there other goals the QSA would add?*

Assessment is the purposeful collection of evidence about students' achievements. An awareness of what learning is assessed and how it is assessed helps students and parents/carers to develop an understanding of what is valued and where to focus attention.

QSA's *P—12 Assessment Policy* states that the purposes of assessment are to:

- promote, assist and improve learning
- inform programs of teaching and learning
- provide information for those people — students, parents, teachers — who need to know about the progress and achievements of individual students to help them achieve to the best of their abilities
- provide information for the issuing of certificates of achievement
- provide information to those people who need to know how well groups of students are achieving (school authorities, the State and Federal Ministers for Education).

The QSA also considers that the features described by international assessment expert, Dylan William (2008), should also be apparent in any assessment system:

- Distributed — so that evidence collection is not undertaken entirely at the end of a course of study.
- Synoptic — so that learning has to accumulate.
- Extensive — so that all important aspects are covered (breadth and depth).
- Manageable — so that costs are proportionate to benefits.
- Trusted — so that stakeholders have faith in the outcomes.

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2. *How important is it that an assessment system 'ranks' students, relative to the other goals of an assessment system?*

The primary purpose of an assessment system is to report how a student's performance matches standards developed before or after the assessment instrument/s are administered. Technically, if all students meet the highest standard, they should all receive the highest level of achievement — they have achieved at the same standard. But if there is a need to distinguish between the overall performances of students because they are in competition for a particular reason, then this is an additional goal of the assessment system requiring different information.

In Queensland, the goal of externally moderated school-based assessment is not to rank students. Rather, grades are awarded based on students' performance against predefined standards.

However, for students seeking entry into university, there is a need to calculate a rank to assist universities to allocate places to students in courses where the demand is greater than the available places.

For this to happen, teachers go beyond the decisions they make about each student's level of achievement to make more fine-grained judgments and rank the students in their classes. Research has shown that teachers can make finer judgments when comparing the work of students to each other equally as well as when they are comparing student work with broader global standards. These fine-grained rankings are then scaled using a common assessment task, the Queensland Core Skills Test, to produce a state-wide ranking.

It is important to distinguish between the two different purposes of these processes. Tertiary ranks use overall student achievement across subjects to produce a state-wide rank for the purpose of tertiary selection. Levels of achievement compare student achievement in specific subjects to the predetermined standards for those subjects.

## Length of tasks

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**3. *Is the ability of students to conceptualise, summarise and be succinct, part of what is being assessed with extended inquiry-based tasks such as EEIs or ERTs? If so, are teachers aware of that and promoting to students the idea that EEIs or ERTs are too long and will not result in a high grade? Is that message incorporated in professional development given to teachers?***

- ***Do extended inquiry-based tasks assess a student's capacity to conceptualise, summarise and be succinct?***

The objectives of the Physics and Chemistry syllabuses and the standards used to grade student work require students to reproduce and interpret "complex and challenging concepts" and compare and explain "complex concepts" (Section 7.9, Chemistry 2007 syllabus). While students are asked to be "discriminating" when presenting data and ideas, and summarise when they reproduce concepts, theories and principles, a response that was not succinct might still be graded at an A-standard if the work matched the remaining aspects of the criteria, such as evaluating, concluding and justifying. Although syllabus documents provide recommended guidelines regarding word length, ultimately the school sets the parameters under which students complete assessment tasks.

- ***Do teachers know that responses should be succinct and teach students to respond in a succinct manner?***

The syllabus sets out what teachers are required to teach. The 2007 syllabuses for Physics and Chemistry included a recommended word length in Year 12 of 2000—2500 words for the discussion, conclusion, evaluation and recommendations components of the EEI.

In 2010, the QSA advised schools about a reduction to the recommended word lengths of EEIs and ERTs in a memorandum dated 12 March 2010 and via email communications. This change was also communicated at panel training and at the annual conference of panel chairs.

Since then, at panel meetings, panel training and professional development events, teachers have indicated that they are aware of the importance of making EEIs and ERTs manageable and that keeping to the word length is an important skill for students to develop.

- ***Does QSA professional development tell teachers that responses should be succinct?***

Yes, the QSA has communicated to schools and teachers about the syllabus criteria and word lengths through professional development workshops and the QSA website.

Ultimately, as with all school-based assessment, the assessment designed for students is a matter for schools to determine. Individual schools make their decisions based on the approved syllabus.

