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Policy and practice in relation to external moderation of school-based assessment in 13 examination systems internationally

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ABSTRACT

This study investigates how different jurisdictions implement external moderation of school-based assessment (SBA). Concerns about high-stakes examinations at upper secondary level prompt systems to incorporate SBA into their qualifications. While addressing issues of validity and student stress, SBA raises reliability concerns, potentially compromising trust in the qualifications. External moderation is frequently used to allay such concerns. This study identifies illustrations of moderation in secondary school exit examinations and investigates the local contexts in which they occur. A two-phase sequential design was used to explore the variables of interest across 13 jurisdictions using a review of publicly available documentation and interviews with examination officials in 9 examination organisations. Findings reveal how education systems use moderation to ensure consistency of standards within and across schools. A range of approaches were identified but showing a marked mixing of models. The findings provide useful advice for jurisdictions contemplating introducing externally moderated SBA.

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Introduction

Examinations at the conclusion of upper secondary education represent a transition pathway for young adults, frequently facilitating entrance to higher education or the workforce. Performance on these examinations is, in many jurisdictions, a key variable informing admission decisions to higher education and, given the high proportion of students in many countries enrolling in higher education immediately after completing secondary education (OECD, 2023), the stakes associated with the examinations are frequently high. Kellaghan and Greaney (2020) note that such high-stakes examinations are defined primarily in terms of their purpose: to certify and select students on the basis of an assessment of their achievements in curriculum areas. They are standardised assessments, fixed in scope and difficulty, administered and scored in systematic, transparent ways. The literature highlights benefits of such examinations in terms of: defining achievement relative to an

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external standard that students and teachers can work towards, raising standards, motivating students and providing a fair way of allocating places to higher education through reducing the effects of patronage (Kellaghan & Greaney, 2020; G. Stobart, 2008). Some challenges are also frequently cited. These include stress on students (Putwain, 2008), conflating student identity with exam performance (Hanson, 1994), teaching to the test (Kellaghan & Greaney, 2020; Smyth et al., 2019), cheating by students and teachers (Guardian, The, 2018), emphasis on low-level cognitive skills at the expense at higher-level learning (Burns et al., 2018) and predictability of questions (Baird et al., 2015).

High-stakes examinations often consist of a combination of two or three components – examinations developed and scored by an examination agency; externally assessed coursework (termed coursework in this paper); and school-based assessment (SBA) developed and scored by teachers. SBA is interpreted here as assessment in which final or provisional marks or grades are provided by teachers and schools to be used as part or all of the marks or grades for certification purposes. At upper secondary level, traditional examinations, frequently written in nature, represent formal processes that measure examinees' understanding and skill in specific subject areas (Isaacs et al., 2013). High-stakes examinations are generally administered at a fixed time and place, under the same conditions that are experienced by other candidates, with strict time limits, and are marked in a consistent way using a marking guide applied by trained markers or examiners, whose work is checked for consistency (Murchan & Shiel, 2024). Recent trends have seen increasing prominence of coursework and SBA in response to concerns that, although traditional examinations offer an objective, standardised and reliable measure of student achievement, they are also considered to assess a narrow range of learning outcomes and limit what is taught (Griffin & Care, 2015; Jennings & Bearak, 2014). Coursework and SBA facilitate the assessment of skills that are difficult to measure with examinations, enhancing the validity of inferences made about students' competence in relation to such complex skills.

Coursework is sometimes used as part of high-stakes examinations to provide information about student learning drawn from non-examination assessments such as projects, portfolios, practical tasks and presentations and may include externally assessed oral examinations. Tasks are typically undertaken by students in school, supervised by the students' own teachers and the student work is then reviewed by graders employed by an examination agency or awarding body. Different interpretations are sometimes ascribed to coursework, to include either external marking or marking by students' own teachers (Crisp, 2008; Joint Council for Qualifications JCQ, 2024).

SBA is an assessment in which final or provisional marks or grades are provided by teachers and schools/centres to be utilised as some or all of the marks or grades for the purposes of certification. It is 'assessment administered in schools and marked by students' own teachers' (Hong Kong Examinations and Assessment Authority HKEAA, 2022, p. 2). SBA frequently overlaps with coursework, although teachers often have more flexibility in determining the nature of SBA tasks. For purposes of this study, which focuses on SBA, we distinguish between Coursework and SBA on the basis that Coursework is sometimes, but not always graded by the awarding body, rather than the student's teacher. In contrast, SBA is administered in school and always marked in the school.

Whereas coursework frequently falls within the direct marking responsibility of the awarding body and is, therefore, subject to the same rigorous marking regimen as examinations, SBA provides a dilemma for officials guiding high-stakes assessment systems. Although it is considered to enhance the validity of inferences that can be made about students' learning in relation to the totality of learning outcomes, SBA's reliance on teacher grades introduces the possibility of bias and unreliability in grading, a particular challenge where scarce resources are allocated (for example, places on an over-subscribed university course) and where public acceptance and trust is required. Examination agencies seek to increase public trust in SBA by employing moderation, defined by Isaacs et al. (2013, 90) as 'the process through which assessment is monitored within an awarding organisation to ensure that it is reliable, fair and consistent with required standards'. Generally, where the stakes are high, some form of external moderation is desired, that is, where the awarding body establishes policies and protocols to ensure that the interpretation of the quality of students' work is consistent across teachers within a school and across schools. There is no one agreed way to implement moderation and a range of different approaches have evolved. During the COVID-19 pandemic, many education systems that depended exclusively or largely on examinations found that they needed to use teachers' grades to ensure that qualifications could be awarded to students exiting upper secondary school. The scale of the change created challenge in some jurisdictions, for example, in the UK and Ireland. In addition, increasing emphasis on students' acquisition of key competencies and transversal skills such as collaborative problem-solving, critical, and innovative thinking and digital literacy (Murchan, 2022) has brought into focus the limitations of examinations in assessing such complex skills, with concomitant need to explore options such as the inclusion of coursework or SBA in qualifications. The present paper focuses on one of these – SBA – investigating how it is externally moderated in several jurisdictions internationally. The study is underpinned by three research questions:

- (1) How do examination systems use SBA as part of their high-stakes certification for secondary education?
- (2) What approaches to external moderation are employed by examination systems to facilitate implementation of SBA?
- (3) How are schools and teachers encouraged and supported to engage successfully with moderation?

