



# **A comparative study of internal assessment practices in selected high-performing jurisdictions**

## **Research question:**

How do internal assessment practices in different high-performing jurisdictions compare, how are standards maintained, and what are the most important considerations for Scotland in reviewing the balance between internal and external assessment in the senior phase?

Publication Date: October 2023

Publication Code: FE8691

Published by the Scottish Qualifications Authority  
The Optima Building, 58 Robertson Street, Glasgow, G2 8DQ  
Lowden, 24 Wester Shawfair, Dalkeith, EH22 1FD  
**[www.sqa.org.uk](http://www.sqa.org.uk)**

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# 1 Introduction

The Scottish Government announced an Independent Review of Qualifications and Assessments in October 2021. The reform will seek to recognise all learners' achievements fairly; this will give every learner an enhanced and fair opportunity to demonstrate the breadth, depth and relevance of their learning.

This decision was influenced by:

- ◆ recommendations in the OECD's independent review of Scotland's Curriculum for Excellence (CfE)
- ◆ the COVID-19 pandemic, which stimulated renewed debate around assessment following the cancellation of National 5, Higher and Advanced Higher exams in 2020 and 2021
- ◆ Professor Gordon Stobart's OECD paper (Stobart, 2021), which set out possible options for Scotland's future approach to assessment and qualifications, using a comparative perspective
- ◆ Professor Ken Muir's independent report (2022): *Putting Learners at the Centre: Towards a Future Vision for Scottish Education*
- ◆ Angela Morgan's Report (2020): *Support for learning: all our children and all their potential* (Scot Gov, 2022)

The review is independent of the Scottish Government, local authorities and other public bodies. Emerita Professor Louise Hayward will provide recommendations to the Cabinet Secretary for Education in May 2023 (Scot Gov, 2022).

Phase 1 of the review is now complete; it drafts the vision and principles that will inform the design and development of future qualifications and assessment. Phase 2 is currently underway; it involves exploring different options for the future of qualifications and assessment. Phase 3 will conclude with the publication of an interim report, which will contain an updated vision statement and set of principles, while also indicating a preferred option for the future of qualifications and assessment in Scotland (Scot Gov, 2022).

In October 2022, Phase 2 documentation was published online by the Scottish Government, inviting consultation responses on options for change. This documentation contained a list of questions for consideration. Question 4 asked respondents to share their thoughts on what a 'better balanced' assessment system would look like: it asked respondents to consider the balance between external examination and internal assessment, and comment on the frequency of examinations.

This research report addresses question 4 by exploring how seven high-performing jurisdictions have implemented their internal assessment practices, including identifying the quality assurance mechanisms they have put in place to ensure their assessment approaches are valid, reliable, practicable and fair. The report also compares how standards are maintained in this context. This leads to a range of things Scotland needs to consider when reviewing the balance between internal and external assessment in National Qualifications.

The research focuses on the current practice in the following jurisdictions:

- ◆ Australia (New South Wales)
- ◆ Finland
- ◆ Hong Kong
- ◆ Iceland
- ◆ New Zealand
- ◆ Norway
- ◆ Poland

## **Rationale for the focus of this report**

These seven jurisdictions were selected for study using the following criteria:

- 1 Programme for International Learner Assessment (PISA) 2018 international ranking placement
- 2 Trends in International Mathematics and Science Study (TIMSS) 2019 international ranking placement
- 3 use of internal assessment at the end of general upper secondary education (CA, 2021)

In Scotland, learners in the senior phase of secondary education, who are typically between the ages of 15 and 18, have the option to undertake National 5, Higher and Advanced Higher courses. These qualifications involve high-stakes external assessment. For this reason, the use of internal assessment at the end of 'general' upper secondary education was used as a criterion for selecting the high-performing jurisdictions. Vocational education and assessments have not been included within the scope of this report, since they typically involve very different forms of assessment, moderation and quality assurance, and they can constitute completely separate pathways.

## **Methodology**

A secondary research method was used to collect and analyse data from the seven jurisdictions. This research included a literature review to provide a contextual understanding of the high-performing educational systems of the selected jurisdictions, focusing specifically on the following:

- ◆ the role of internal assessment in secondary education
- ◆ moderation and quality assurance practices
- ◆ support for teachers and lecturers in implementing and grading internal assessments

By using a literature review approach, the report and its considerations aim to be evidence-based.

## **Limitations**

This report draws from information published in the public domain from online sources only, including international comparison websites, official government websites and websites of associated education and assessment agencies. Additionally, it only considers information published in English from these sources, but not information published in foreign languages.

## 2 The role of internal assessment

In recent years, there has been growing discourse about the purpose, role and frequency of high-stakes external assessment in secondary education. In 2020 and 2021, jurisdictions across the world were forced to cancel external examinations due to the impacts of the COVID-19 pandemic, which exposed the lack of resilience and flexibility in many systems (SQA, 2022a). This resulted in some jurisdictions awarding qualifications based on teacher-determined grades, including Scotland. This swiftly implemented change represented a radical shift in assessment policy and has created renewed debate about the need to strike the right balance between internal and external assessment practices in secondary education.

This section of the report will explore the secondary education assessment systems of the seven selected high-performing jurisdictions, specifically focusing on the role of internal assessment. Assessment is a value-laden social activity (Stobart, 2008); as such, it is important to bear in mind that the following assessment systems reflect the influence of specific societal, historical and cultural factors (SQA, 2022b).

Table 1 below provides a brief overview of assessment formats at the end of basic (lower secondary) education in the selected jurisdictions; Table 2 provides a brief overview of assessment formats at the end of upper secondary education in the selected jurisdictions.

**Table 1: Assessment at the end of basic secondary education**

<b>Jurisdiction</b>	<b>Age when compulsory education ends</b>	<b>Assessment at the end of basic secondary education - ages</b>	<b>Qualification or certificate name</b>	<b>Assessment type</b>
Australia (NSW)	17	15–16	Record of School Achievement (RoSA)	Internal assessment
Finland	18	15–16	Basic Education Certificate	Internal assessment
Hong Kong	15	14–15	n/a	External exams (system monitoring only)
Iceland	16	15–16	Compulsory Ed. Certificate	Internal assessment
New Zealand	16	15–16	NCEA — Level 1 (non-compulsory)	External exams and internal assessment
Norway	16	15–16	Compulsory Education Leaving Certificate	External exam (one subject) and internal assessment
Poland	18	14–15	Eighth-grader exam — no passing score	External exam
Scotland	16	15–16	Individual subject qualifications	N4: internal assessment; N5: external exams and externally set coursework (N4 / N5 optional)

**Table 2: Assessment at the end of general upper secondary education**

\*Net statutory teaching time in upper secondary education — OECD average: 684.1 hrs (OECD, 2022)

<b>Jurisdiction</b>	<b>Age when compulsory education ends</b>	<b>Assessment at the end of upper secondary education - ages</b>	<b>Qualification or certificate name</b>	<b>Assessment type</b>
Australia (NSW) Teacher contact time: 838.8 hrs* (2021)	17	17–18	High School Certificate (HSC)	External exams and internal assessment
Finland Teacher contact time: 567.0 hrs* (2021)	18	18–19	Certificate of Matriculation and/or Secondary Leaving Certificate	External exams and/or internal assessment
Hong Kong Teacher contact time: <i>Missing</i>	15	17–18	Hong Kong Diploma of Secondary Education (HKDSE)	External exams and internal assessment
Iceland Teacher contact time: 455.73 hrs* (2019)	16	17–20	Upper Secondary Certificate or Matriculation Certificate	Internal exams and internal assessment
New Zealand Teacher contact time: 760.0 hrs* (2021)	16	16–18	National Certificate of Educational Achievement (NCEA)	External exams and internal assessment
Norway Teacher contact time: 522.5 hrs* (2021)	16	18–19	Upper Secondary Leaving Certificate	External exams and internal assessment
Poland Teacher contact time: 483.3 hrs* (2021)	18	17–18	Maturity Certificate	External exams and oral internal assessment
Scotland Teacher contact time: 855.0 hrs* (2021)	16	17–18	Individual subject qualifications (option to take N5, Higher and Advanced Higher)	External exams and externally set coursework (generally for N5, H and Ad H)

## **Exploring the role of internal assessment**

The arrangements and practices of the seven selected high-performing jurisdictions are considered below in more detail.

### **Australia (New South Wales)**

#### **Overview**

Australia is made up of six states (New South Wales, Queensland, South Australia, Tasmania, Victoria, and Western Australia) and two territories (Australian Capital Territory and Northern Territory). Due to the federal nature of Australia's education system, the structure of education and assessment practices varies across the states and territories. However, recent years have seen more of a federal focus on education and alignment of policies and practice. For example, there is now a national Australian Curriculum, while previously, individual jurisdictions set their own curriculums. The Australian Curriculum, Assessment and Reporting Authority (ACARA) develops the national school curriculum; it is a source of advice on, and delivery of, the national curriculum, assessment, and reporting for Australian state and territory education ministers (ACARA, 2022). Education is administered at state level through the NSW Department of Education. The New South Wales Education Standards Authority (NESA) is an independent statutory authority responsible for the school curriculum for primary and secondary school learners.

In New South Wales, all learners must complete Year 10; until they turn 17 years of age, learners must be in full-time further education and training, or full-time paid employment of an average of 25 hours per week, or a combination of both.

#### **Higher School Certificate (HSC)**

Secondary school learners in NSW generally work towards the Higher School Certificate (HSC) in Years 11 and 12. To receive the HSC, learners must complete at least 12 units of Preliminary courses (Year 11) and 10 units of HSC courses (Year 12), including English.

For most HSC courses, a learner's final result is a combination of their HSC exam and school assessment marks. The HSC mark is usually a 50:50 combination of a learner's examination mark and school-based assessment mark for each course (NESA, 2022d).

NESA's syllabus packages, which include assessment and reporting documents, detail the mandatory components related to HSC assessment and the weighting to be applied to each of those components. Schools have considerable autonomy and have responsibility for determining practical and written tasks, such as projects, assignments and tests for assessments; schools can also determine the weighting of each task, except in instances where it is already specified by NESA. Schools are also responsible for providing written guidance detailing the school's assessment arrangements; such arrangements include guidance around assessment timing, administration, malpractice and appeals (NESA, 2022c).

#### **Record of School Achievement (RoSA)**

If learners leave school before completing the HSC, NESA issues a Record of School Achievement (RoSA) to eligible learners. The RoSA is a cumulative credential, containing a learner's record of academic achievement until the date they leave school. This could be between the end of Year 10 until and including some results from Year 12 (NESA, 2022b).



## **Assessment**

Learners sit a compulsory exam for HSC courses. All learners in the state will sit the same exam for each course, which NESA sets, conducts, and marks. Most courses have written exams, but some also have practical or performance exams. Each HSC exam assesses how learners achieve the learning outcomes from the course syllabus and contributes 50% of the final HSC mark for that course (NESA, 2022e).

School-based assessment marks contribute 50% of the final mark for HSC courses. These marks are submitted by schools for each course to indicate learners' achievements at the end of the course. The number of school-based assessment tasks is capped at four per course.

School-based assessment marks are based on:

- ◆ a wider range of syllabus outcomes, measured by external examination
- ◆ multiple measures and observations made throughout the HSC course

Learner performance in each HSC course is measured against defined standards. HSC marks for each course are divided into bands; each band aligns with a description of a typical performance by a learner within that mark range. HSC results will generally show three marks for each course: an assessment mark, an exam mark, and an HSC mark, which is the average of the first two marks. Learners will also be assigned a performance band, which shows how well they performed compared to other learners in the course (NESA, 2022d).