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**4. The QSA syllabus documents for Mathematics, Chemistry and Physics, when describing the EEs, ERTs and Supervised assessment tasks for each subject, use the words ‘must’, ‘might’ and ‘should’ in respect of the requirements for these tasks. Are these terms used deliberately and consistently through the documents to explain what is mandated and what is not?**

The terms “must”, “might” and “should” are used very deliberately and consistently within and across the Chemistry, Physics and Mathematics B and C syllabuses. In these documents:

- “Must” indicates a requirement of the syllabus, and all schools are expected to follow this advice. For example, all four syllabuses (i.e. Chemistry, Physics, Mathematics B and Mathematics C) indicate that schools must use forms of assessment other than supervised tests. The Physics and Chemistry syllabuses use “must” to define EEs and ERTs and to explain the conditions and support that teachers are required to provide.
- “Should” indicates advice that is recommended best practice. Schools may follow this advice but, in some cases, it might not be appropriate because of particular circumstances or student needs. ‘Should’ is used to describe negotiable characteristics of assessment tasks. Where these characteristics are common to tasks used across different syllabuses, the advice is identical. For example, the Chemistry, Physics and Mathematics syllabuses all advise that paragraph responses to questions on supervised tests “should be between 50 and 150 words”. Similarly, on non-test tasks, the syllabuses all indicate that: “feedback and assistance should be provided judiciously”.
- “Might” is used with illustrative examples. While some schools will follow this advice, other schools may prefer alternatives. For example, “might” is used in the Mathematics syllabuses to describe the way a student may complete an extended modelling and problem-solving task or a report. It is also used across syllabuses when suggesting approaches for handling circumstances of Special Consideration.

## **Standards based versus numerical/percentage based system**

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**5. Some criticisms have been levelled at the current assessment system which might set for every task or exam question within a piece of assessment, a rating from A to E; however a C could be the highest possible mark a student can get for some of the questions or tasks. Is that how questions or tasks are weighted? Can a student use that information to prioritise the questions or tasks that could earn them an A? If it is a weighting system, is that explained to teachers and students?**

Teachers design assessment to provide the opportunity for students to show their knowledge and skills and demonstrate the syllabus standards over a two-year course. Each assessment task may not assess all aspects of all the standards.

In a single test, the syllabus does not require teachers to set each question to allow an A to E rating but it does require a range of questions — from simple through to complex and from routine through to non-routine — so that students have an opportunity to demonstrate their knowledge in complex situations and unfamiliar contexts.

As assessment instruments, including tests, may have a number of questions, some schools identify the levels of questions using a variety of methods, such as:

- labelling the questions with letters, symbols or words such as simple, complex, routine or non-routine, or
- placing them on a continuum.

The label for each question indicates the anticipated level of the response to a particular question or group of questions. It indicates how the question contributes to the overall requirements of a particular standard along with other similar questions. The teacher matches the qualities within the whole student response to a standard, therefore indicating that there is no weighting of questions or tasks. For example:

A mathematics test may have 10 questions that all assess different aspects of “knowledge and procedures”. Together the 10 questions provide students with different opportunities to demonstrate what they know and how they apply what they know. Some questions require responses to problems that are simple and routine; others require knowledge of more complex and non-routine aspects. The teacher matches the answers to all these questions to the pre-stated syllabus standards and identifies the standard (A to E) that best describes the students’ achievement across all 10 questions — that is, the overall performance in “knowledge and procedures” in this assessment.

Labelling questions is not a requirement. When grading tests, teachers are not required to award A to E standards to individual questions. Schools that use some form of labelling do so as they find it assists them in tracking the opportunities that students have had to demonstrate the full range of standards across a two-year assessment program.

While a question may target particular knowledge and skills, an assessment instrument such as a test would have a number of questions that would allow students to be graded from A to E, depending on their ability.

Decisions about the methods of grading assessment tasks are school decisions and school decisions only. Whatever method for grading/marking a school chooses to use must be understood by teachers, students, parents and the panel members reviewing student folios.

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**6. Professor Ridd told us that if a student has a C – or a sound achievement – in maths, a university educator can’t tell from that what a student knows. How can that be, if the standards specify what a student with a C must know and be able to do? Can you offer any comment on that?**

The Queensland Mathematics A, B and C syllabuses are available on the QSA website. Universities accepting students into first-year courses can refer to the syllabuses for information about what their students are likely to know and be able to do.