Websites and other publicly available information from selected awarding bodies, examination agencies and education ministries were reviewed to identify systems that use a combination of examinations and SBAs in their upper secondary school qualifications. This led to the inclusion of 23 systems, of which 10 were excluded from the analysis as they did not fit the study criteria fully. The level of detail about external moderation in the publicly available sources was found to be variable, especially in relation to issues of support to schools and lessons learned so interviews with relevant examination officials in a sub-set of examination systems were conducted to enhance understanding of the issues. Preliminary information from some interviews is available for the present analysis and further work is underway in relation to the sub-set of systems but this is beyond the scope of the present paper. At the present time, this study offers a panoramic snapshot of

practice across a range of examination systems that illustrates significant variation in how systems structure, implement, support and quality assure their systems of CBA in the context of high-stakes qualifications and examinations. The study audits and collates high-level findings drawn from current practice in a sample of 13 examination systems and contributes to the knowledge base of how SBA is enacted in high-stakes examination contexts.

Literature review

SBA is a salient feature of the international examination systems under investigation. Accordingly, moderation is required in order to ensure comparability, consistency and accuracy of SBA marks within and across different schools (Adams, 2007; Crisp, 2017, 2018; Cuff, 2017, 2018; Cuff et al., 2018; Daly et al., 2011). Externally moderated SBA is where the certifying body is not the school itself but is an external agency, which implements systematic procedures to ensure that it can stand over the assessment outcomes provided by schools. What follows is a brief review of SBA and the two broad categories of approach to moderation emerging from the literature: *statistical* moderation and *social* moderation (Daly et al., 2011). Professional judgement and consensus reside at the heart of social moderation as opposed to statistical adjustments. The literature outlines three groups of social moderation: *Moderation by inspection* where moderators or subject experts review the teacher-assessed work of a sample of students from each school; *Verification* where schools' marks are not adjusted according to the moderator's judgements; and, *Consensus moderation*, a group activity where teachers meet to consult over their respective marking, with a view to standardising their understanding and application of the assessment standards.

School-based assessment

SBA has emerged as a central component of modern assessment systems, responding to the growing need to evaluate a broader spectrum of student competencies than those typically captured in standardised examinations. Its adoption reflects a shift towards more holistic and learner-centred pedagogies by embedding assessment within the everyday practices of classroom teaching. SBA has two key functions within high-stakes examination environments: it serves as a formative and a summative assessment method. SBA, as a formative tool, assists in enhancing learning by directing the teaching and assisting the students during the course (Black & Wiliam, 2009). It gives continuous feedback, which assists teachers and students to know the progress and what requires further improvement (McGlynn & Kelly, 2017). At the same time and more directly related to the focus of the present study, SBA also serves as a summative tool. This means teachers formally measure and record students' achievements, which then contribute marks to final grades or certification (Johnson & Burdett, 2008).

With an increasing number of countries incorporating 21st-century skills into their educational objectives (OECD, 2019), the SBA component has been gradually introduced into public examination systems as part of national assessment procedures worldwide. The Caribbean Examinations Council (CXC) introduced SBA as part of their assessment

strategy in 1979. The idea was to complement the traditional end-of-course exams with assessments conducted throughout the school year by teachers. In Hong Kong, SBA became an integral part of the public examination system in 1978. Its initial implementation occurred within the Hong Kong Advanced level Examination (A-level) in Chemistry, with the primary objective of evaluating students' practical laboratory competencies (Hong Kong Examinations and Assessment Authority [HKEAA], 2012). By 2006, SBA was applied to 13 A-level subjects and 13 Certificate of Education subjects, including English language (HKEAA, 2012). In 1972, Queensland (Australia) eliminated external examinations for year 12 students and introduced a system of externally moderated SBA known as the 'Queensland system' (Queensland Curriculum & Assessment Authority [QCAA], 2014). Such shifts aim to move away from the one-dimensional approach of summative examinations, primarily designed for evaluating learning outcomes at the conclusion of a term (Volante & Beckett, 2011). While standardised testing undoubtedly contributes to the overall understanding of a student's academic performance, SBA emerged as a response to the limitations of summative examinations, empowering students to take ownership of their learning journey.

Teachers play a pivotal role in the development and implementation of SBA (Torrance, 2007). Their involvement is crucial in establishing a supportive learning environment, delivering constructive feedback and facilitating the enhancement of students' skills and competencies. Throughout this process, teachers are actively engaged, beginning with the design of the assessment programme and the creation or selection of appropriate assessment tasks. Ultimately, they make informed judgements based on the outcomes of these assessments (HKEAA, 2012). Within the context of SBA frameworks, a range of assessment tools is available, including coursework, fieldwork, laboratory work, performances and portfolio creation. However, challenges arise in relation to the authenticity and validity of classroom tasks, as well as the ability of teachers to accurately evaluate student performance. To address these challenges, one effective approach is the introduction of quality control measures, often achieved through external moderation of SBA tasks and outputs (Crisp, 2017). In general, moderation processes seek to foster and promote good practices in assessment, teaching and learning (Adie et al., 2013) and are, therefore, essential to the integrity of teacher assessment judgements.

Approaches to moderation

Statistical moderation

Sometimes referred to as 'scaling' or 'calibration', the principal objective of *statistical* moderation is to align performances in different exams, tests or subjects by statistically adjusting scores/marks to make them comparable (Gill, 2015; Williamson, 2016). Statistical moderation is particularly applicable to situations in which there is another measure available that can be used to 'moderate' schools' assessments. Typically, this other measure will be students' performance in the examination in that subject (more usually) or on a test of general academic ability. For externally moderated SBA – between teacher (or school) comparisons – an external examination can be employed as an anchor measure or 'external calibrator' (Wilmot & Tuson, 2005, p. 4), to statistically moderate scores assigned by teachers to the students at each school, such that results may change without altering the relative ordering (rank order) of

individual students within a school. The underpinning rationale is that the external examination score is based on an assessment that is taken by all students across the country, region/province or awarding body, thereby providing a common standard against which the SBAs can be compared. Jurisdictions that employ statistical moderation usually use it in combination with some form of social moderation (inspection; consensus; verification) and as a means of monitoring (Daly et al., 2011; Kellaghan & Greaney, 2020; Wilmot & Tuson, 2005).

In the context of SBA, statistical moderation is the process of adjusting a school's SBA marks to provide some desired pattern of correspondence between the SBA marks and the pattern of marks on some other criterion measure such as an exam. Kolen and Brennan (2014, as cited in Williamson, 2016) highlight statistical moderation as a form of assessment linking where 'the goal is to put scores from two or more tests on the same scale – *in some sense*'. Typically, the statistical adjustment focuses on establishing a relative alignment of the mean and spread (standard deviation) of SBA scores with the same candidates' marks on an external examination such as a public examination in a particular subject or on a standardised test. Any statistical adjustment does not alter the rank order of the SBA marks (Cuff, 2017, 2018; Gill, 2015; Wilmot & Tuson, 2005). For example, after statistical moderation is applied to a group of scores from a school, the student who had the highest score from the teacher initially will remain as the highest ranked student after the moderation. Similarly, the student to whom the teacher assigned the lowest mark will, post moderation, have the lowest mark in the group. However, when the moderated SBA scores are combined with another measure (for example, student marks on an external exam), the rank ordering based on the aggregate mark may change (see Daly et al., 2011; Williamson, 2016). The motivation for statistical moderation, therefore, is to preserve information about candidates' SBA performance but to align that performance with another criterion measure or expectation.