## **Finland**

### **Overview**

In Finland, the Finnish National Agency for Education (EDUFI) assists the Ministry of Education and Culture in preparing and implementing national education policies. It is also responsible for preparing the National Core Curriculum and determining the requirements for qualifications (EACEA 2022a). At a national level, the Finnish Matriculation Examination Board is responsible for the development, content and administration of the Matriculation Examination (O'Donnell 2008). The Matriculation Examination is now organised digitally. From 2020, traditional paper tests have no longer been organised (YTL, 2022a).

A new National Core Curriculum for general upper secondary education was implemented in 2021 with changes that include incorporating transversal competences into all subjects and introducing a modular structure to replace courses by credits. These curriculum reforms coincide with other reforms introduced in 2021 to extend compulsory education in Finland from 16 years to 18 years (EACEA 2022b).

At a local level, education providers (municipalities or schools) create their own local curriculum, based on the National Core Curriculum (EACEA 2022c). This allows teachers to devise, shape and tailor their own local curriculum based on the national framework (EACEA 2022d).

### **Basic Education Certificate**

Learners who complete basic education are awarded a Basic Education Certificate by the education provider, which is normally the school. The scale of numerical grades used is 4–

10, where 5 is adequate, 6 moderate, 7 satisfactory, 8 good, 9 very good, and 10 shows excellent knowledge and skills. Grade 4 is for failed performances. No assessment of a learner's behaviour is included. In the majority of cases, the certificate is required for continuing studies in upper secondary education (EACEA 2022f).

## Upper secondary education

There are a number of certificates awarded for upper secondary education in Finland:

- 1 **Upper Secondary School Leaving Certificate (General)** — awarded to a learner who has completed the entire general upper secondary school syllabus
- 2 **Certificate of Matriculation** — awarded to a learner who has acceptably passed the compulsory tests of the Matriculation Examination and who is awarded the upper secondary school certificate
- 3 **Certificate for Completion of a Syllabus** — awarded to a learner who has completed the syllabus of one or more upper secondary school subjects
- 4 **Certificate of Resignation** — given to a learner who leaves school before completing the entire general upper secondary school syllabus (EACEA 2022e).

## Assessment

There are no national examinations or high-stakes external assessments in basic education. Assessment at this stage is mainly formative and takes the form of 'assessment during study', focused on continuous feedback and developing learners' self-assessment skills. This is complemented by the internally assessed final assessment, which takes place at the end of a course of study. The purpose is to define how well a learner has achieved the objectives of the syllabus. This assessment must be nationally comparable and treat learners equally, as the grades are marked in the Basic Education Certificate (EACEA 2022f).

There are two main forms of assessment in general upper secondary education: course assessment and the Matriculation Examination. Course assessment is based on objectives defined in the National Core Curriculum and consists of formative internal assessments and a final, summative assessment for each subject of study, which is internally assessed by the school principal and subject teachers. The grade awarded for the overall subject syllabus is the mathematical average of the grade awarded for the learner's individual courses. The grading scale is the same as the basic general education grading scale, with grades ranging from 4 (fail) to 10 (excellent). If learners are not satisfied with their grade, they can ask the principal for a remark within fourteen days of receiving their results (O'Donnell 2018).

The Matriculation Examination consists of at least five assessments (the minimum number of assessments increased from four to five in 2022). Among them, the test in the learner's first language is compulsory. The learner then chooses four other subjects from:

- ◆ Second domestic language
- ◆ Foreign languages
- ◆ Mathematics
- ◆ General studies (that is, science and humanities subjects)

The Matriculation Exam aims to measure whether learners have met the requirements of the upper secondary curriculum, whether they have achieved sufficient maturity and

accomplishment to be eligible to continue their studies in further education. The exam is held twice a year and learners have the option of completing assessments over a maximum of three consecutive exam periods. Learners may re-take a failed examination once and there are no limits on the number of re-sits they can take to improve their pass grade (O'Donnell 2018).

The Matriculation Examination Board is responsible for issuing guidance on the arrangements for administering the Matriculation Exam and sets standards for marking by providing marking criteria (O'Donnell 2008). Since 2019, the exam has been fully digital and delivered online. The exams are initially marked by teachers based within the learner's own school before they are sent to the Matriculation Board for moderation.

## **Hong Kong**

### **Overview**

Hong Kong's central education authority is the Education Bureau (EDB), led by the Secretary for Education. The EDB is responsible for the development, review, and implementation of education policies, programmes, and legislation for pre-primary to post-secondary education. The EDB also monitors the work of several key organisations in education, including the Hong Kong Examinations and Assessment Authority (HKEAA), which is the independent statutory body responsible for administering jurisdiction-level assessments (NCEE, 2021).

The 'Learning to Learn' curriculum reform that started in 2001 promoted changes in the curriculum and teaching methods to foster learners' whole-person development (HKEDB, 2022). The curriculum outlines competences and generic skills such as collaboration and problem solving; in addition, values and attitudes are incorporated across the curriculum. Schools must incorporate five essential learning experiences into teaching and learning: moral and civic education, intellectual development, community service, physical and aesthetic development, and career-related experiences. These should be provided through a combination of in- and out-of-classroom learning, representing a shift away from rote learning towards more creative and interactive experiences (NCEE, 2021).

Children in Hong Kong attend primary schools for six years, followed by junior secondary education for three years and upper secondary education for three years. School is compulsory up to the age of 15 (NCEE, 2021).

### **Hong Kong Diploma of Secondary Education (HKDSE)**

On completion of upper secondary education, most learners will take the Hong Kong Diploma of Secondary Education (HKDSE). Most learners take four core subjects (Chinese Language, English Language, Mathematics and Liberal Studies) and two to three elective subjects from:

- ◆ Category A: (traditional academic) senior secondary subjects
- ◆ Category B: applied learning (ApL) subjects (with a vocational/professional practice focus)
- ◆ Category C: other language subjects (HKEAA, 2022a)

Liberal Studies will be replaced by Citizenship and Social Development from 2024 (HKEAA, 2022b).

## Assessment

There are no high-stakes, jurisdiction-level assessments in Hong Kong until the end of upper secondary school. At the end of lower secondary school, S3 learners (14–15 years old) must sit tests administered by the HKEAA, which constitute the low-stakes Territory-wide System Assessment (TSA). The TSA tests provide objective data on learner performance in three subjects: Chinese Language, English Language and Mathematics (HKEAA, 2022c). The results of the tests are used for the purposes of system monitoring and improvement only (NCEE, 2021).

The majority of assessment for the HKDSE is external; depending on the subject, exams comprise a variety of essay questions, structured questions, short questions, and multiple-choice questions (UCAS, 2016). Exams are set, marked, and graded by HKEAA (HKEAA, 2018a). There is no public exam for Category B subjects (ApL); assessment is undertaken by course providers and moderated by HKEAA. (HKEAA, 2018a). Until 2025, Category C subjects (other languages) are set, marked, and graded by Cambridge International (HKEAA, 2018a).

Hong Kong introduced school-based assessment (SBA) in phases from 2012 (NCEE, 2021). Schools administer SBA as part of the learning and teaching process, with subject teachers assessing the learners. The main rationale for SBA is to enhance the validity of the public assessment and extend it to include a variety of learning outcomes that cannot be assessed easily through public examinations (HKEAA, 2013). SBA marks awarded count towards learners' results in the HKDSE examinations. SBA typically makes up 15–20% of a learner's mark in the subject (HKEAA, 2022b). However, not all subjects have an SBA component (NCEE, 2021). While the authorities announced that all Category A subjects would include SBA by 2019, there is currently no SBA in Mathematics or Citizenship and Social Development, which will replace Liberal Studies in 2024 (HKEAA, 2022b).

According to the HKEAA, SBA:

- ◆ *integrates learning and teaching with assessment*
- ◆ *offers a more comprehensive appraisal of learners' performance*
- ◆ *helps learners understand their strengths and weaknesses through quality feedback from teachers, leading to continuous improvement*
- ◆ *boosts learners' confidence and motivation to learn*
- ◆ *enhances autonomous learning*
- ◆ *enables learners to achieve their best in a more relaxed and familiar setting (HKEAA, 2013, p1)*

Learning outcomes are assessed using a wide variety of forms, such as assignments, written reports, oral presentations, group discussions, project work and practical work. Teachers must explain SBA requirements to learners, administer SBA as part of the teaching and learning process, and assess learners according to the stated procedures and criteria. Additionally, they must submit SBA marks and samples of learner work to the HKEAA (HKEAA, 2013)

There is no overall grade for the HKDSE as a whole. For each subject, the HKDSE certificate lists both subject level results and component level results (if any). SBA is an integral part of Category A subjects, so SBA results are not reported separately. Moderated SBA results are combined with public examination results to form an overall component level

(for Chinese Language, English Language and Combined Science only) or subject level as appropriate (HKEAA, 2018a).

## **Iceland**

### **Overview**

Iceland operates a two-tiered decentralised education system involving the central government and municipalities. There is no administration of schools at a regional level; no separate national agencies or bodies sit between the Ministry of Education, Science and Culture and the municipalities (EACEA, 2022g). This simple governance structure may reflect the country's relatively small population of fewer than 350,000 inhabitants (EACEA 2022i). Nationally, the Ministry of Education, Science and Culture is responsible for the implementation of legislation at all school levels and for producing the National Curriculum Guide (EACEA 2022h). The National Curriculum Guide defines the school's role in teaching, subject content and required learning outcomes within each subject area. The guide emphasises the importance of formative assessment and states that the methods of assessment used must be varied; there should be oral, practical, written and pictorial assignments and tests, as well as group work and projects carried out within a limited timeframe and with unlimited time (MESC, 2011). Study assessment should be reliable, impartial, honest and fair for learners. Evaluation should include all aspects of education: knowledge, skills and competence with reference to the criteria provided (EACEA, 2022j).

Compulsory education in Iceland forms a single-structure system, where primary and lower secondary education form part of the same school level, and generally take place in the same school. Legislation on compulsory education states that education is mandatory for children between the ages of 6 and 16 (EACEA, 2022i). Learners leaving school at the age of 16 are awarded a compulsory education (Grunnskólapróf) certificate, which proves that they have completed compulsory education and records their final-year study assessment report based on school grades (EACEA, 2022j). Upper secondary education in Iceland is not compulsory, but any learner who has completed compulsory education has the right to enter an upper secondary school. Learners in upper secondary education are usually between 16 and 20 years of age (EACEA, 2022m).

### **Upper Secondary School Leaving Examination**

The upper secondary school leaving examination leading to the Upper Secondary Education (Sveinspróf) Certificate aims to meet the needs of learners who do not aim at other forms of graduation. The extent of the upper secondary school leaving examination depends on the final objectives of the studies but should always be 90 to 120 secondary school credits (MESC, 2011).

### **Matriculation Examination**

The Matriculation Examination aims to prepare learners for university education. Duration of study for the Matriculation Examination can differ depending on study programmes and schools, but the learners' contribution must not be less than 200 secondary school credits (MESC, 2011). The scope of the matriculation syllabus is three years, but the studies may be accomplished in two, three or four years (EACEA, 2022m).