If universities set prerequisites such as a Sound Achievement in ‘mathematics’, then it is possible that students may have achieved a ‘Sound’ in any one of the three available mathematics courses. However, it is simplistic to think that a Sound Achievement in ‘mathematics’ means that all students are at the same standard as each syllabus has very different mandated core topics, or subject matter.

The standards in the mathematics syllabuses are a tool for determining “how well” on a five point scale the student has achieved. The standards in each syllabus describe the typical performance in a student’s folio of work. When awarding a C standard teachers have clear direction in the syllabuses, including:

- Core topics to be covered over the two–year course.
- The section on “Awarding exit levels of achievement” outlines the minimum combination of standards across the criteria for each level. For example, in all mathematics syllabuses, to be awarded a Sound Achievement, the student’s work must include: Standard C in any two criteria, one of which must be the Knowledge and procedures criterion, and no less than a D in the remaining criterion.
- The standards matrix in each of the syllabuses describes each level, A to E, for each criterion. For example, in Mathematics B the Knowledge and procedures criterion refers to the student’s ability to recall, access, select and apply mathematical definitions, rules and procedures, to demonstrate numerical and spatial sense and algebraic facility, with and without the use of mathematical technology.

To be awarded a Sound Achievement in Mathematics B at the end of a two year course of study, the student’s folio of assessments will have the following characteristics:

- recall, access, selection of mathematical definitions, rules and procedures in routine, simple life-related or abstract situations
- application of mathematical definitions, rules and procedures in routine, simple life-related or abstract situations
- numerical calculations, spatial sense and algebraic facility in routine, simple life-related or abstract situations
- selection and use of technology.

These characteristics refer to the core topics in the syllabus, namely:

- Introduction to functions
- Rates of change
- Periodic functions and applications
- Exponential and logarithmic functions and applications
- Optimisation
- Introduction to integration
- Applied statistical analysis.

### ***7. Has there been any evaluation of Queensland's standards-based system since it was implemented?***

Queensland's system of externally moderated school-based assessment and its system of tertiary entrance have been the subject of public, system-wide reviews, including:

- The 1980 Review of School-Based Assessment in Queensland Secondary Schools (or 'ROSBA'), which followed two research studies that were commissioned in the mid-1970s to investigate implementation issues in schools.
- The 1990 Review of Tertiary Entrance in Queensland, conducted by Nancy Viviani, Professor and Head of Political Science at the Australian National University.

In addition, there have been a number of consultant reports or internal reviews commissioned by the Board of Senior Secondary School Studies and its successor organisation, the Queensland Studies Authority, and research papers by academics and other researchers. These include:

- The Review of school-based assessment (ROSBA) discussion papers developed by the Assessment Unit of the Board of Secondary School Studies between 1985 and 1987.
- The 2005 Review of syllabuses for the senior phase of learning. The review was chaired by Professor John Dewar, Deputy Vice Chancellor (Academic) at Griffith University.
- The 2007 consultants' report, Proposal for a new model of senior assessment, prepared by Claire Wyatt-Smith (Griffith University) and Gabrielle Matters (Australian Council for Educational Research).
- The 2008 report to the QSA, Development of a set of principles to guide a P–12 syllabus framework, prepared by Allan Luke and Katie Weir (Queensland University of Technology) and Annette Woods (Griffith University).
- The 2011 Australasian Curriculum, Assessment and Certification Authorities (ACACA) review of year-to-year comparability of results in QSA senior secondary courses that include school-based moderated assessment, conducted by Scott F. Marion (National Center for the Improvement of Educational Assessment), Bob Peck (Victorian Curriculum and Assessment Authority) and Jan Raymond (SACE Board of South Australia).

### **District review panels and moderation (validity)**

**8. How are teachers appointed to the district and state review panels? Are there appointment criteria? Who makes appointments to the panels (members and chairs)? Must appointments be representative of different types of schools in the district, for example public and private?**

### **District review panels**

The number of review panellists appointed to a district review panel is determined by the number of schools offering the subject within a district and is based on a 'two schools to one panellist' ratio. The review panel chair is an additional appointment.

The membership of the panel is broadly representative of the schools offering the subject within a district. Where possible, panel membership tries to balance representation of State, Catholic and Independent schools.

Vacant positions on district review panels are advertised to schools within the district. **Principals nominate expert teachers to join district review panels.** Teachers currently teaching the subject apply by responding to key attributes and applications must be approved by the applicant's principal.