Social moderation

Social moderation^{Note 1} (as umbrella term) relies upon professional judgement and consensus as to what constitutes a performance which would meet a set of prescribed standards. Whilst social moderation depends mainly on professional appraisal, statistical methods are sometimes integrated on an ancillary basis (Cuff, 2017, 2018). Three categories of social moderation are outlined below.

Moderation by inspection. It refers to a process where moderators or subject experts review a sample of each school's teacher-assessed marking (Daly et al., 2011; Kellaghan & Greaney, 2020; Wyatt-Smith et al., 2010). The examination board uses the relationship between the moderator and teacher marks in the sample selected to decide if an adjustment to the teacher marks is warranted. Usually, some tolerance is permitted to allow for reasonable difference between the judgement of the moderator and the teacher. Only once the tolerance is exceeded, are marks adjusted using some agreed procedure such as a manual change in marks, a request to the school to change the marks or a statistical adjustment. In the main, the rank ordering of students within each school is maintained following moderator adjustments. Although this may involve some statistical treatment, it corresponds only to the automating of what would ordinarily be a judgemental process

of aligning both school and moderator marks. In this sense, the moderation approach remains dependent on the re-marking of a sample of work by a moderator and it is, therefore, not narrowly statistical moderation, even though a statistical procedure, normally linear regression, is frequently used to generate adjusted grades for the cohort. Where regression algorithms are used in conjunction with moderation by inspection to adjust marks, it typically involves regressing the sample of moderator marks on the sample of SBA marks drawn from the school, and then using the resulting regression function to adjust the entire population of marks (that is, the scores of the students who were in the sample and the scores of students who were not sampled). The point to note in this is that any adjustments to school marks are based essentially on the views of the moderator(s) rather than by reference to another external test. As such these approaches are not strictly statistical moderation as outlined in the previous section.

Verification. It is a variant of, and is similar to, moderation by inspection (Ofqual, 2019). However, schools' marks are not adjusted according to the moderator's judgements. Rather, remedial feedback is usually provided to the school for the school to take the necessary and appropriate corrective action. The external 'verifier' cannot normally change the school's assessment decisions. Verification can also entail simple checking procedures for determining that correct procedures have been followed in relation to assessment and marking processes, without a decision as to whether assessment standards have been achieved (Daly et al., 2011).

Consensus moderation. By using a process of discussion and review, it affords opportunities for teachers, meeting in groups, to standardise their interpretation and application of the relevant assessment standards, thereby facilitating shared recognition of the performances that represent those standards. There are many different ways of structuring opportunities for teachers to meet in groups to confer over their respective marking, with a view to standardising their interpretation and application of the assessment standards. Cuff (2018, 6), for example, defines consensus moderation as 'a process where teachers meet in groups to discuss their marking, in order to standardise their interpretation and application of the assessment standards. No external moderator employed by the awarding body is involved in reviewing these decisions'. Daly et al. (2011), however, introduces an additional layer of sophistication by deconstructing the concept 'Consensus' into three constituent elements: Consortium; Group; and Agreement trialling. Unlike Cuff (2018), these first two elements entail some form of an external moderating mechanism. 'Group' moderation teacher meetings are regularly superintended, guided and managed by awarding bodies/examination authorities. 'Consortium' moderation applies to a moderation system in which a network of schools is managed by an external moderator – the standards being controlled by the moderator. 'Agreement trialling' differs from the other two elements – which both rely on utilising external moderators working with teachers, in that students' work is used internally by teachers to clarify and agree standards – the principal focus being on professional understanding and continuing development of assessors (Kellaghan & Greaney, 2020). Examination systems employing such an approach to moderation are ones that evidence consensus

moderation but without external intervention. For the purposes of this study, any examination system that manifests agreement trialling (including cross-school trialling) will be classified as an illustration of a system that relies on Consensus moderation, through some form of agreement trialling.

Methodology

The research methodology employed in this study follows the principles of triangulation, commonly employed in qualitative design (Cohen et al., 2017). The goal of using triangulation in research design is to collect different types of data on the same research question to gain a more complete understanding of the research problem. The study utilised a two-stage sequential approach, where the types of data collected in each stage were combined and analysed to comprehensively understand the process of moderation in SBA (Creswell, 2009). A combination of document analysis of information publicly available from examination agency websites and from other sources (Stage 1) and semi-structured interviews with examination agency officials (Stage 2) was chosen to provide both breadth and depth to understand SBA moderation processes. Document analysis of the data collected from websites facilitated a systematic review of the publicly available information, while analysis of interview data helped evaluate the accuracy of interpretations from the websites and offered additional insights into the practical implementation and challenges faced across different systems.

Stage 1: document analysis drawing on publicly available information

In Stage 1, criterion-based purposive sampling was employed to select relevant examination systems. The search focused initially on examination systems where there was some evidence of use of SBA in high-stakes certification examinations at the conclusion of upper secondary level. In reviewing potential systems, keywords such as ‘school-based assessment’, ‘external moderation’ and ‘external examination’ were used to search for relevant information from official examination system websites and other publicly available sources. A Stage1 search template was developed based on the three key research areas introduced in the study. The areas included the following: (i) examination systems that use SBA as part of their high-stakes certification for secondary education; (ii) approaches to external moderation to facilitate the implementation of SBA and (iii) how schools and teachers are encouraged and supported to engage successfully in SBA moderation. Initial investigations revealed 23 jurisdictions or examination systems for possible inclusion in the study.

Once the sample of jurisdictions had been identified, document analysis was applied to examine the data collected for each system. Document analysis is a structured method for examining texts. It can be used to provide context, shape research questions, complement other forms of data, trace changes over time and confirm evidence from different sources (Bowen, 2009). Stage 1 involved reviewing official sources from relevant government agencies, organisations, policy documents and academic literature. The official websites of selected agencies/organisations were searched using a standard online search engine, and additional sources of interest were reviewed when identified. The search, restricted to systems that have an SBA component as part of their high-stakes examination system,

sought to identify also evidence of external moderation of the SBA, in the context of high-stakes examinations. Refinement of the search resulted in the identification of 13 systems of particular relevance, where reasonably detailed information about moderation practices was accessible online and where the sample reflected geographic diversity. The sample included three multi-jurisdictional examinations: the International Baccalaureate (IB) Diploma, the Caribbean Advanced Proficiency Examination (CAPE) and the West Africa Senior School Certificate of Education (WASSCE). The search yielded a wide range of relevant documents. These included the following: official examination agency webpages, policies, guidelines and annual reports; curriculum specifications/syllabi; handbooks and assessment administration manuals for teachers; professional development material; communications aimed at teachers, parents and students; policy reports; and scholarly publications. Over 148 documents were reviewed across the 13 systems. [Table 1](#) provides an overview of the 13 systems with some illustrative examples of sources used in the document analysis.