### **Assessment**

In upper secondary education, teachers in schools are responsible for general study assessment. Learner evaluation comprises both continuous assessment and final

assessment at the end of each semester. Teachers devise and mark examinations. Upon receiving their marks, all learners have the right to inspect their examination papers in the presence of a teacher. There are no external examiners except in the event of a dispute between a teacher and a learner. There are no formal comprehensive final examinations in schools that operate according to a unit-credit system (EACEA, 2022m).

Grades are awarded in whole numbers on a scale from one to ten in all schools, ten being the highest. The final grade consists of a semester grade and an exam grade. The semester grades consist of various components, such as homework, class assignments, oral presentations and tests (MH, 2020).

Assessment practice varies between teachers, across schools and between courses. For this reason, it is difficult to give a definitive account of the proportion of marks awarded for different assessment components. This level of variability makes it difficult to define the role of internal assessment within Iceland's system without going into an extremely granular level, that is, looking at individual courses within individual secondary schools. As an example, in the International Baccalaureate Diploma programme (a demanding two-year programme taught in English for pre-university learners), 70% of the marks for languages are based on internal summative assessment that takes the form of examinations, while 30% of the marks are based on internal formative assessments administered throughout the school year (MH, 2022).

## **New Zealand**

### **Overview**

At a national level, New Zealand's Ministry of Education (MoE) develops strategic policies and delivers services to the education sector. The MoE supports teachers' and principals' professional leadership, learning and teaching by developing national guidelines. The national curriculum provides a common framework for schools; it is flexible, granting schools the freedom and scope to develop their own school curriculum. School curriculums are also flexible to allow teachers to make interpretations that meet the needs and interests of learners in their classes (MoE, 2015).

The MoE is responsible for monitoring the performance and capacity of the New Zealand Qualifications Authority (NZQA). The NZQA has a wide range of responsibilities that include:

- ◆ administering the National Certificates of Educational Achievement (NCEAs) for secondary school learners
- ◆ developing and maintaining the New Zealand Qualifications Framework (NZQF)
- ◆ managing the external assessment of secondary school learners
- ◆ moderating secondary schools' internal assessment activities and processes
- ◆ acting as a standard-setting body

Learners in New Zealand must attend school until they are 16 years old. Study at secondary school begins when learners are 12 or 13 years old and lasts about five years, from Year 9 to Year 13 (MoE, 2015).

### **National Certificate of Educational Achievement (NCEA)**

The NCEA is the main secondary school qualification in New Zealand. The NCEA is a flexible unit-based qualification designed to offer learners greater choices in tailoring their

pathway; it also gives teachers the freedom to develop cross-curricular courses. To attain the NCEA, learners must meet assessment standards, many of which are internally assessed. The NCEA provides recognition of achievements in a broad range of settings, such as academic and vocational learning in different environments (O'Donnell, 2018).

The NCEA takes the form of three separate certificates, which are awarded at Levels 1, 2 and 3. Learners usually begin studying for their NCEA Level 1 in Year 11 and continue through Years 12 and 13 (from ages 15 to 18). Each year, learners study a number of courses or subjects. In each subject, skills and knowledge are assessed against a number of standards. Schools use a range of internal and external assessments to measure how well learners meet these standards (NZQA, 2021a).

## **Assessment**

Assessment at the end of basic secondary education is for NCEA Level 1; it includes internal assessment and external exams. The decision to deliver NCEA Level 1 is optional for schools. Assessment for the NCEA is based on learner achievement in a range of unit or achievement standards that assess the knowledge and skills related to a subject. Achievement standards can be internally or externally assessed, while unit standards are assessed internally. Each standard is worth a specific number of credits (Careers, 2022). In addition to written work, internal assessment can include practical activities, experiments, presentations, and performances.

External assessment takes the form of national examinations held at the end of each year, or the submission of a portfolio of work for some practical subjects. Learners are assessed against a maximum of three external achievement standards in a three-hour session for each subject. The NZQA is responsible for implementing national examinations, which take 18 months to develop, involving multiple stages of subject expert review (NZQA, 2022). Independent subject experts are contracted by the NZQA to mark the work of learners to ensure standardisation (O'Donnell, 2018).

## **Norway**

### **Overview**

In Norway, the Ministry of Education and Research has overall responsibility for the 13-year education and training system provided by primary and secondary schools. The Directorate of Education and Training is responsible for the development, implementation and administration of the overall system of testing and assessment. This includes centrally devised examinations. The municipalities are responsible for operating and administering primary and lower secondary schools (compulsory education), while county authorities are responsible for upper secondary education and training (EACEA, 2023b).

Primary and lower secondary education form a single-structure compulsory education system under a common legislative framework and a national curriculum. Primary education spans Years 1–7, while lower secondary education covers Years 8–10 (EACEA, 2023c). Education is compulsory from 6 to 16 years of age. Learners who have completed primary and lower secondary education or equivalent have a statutory right to three years of upper secondary education and training (EACEA, 2023d).

The National Curriculum for Knowledge Promotion encompasses the 10-year compulsory primary and secondary education, as well as upper secondary education and training as a whole. The curriculum consists of:

- ◆ the Core Curriculum
- ◆ the Quality Framework
- ◆ subject curriculums
- ◆ a framework regulating the distribution of periods and subjects

One of the main principles of the curriculum is the introduction of more freedom at a local level with respect to curriculum work, teaching methods and teaching materials (EACEA, 2023a). The curriculum at upper secondary level is competence-based and aims to give young people a broad education. (EACEA, 2023d).

### **Primary and Lower Secondary Leaving Certificate**

At the end of compulsory education (Year 10), the results of external exams and internal assessment are recorded on the Primary and Lower Secondary Leaving Certificate.

### **Upper Secondary Leaving Certificate**

At the end of upper secondary education, learners are awarded the Upper Secondary Leaving Certificate. To gain the certificate, learners must pass all subjects and examinations according to the curriculum. The certificate lists the necessary compulsory subjects and the subjects related to any chosen programmes. The grades recorded on certificates are awarded by the subject teacher; they indicate the learner's level of achievement in the subject, with the addition of examination grades (EACEA, 2023g).

### **Assessment**

In recent years, Norwegian schools have been increasing emphasis on continuous and formative assessment. From Year 8, learners are awarded overall achievement marks for each subject studied. Overall achievement marks are based on a broad range of assessments to demonstrate the competence achieved in the subject as a whole.

At the end of lower secondary education (Year 10), learners take national examinations; they must take a centrally set written examination in one of the following subjects: Norwegian, Mathematics, Sami, or English. It is decided locally which groups of learners will sit which of the subjects. Learners are told which subject they must sit only a few days before the examination. These exams are centrally devised and externally marked. In addition, most learners also sit an oral exam that is organised locally and may be in any of the school subjects, except Arts and Crafts, Home Economics, and Physical Education. In subjects where the learners have not taken an examination, the final mark is based on the teacher's assessment of the learner throughout the year (EACEA, 2023f). The results of the external examinations are combined with overall achievement marks awarded by teachers at the end of compulsory education and recorded on the Primary and Lower Secondary Leaving Certificate.

At the end of upper secondary education, written examinations are taken; they are compulsory for the five general study areas leading to higher education. Additionally, learners normally take at least two written examinations in two other subjects. Learners are given 48 hours' notice before sitting oral exams and 24 hours to prepare a response to a given theme or problem. External examinations are set by the Directorate for Education and Training and assessed by examiners appointed by the Directorate. The counties are



responsible for selecting subjects and learners for examination, based on a framework from the Directorate of Education (SQA, 2022b). Learners should be distributed for examination through random selection. A consequence of random selection is that the number of exams per learner may vary, which may influence the number of grades available for computing the average sum of marks for entry into higher education (EACEA, 2023g).

Two types of grades are awarded:

- 1 Grades for overall achievement in each subject, which are based on formative and summative internal assessment undertaken by teachers based on practical work, classwork, homework, project work and group work over the course of the school year — overall achievement grades are awarded on a six-point scale with 1 being the lowest and 6 being the highest.
- 2 Grades awarded for end-of-year examinations using the same grading system — As a safeguard against possible error, a separate commission of examiners deals with appeals and their decision is final (EACEA, 2023g).

## **Poland**

### **Overview**

In Poland, the Minister in charge of school education is responsible for the national educational policy. They co-ordinate and implement the national education policy and co-operate with regional authorities and province governors. Regulations and arrangements set by the Minister include:

- ◆ National Core Curriculum for general and vocational education
- ◆ content of general and vocational education and associated textbooks
- ◆ detailed rules for assessing and promoting learners
- ◆ detailed arrangements for conducting Eighth-Grader examinations and maturity examinations
- ◆ arrangements for issuing certificates
- ◆ establishment of regional examination boards and specification of their territorial jurisdiction (EACEA, 2022n)

Within the framework of the national core curriculum, teachers are free to develop their own lessons, individually or in collaboration with other teachers; or, they can choose to teach a commercial curriculum and adapt it as necessary. There is no requirement to develop a school-level curriculum for approval at a national level; instead, teachers must submit their curriculum plans to the school principal for approval, who will consult with the school's teaching council (NCEE, 2022).

Education in Poland is compulsory from 6 to 18 years of age. The Polish school system has been undergoing reform since 1 September 2017. The previous system consisted of six years of primary school education, three years of lower secondary education, and three to four years of upper secondary education. The new system combines primary education and lower secondary education. Learners now attend primary school for eight years before continuing their studies in upper secondary schools for a duration of four to five years, which represents a one-year extension of upper secondary education (EACEA, 2022o). The new system is expected to be fully in place in the school year 2022–23.

## **Eighth-grader exam**

The eighth-grader exam is a written exam that learners take at the end of basic secondary education. Following the education reform in Poland, it takes place at the end of the eight years spent at primary school (single-structure education), when learners are around 14 to 15 years of age. The exam aims to assess the extent to which a learner meets the requirements set in the core curriculum. Currently, the exam covers the following compulsory subjects:

- ◆ Polish language
- ◆ Mathematics
- ◆ Modern foreign language
- ◆ one subject chosen from among Biology, Chemistry, Physics, Geography and History

External examiners mark the eighth-grader exam and the District Examination Commission sends the results to schools along with the primary school leaving certificates. Results of the eighth-grader exam have no impact on the completion of primary education and there is no minimum passing score. However, the results are used as part of the selection criteria for applying to post-primary schools (EACEA, 2022p).

## **Maturity exam**

The maturity exam takes place at the end of general upper secondary education in Poland. Prior to 2005, teachers assessed the maturity exam in their own schools. However, following the reform of the assessment system, the exams are now implemented nationally and marked by external examiners to make the results more objective. Higher education institutions no longer run their own entrance exams and instead base entry decisions on the results of the maturity exams.

Sitting the maturity exam is not compulsory, but learners must pass the exam to be able to apply for higher education courses. On finishing general secondary education, learners receive a school leaving certificate, which details the end-of-year marks (internally assessed) for all subjects in the final grade, without results of the final examination. This certificate provides access to a post-secondary (non-tertiary) school or the maturity exam (EACEA, 2022q).

## **Assessment**

Internal assessment in upper secondary schools in Poland is mainly formative as opposed to summative, with the exception of the maturity exam. The maturity exam consists of two parts:

- 1 oral assessment (internally assessed by individual schools)
- 2 written examination (externally set by the Central Examination Board and marked by examiners listed on the registers of Regional Examination Boards) (ENIC-NARIC, 2020)

The written part of the exam covers the following compulsory subjects, assessed at the basic level: Polish language, mathematics, and a modern foreign language. Learners must also choose one to five additional subjects from a large range of options, which is assessed at an advanced level. The oral part, assessed by teachers, covers Polish language and a modern foreign language as the compulsory subjects. Learners should also choose one additional subject from a list of language-related courses. Unlike the written part, the level (basic or

advanced) is not defined for oral examinations. Additionally, learners may voluntarily choose to sit up to five exams in additional subjects. The results of these exams do not count towards passing the maturity exam but are still indicated on the certificate. To pass the maturity exam, the learner must score at least 30% of points in each of the compulsory subjects (both written and oral) and sit a written examination in an additional subject at the advanced level. Learners can re-sit exams to improve their results (ENIC-NARIC, 2020).