All panel applicants must demonstrate capacity to:

- design effective assessment and make appropriate judgments in Years 11 and 12
- demonstrate a collegial and professional approach to the quality assurance of school-based assessment decisions
- implement moderation advice and recommendations
- effectively use QSA syllabuses and related documentation to inform teaching, learning and assessment.

District review panel chair vacancies are advertised to members of the district review panel and schools within the district. Teachers apply by responding to key attributes and applications are approved by the applicant's principal.

All panel chairs must demonstrate, in addition to the capacities for panellists above, the ability to:

- effectively use QSA syllabuses and related documentation to inform reviewing
- effectively complete review notes and consensus forms
- demonstrate a collegial and professional approach to the external moderation of school-based assessment decisions
- show capacity to demonstrate leadership of QSA-reviewing processes.

The applicants are considered by a committee of three to five principals who select successful applicants. This committee represents all principals in the district and membership is approved by the Chief Executive Officer of the QSA. Applicants recommended by the committee of principals are then appointed by the QSA.

### **State review panels**

The state review panel is responsible for overseeing the work of district review panels and comparability of levels of achievement across districts. The number of state review panellists is determined by the number of district panels and ranges from three to eight panellists. The state review panel chair is an additional appointment. Where possible, panel membership tries to balance representation of State, Catholic and Independent schools and geographic regions of Queensland.

Vacancies on state panels are advertised to all schools. **Principals nominate expert teachers to join state review panels.** Teachers apply by responding to the same key attributes as for a district review panellist. Applicants must have the approval of their principal.

Vacancies for a state review panel chair are advertised to district review panel chairs and members of the state review panel. Current panellists or chairs apply by responding to the same key attributes as for district review panel chairs. Applicants must have the approval of their principal. Recommended applicants are approved and appointed by the QSA.

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**9. What are the terms of appointment for panel members (for example, for how long are members appointed)?**

District and state review panellists and chairs are appointed for six-year terms and may reapply for appointments beyond their initial term.

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**10. In your briefing on 7 March you stated that schools make 8,000 submissions to the review panels for moderation. Who selects the pieces of work that will be submitted to the panels?**

Schools send submissions for review at three points: monitoring, verification and random sampling. At monitoring and verification, schools select the student folios to be submitted. At random sampling, the QSA selects the student folios to be submitted. There are clear instructions to schools about what must be included in the submission.

**Monitoring** (February)

Review panels consider the school's implementation of a course and the standards of assessment after approximately half of the course of study has been completed. A monitoring submission is signed-off by the principal or the school moderator and includes:

- the school's approved work program
- copies of assessment instruments and the criteria sheets
- five sample folios that include the folios of students whose achievement is closest to the middle of each level of achievement, i.e. a mid-A, mid-B, etc.
- where there are fewer than five students, all folios must be sent
- other evidence and/or documentation that may not be associated with a sample folio but provides information to support decisions about practical or non-written responses.

**Verification** (October)

Verification is the process by which review panels advise schools about Year 12 student achievement relative to syllabus standards descriptors. Schools prepare and send their verification submissions to be reviewed by the review panel. The verification submission from each school for each subject includes:

- a Form R6, which includes the placement of all students in each level of achievement and indicates where the sample folios are placed
- a copy of the school's approved work program, copies of assessment instruments including conditions, and criteria sheet
- sample student folios whose responses demonstrate standards that are typical at the particular level of achievement. A minimum of nine student folios must be included
- the sample folios include:
  - the top student in the cohort
  - the student who is placed closest to the middle of each level of achievement (mid-range sample)
  - the student who is placed closest to the lower threshold of all levels (threshold samples) except Very Limited Achievement (VLA)
- other evidence and/or documentation as required by the syllabus such as recorded evidence of practical or spoken responses not associated with a sample folio.

The submission is signed-off by the principal or the principal's nominee.

**Random Sampling** (February in the year following completion of a course).

Random sampling is a quality-assurance process designed to provide information about the comparability of final exit level of achievement decisions.

Each year the QSA selects a stratified random sample of finalised Year 12 folios from schools across the state and sends them for review to panels from different districts. In 2012, 2649 folios were reviewed during Random sampling.