Stage 2: survey using semi-structured interview methods

The analysis of data from Stage 1 informed the selection of systems for Stage 2, especially in relation to systems' potential to provide additional insights into the variety of moderation approaches. Stage 2 involved conducting semi-structured interviews with senior officials from selected examination systems. Purposive sampling methods were employed to achieve representation and variation across a sub-sample of the original 13 systems. Nine of the 13 jurisdictions were selected for this more in-depth analysis. Given duplication in the approach to moderation across some examination systems in Stage 1, it was not deemed necessary to interview in all 13 systems. Selection of examination systems was based on systems' diverse approaches to external moderation (to ensure representation of all the moderation approaches identified during Phase 1 and in the literature), on ensuring geographic spread internationally and on practical considerations, such as the researchers' capacity to secure access to senior officials and officials' willingness to participate. Stage 2 provided opportunities to explore unique challenges and best practices in most of the examination systems (marked with an asterisk in [Table 1](#)). The research team contacted examination officials associated with the nine examination systems selected for inclusion in the interview phase of the study. The researchers were able to use their contacts to help identify the most appropriate individuals familiar with the nine examination systems who could assist with the study. Once suitable interviewees were identified, introductory emails, letters and documentation were sent outlining the purpose and structure of the study, including an invitation to participate in an online interview. Agreement to participate was secured in all nine examination systems approached.

All three of the research team members participated in each interview which were conducted on dates between February and June 2023. The process involved conducting one online interview with an individual or a group of individuals who had a solid practical working knowledge of each examination system sampled. In the cases of seven of the systems, one individual with working knowledge of the moderation structures and processes was interviewed. In another system, two officials from the examination agency attended, while in another system, three officials attended. In total, 9

Table 1. Overview of examination jurisdictions included in Stage 1.

SystemName	Brief Description of Qualifications and Examinations	Illustrative Sources
Australia (NSW)	The Higher School Certificate (HSC) is the highest educational award in NSW, completed over a two-year period. HSC is administered by The New South Wales Education Standards Authority (NESA).	NSW Government (2023a) NSW Government (2023b) Shi (2021)
Australia (Queensland)	The Queensland Certificate of Education (QCE) is the senior secondary school qualification in Queensland, awarded upon completion of Years 11–12. QCE is administered by the Queensland Curriculum and Assessment Authority (QCAA).	Rodgers Gibson (2019) Queensland Curriculum & Assessment Authority [QCAA] (n.d.-a) Queensland Curriculum & Assessment Authority [QCAA] (n.d.-b) Queensland Curriculum and Assessment Authority [QCAA] (2018)
Australia (Victoria)	The Victorian Certificate of Education (VCE) is the qualification awarded in Years 11 and 12. The Victorian Curriculum and Assessment Authority (VCAA) oversees the Victorian Curriculum and administer the VCE.	Victorian Curriculum and Assessment Authority [VCAA] (2022) Victorian Curriculum and Assessment Authority [VCAA] (n.d.-a) Victorian Curriculum and Assessment Authority [VCAA] (n.d.-b)
Canada (Province X) ^a	Students graduate with a High School Diploma that certifies that the holder has completed a required course of instruction. The provincial Ministry of Education oversees education provided by high schools.	See note ^b below table
The Caribbean Examinations Council (CXC)*	The Caribbean Advanced Proficiency Examination (CAPE) examinations is equivalent to A-Levels typically administered in the UK and elsewhere. CAPE is administered by the Caribbean Examinations Council (CXC).	The Caribbean Examinations Council [CXC] (2025a) The Caribbean Examinations Council [CXC] (2025b) The Caribbean Examinations Council [CXC] (2013)
England*	AQA provides qualifications at AS and A-Level ^c	AQA (n.d.-a) AQA (n.d.-b) Joint Council for Qualifications (JCQ) (2022)
Hong Kong*	The Hong Kong Diploma of Secondary Education Examination (HKDSE) is taken by students after completing a three-year senior secondary curriculum. The HKDSE is administered by the Hong Kong Examinations and Assessment Authority (HKEAA).	HKEAA (2012) Hong Kong Examinations and Assessment Authority [HKEAA] (2025a) Hong Kong Examinations and Assessment Authority [HKEAA] (2025b) Hong Kong Examinations and Assessment Authority [HKEAA] (2025c)
International Baccalaureate (IB)*	The International Baccalaureate Diploma Programme (IBDP) is a two-year educational programme aimed at 16 to 19-year-olds in 159 countries around the world. IBDP is administered by the International Baccalaureate (IB).	International Baccalaureate [IB] (2018) International Baccalaureate (2025) International Baccalaureate [IB] (n.d.)
Malta*	The Matriculation and Secondary Education Certificate (MATSEC) is a qualification equivalent to the A Level. Examinations are developed by the MATSEC Examinations Board within the University of Malta.	Eurydice (2024) MATSEC Examinations Board (2022) MATSEC Examinations Board (n.d.) University of Malta (2023)
New Zealand*	New Zealand's National Certificates of Educational Achievement (NCEA) are national qualifications for senior secondary school students managed by the New Zealand Qualifications Authority (NZQA).	New Zealand Qualifications Authority [NZQA] (n.d.-b) New Zealand Qualifications Authority [NZQA] (n.d.-c) New Zealand Qualifications Authority (n.d.-a) Williams et al. (2021)

(Continued)

Table 1. (Continued).