Results of the maturity exam are considered final in principle. Learners can file an appeal with the Examination Arbitration Committee if the Director of their Regional Examination Board refuses to verify their scores (EACEA, 2022r).

## Discussion

### The role of internal assessment in upper secondary education

Internal assessment practices across the selected jurisdictions vary considerably, with different forms, different degrees of curriculum flexibility, and different levels of teacher autonomy. Across the jurisdictions, no dominant method of internal assessment could be identified. In practice, however, this variation may reflect the flexibility in what summative and formative internal assessment can deliver. In Hong Kong, learning outcomes are internally assessed using a wide variety of forms such as assignments, written reports, oral presentations, group discussions, project work and practical work. In Norway, 'overall achievement' marks are awarded by teachers on a scale from 1 to 6, where 6 indicates high competence and 1 indicates low competence. In Poland, only the oral assessment portion of the maturity exam is internally assessed. In both Iceland and NSW, schools have considerable autonomy and responsibility for determining practical and written tasks, in addition to the weighting of each task, (except in NSW for subjects where the weighting has already been specified by NESA). Schools in both jurisdictions are responsible for providing written guidance detailing the school's assessment arrangements. Such arrangements include guidance around assessment timing, administration, malpractice and appeals. This high level of trust and autonomy creates a variety of approaches that, in turn, create challenges in ensuring consistency of approach and provision.

There is also great difference in the proportion of marks and influence on grading that internal assessments have in each jurisdiction. In NSW, for example, when specified by NESA, internal assessment generally constitutes 50% of the overall mark awarded for each course that forms part of the HSC. In Hong Kong, on the other hand, school-based assessments typically account for up to 15–20% of a learner's mark in a subject, which counts towards the HKDSE examinations. In contrast, Iceland awards the Upper Secondary Certificate and Matriculation Certificate based entirely on the results of formative and summative internal assessments.

Despite these differences, there is commonality to be found across all the jurisdictions studied with regard to the perceived role internal assessments play and the benefits derived from them. NESA, for example, states that 'measuring achievement at several points during the course can provide a better indication of learner achievement than a single, final assessment event' (NESA, 2022c). Similarly, New Zealand's Ministry of Education has stated that assessment for the NCEA is fairer as it gives a full picture of what a learner can do by taking into account all of their learning throughout the school year, as opposed to relying heavily on the results of high-stakes external examinations. Since NCEA was introduced, 'more learners are leaving school with qualifications' (MoE 2022a). In Hong Kong the 'Learning to Learn' curriculum outlines competences and generic skills such as

collaboration and problem solving in addition to values and attitudes, which are to be incorporated across the curriculum (NCEE, 2021). The main rationale for school-based assessment (SBA) is to assist with assessing these less tangible outcomes, enhancing the validity of the external exam by ensuring assessment includes a variety of learning outcomes that cannot be assessed easily through external examinations (HKEAA, 2013).

This suggests that internal assessments could provide a better account of a learner's achievement, particularly in more complex and less tangible skills, such as collaboration and creativity (Stobart, 2021). These are precisely the kind of skills that make up the 'four capacities' of Scotland's Curriculum for Excellence — successful learners, confident individuals, responsible citizens and effective contributors. It would require extensive consultation across the system to agree the contribution of internal assessments to overall grading, in a way that reflects Scotland's assessment culture. While the increased use of internal assessment in National Courses would reduce the contribution of external examinations to a learner's overall grade, it could be argued that such internal assessments would be no less high stakes. 'Almost any form of internal assessment can have high stakes associated with it for students' (CA, 2021, p12).

If introducing increased internal assessment into national courses, such components would need to have an appropriate blend of prescription and flexibility to ensure consistency in approach while also providing the autonomy necessary to allow for effective implementation across a wide range of teaching and learning contexts. Effective implementation of internal assessments will likely have an impact on teaching practices and teacher workloads. With regard to teacher time, the OECD have already identified that 'a tension exists between Scotland's comparatively high rate of teachers' class contact time and the expectations for teachers to lead and plan curricula locally' (OECD, 2021a p.125). Logically this tension could be extended to the time / capacity teachers have available to implement internal assessments. In New Zealand, critics of the NCEA claim that increased internal assessment volume is increasing teacher workloads, resulting in less time for teacher–learner interaction (NZI, 2018). In Scotland, internal assessments for units, which previously formed part of National 5, Higher and Advanced Higher courses, faced similar criticisms; the administrative burden of internal unit assessments was deemed to be increasing teacher workloads and the assessment burden on learners (Scot Govt, 2016). In response, Scottish Government enacted an education reform in 2017 which removed these internal unit assessments from National 5, Higher and Advanced Higher courses. Following their removal, course content that had previously been internally assessed was incorporated into the external assessment, increasing mark allocation, duration and, in some cases, weighting of the examination.

### **Assessment at the end of lower secondary education**

When comparing the assessment arrangements at the end of basic secondary education, across the selected jurisdictions, as summarised in Table 1, it becomes clear that a variety of approaches are used. In NSW, Finland and Iceland, assessment is exclusively internal with no high-stakes examinations featuring at this stage. Where external examinations do feature as an aspect of lower secondary education, they appear to satisfy two main roles: firstly, to monitor the quality and effectiveness of compulsory education (Hong Kong, Norway) and secondly, to provide a grade upon which application and selection to upper secondary schools can be made (Poland). An exception to this would be New Zealand, where achievement of NCEA at Level 1 includes both internal assessment and external exams. However, the decision to deliver NCEA Level 1 is optional for schools. Recently, some schools have complained that three levels of assessment for the NCEA is excessive. It

is for this reason that they have withdrawn from offering NCEA Level 1, to avoid over-assessment, except in those cases where learners need to undertake NCEA Level 1 as an exit qualification. In terms of teaching and learning, such schools have chosen to focus on preparing learners for Levels 2 and 3 of the NCEA with end-of-topic tests and assessments instead (Dwyer, 2021).

In Scotland, learners move into the senior phase of secondary education around the age of 15, when they enter fourth year (S4), which is the last year of compulsory education. It is at this point learners have the option to sit subject-specific National 5 assessments, which, in the majority of cases, take the form of external written examinations and externally set and marked coursework. Following this, most learners, around 88%, will go on into their fifth year (S5) to sit Highers (Stobart, 2021). Learners who go on to sixth year (S6) choose, in the main, to study Higher and Advanced Higher courses. This represents three consecutive years of high-stakes external assessments in the senior phase. The OECD has highlighted that these three successive tranches of high-stakes external assessment that begin in S4, are creating a 'backwash effect' into third year (S3). This suggests learners in S3 who are still in broad general education (BGE) are having their broad learning experience negatively impacted by the pressure to begin preparing for narrower, high-stakes, subject-specific external assessments in S4. It is important to note that these three successive years of high-stakes external examinations are not part of the intended design for Scotland's CfE, but that this is a product of the way CfE has been implemented.

The purpose of high-stakes external assessments for learners under the age of 16 in Scotland does not appear to align with the purposes identified in the other jurisdictions studied. While the outcomes of these assessments may contribute to system monitoring, arguably that is not their primary function. Furthermore, as these assessments take place in upper secondary school, they do not serve as criteria for selection of learners to different secondary schools, as is the case in Poland. As National 5 examinations must be taken in each individual subject studied, their utility as an exit qualification is limited in terms of providing a breadth of evidence regarding the completion of a broad compulsory education. 'Breadth of learning cannot be equated with maximising the number of subjects a learner takes' (OECD, 2021a, p119).

It is important for Scotland's education system to reach a clear agreement about the purpose of assessment at the end of compulsory education. This will help when considering the balance between internal and external assessment in National 5 courses. There are, for example, many qualifications at SCQF level 5 which do not involve high stakes external assessment, but these have comparatively low uptake from learners compared to National 5 qualifications. This may reflect a difference in esteem between SCQF level 5 qualifications that are internally assessed and National 5 qualifications which are, in the main, externally assessed.

### **Assessment at the end of upper secondary education**

One obvious area of alignment between the jurisdictions studied was that they all offered learners a journey towards a single qualification or certification in upper secondary education. Often this took the form of an upper secondary education leaving certificate or specific certificate, such as Maturity Certificate or Matriculation Certificate, needed if a learner planned to continue their studies in a higher education institution in Poland. Learners who wish to attend a post-secondary (non-tertiary school) can opt out of sitting the maturity exam and instead exit upper secondary education with a school leaving certificate that

details end-of-year (internally assessed) marks for all subjects in the final grade (EACEA, 2022q). In NSW, HSC qualification results will generally show marks for each subject studied, however these marks are broken down into three categories: an assessment mark (internal) an exam mark (external), and an overall HSC mark, which is the average of the first two marks.

In Scotland, however, there is no leaving certificate or single qualification undertaken at the end of upper secondary education. Instead, individual subjects are undertaken, mainly at Higher and Advanced Higher level. Results are recorded on the Scottish Qualifications Certificate (SQC), which is issued to the learner and provides a detailed record of achievement for all the SQA courses, group awards and stand-alone units they have achieved. There may also be a need to capture broader learner achievement, extending beyond certificated qualifications towards the recognition of specific skills, competencies or experiences. How this can be achieved in practice will need to be considered along with how learner achievement is captured and profiled by schools, each year and at key transition points.

### 3 Tensions between reliability and validity

'Public confidence in any qualification system is essential to maintain the currency of the certificates for the learners whose life chances depend upon them' (Baird et al. 2022, p4). It is vitally important therefore, that assessments are valid, reliable, equitable, fair and practicable. The Scottish Qualifications Authority (SQA) defines validity as a measure of the accuracy of an assessment:

*An assessment is valid when it:*

- ◆ *is appropriate for its purpose*
- ◆ *has been designed to allow learners to show that they have the required knowledge, understanding and skills to meet the standards of the qualification*
- ◆ *allows all assessors to make reliable assessment decisions*
- ◆ *allows the interpretation and inferences which can be drawn from the assessment outcomes to be meaningful and justifiable (SQA, 2017, p8)*

There are two key aspects of validity used by SQA, content validity and construct validity. Content validity is the measure of how closely the content of an assessment matches the content within the qualification specification published by SQA. It is concerned with the level of knowledge, understanding and skills that is required to meet the standard of the qualification. Construct validity concerns the extent to which an assessment 'actually measures what the qualification specification states it is intended to measure' (SQA, 2017, p8).

For an assessment to be valid it must also be reliable. The concept of reliability relates to the consistency of the assessment scores across time, place, conditions and markers. Checking the reliability of an assessment is essential to ensure that learners are being scored without bias:

*Reliability is achieved by:*

- ◆ *assessments with high content and construct validity*
- ◆ *the use of consistent conditions of assessment*
- ◆ *standardisation exercises by assessors (SQA, 2017, p41)*

SQA considers validity and reliability to be interdependent. An examination which produces inconsistent results cannot provide valid evidence of a candidate's achievement (SQA, 2017). This is supported by SQA's assertion that reliability is achieved by assessments with both high content and construct validity.