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**11. At the briefing on 7 March you stated that review panels provide feedback to schools after the moderation exercise. You also mentioned that QSA staff check that schools have acted on this advice. What is the status of the feedback? What powers does the QSA have regarding non-compliance (e.g. are schools compelled to act on the advice of the panels)?**

Schools receive feedback at two key points:

- **Monitoring** (February)

At monitoring, QSA review panels look at Year 11 sample student folios for each level of achievement from the previous year and provide feedback to schools. Schools are encouraged to act on the advice to avoid issues arising in relation to the assessment and grading of the cohort in Year 12. However, as monitoring is not a pre-certification checking process, it does not have a compliance aspect for schools. Compliance is only relevant to the reporting of results which must be “true and accurate”.

- **Verification**(October)

Verification directly relates to the certification of student results. At verification, the QSA review panel may make recommendations to schools to change the student grades, where there are issues. Most schools reach agreement at verification.

If agreement is not reached between a school and its district panel, schools may send their “unresolved” student folios to a QSA state panel for review.

The school must then reach agreement with the state review panel. Of some 8,000 school submissions at verification, typically one per cent, or around 80 submissions, go to a state panel to contest the verification panel’s recommendations.

It is extremely rare for schools to not reach agreement with state panel recommendations. In cases where agreement cannot be reached, the QSA can instruct a school to submit grades that the QSA determines but the collaborative nature of the system means this almost never happens. In the main, schools comply with QSA panel recommendations.

- **Confirmation** (immediately after the end of Year 12)

The QSA is responsible for confirming the results for all students as part of the final pre-certification checking of the accuracy of student results. Where schools have not complied with the recommendations of the panel for the results for all students in the cohort, the QSA contacts the school and instructs it to report the true and accurate result. The QSA can require student work to be submitted. If a school refuses to comply, results will not be recorded for any of the students in that cohort for that subject.

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**12. Is there any external input into the moderation or verification exercise, for example people other than teachers who are panel members, or QSA staff?**

Each state panel is made up of eight panellists plus a state review panel chair. The composition of the state panel includes teachers currently teaching the subject and can include one person from a tertiary institution who is involved in the area of study.

For example, the QSA state panel for Mathematics B includes a tertiary representative from the Queensland University of Technology. This panellist has been a member of the Mathematics B (2007 – the present) and Mathematics C (2005 – 2006) state panels. As a state panellist, their duties involve reviewing student folios sent to state panel when schools and district panels do not agree about interim levels of achievement.

Unfortunately the tertiary representative position can be difficult to fill due to work commitments.

QSA officers:



- attend monitoring and verification meetings as part of the general support for review panel chairs
- provide advice about procedures at meetings as well as telephone and email support on and after monitoring and after verification, as the review panel chairs work to reach agreement with schools
- train panellists (every two years) and chairs (1.5 days a year). The focus is on reviewing and communicating recommendations
- provide examples of completed review notes prior to monitoring and verification meetings. Panellists are guided through their reviews of assessment and student work using the review notes. These notes are used by the review panel chair when completing the formal written feedback to schools
- act as review panel chairs in emergency situations or sudden, short-term staffing vacancies.

## External exams / school-based assessment (validity)

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### ***13. Mr Robertson from Independent Schools Queensland in his briefing to us on 6 March indicated that the QSA was phasing out external exams. What is the QSA's role currently in administration of external exams in maths, chemistry or physics for schools who want to use them? Are they being phased out?***

The QSA provides Senior External Examinations (external exams) in accordance with the Education (Queensland Studies Authority) Regulation 2002. External exams are for:

- Year 12 students unable to study particular subjects at their own school because of a timetable clash or because the subject is not taught (and who choose to not study the subject through distance education if available or via a shared campus arrangement). Year 12 students can sit a maximum of two subjects.
- Adult students (Queensland residents of any age not enrolled at a Queensland secondary school) to meet tertiary or employment requirements or for personal interest. Adult students can sit as many subjects as they wish.

Each external exam consists of individual subject exams offered throughout Queensland in October and November each year. Each subject exam is based on an external syllabus that sets out the aims, objectives, learning experiences and assessment requirements for the subject.

External exams in Queensland were originally intended to provide a safety net for people who left school before completing their senior secondary school studies. However, there are now essentially two categories of candidates who undertake external exams — students studying languages subjects while enrolled in Year 12, and other subject candidates who are mostly non school-based students, wishing to seek a qualification, acquire a pre-requisite for further study, obtain a tertiary entrance rank, or re-engage with learning. Currently, there are numerous programs that can fulfil any of these requirements. This is reflected in the decline in the number of non school-based external exam candidates from over 4000 in 1991 to fewer than 200 in 2012 — a 95 per cent decline in candidature over the last 20 years.