SystemName	Brief Description of Qualifications and Examinations	Illustrative Sources
Scotland	Examinations for the Scottish Higher qualifications (known as <i>The Highers</i>) evaluate student learning at the conclusion of secondary school. Results on the exams are considered by Scottish higher education institutions during admissions. The Scottish Qualifications Authority (SQA) is responsible for designing and delivering qualifications and awarding certificates.	OECD (2021) Scottish Qualifications Authority [SQA] (2019) Scottish Qualifications Authority [SQA] (n.d.) Stobart (2021)
South Africa*	The National Senior Certificate (NSC) is the school-leaving certificate in South Africa. The NSC is awarded to learners who have met requirements as set out by the Department of Basic Education (DBE) and Umalusi, the Quality Council for General and Further Education and Training (FET).	Department for Basic Education Republic of South Africa [DBE] (2025) Department for Basic Education Republic of South Africa [DBE] (2014) Umalusi Quality Council for General and Further Education and Training (2021) Umalusi Quality Council for General and Further Education and Training (2014)
The West African Examinations Council (WAEC)*	The West Africa Senior (Secondary) School Certificate of Education (WASSCE) is a certificate awarded upon completion of the Senior High School (and/or Technical School) curriculum in West Africa. WASSCE is administered by the West African Examinations Council (WAEC).	The West African Examinations Council [WAEC] (2022a) The West African Examinations Council [WAEC] (2022b) Issaka et al. (2020) The West African Examinations Council [WAEC] (n.d.)

*Further data gathered via interview, in Stage 2 of study.

^aFollowing a request for anonymity by officials in the Canadian province included in the study, it is referred to in this paper as Canada Province X.

^bTo further protect the anonymity requested by Canada Province X, the sources of information drawn on by the research team have been withheld.

^cAQA, formerly the Assessment and Qualifications Alliance, is one of the awarding bodies in England, Wales and Northern Ireland licenced to provide educational qualifications. These qualifications include Advanced Subsidiary (AS) and Advanced level (A-Level) qualifications, typically taken by students in upper secondary education. The A-Level is a stand-alone qualification that can be taken after AS.

interviews were conducted (one for each examination system), with a total of 12 interviewees altogether. The interview sample reflected senior roles either in management of the examination system overall or in managing the implementation of SBA and moderation in the system.

The online semi-structured expert interviews aimed to gather detailed information related to the three key research areas and questions identified for the study, providing a deeper understanding of the moderation process in different educational contexts. Ethical approval for this study overall was received from the ethics committee of the university where first-named author is affiliated and written consent was secured from all participants involved in the interview stage of the research. An interview guide was developed based on the three primary research areas identified in Stage 1 (use of SBA, approaches to external moderation, support for schools and teachers). Interviews included open-ended questions about SBA implementation, external moderation approaches and support systems for schools and teachers. Alongside the interviews, some information was sourced through email exchanges and written documents supplied

by the participants. As part of each interview, a document containing a summary description of the system's approach to SBA and related moderation processes, prepared by the researchers based on analysis of Phase 1 data, was sent to interviewees for review in advance. This document formed the basis of the first part of each interview, allowing the interviewees to clarify with the researchers the information about SBA and moderation and thus helping to generate validated understanding of key issues relevant to the research. This process of validation enhanced the accuracy of data interpretation, enhancing the credibility of findings from the study.

Data coding

Thematic analysis, drawing on Maguire and Delahunt (2017), was employed to analyse the collected data from both stages, enabling the identification of patterns and themes within the datasets. The process of analysis involved becoming familiar with the datasets, generating initial codes based on the research questions, searching for themes, and defining and labelling the identified themes. Much of the data used to inform the present paper were drawn from the Stage 1 standardised search templates used to extract data from examination agency websites and other published documentation. These templates provided a structured framework for the data collection under several categories relevant to the research questions. Categories included the following: SBA components; purpose of moderation; impact of moderation; perceived practicality; forms of moderation used; supports for schools; and training for teachers. An inductive approach was used to generate initial codes directly from the data – linked to the search template categories – which were then grouped into broader themes based on research questions such as 'SBA weighting within examination', 'challenges in SBA implementation', 'single or blended approach to moderation' and 'teacher support mechanisms'. The three researchers independently coded a portion of the search templates to ensure reliability, resolving discrepancies through discussion in meetings until consensus was reached. Final coding of the remaining templates was undertaken separately by the researchers.

Analysis of the Stage 2 interview data drew mainly on data in the summary description of SBA and moderation discussed and refined by the interviewees during the initial part of each interview and on data in the corresponding part of the interview transcripts. Two broad categories in the summary description included the following: 'overview of certification and related examinations', and 'approach to moderating results from SBA', codes generated from the data included 'rationale for SBA', 'subjects with SBA component and weighing', 'rationale for moderation', 'forms of moderation', 'internal standardisation', 'extent of external moderation', 'training for teachers' and 'additional supports for schools/teachers'. As with the Stage 1 search templates, a portion of the interview data was independently coded by the researchers, with any discrepancies resolved through discussion before final analysis was undertaken.

There are certain limitations associated with this study. One limitation is the reliance on publicly available information, which may result in limited details regarding how these systems operate in practice. Institutional constraints and the sensitivity of certain information were also considered during the data collection process. The study was also largely limited to systems where data were available in English. To address the limitation

of relying on publicly available information, we supplemented these data with expert interviews and requested additional documentation from participants where possible. To mitigate language limitations, we consulted with native speakers when encountering crucial non-English documents.

Findings

Research question 1: how do examination systems use SBA as part of their high-stakes certification for secondary education?

The use of SBA is not universal practice in high-stakes examination systems at secondary level. This suggests that the adoption of SBA involves, first, a commitment, rationale and decision to use it and, second, an operational plan to implement it. Research Question 1 focuses mainly on the second element – how is SBA incorporated into the examination process in the systems sampled? In keeping with the focus of this paper, a broad snapshot of such implementation, drawn from practice in 13 jurisdictions/examination systems, is presented in [Table 2](#).

Data in [Table 2](#) confirm that the use of SBA is relatively common across a wide range of jurisdictions reflective of varied geographic location, size of population and overall education structure. It is evident in large systems (England) and in small (Malta); in different continents (for example, Australia and Africa), in systems that are centralised (New Zealand) and decentralised (Canada) and is also evident in examination systems that serve multiple jurisdictions (Caribbean/CXC, IB, Ghana/WAEC). Although SBA contributes to a high-stakes award in all 13 systems, they vary in how it is structured and used.

It is evident from [Table 2](#) that:

- Any one system might use SBA in all, in some, or in very few subjects. Consequently, a student's overall qualification at the end of secondary school may be based on a range of results in individual subjects, some of which have been generated by externally assessed work only and some by a combination of exams and SBA.
- In addition to variations in terms of whether SBA is used across subjects within a system, the relative weighting of SBA within the overall examination and qualification varies across subjects, where it is incorporated. For some subjects SBA constitutes a high proportion of marks (for example, 100% in the IB); in others, it is a very modest proportion.
- The tasks assigned to students as part of SBA vary in provenance. Sometimes specific tasks are set centrally by an examining/awarding body and teachers supervise the completion of the work. Alternatively, teachers might be asked to develop tasks locally, within parameters established by the examining/awarding body. Tasks take many forms, spanning a range of written tests, oral examinations, practical activities and investigations, performances and other work.