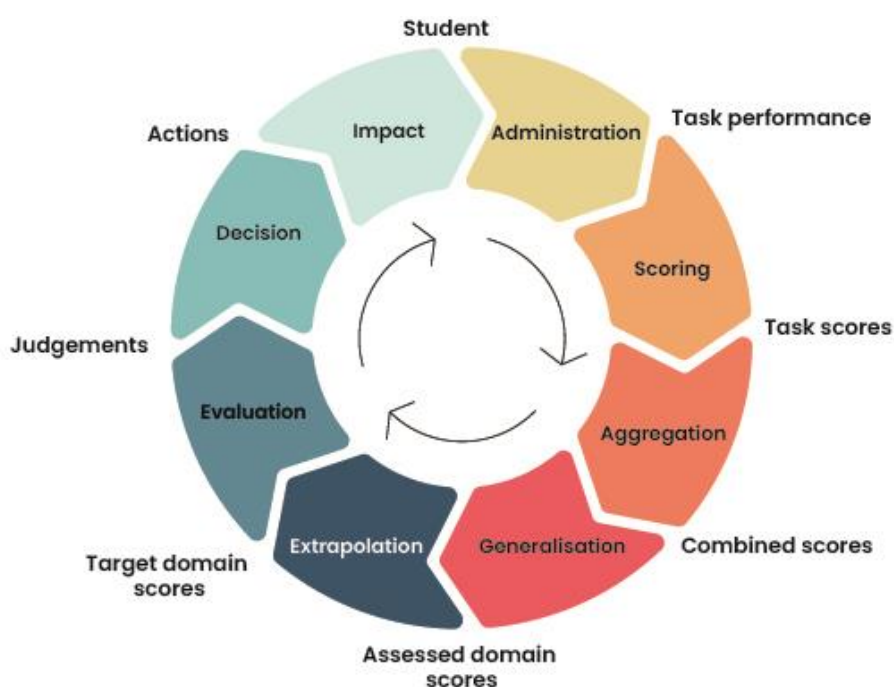
Nevertheless, there are tensions between reliability and validity within assessment. In particular, the validity of an assessment may have to be balanced against reliability of marking. For example, different subject domains require different assessment approaches to ensure validity. Specific topics within subjects, where there is an unambiguous 'correct' answer, may lend themselves to objective tests of particular knowledge and skills. These tests are highly reliable, because markers can agree what the 'correct' mark should be. In contrast, other subjects may require test items which involve a more complex response to ensure they validly assess the underlying construct. The longer and more complex the response, as in the case of an essay, the more a marker will need to interpret the marking scheme. This can often lead to lower reliability, and variation in marking quality. For this

reason, Bramley (2007) suggests that in order to ensure high validity of assessments, lower reliability must be an acceptable consequence.

Other aspects of validity which must be considered are fairness, equity and practicability. SQA defines equality and fairness in terms of ensuring that there are no unnecessary barriers to assessment in the specification of skills, knowledge and understanding or the development of the assessment. This is fundamental to ensuring assessments provide equal opportunity for learners to demonstrate their attainment (SQA, 2017). SQA defines practicable assessments as being capable of being carried out efficiently and effectively. Practicability issues generally relate to resource and time. As such, reliability, equity, fairness and practicability can be regarded as underpinning aspects of validity, as an assessment that produces inconsistent results, is inequitable, unfair or impractical, cannot be deemed valid.

When considering validity, it is important to also consider the threats to validity that can occur when using assessments. The two main threats to validity are 'construct under-representation', which occurs when the test is not adequately measuring the embedded traits, or the construct it intends to measure, and 'construct irrelevance variance', which occurs when the test is measuring something unrelated to the intended construct (Newton, 2014, p.178). There are, however, many other threats to validity and when considering these in the context of using assessments, it is useful to think of these using the Crooks, Kane and Cohen 'eight chain model' of validation (Crooks, Kane, and Cohen, 1996). The model presents a defined set of validation criteria, with each link in their chain representing a stage in the assessment process. At each stage potential threats to validity are presented for consideration. The chain itself provides a valuable metaphor for use as it emphasises the interconnected nature of the different stages and the fact that a weakness found in one link can affect the whole chain. The eight stages are pictured in Diagram 1 and described in more detail in Table 3 below.

**Diagram 1:** Threats to the valid use of assessments (8-chain model) (Crooks, Kane, and Cohen, 1996, p268).





**Table 3: Threats to the valid use of assessments**

Link	Threat to validity
Administration	Low motivation. Assessment anxiety. Inappropriate assessment conditions. Task or response not communicated.
Scoring	Scoring fails to capture important qualities of task performance. Undue emphasis on some criteria, forms or style of response. Lack of intra-rater or inter-rater consistency. Scoring too analytic. Scoring too holistic.
Aggregation	Aggregated tasks too diverse. Inappropriate weights given to different aspects of performance.
Generalisation	Conditions of assessment too variable. Inconsistency in scoring criteria for different tasks. Too few tasks.
Extrapolation	Conditions of assessment too constrained. Parts of the target domain not assessed or given little weight.
Evaluation	Poor grasp of assessment information and its limitations. Inadequately supported construct interpretation. Biased interpretation or explanation.
Decision	Inappropriate standards. Poor pedagogical decisions.
Impact	Positive consequences not achieved. Serious negative impact occurs.

(Crooks, Kane, and Cohen, 1996, p270.)

The highly controlled and standardised conditions of high-stakes external examinations allow many of the threats to validity identified in Table 3 to be effectively mitigated. Threats related to scoring are also reduced by the robust standard setting and quality assurance processes used by awarding bodies during external marking procedures. As Stiggins (1987) states, 'it is critical that the scoring procedures are designed to assure that performance ratings reflect the examinee's true capabilities' (as cited in Linn et al., 1991, p.9).

Thinking particularly of threats to validity, which occur at the scoring stage, a recent study published by the University of Glasgow in collaboration with Oxford University and the SQA, undertaken to investigate stakeholder perceptions of assessment standards in Scotland, highlighted the issue of potential bias in teacher assessment (Baird et al, 2022). The report's review of the international literature on bias in teacher assessment drew the following 'general conclusions from the available research on comparisons between examination results and teacher assessments or predictions' (Lee and Walter, 2020)

- ◆ *Accuracy of teacher predictions varied to a small extent by age and gender, but this was inconsistent across subjects*
- ◆ *Teacher predictions varied by subject, but the effects were inconsistent*
- ◆ *Accuracy of prediction was related to the kind of school that learners attended*
- ◆ *Predictions for some ethnic minority groups were overly optimistic*
- ◆ *There was some over-prediction for disadvantaged groups*
- ◆ *Amongst high-attainers, there was less over-prediction for disadvantaged groups*  
(Baird et al. 2022, p14)

Bias is just one example of a practice that can affect the validity of the scoring link and as illustrated by the 8-chain model, any practice that affects the validity of the scoring link will impact the validity of the whole chain, as every other link after that is based on scoring.

'The role of examinations in setting and raising standards and in selection and certification is still central to their current function' (Stobart, 2021, p10). It follows, therefore, that where the results of internal assessments are used in the calculation of a learner's final grade, these assessments are contributing to the fulfilment of that same function. As such, steps must be taken to address threats to validity in any model of internal assessment to ensure that such assessments are valid, reliable, equitable, fair and practicable.

## 4 Moderation and quality assurance

'Suitable execution of moderation policy is challenging but crucial for the trustworthiness and credibility of internal high-stakes assessment systems. In formal education, policies are rarely implemented as intended. Instead, they are *enacted* in ways influenced by mediating factors including the internal and external contexts of organisations' (Williams et al. 2022, p1).

In this section we shall explore the moderation and/or quality assurance practices undertaken in the seven selected high-performing jurisdictions aimed at maintaining internal assessment standards and managing the threats to assessment validity identified in the previous section.

### Australia (New South Wales)

In New South Wales (NSW) schools have the autonomy to determine assessment tasks and associated marking criteria for school assessments contributing to the Higher School Certificate (HSC). Consequently, practice between schools is highly varied with different schools using different assessments and marking practices. This means that learners from different schools experience different assessment conditions. To set and maintain standards, The New South Wales Education Standards Authority (NESA) applies a process of statistical moderation to school assessment marks.

School assessment marks for the High School Certificate (HSC) are sent to NESA for moderation. The school assessment marks represent a learner's performance when assessed under the same conditions as others in their group, which means they can be compared at a school level, allowing schools to produce a rank order of learners within a particular group that details the relative gaps between them at their school. This is also submitted to NESA.

NESA's moderation process adjusts school assessment marks based on the HSC exams, as all learners undertake the exams under the same conditions. NESA uses the total number of marks earned by learners at the school in the HSC exam for that course. Moderation maintains the rank order of learners within the school group and the relative gaps between them. When moderating school assessment marks for a course. Once moderation is complete, assessment marks awarded by different schools can be compared.

Moderation adjusts assessment marks using three anchor points:

- 1 The mean of the school group's assessments is adjusted to equal the mean of the exam marks obtained by the learners in that group.
- 2 The top assessment mark in a school group is adjusted to equal the highest exam mark obtained by any learner in that group.
- 3 Where possible, the bottom moderated assessment is adjusted to equal the lowest exam mark obtained by any learner in the group. However, this is not always possible when the distributions of the school assessment marks and the exam marks are very different (NESA, 2022f).

Some learners' marks are exempt from moderation if affected by circumstances such as poor exam marks due to illness, or in cases where performance in the exam is much lower than expected based on their performance in the school assessment, relative to their own

group. These marks are excluded from moderation to ensure that atypical performance does not affect the moderated assessment marks for the school group.

**Monitoring grades** — schools are responsible for awarding each learner who is taking a Year 10 or 11 course a grade to represent that learner's achievement in that subject. Schools also award grades to learners who complete the Year 12 English Studies or Mathematics Standard 1 course. These grades are reported on the learner's RoSA or HSC Record of Achievement.

The awarding of grades that are reported on NESA credentials places significant value on teachers' professional judgements about learner achievements. To strengthen the consistency of these judgements in relation to state-wide standards, schools are asked to keep learner work samples and the corresponding assessment activities for Year 10 and 11 courses (except VET and Life Skills) and for Year 12 English Studies and Mathematics Standard 1 (NESA, 2022h).

Grades submitted to NESA are monitored before they are finalised to strengthen the comparability and consistent application of standards. The overall picture of each school's comparative data is considered, along with grade history and any known circumstances. The grade pattern for a course may be considered anomalous if it differs markedly from grade patterns in the past, patterns in other courses in the school, or grade patterns in comparable schools. An on-balance judgement is made about each school's grading patterns by a team of NESA officers (NESA, 2022g).

## **Finland**

In Finland, within both lower and upper secondary education, internal assessment is used both as a form of formative continuous assessment and as summative final course assessment. There is no external moderation activity undertaken in relation to these internal assessments. Due to the localised nature of internal assessment and the large degree of autonomy granted to teachers, there are no nationally mandated internal assessment methods and subsequently no nationally mandated quality assurance of internal assessment methods or results. Most testing, therefore, is administered and marked by teachers solely based on their interpretation of the National Core Curriculum upon which their school's own local curriculum is based. As the National Core Curriculum is designed to be flexible in terms of grading criteria, there is no minimum performance criteria with regard to standard setting (Vainikainen et al. 2017) As a result, it is difficult to see what criteria could be used to moderate internal assessments.