With the exception of languages other than English, all Queensland external exams are being phased out, with 2015 the anticipated final year for non-language external exams in Queensland. This includes Mathematics B, Chemistry and Physics, although these external exams will be offered in 2013.

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**14. In your briefing to us on 7 March, the QSA indicated that the three functions that contribute to a quality assessment program were the ability of teachers to monitor student performance progressively and so inform their teaching; the ability of students to reflect on their own progress; and standards based assessment by teachers of the students. Could this happen equally well in a system that used an external exam instead of panels to moderate student achievement? Why/why not?**

An external examination can be standards-based but it cannot support teachers to monitor student performance progressively and so inform their teaching and provide students with opportunities to reflect on their own progress.

Research shows that in all education systems, it is assessment that dominates curriculum. If a model of assessment is restrictive, it will narrow the learning experiences of students. Full-cohort tests rarely provide information that teachers can use to improve their teaching and student learning (Pellegrino, Chudowsky & Glaser 2001) especially when the major use of test results is to determine whether students have met a minimal standard or benchmark (Herman, Baker & Linn 2006).

In the Queensland system, assessment is determined within the classroom — not by an external entity at the end of a course of study. It is an integral part of teaching and learning.

School assessment programs include opportunities to determine the nature of students' learning and then provide appropriate feedback or intervention. Because teachers do not teach and then hand over the assessment that “counts” to external experts to assess what the students have learnt, they are able to practice what is known as “authentic pedagogy”. This form of pedagogy occurs when the act of “teaching” involves placing high-stakes judgments in the hands of teachers.

Since the abolition of external exams, Queensland's teachers have been able to broaden the ways in which students can demonstrate what they have learnt rather than try and predict what examiners might be looking for. They have catered to the diverse learning needs of students by offering a variety of assessment experiences. And all of this assessment “counts”.

While examinations can be standards-based, it is difficult for them to achieve the broader purposes of assessment. An examination can assess only part of the curriculum and only those skills that are accessible by the written method. They are thus a partial “one shot” method of testing performance.

Harlen (2013) points out that striving for high reliability leads to the inclusion of goals most easily tested reliably, thus tending to exclude less easily tested goals, such as higher level skills and practices.

Other Australian states and territories, and overseas jurisdictions, would consider that their approach to assessment achieves a balance of assessment *of* learning, assessment *for* learning and assessment *as* learning. However, few would rival the Queensland system in promoting assessment *for* learning, and in creating a disincentive for teachers to teach to the test (which reduces valuable teaching time — an issue which has been the subject of recent media about the NAPLAN tests — and leads to a narrowing of the range of curriculum experiences for students and deskilling of the teacher workforce).

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**15. During the briefing on 7 March you stated that the beauty of school based assessment was that schools can tailor the learning experiences that are relevant and appropriate to students in that school. How does QSA ensure that whilst providing this flexibility, students across Qld are consistently taught the basic skills of the relevant subject to enable them to compete with students from other states/territories and internationally?**

The QSA develops, reviews and approves syllabuses for Authority subjects. Teachers can tailor learning experiences only within the parameters set by the syllabus, that is, the objectives and the mandatory requirements. Queensland syllabuses have core concepts, content or topics which all schools must do — how they are organised and taught is a school decision.

Tailoring learning experiences typically includes:

- using local contexts — for example, schools use common content but a school in Mount Isa might use a mining context; a Gold Coast school might use a marine context
- organising the ordering of units of work to accommodate composite classes which are common in small rural schools and in schools that offer low candidature subjects. These schools organise their curriculum based on common content and differentiate the processes and assessment for Year 11 and 12.

QSA syllabuses form the basis for the preparation of work programs by schools. School work programs detail the mandatory aspects of syllabuses and the significant aspects of schools' courses of study selected from the choices permitted by each syllabus. All schools are required to submit a work program for every subject to the QSA for approval. District Review Panels ensure work programs meet the syllabus requirements.