Having highlighted the prevalence and nature of SBA across the jurisdictions sampled, the next section describes the different approaches employed to ensure comparability of

Table 2. Summary of SBA in selected examination systems.

Examination System	Approach to School Based Assessment
Australia (New South Wales)	SBA is a crucial part of the Higher School Certificate (HSC), typically accounting for 50% of a student's final mark in most subjects. It is assessed by teachers within the student's own school. The number and type of assessment tasks can vary depending on the subject and school, but typically there are three to five tasks per course, including projects, tests, oral presentations and other forms of assessment.
Australia (Queensland)	Most General subjects in the Queensland Certificate of Education (QCE) use three internal assessments and one external assessment to determine final grades. SBA accounts for 75% of the final grade, except for General Mathematics and Science subjects where it accounts for 50%. The number and type of internal assessments vary by subject and year level, with Year 11 having two to four assessments and Year 12 having four assessments for each General and Applied subject. Marks from SBA and external exams are combined to provide scores out of 100 and a grade of A-E for each subject
Australia (Victoria)	Where SBA is included as part of the Victorian Certificate of Education (VCE) it typically accounts for between 25% to 50% of the mark in a subject. The exact weighting of SBA is specified in the VCE study design, which also outlines the assessment types used. The two main types of SBA used are (i) school-assessed coursework (SAC), developed and scored by teachers and (ii) school-assessed tasks (SAT), developed by the State awarding body (VCAA) and scored by teachers using criteria supplied by the VCAA.
Canada (Province X)	Depending on the subject, certification for the provincial High School Diploma is largely based on SBA, with a small external exam component. The external examination is not employed in every subject and in such cases, all marks are based on SBA. SBA is based on a combination of continuous assessment and teacher-developed tests, administered frequently at the end of a semester/term. Student transcripts show the results of the external exam and SBA separately, along with the aggregate grade.
Caribbean	The Caribbean Advanced Proficiency Examinations (CAPE), administered by the Caribbean Examinations Council (CXC), incorporates both SBA and external examination in all 24 subjects. The weighting varies according to the subject, generally from 20% to 40% of final mark. Teachers develop the SBA tasks/activities themselves, with reference to syllabus objectives.
England	A number of awarding bodies offer A-Level subjects and qualifications. The present study focused on AQA. Recent reforms have prioritised external examinations and some subjects have no SBA. SBA is used only where such assessments are needed to test essential skills and the task is either developed by the awarding body (and scored by teachers) or developed by the teacher, following guidelines from the awarding body. Where employed, SBA is frequently weighted at 20% of grade and is managed by schools.
Hong Kong	In the Hong Kong Diploma of Secondary Education Examination (HKDSE) 'core' subjects (Chinese Language; English Language; Liberal Studies) and a number of 'Elective' subjects include SBA components. SBA includes tasks such as oral presentations, portfolios, fieldwork, investigations, practical laboratory work, etc. The weighting applied to SBA varies by subject, for example, 15% in English Language. Teachers administer SBA according to regulations and procedures set by the local awarding body, HKEAA, and the school.
IB Diploma	Student grades in many IB Diploma Programme subjects are based on a combination of external examinations and SBA, with some subjects such as Visual Arts and Music assessed solely by SBA. SBA allows candidates to showcase their knowledge through oral work, fieldwork, lab work, investigations and artistic performances. The weighting of SBA varies by subject and tasks are either externally assessed or marked by teachers.
Malta	Although SBA is popular with education stakeholders, only a handful of subjects in the Matriculation and Secondary Education Certificate (MATSEC) incorporate SBA. Where used, SBA is considered preferable to exams for assessing certain learning outcomes that can only be assessed by teachers in schools. The weighting varies, for example, from 3% in biology to 20% in Geography. Teachers set the specific tasks aligned with guidelines from the exam board. Tasks are graded by the teacher.
New Zealand	Schools use SBA with weightings varying by subject. Internal assessments evaluate skills that exams cannot measure and typically account for 70% of standards. Schools/teachers develop assessment material appropriate for use with standards and/or draw on material provided by outside organisations. There is strong emphasis on using assessment materials that are certified by NZQA as meeting the assessment standards.

(Continued)

Table 2. (Continued).

Examination System	Approach to School Based Assessment
Scotland	SBA (coursework) is used in many subjects in the <i>Highers</i> . Where used, the weighting of SBA is typically between 25% and 49% but is greater than 50% in some subjects. Tasks are typically set by the central awarding body, SQA, or are developed by teachers using guidelines from SQA. Most coursework is graded externally by SQA, but some is marked by teachers within a school.
South Africa (Gauteng)	SBA accounts for a minimum of 25% of the grade in each subject in Grade 12. External examinations are graded anonymously by graders hired by an Examination Board. Teachers do not grade the exams of their own students. Tasks for students relating to SBA are developed and graded by students' own teachers/schools who return a mark to the Exam Board.
Ghana (WAEC)	Weightings of the external exams and SBA are 70% and 30% respectively. The current SBA system improves on the old practice of leaving schools to develop their own assignments by supplying schools with sample items/questions, project topics, marking and grading systems as a procedure for standardising the SBA process.

marking practices, and consequently standards, across systems. These approaches relate to external moderation.

Research question 2 – approaches to external moderation evident internationally to facilitate implementation of SBA

Table 3 offers a descriptive summary of overall approaches to external moderation for each of the 13 examination systems explored. For each system, key high-level moderation information is provided in terms of the moderation approaches identified in the literature. Insights from both stages of the study, including the summary description of each system validated in the interviews, allowed for refinement of the categorisation of moderation approaches.

While it is widely regarded that teachers might be best placed to reliably assess the abilities of their own students, the examination officials interviewed noted that teachers are not necessarily aware of the standards of performance across all other schools. Even though teachers are trained in the implementation of SBA and will assess students using the same assessment criteria, teachers in some schools may be harsher or more lenient in their judgements than teachers in other schools. Accordingly, SBA moderation maintains consistency and comparability in the assessment procedures, practices and the scores awarded to students, ensuring scores are valid, fair and reliable across different schools and teachers (South Africa). The dependability of scoring and the integrity of the qualification are safeguarded (Malta). Moderation seeks to confirm that the assessment of the work of different schools carried out by different teachers using sometimes different tasks is aligned to the standard of assessment defined by the examining body (Caribbean); that a common standard is adhered to across all schools (IB); that the standard of marking is consistent across all schools/centres (England) and serves as a check that the teacher has applied the assessment criteria marking the candidates' work accurately and consistently (IB).