Moderation occurs only in relation to the Matriculation Examination, which is externally set and internally assessed by teachers within the learner's school. This internal assessment, however, is only the first stage of marking as these tests are then sent to the Matriculation Examination Board for external moderation. The Board's moderators make a final assessment judgement by reviewing the learner's tests and scores to determine if they meet the criteria that has been sent within subjects. After these scores have been determined, the Board decides on the relationship between the marks achieved and the grades awarded. This relationship and/or grade distribution may differ in every examination period. 'In the average of standardised total scores, a distribution is formed of all the participants of two successive examination periods. The participant profile of each test can then be compared to that distribution before deciding on score limits' (YTL, 2022b). This is to ensure grades are comparable and determined reliably and fairly. This is considered especially important as the

results of these examinations are used by higher education institutions for the purposes of learner selection.

## Hong Kong

Hong Kong employs various methods of moderation to quality assure the different categories of course offered in upper secondary education. Due to the complexity of these arrangements, for the purposes of this section, we will be focusing on moderation for Category A (traditionally academic) subjects only.

### Within school standardisation

The HKEAA requires teachers who teach the same subject in a school to agree on the criteria for awarding marks, to ensure that the same standard of assessment is applied across all learners. With regard to standardisation activities, the HKEAA suggests the following:

- ◆ *setting common SBA tasks across classes*
- ◆ *conducting trial marking of samples of learners' work*
- ◆ *adjusting the marks of some teachers, if necessary, to ensure consistency of assessment standards for the whole school*
- ◆ *using reference materials (such as those provided by the HKEAA) and archive materials (such as samples of learners' work from previous years) to help standardise marking within the school (HKEAA, 2021, p19)*

### External moderation

To ensure the reliability and comparability of assessment standards across schools, the HKEAA moderates SBA marks submitted by different schools for Category A subjects, either through statistical moderation or expert judgement. For most subjects, the moderation is conducted by statistical adjustments supplemented with sample reviews of learners' work. The HKEAA undertakes moderation of SBA with the following aims:

- ◆ *to maintain comparability of SBA results across schools, ensuring fairness*
- ◆ *to maintain the quality, reliability, and validity of SBA from year to year*
- ◆ *to gather information that may be useful for making recommendations for improved practice (feedback to schools) (HKEAA, 2022b)*

The SBA moderation process for each subject includes two basic components. They are:

- 1 *the determination of group performance level of individual moderation groups based on the moderating variable, that is, how the average performance of learners in each group compares with that of all other groups*
- 2 *the determination of individual learners' moderated SBA scores, taking into consideration how a learner in a moderation group performs in comparison to all other learners in the same group (HKEAA, 2018b, p4).*

### Statistical moderation

Statistical moderation involves adjusting the average and the spread of raw SBA scores of learners in a given school with reference to the public examination scores of the same group

of learners. During the moderation process, learners' raw SBA scores may be adjusted, but the rank order determined by the school will remain unchanged (HKEAA, 2018b).

### **Expert judgement moderation**

As part of the moderation process all schools submit samples of learners' work for review by SBA district co-ordinators (DCs) or assessors appointed by the HKEAA. DCs/assessors review the samples of learner work collected, either by commenting on teachers' assessment standards or by re-marking learners' work with reference to the assessment criteria. The statistical moderation results are compared to the results from the sample review and if the two are broadly comparable the statistical moderation results are adopted. If the difference between the two is significant, the HKEAA will follow up on outlier cases and modify the adjustment recommended by the statistical method, if necessary (HKEAA, 2018b).

For each moderation group, the moderated scores will be compared to the school's raw SBA scores. If the difference between the two is significant, the HKEAA will follow up on these extreme cases and may modify the adjustments recommended by the expert judgement method to ensure that the moderated scores accurately reflect learners' performance (HKEAA, 2018b).

### **Iceland**

There are no external processes in place for the moderation or quality assurance of individual learners' class work or examinations. Instead, the focus is on school evaluation, which takes the form of both internal (self) assessment and external assessment (inspection) conducted by the Ministry of Education, Science and Culture. External evaluation activities include ensuring that school activities are determined in accordance with the National Curriculum Guide and must take place at least every five years. The Minister of Education, Science and Culture can implement a special external evaluation of an upper secondary school or hold achievement examinations in specific subjects or ability tests linked to competence criteria, if deemed necessary (MESC, 2011).

### **New Zealand**

In New Zealand a process of internal and external moderation is used to monitor accuracy and consistency of internal assessment judgements made in schools. Internal moderation requires that schools have a robust process in place to ensure that grades awarded have been checked against the appropriate standards. This involves a second subject expert within the school verifying a sample of the marked work. Schools must complete internal evaluation before they report results to NZQA, the national body responsible for the NCEA external examinations and for external moderation of internal assessments.

The NZQA employs a process of external moderation that utilises the expertise of moderators to quality assure the assessment decisions made by schools. Schools are required to put in place a system for submitting samples of learner work to the NZQA for moderation. The moderators scrutinise the marks awarded for achievement standards which are graded on a four-point scale: 'Not Achieved', 'Achieved', 'Merit' and 'Excellence' (O'Donnell, 2018). Moderators review the evidence submitted by schools to determine if it meets the criteria for the national standard. The work is only 'moderated' if it fails to meet the national standard due to inappropriate awarding. Assessment tasks and judgements can be considered fit for purpose unless they have been specifically moderated. Schools are required to address any issues identified through the moderation process.

'NZQA reviews the assessment systems of secondary schools at least once every four years to ensure that assessment is valid, fair, consistent, reliable, to the national standard and in accordance with The Assessment (including Examination) Rules for schools with Consent to Assess' (NZQA, 2022, p1).

Each year the NZQA moderates approximately 100,000 pieces of learner work as part of the external moderation process. These pieces of work come from two separate samples: the School Check and the National System Check. The School Check is a sample of 90,000 to 95,000 pieces of work purposively selected with a focus on improving the quality of assessments and assessment related decisions. The National System Check is a selection of 5,000 to 10,000 pieces of learner work that is used to calculate the National Agreement Rates. National Agreement Rates are published publicly by the NZQA and are to be considered at two different levels. Firstly, at Credit level, which details whether there is agreement that the credit has been achieved or not achieved and secondly at Grade level, which concerns whether agreement has been reached regarding the 'grade' of that achievement, ie Not Achieved, Achieved, Achieved with Merit or Achieved with Excellence (NZQA, 2021b). In 2019 the National Agreement Rates at the level of Credit was 91.3% and agreement at the level of Grade was 81.8% NZQA (2019a).

Critics of the NCEA approach advocate a return to percentage scores and claim to have concerns over the quality of moderation of internal assessment. In 2014, nearly one in four grades given by teachers for internally marked work were deemed incorrect after checking by NZQA moderators. These grades were not changed by the NZQA as they felt the fall in the National Agreement Rates had been caused by the introduction of new assessment standards that had replaced the previous ones and the changes still needed adequate time to embed into teaching practice (NZH, 2014).

## **Norway**

In Norway 'Overall Achievement' marks are awarded by teachers on a scale from 1 to 6, where 6 indicates that the learner holds high competence, and 1 indicates that the learner has attained little competence in a subject area. These marks are not externally or internally moderated. This has been identified as an area of concern due to the perceived subjectivity that can occur during grading. The OCED has commented that there is no clear cohesive, mutually established understanding of what constitutes adequate, good, and excellent performance in different subject areas. For this reason, teachers tend to use their personal reference points for what constitutes, for example, excellent performance, which creates inconsistencies in how learners are graded between constituencies and possibly even in the classroom (Nusche et al. 2011). As grading practices influence learners' access to higher education and the labour market, this is particularly concerning in terms of ensuring both equity and fairness (Nusche et al. 2011). Further compounding this issue is the fact that learners are randomly sampled for national exams, meaning they are not offered equal external assessment opportunities.

## **Poland**

The maturity exam in Poland includes oral assessments in a range of language-related subjects. These oral assessments are internally marked by teachers and are not externally moderated.

In a report published by the United Nations Educational, Scientific and Cultural Organisation, (UNESCO) the authors undertook a review of accountability in the Polish education system

and raised concerns that the results of national examinations in Poland are not comparable across years, which means the government does not monitor trends. Instead, performance on international assessments such as the OECD's Programme for International Learner Assessments (PISA) are the main accountability tools used to monitor system performance (UNESCO, 2017).

## Discussion

Assessment systems reflect the social, historical and cultural context in which they have developed, and the same can be said of the moderation systems that form a part of them. We can see this clearly when examining the different external moderation practices adopted, or in many cases not adopted, in our selection of high-performing jurisdictions.

In those jurisdictions where teachers have greater assessment related autonomy (NSW, Hong Kong, Iceland, Finland, Norway) and are responsible for determining their own internal assessment practices, such as task formats, guidance, marking and in some cases, appeals and malpractice related procedures, there is, understandably, more variation in practice results. In response to this variation, both Australia and Hong Kong have developed systems of moderation that are statistical in nature and are reliant on the marks produced by external examination. Neither Iceland, nor Finland have externally set, externally assessed exams at the end of upper secondary education. Iceland has no process of moderation for internal assessments. Equally, Finland has no moderation process in place for internal assessments, however, it does moderate the marks teachers award for the externally set Matriculation exams, the results of which aid the Finnish Matriculation Board in setting appropriate grade boundaries (SQA, 2022b).

While Norway does have externally set and assessed examinations at the end of upper secondary school, the learner only needs to sit an exam in one subject, which is randomly allocated to them. Overall Achievement marks, which are awarded for each subject area, are based on teacher judgement and are not externally or internally moderated. With regard to the awarding of Overall Achievement marks, the OCED has raised concerns that there is no clear cohesive, mutually established understanding of what constitutes adequate, good, and excellent performance in different subject areas in Norway. For this reason, teachers tend to use their personal reference points for what constitutes, for example, excellent performance, which creates inconsistencies in how learners are graded between constituencies and possibly even in the classroom (Nusche et al. 2011).

In NSW, statistical moderation involves ranking the performance of learners who have all been assessed under the same internal assessment conditions. This rank order is submitted to the NESA, which adjusts these marks based on the marks awarded to these same learners for the external HSC exams. The moderation practices maintain the rank order of learners within the school group. In Hong Kong, statistical moderation also involves ranking learners, but the process is substantially more complex. Moderation of school-based assessment (SBA) for Category A (traditionally academic) subjects in Hong Kong involves three stages of moderation. The first is within school standardisation, where subject teachers within the same school must standardise their marking and rankings by comparing marks and making use of reference materials and national guidance. The second is statistical moderation where, to state it simplistically, the ranked SBA scores are adjusted based on marks awarded for the external examination, ensuring the rank order is maintained. Thirdly, the statistical moderation process is supplemented with external expert judgement. This involves all schools submitting samples of learner work for review to assessors appointed by the HKEAA. At this final stage the statistical moderation results are compared to the results



from the sample review and if the two are broadly comparable, the statistical moderation results are adopted (HKEAA, 2018b).

The moderation process employed by Hong Kong to maintain reliability and comparability is clearly complex and reflects the traditionally exam-focused culture of the country, where the introduction of SBAs was viewed as somewhat contentious, given the perceived high-stakes nature of HKDSE assessment. This complex system of moderation appears to place significant demands on both practitioners and the awarding body. Many practitioners have found the administrative burden of SBA and associated moderation practices difficult to manage, which has threatened both the workability of the qualifications and teacher goodwill (Stobart, 2021). It is not yet clear whether there will be resistance, as there was in Hong Kong, to proposals to incorporate more internal assessment and/or internally assessed components into National Courses taken in upper secondary education. However, what these international examples do provide is evidence that a robust quality assurance process delivered by an external moderation method can help to manage threats to validity, and in doing so alleviate concerns about equity, fairness, reliability and comparability.