## General

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**16. Professor Ridd told us that Queensland used to be the leading state in Australia in terms of maths and referred to a report to the QSA which said that over the last 30 years in Queensland maths at year 10 level has slipped by the equivalent of two years of learning. Where does Queensland sit now in terms of maths results at year 10, compared to other states in Australia?**

Although the source for this statement is not clear, an assumption has been made that it refers to a report by Professor Geoff Masters, from the Australian Council for Education Research, entitled *A Shared Challenge: Improving Literacy, Numeracy and Science Education in Australia*. The report was commissioned by the Queensland Government in 2008. It may be accessed at the following website: <http://education.qld.gov.au/mastersreview/>

The reports cites a specific study by Afrassa and Keeves (1999)<sup>1</sup> that concluded Queensland students' performance in mathematics had declined by two years worth of growth over 30 years. The study examined lower secondary students and was referring to the period 1964-94, not the last 30 years. While a decline of that order is of note, attributing it to syllabuses produced over 10 years after the data from the study was collected is not plausible. While participation and performance in science subjects have changed throughout Australia, the nature of Queensland syllabuses is not the common factor.

There is no available comparative data for Year 10 mathematics. Data from the 2012 NAPLAN Numeracy test indicates that for Year 9, Queensland students' performance on average was higher than the Northern Territory, Tasmania, South Australia and lower than New South Wales, Victoria, Western Australia and ACT.

**17. In your briefing on 7 March you indicated that the Qld system has attracted favourable attention of academics and educationalists internationally. Could you give us some examples? Are there any other countries that have adopted and still use a similar system?**

Over the past two decades, Queensland's system of externally moderated school-based assessment has been used as a case study in international articles by a range of academics and researchers. These include:

- Allen, R. (2012) *Developing the Enabling Context for School-Based Assessment in Queensland, Australia*, The International Bank for Reconstruction and Development / The World Bank, Washington DC.
- Elwood, J. (2006) Formative assessment: possibilities, boundaries and limitations. Assessment, in *Education: Principles, policy and practice*, 13(2), 215-232.

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<sup>1</sup>Afrassa, T.M. and Keeves, J.P. "Changes in students' mathematics achievement in Australian lower secondary schools over time", *International Education Journal*, Vol 1, No 1, 1999, pp.1-21

- Gipps, C. (1994) *Beyond Testing: Towards a Theory of Educational Assessment*, Routledge, London.
- Gipps, C. (1996) Assessment for learning, in A. Little & A. Wolf (Eds.), *Assessment in transition: Learning, monitoring and selection in international perspective*. Pergamon, Oxford.
- Gipps, C., & Stobart, G. (2003) Alternative assessment, in T. Kellaghan & D. L. Stufflebeam (Eds.), *International Handbook of Evaluation* (pp. 549-576). Kluwer Academic Publishers, Dordrecht.
- Harlen, W. (2005) Teachers' summative practices and assessment for learning – tensions and synergies. *The Curriculum Journal*, 16(2), 207-223.
- Harlen, W. (2013) *Assessment and inquiry-based science education: Issues in policy and practice*, Global Network of Science Academies (IAP) Science Education Program, Trieste.
- Jensen, B. (2012) *Catching up: Learning from the best school systems in East Asia: Summary report* (Grattan Institute Report no. 2012-3, November)
- Myford, C.M. (1999) "Assessment for accountability vs assessment to improve teaching and learning: Are they two different animals?" Paper presented at ACACA conference Perth.
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Notably, the Queensland system is mentioned by Professor Linda Darling-Hammond from Stanford University in her 2010 paper "Performance Counts: Assessment systems that support high-quality learning" and (with Ray Pecheone) "Developing an Internationally comparable balanced assessment system that supports high-quality learning".

The Queensland system and how the use of panel moderation is an example of a strong quality control for high stakes assessment is mentioned in the *International Encyclopedia of Education* (2010) in G.S. Maxwell's article, "Moderation of Student work by Teachers".

While no other jurisdiction has implemented a system of externally moderated school-based assessment that is as extensive as Queensland's approach, the following schools or countries have licensing agreements with Education Queensland International to teach and assess using QSA senior syllabuses and are certificated using externally moderated school-based assessment.

2010 – The Australian International School, Sharjah (UAE)

2013 – The Republic of Nauru

2013 – People's Republic of China:

- Suzhou International Foreign Language School
- Dong Fang School, Hangzhou

The QSA has on a regular basis hosted delegations from around the world seeking information and presentations on the moderation system. Countries that have visited on a regular basis include:

- China
- Ireland
- Republic of Tonga
- Saudi Arabia
- Scotland
- Singapore
- South Africa
- Sweden.