Jurisdictions draw on individual approaches or combinations of external moderator-based and statistical moderation, each suited to its own educational, social and political context. Most systems also include various elements of internal standardisation of

grading by schools themselves (internal moderation) in addition to some form of external moderation.

Overall, a number of conclusions can be drawn in relation to Research Question 2:

- Moderation is a complex, challenging construct – there is no ‘one size fits all’ approach to external moderation.
- Moderation frequently seems to comprise a two-stage process: some form of internal standardisation coordinated and managed at school-level followed by external moderation (Canada Province X being the exception).
- Examination systems use what they deem appropriate to their contexts and capacity.

Having identified external moderation approaches associated with each of the examination systems under investigation, we now address the issue of how schools and teachers are encouraged and supported to engage successfully with moderation.

Research question 3: how are schools and teachers encouraged and supported to engage successfully with moderation?

Table 4 presents a summary of the support mechanisms available to teachers in each of the 13 jurisdictions in relation to the external moderation of SBA.

The data suggest a number of conclusions:

- Forms and levels of support for externally moderated SBA vary across educational systems, often including online materials, training sessions and post-moderation feedback.
- In the majority of jurisdictions/systems examined, training for external moderation is not compulsory.
- Training may be free or require a fee, with certain targeted modules for specific subjects or in relation to cases which occurred during moderation processes.
- Informal avenues for sharing best practices are evident in some jurisdictions (for example, New Zealand).

Discussion and conclusions

In the context of high-stakes qualifications, SBA and external moderation are inextricably linked and it is difficult to consider one without the other. This study first sought to ascertain practice in a number of examination systems in relation to SBA, either as the sole form of assessment or, as is often the case, as a component part of a hybrid system. Drawing data from 13 examination systems, the research identified several rationales for embracing SBA, chief of which is a desire to adequately assess areas of the curriculum that are difficult to assess with an examination. Education planners are aware of the challenges and potential negative reliability implications of trading some elements of carefully graded, standardised external examinations for a form of assessment that may introduce risk of biased and/or inconsistent marking by teachers. This study suggests that

Table 3. Summary of external moderation in selected examination systems.

Examination System	Approach to External Moderation
Australia (New South Wales)	Statistical moderation Involves adjusting SBA marks based on the external exam, which is completed by all students under the same conditions. By maintaining the rank order of students within the school group and aligning the assessment program with the expected standards, moderation helps to produce reliable and fair HSC results.
Australia (Queensland)	Moderation by inspection (sampling) QCAA Assessors review a sample of student responses to check the accurate and consistent use of the instrument-specific marking guide (ISMG) by teachers. The ISMG provides assessment criteria and examples of different levels of achievement.
Australia (Victoria)	Statistical moderation Uses external assessment to create a common scale for comparing students' results across different schools. Moderation does not change the level of achievement or rank order, only the numerical value.
Canada (Province X)	Consensus moderation (through some form of agreement trialling – see section earlier in paper on social moderation) Teachers within a school enact assessment and grading practices aligned with published professional standards for teachers in the province. School leaders/principals are responsible for assuring the quality of teacher assessment, in keeping with provincial leadership standards. In some cases, networks of teachers meet to align standards. Statistics supplied by the Ministry are used to reflect on assessment and grading.
Caribbean	Moderation by inspection (SBA aligned with moderator marks using a form of scaling) Moderation by Remarking: trained examiners remark samples of assignments, practical work or projects during marking exercise. Samples are carefully chosen so as to analyse quality of marking and consistency with which the teachers at centres apply the marking scheme.
England	Moderation by inspection (sampling), where SBA marks are aligned with moderator marks using linear regression; with consensus moderation within centres (internal standardisation) <i>Internal</i> standardisation by each school before submission of marks and <i>external</i> moderation by AQA. External moderation is generally undertaken remotely but some is completed on site depending on nature of SBA. Begins with a small sample from a school and if discrepancies are detected, broader sampling is undertaken. If necessary, marks for a school cohort are adjusted using linear regression.
Hong Kong	Statistical moderation for subjects with large candidature and where SBA and examinations share a substantial portion of common assessment objectives; Moderation by inspection with some form of scaling for subjects with small candidature or where there are significant differences between SBA and examination objectives HKEAA adopts two moderation methods: Statistical approach: Determination of group performance level with reference to the performance of the group in public examinations, supplemented with review of samples of students' work. Expert judgment approach: Determination of group performance level with reference to review of samples of students' work, assisted with statistical techniques.
IB Diploma	Moderation by inspection (sampling), where SBA marks are aligned with moderator marks using linear regression The IB requires access to all work contributing to a candidate's final mark for transparency and fairness. Moderation sample sizes are 10, 8, 5 or fewer than 5, according to the number of candidates in the subject cohort. Linear regression analysis is conducted to adjust a teacher's marking based on the sample trend.
Malta	Moderation by inspection (sampling) Typically, an external moderator for a subject, visits a school to review a 25% sample of students' work and its grading. Schools are selected on a rotational basis. Where teacher and moderator grades differ by more than 10%, the moderator mark is typically applied to the marks.
New Zealand	Verification, with Consensus moderation within schools Internal moderation is undertaken within or between schools to quality assure assessment materials, verify grade judgements and ensure consistency with the national standard. The subject leader and senior management in a school are responsible for ensuring internal moderation occurs. NZQA conducts external moderation for a small sample of student work annually to verify that marking is at the national standard. The outcome statements in external moderation reports indicate the level of consistency in assessor decisions and suitability of assessment materials.

(Continued)

Table 3. (Continued).

Examination System	Approach to External Moderation
Scotland	<p><i>Verification moderation, with some Moderation by inspection (where process of aligning SBA with moderator marks is unclear)</i></p> <p><i>Internal verification:</i> Each school must enact a policy to quality assure its own SBA and grading.</p> <p><i>External moderation.</i> Exam Board moderators sample a number of schools annually, drawing approximately 12 cases per subject per school. Much of the moderation is conducted remotely.</p>
South Africa (Gauteng)	<p><i>Moderation by inspection, with Statistical moderation to align the SBA marks to those of the examination based on an acceptable statistical variation</i></p> <p>Moderation procedures are expected at three levels: <i>School, District, and Province</i>. Typically, the work of 10% of students are moderated, to a maximum of 10 students in the subject. At district and provincial level, a minimum of 3–5% is moderated. Moderation at District level involves the physical remarking of a selection of SBA tasks, feedback meetings with the teachers, and compiling a report with recommendations. Not all centres within each school district are sampled. Moderation at provincial level effectively operates as a quality assurance of the moderation work conducted at district level. In addition, there is some level of subsequent sample moderation by the Department of Basic Education and by Umalusi, using statistical moderation</p>
Ghana	<p><i>Statistical moderation</i></p> <p>WAEC moderates SBA scores using external exam scores before combining them with external scores for grading candidates. The moderation is a linear transformation procedure by which students' SBA scores (e.g. the three-year averages) in a subject are adjusted so that their distribution has same mean and standard deviation as distribution of scores on the external examination for that school.</p>

many education systems believe that this trade-off is worthwhile. How jurisdictions ensure that the students, parents, teachers and the public can retain confidence in this decision relates directly to the approaches to external moderation employed to facilitate implementation of SBA.