Like Hong Kong, New Zealand's system of moderation for internal assessments also involves internal moderation, where teachers are required to standardise their marking. Specifically, a second teacher within the school must verify the marks awarded before they are sent to the NZQA for external moderation. However, its external moderation process does not involve statistical adjustment and is instead based on the judgement of subject experts appointed by the NZQA. Schools are required to submit samples of learner work for scrutiny by moderators against national standards. The work is only considered 'moderated' if it fails to meet the national standard due to inappropriate awarding.

New Zealand supplements this moderation process with additional sampling activity undertaken for the National Check System, which is used to calculate the level of agreement between teacher-determined grades and moderator-determined grades. These 'National Agreement Rates' are published annually. A source of some criticism in New Zealand has been the difference in achievement rates, which are much higher for internally assessed components. This has led some stakeholders to state that they do not trust the results of internal assessment as much as they trust the results of external assessments. The NZQA and MoE have stated that such concerns are unfounded and have highlighted several factors that may account for this difference in achievement rates:

- ◆ *learners could be assessed at a time when they were ready for assessment, rather than months later at the end of the year*
- ◆ *a reassessment opportunity might be available following further study*
- ◆ *a wider sample of learner evidence could be used in making the final judgment on learner achievement* (NZH, 2012)

NZQA has emphasised that internal and external assessments are intentionally used to assess different learning. Internally assessed standards allow teachers to give learners much more explicit guidance, which was one explanation given for the general pattern that internal results were higher. 'Remembering that we are concerned with recognising achievement and not selecting an elite, it should be understood as a better directed assessment process rather than any reduction of rigour' (NZH, 2012).

It is here we must acknowledge the tension between validity and reliability: the tension between the purpose and forms of internal assessment and the need for a robust moderation approach. If we use many different forms of internal assessment to validly test more complex and less tangible skills, such as those related to the four capacities, how can we effectively moderate them? What kind of nationally determined criteria may be needed in order to ensure consistency of grading and comparability of grades? Additionally, how can we ensure such a system isn't overly complex and ultimately impractical?

The moderation process used by New Zealand to moderate internal assessments is very similar to the verification process used in Scotland to moderate internally assessed freestanding national units and the practical and performance related elements of some national courses. Internal verification must take place in schools before samples of learner evidence are submitted to subject experts for external review. Subject experts then make a judgement regarding whether the evidence meets the national standard and communicate this to schools for any follow-up action. In both New Zealand and Scotland, subject-specific reports are produced for the entire practitioner community at the end of this process to deliver key messages.

In Scotland, this same moderation process (verification) was also used for internal unit assessments that formed part of National 5, Higher and Advanced Higher courses. A key factor that contributed to the Scottish Government's decision to remove unit assessments from these courses in 2017 was the burdensome nature of the moderation processes. These increased teacher workload and were considered disproportionate in terms of what was required to quality assure assessment decisions (Scot Govt, 2016).

Arguably, statistical methods of moderation would carry less of an administrative burden, but we must question whether such an approach fits with Scotland's assessment culture. In 2020, in response to the COVID-19 pandemic and the cancellation of external examinations, a statistical algorithm, partially based on learner rankings submitted by teachers, was used to adjust teacher estimated grades. Following widespread criticism of the resulting grades, these were quickly withdrawn and replaced by the original teacher determined grades. From this experience, it could be argued that there is an inherent mistrust of statistical algorithms for determining learner achievement in Scotland.

If there is to be increased use of internal assessment in National 5, Higher and Advanced Higher courses, it will be important for the education system to determine its priorities for quality assurance of internal assessments. In particular, how are we to achieve the right balance between validity, reliability, comparability, equality, fairness and practicality? Determining these priorities will be fundamental to designing a moderation approach that is proportional and fits with the assessment culture and context of Scotland.

## 5 Support for teachers and lecturers

'If we consider a process of policy enactment from only one frame of reference without sufficient attention to the contextual roles of other systems that interact with that frame of reference, we heighten the risk of widespread variation in that enactment, which can result in egregious unintended consequences' (Williams et al. 2022, pp 18–19).

To ensure internal assessments used for summative and/or certification purposes are valid, consistency of approach is key to ensuring reliability, equity, fairness and practicability. In this section we shall explore actions taken across the seven selected high-performing jurisdictions to support teachers to design and implement internal assessments for the purposes of summative assessment.

### Australia (New South Wales)

Course syllabuses produced by the New South Wales Education Standards Authority (NESA) promote a standards-referenced approach to assessing and reporting learner achievement. The model for developing assessments provides guidance for teachers. This guidance emphasises that outcomes should be central to the decisions teachers make about teaching, learning and assessment and stresses the importance of gathering and making good use of learner-generated evidence that can be used to determine how well learners are doing in relation to achieving these outcomes. It highlights the importance of teacher feedback and learner reflection and the need for evidence of learner achievement to inform future teaching and learning practices (NESA, 2012).

NESA also provides information on assessment for practitioners that includes:

- ◆ principles of effective assessment
- ◆ using syllabus outcomes in standards-referenced assessment
- ◆ assessment for, as and of learning
- ◆ adjustments for learners with a disability
- ◆ recording evidence
- ◆ assessment strategies
- ◆ assessment checklists
- ◆ marking assessments
- ◆ formal and informal assessment
- ◆ sample assessment for learning activities
- ◆ effective feedback (NESA, 2022j)

To aid teachers in determining grades, NESA provides sample work aligned to grades that teachers can use to confirm their professional judgements. Teachers are also expected to:

- ◆ use samples of work from their learners for professional development with colleagues and teachers from other schools to ensure consistent expectations on standards
- ◆ refer to samples of learner work from previous years prior to marking and grading to clarify what is expected and to improve task design (NESA, 2022i)

## **Finland**

Finland's education system is decentralised and considered to be 'high trust' (SQA, 2022b). This trust is actively built through deliberate structures and initiatives that combine horizontal and vertical teamwork, networking, participation, target setting and self-evaluation (OECD 2021a). High-stakes external assessment linked to accountability measures do not feature as key aspects of education policy. Instead, education policy is built on whole-system trust in teachers and focuses on self-evaluation, encouraging learner development, and encouraging schools to create optimal learning environments (Sahlberg, 2007).

Schools and teachers are free to choose their methods and materials and use the National Core Curriculum as a basis upon which to create their own curriculum. Creation and introduction of the revised National Core Curriculum was not undertaken using a top-down approach, instead the review was a collaborative endeavour that engaged a large range of different stakeholders, such as teachers, parents/carers, learners, teaching unions and other third sector organisations (Vainikainen et al. 2017). Practically anyone interested could read the drafts and give feedback, using a digital system that was designed for this purpose (Halinen 2018). In this way the revised National Core Curriculum was not imposed upon teachers but rather co-created with them, further enshrining the importance of maintaining teacher agency and trusting teacher judgement.

## **Hong Kong**

HKEAA aims to promote the quality of SBA and improve the shared understanding of assessment criteria by providing teachers with professional development training, specifications containing learning objectives to be assessed, detailed assessment criteria and exemplar assessment tasks for teacher reference (HKEAA, 2021). A curriculum and assessment (C&A) guide is available for all Category A subjects. Each C&A guide is jointly prepared by the Curriculum Development Council and the HKEAA. It contains information on the curriculum framework, curriculum planning, pedagogy, assessment and the use of teaching and learning resources. A key concept underlying the senior secondary curriculum is that curriculum, pedagogy and assessment should be well aligned (HKEAA, 2021).

SBA teachers' handbooks are available for Category A subjects, setting out the assessment framework, aims and objectives, assessment requirements, guidance in the conduct of SBA, administrative arrangements, information about moderation, and information about malpractice (HKEAA, 2022b).

Hong Kong teachers are required to complete 150 hours of professional learning every three years. Formal professional development courses and other programmes are offered through the EDB, universities, and the Hong Kong Teachers' Centre, a resource centre provided by the EDB that offers opportunities for teacher professional learning and collaboration (NCEE, 2021).

## **Iceland**

The National Curriculum Guide is the main administrative tool used by educational authorities in Iceland to ensure coordination and synchronisation in schools in the execution of a common educational policy. Schools use the National Curriculum Guide to assist in creating a School Curriculum Guide that includes course descriptions, proposals for programmes and plans for teaching, learning and assessment. This is submitted to central government for approval (EACEA, 2022m). This process involves both internal experts at the ministry and external experts. The external experts can be the occupational councils of

relevant or other external capable institutions (EACEA, 2022k). The school curriculum guide contains requirements for completing a course unit and the criteria for valuing individual aspects of the assessment. It specifies rules related to learner illness during examinations and details regarding re-sit opportunities. It covers malpractice arrangements and explains processes for appeals and rights for learners who require special assessment arrangements. It also signposts specific support for learners suffering from exam-related anxiety or requiring arrangements to be put in place related to a disability (MESC, 2011).

The Ministry of Education also publishes programme descriptions, descriptions of knowledge, skills and competences that characterise core subjects at different qualification levels and examples of programmes and assessment questions. Schools are encouraged to use these for reference when creating programme descriptions for upper secondary school leaving examinations, examinations for professional rights, matriculation examinations and other final examinations (MESC 2011). The guidance makes clear that assessment in final course units in core subjects must take into account the guiding examinations that the Ministry of Education supplies and confirms. Additionally, the Ministry of Education follows up internal and external school evaluation with support, instruction and guidance aimed at making improvements.

The OECD has commented that education policy implementation in Iceland takes a top-down approach, where information is cascaded to stakeholders 'without a great deal of trialling, piloting or interim reviewing to potentially course correct along the way' (OECD, 2021b, p36).

## **New Zealand**

The New Zealand Qualifications Authority (NZQA) provides teachers with access to quality assured assessment resources to support internally assessed achievement standards at all levels of the NCEA. This is hosted online by the Ministry of Education. These resources contain guidance for teachers regarding the detail and context of the assessments, in addition to defining the conditions of assessment and rules around ensuring authenticity of assessment. The assessment task provided by NZA includes an introduction, the task itself, and a marking table for judging evidence, which is called an assessment schedule. The schedule gives examples of answers. In addition, examples of learner work or expected learner responses, written by subject moderators have been developed for Level 1 NCEA assessment standards (MoE, 2022a). Moderator clarification documents and annotated exemplars can also be found on the NCEA subject resources pages (NZQA, 2019a).

NZQA provides 'Best Practice Workshops', which are aimed at increasing teacher confidence in making assessment judgements that are consistent with the national standard. These workshops must be requested and are hosted by subject associations and regional clusters. These are offered both face-to-face and online and can provide targeted support based on the needs of the requesting school, group or cluster.

To increase teacher assessment literacy NZQA provides bitesize modules and short courses that focus on assessment related to a wide range of subjects and standards. They also provide a Transforming Assessment Praxis (TAP) workshop online, which is aimed at giving assessors confidence in re-contextualising assessment resources and exploring different ways of collecting evidence.

When new standards and associated assessment materials are developed, these are reviewed through open consultation using online surveys and online engagement sessions.

The materials are then piloted; only pilot schools can utilise the materials as feedback from the piloting is used to finalise the materials for general use (MoE, 2022b).

Innovative assessment school visits – over the last two years NZQA has been visiting schools that have been identified as using innovative assessment practices, such as integrated assessment (within subjects and across subjects), project-based assessment and the use of different technologies. These visits have enabled the NZQA to check that its policies and procedures do not act as a barrier to internal assessment. NZQA has provided case studies based on the experience of these visits, which it is hoped will encourage other schools to explore different assessment practices, while still maintaining qualification standards. Video clips from these schools visits also appear in the TAP workshop online (NZQA 2019b).

## **Norway**

In recent years, there has been an increased focus on formative assessment in Norway. The Assessment for Learning Programme (2010–18) was developed to support schools, training providers, and local authorities in improving formative assessment practices. Some 320 municipalities and 630 schools were involved in the programme across its two phases (2010–14 and 2014–18). The Directorate for Education and Training set guiding principles for the content and organisation of the programme, while local authorities were charged with local-level implementation. The Directorate also organised seminars and conferences for participating local authorities and provided online training and resources for schools. The final report (2018) of the programme found that, in many cases, participation had led to a more learning-driven assessment culture, increased use of formative assessment practices, improved curriculum planning, and an improved research and development culture among schools. However, reports also found variation in schools' and local authorities' understanding of what constitutes good assessment practices. There was also variation in the scope of change, indicating that some schools and local authorities needed more time to bring about significant change in assessment practices (OECD, 2020).

A focus in teacher training and a new teacher training structure launched in 2010 requires all teachers to have required competences in assessment for learning upon graduation. There have also been government initiatives since 2005 to clarify national assessment standards and promote fairer assessment. Training in co-operation with schools and universities has been initiated by the Norwegian government with the goal of increasing assessment capacity. This along with international co-operation to improve assessment has helped to improve teacher training and assessment (Nusche et al. 2011).

The Norwegian Directorate for Education and Training is responsible for the Quality Assessment System (QAS). The system provides schools and school owners with relevant and reliable data on learning outcomes, learning environment, completion of upper secondary education, resources, and school facts. The system emphasises the necessity of seeing the quality process as a continuous and recurrent one, involving assessment of information, analysis, target setting, planning changes to practices, implementation, and subsequent assessment of the outcomes of the changed practices (EACEA, 2023e).

## **Poland**

The Ministry of Education and Science provides support for teachers via an online platform called 'Lesson: Enter', which includes e-textbooks, sample curricula and lesson plans. Teachers can use the resources hosted on the platform to inform their own professional

practice as well as use it to create and share content online and communicate in real-time with learners and other teachers (NCEE, 2022).

Poland also operates a 'pedagogical supervision system', which aims to support schools through evaluation and monitoring activities. This includes support for teachers provided through publication of the findings from pedagogical supervision, the organisation of conferences and meetings and dissemination of information on education issues and changes in legislation (EACEA 2022s).

The continuing professional development (CPD) system for teachers operates at three levels in Poland: national, regional and local. CPD activities take place at each of the three levels, such as national in-service teacher training days and CPD events held at local government units. National CPD programmes assist in establishing and maintaining collaborative, self-training networks of teachers (EACEA, 2022t).

## Discussion

The main form of support provided for teachers and lecturers by the jurisdictions selected for study took the form of national guidance. In NSW, course syllabuses promote a standards-referenced approach to assessing and reporting learner achievement. In Finland, the National Core Curriculum includes the objectives and core contents of different subjects, as well as the principles of learner assessment (OECD 2021c). In response to concerns raised about inequalities and issues of comparability related to final assessment in basic secondary education in Finland, the EDUFI now publishes exact national criteria for the final assessment of learners. This was implemented in 2020 (EACEA 2022b).

In Hong Kong, subject specifications contain learning objectives, detailed assessment criteria and exemplar assessment tasks (HKEAA, 2021). Curriculum and assessment guides, which are provided for Category A subjects, contain information on curriculum, pedagogy and assessment. Additionally, School Based Assessment (SBA) handbooks set out the assessment framework, aims and objectives, assessment requirements, conditions and administrative arrangements (HKEAA, 2022b).

In Iceland, the National Curriculum Guide has the legal status of a ministry regulation (EACEA, 2022h). The guide lays down the schools' pedagogical role, the objectives and structure of school activities and general policy in teaching. The Ministry of Education also publishes programme descriptions and descriptions of knowledge, skills and competences that characterise core subjects at different qualification levels (MESC 2011). Stakeholders in Iceland have indicated they need more detail and prescription, but not to the extent that this might negatively impact innovation. Stakeholders have also expressed a desire for the ministry to 'play the role of co-ordinator, striking a balance between central support and local choice' (OECD, 2021b, p36). The OECD has also suggested that to aid implementation planning, Iceland should consider more closely how it will balance different assessment types, and more explicitly link the capability requirement teachers might need to assess and use their results to inform teaching practice more explicitly (OECD, 2021b).

Both NSW and New Zealand provide samples of marked and/or moderated internal assessments to aid teachers in developing their professional practice. Such samples are derived from learner-generated work, usually obtained the previous year. These samples are used to enhance the assessment literacy of teachers by clarifying how the evidence meets the national standards and providing examples of assessment tasks to enhance assessment design. NSW and Hong Kong also provide models for developing assessments, while New

Zealand provides quality assured assessment resources that include the internal assessment task itself and a marking table for judging evidence [MoE, 2022a].

Many jurisdictions (NSW, Finland, New Zealand, Poland) explicitly encouraged the development of professional networks, where teachers could collaborate with colleagues and teachers from other schools to ensure consistent expectations on standards. In New Zealand, online engagement sessions are held that allow open consultation on assessment materials developed to support new standards, prior to piloting (MoE, 2022b). In Poland, national CPD programmes assist in establishing and maintaining collaborative, self-training networks of teachers (EACEA, 2022t). The country has also created an online platform called 'Lesson: Enter', which includes assessment resources and is used by teachers to create and share content online and communicate in real-time with learners and other teachers (NCEE, 2022).

Across many of the jurisdictions studied the importance of teacher training, formal CPD courses, training and events was emphasised. Such activities were seen as a way of driving improvement in assessment related practice, pedagogy and curriculum planning. In New Zealand, the NZQA offers bite-size modules and short courses aimed at increasing the assessment literacy of teachers. They also provide a Transforming Assessment Praxis (TAP) workshop online, which is aimed at giving assessors confidence in re-contextualising assessment resources and exploring different ways of collecting evidence. The TAP workshop includes video clips from 'Innovative Assessment School Visits' case studies which identify innovative assessment practices being used in schools to encourage schools to adopt these or form their own (NZQA 2019b).

Workshops, seminars and conferences were highlighted as a specific form of CPD, aimed at increasing teacher confidence in making assessment judgements in line with national standards. In the case of Norway, seminars and conferences held to support implementation of the Assessment for Learning Programme also aided national agencies in identifying variation in schools' and local authorities' understanding of what constitutes good assessment practice (OECD, 2020).

When it comes to supporting teachers and lecturers with the design and implementation of internal assessments, there is clearly commonality of approach across many of the jurisdictions. These commonalities align with some of the current practices in Scotland to support the implementation of both internal assessments and external assessments. In Scotland, the SQA's 'Understanding Standards' service provides online access to subject-specific internal and external assessment-related materials that exemplify the national standards required in SQA assessments. Examples of candidate assessment evidence is provided, which have been assigned marks and a commentary prepared by the assessor. SQA devised internal assessment tasks and quality assured school-devised internal assessment tasks for unit assessment are also available on the site. The website hosts video and audio recordings prepared by subject-specific examiners, practical skills videos, and recordings of subject-specific webinars (SQA, 2022c). These materials aim to support teachers in preparing their candidates for assessment while strengthening understanding of national standards. Online and face-to-face CPD events are also organised for teachers by the service, and are well attended.

It is possible that SQA's Understanding Standards service could be expanded to support increased use of internal assessment. Support could focus particularly on the development of internal assessment methods, approaches to grading and support for implementing any



associated processes of internal and/or external moderation. Additionally, following the example of New Zealand, bespoke training could be created to help enhance the assessment literacy of teachers.

The provision of national guidance was identified as the main method used by selected jurisdictions to establish consistency of approach. However, providing guidance does not necessarily mean it will be well understood, agreed with, or indeed used. When it comes to producing national guidance there is a figurative tightrope to walk: the right balance needs to be achieved between the overly flexible, which can prove too vague to support confidence and consistency in practice, and the overly prescriptive, which can restrain autonomy, increase frustrations and act as a barrier to innovation. Equally, a balance also needs to be struck between providing too little guidance, which, due to its insufficiency, may lead to a wide variety of interpretations, or far too much guidance, which may overwhelm users and lead to disengagement or confused interpretations. Both these situations could result in the kind of variations in practice, which constitute threats to assessment validity. The latter is also more difficult to correct. In 2015, the OECD cautioned against Scotland addressing the problem of 'too much guidance and not enough time to look at it' through drafting extensive new guidance (OECD, 2015) and instead suggested simplifying current guidance.

With this in mind, Scotland's education system may wish to consider the creation of an extensive programme of stakeholder engagement to ensure that any national guidance produced to support increased use of internal assessment meets the needs of learners, teachers, lecturers and key stakeholders, and strikes the right balance in terms of flexibility, prescription, complexity and volume.

When exploring the various methods of support provided by the selected jurisdictions, a common dependency emerges: the need for teachers and lecturers to have sufficient time to engage with these methods for them to be effective. Teachers and lecturers need time to read, understand and to locally plan and implement national guidance for the curriculum. They need time to respond to consultations and contribute to online forums and teacher networks. They need time to attend CPD events, undertake training courses and to engage with assessment resources that exemplify the national standard.

Table 2 compares the net statutory teaching time in upper secondary education across the selected jurisdictions. These range from 455.17 hours in Iceland to 838.8 hours in NSW. The OECD average is 684.1 hours (OECD, 2022). In Scotland this figure stands at 855 hours (OECD, 2021a), greater than all the other jurisdictions studied. The OECD has reported that Scotland is one of few OECD education systems in which teachers are required to teach the same number of hours across all levels of school education. This high contact time means that teachers have less time / capacity available to engage in activities designed to support them and their assessment practice.

To support the use of increased internal assessment in National Courses taken in the senior phase, consideration should be given to ways to increase the amount of time teachers and lecturers have to engage with consultations, professional networks, guidance, support materials, assessment resources and professional development opportunities. All these activities are essential to the success of any reforms aimed at increasing the amount of internal assessment and enhancing teacher and lecturer empowerment and autonomy and literacy in assessment.

## 6 Conclusion

This report aims to provide contextualised insights and stimulate debate by responding to high-level themes identified as areas for consideration by the independent review of qualifications and assessment that is currently being led by Professor Louise Hayward. Based on an analysis of internal assessment practices, moderation practices and activities undertaken to support teachers in the design and implementation of internal assessments, in seven high-performing jurisdictions, it highlights areas for consideration in a Scottish context.

It is important to state that this report is not an exercise in international policy borrowing or 'cherry picking.' Isolating one principle, policy or characteristic that works particularly well in one international context does not mean it will work well in an entirely different social, cultural and political context (SQA, 2020b). The Scottish context, the past experiences of the education system, assessment traditions, assessment culture and system capacity must all be taken into consideration when reviewing the balance between internal and external assessment in the senior phase. This is fundamental to ensuring any resulting reforms achieve sufficient buy-in, as 'reforms which do not achieve buy-in often cannot fully enact change' (Gray and Baird, 2020).

## 7 References

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