There appears, however, to be no 'gold standard' model of moderation adopted uniformly internationally. Approaches mainly align directly with those outlined in the literature – in other words, a 'single' approach to moderation (e.g. Australia, Malta and Ghana), or with an amalgamation of approaches (e.g. Hong Kong, Scotland and South Africa). Where the approach is 'blended', they all share elements of moderation by inspection. Methods of moderation often include an amalgamation of elements of statistical moderation and moderation by expert judgement, the latter frequently involving application of a regression algorithm to map SBA marks onto moderator marks. Statistical moderation supplemented with sample review of students' work may be adopted for subjects in which the SBA and the external examination share a substantial portion of common assessment objectives. Conversely, expert moderation supplemented with regression techniques may be adopted which involve assessment objectives that are different from those of the external examination, assisted with statistical techniques (linear regression). The fact that individual jurisdictions frequently rely on more than one approach to moderation is significant in terms of the required robustness of procedures and resource implications: systems use what they deem appropriate to their contexts and capacity. A key determinant is the level of trust in the system locally – constituents need to have confidence in and be happy with it.

Table 4. Support for teachers and schools offered by examination agencies and authorities.

Examination System	Supports available
Australia (New South Wales)	The Australian Professional Standards for Teachers set expectations for teachers' knowledge and skills. Teachers progress through different levels and must possess knowledge of moderation processes. Professional development activities are necessary to maintain accreditation.
Australia (Queensland)	The Queensland Curriculum and Assessment Authority (QCAA) provides a comprehensive assessment literacy program to support teachers in their assessment practices. This program includes online modules that teachers can complete at their own pace. QCAA trains assessors who review student responses for confirmation, ensuring the accuracy and consistency of teachers' judgements. Teachers receive further assistance through instrument-specific marking guides (ISMG) and online courses offered by QCAA. The authority also provides resources to help schools with sample preparation and submission, facilitating the external moderation process.
Australia (Victoria)	The VCAA website offers subject-specific assessment materials for the VCE certification. Teachers can access webpages containing general assessment advice and examination specifications. The website also provides online resources to gain insights into statistical moderation, such as FAQs from teachers, videos, brochures, administrative handbooks and checklists. The VCAA recommends that schools with fewer than five enrolments establish partnerships with other schools. These partnerships facilitate consistent interaction and ensure effective statistical moderation of school-based assessments.
Canada (Province X)	For within-school moderation, independent CPD agencies offer optional workshops to assist schools in interpreting results and addressing any grade discrepancies. These workshops may involve a fee. To promote fair and evidence-informed assessment, teacher qualification standards and leadership qualification standards are in place. The Ministry hosts relevant material on its website, which can be accessed by educators. Comprehensive statistical data on exam and SBA outcomes are shared with schools. This information helps schools reflect on their practices at a local level.
Caribbean	Teachers and schools receive training and support for external and within-school moderation. Workshops conducted periodically by subject matter specialists and CXC staff provide guidance for external moderation. Additional information is available through in-house training and free CXC workshops. Within-school moderation training clarifies the distinction between formative and summative assessment and is integrated into pre-service training. Teachers receive moderation feedback forms for further support.
England	Training for external moderation includes compulsory sessions in situations of new/revised exams or significant discrepancies in marks. Additional support is provided through website materials and videos. Within-school moderation training has shifted online, led by a principal moderator, with a fee applied. Calibrated samples and SBA advisors assist in marking.
Hong Kong	External moderation training is primarily provided by HKEAA, with additional courses from tertiary institutes. Teachers without SBA experience can join a 15-hour program. Post-administration feedback and briefings support external moderation. Separate training exists for internal moderation. Most teachers receive within-school moderation training, ensuring assessment standardisation. Overall, training ensures assessment quality and consistency.
IB Diploma	Examiners involved in external moderation receive training to ensure adherence to the global standard. Teachers are not required to undergo any specific training for external moderation. The IB provides guidelines and materials to schools, supporting teachers in understanding the process for external moderation. For within-school moderation, the IB supplies subject guidance to schools, assisting teachers in marking against standards. Teachers have the option to attend workshops provided by the IB, for which a fee is charged.
Malta	Training for external moderation is provided to key staff in schools, increasingly online, but attendance is not mandatory. Additional support includes facilitating meetings between MATSEC and schools/teachers. Within-school moderation is recommended but not enforced by MATSEC, with limited available support.
New Zealand	For external moderation, teacher training is optional but encouraged, especially when new standards are introduced. NZQA provides online materials like webinars and guidelines to support good assessment practices. For within-school moderation, NZQA offers online learning modules and workshops for assessors. They also provide face-to-face workshops, targeted support and subject-specific resources on Facebook for effective assessment within schools.

(Continued)

Table 4. (Continued).

Examination System	Supports available
Scotland	SQA offers bespoke training to schools for external moderation, specifically focusing on understanding the standards associated with different subjects and qualifications. Additionally, SQA provides various supporting documents on their website. These resources assist schools in implementing effective moderation practices and ensuring alignment with the required standards.
South Africa (Gauteng)	For external moderation, subject exemplar booklets are provided to assist teachers in setting standardised SBA tasks. While training is not mandatory, there are options available such as a 5-day assessor course and a 2-day moderator course to ensure teachers understand the purpose and process. Additional support for external moderation includes the use of moderation feedback forms, which provide valuable insights into students' strengths and weaknesses. Furthermore, the training of Regional Moderators helps in providing feedback and support to individual schools.
Ghana (WAEC)	External moderation training in Ghana is provided by the Ministry of Education through face-to-face sessions conducted by the National Council of Curriculum and Assessment. The Ghana Education Service also offers various small courses for teachers in continuous assessment. However, a significant challenge is the limited penetration of training for teachers due to resource constraints and the high cost of running training courses. For within-school moderation, guidelines are provided to assist teachers in writing and administering Class Assessment Tasks. These guidelines serve as a framework for maintaining consistency in assessment practices within schools.

Usually, the SBA moderation process takes place after the assessment is completed and marks have been submitted to the examining authority or awarding body (for example, England; Hong Kong; Malta). As a general principle, within a group, individual students' raw SBA scores may be adjusted, but the rank order within a moderation group will remain unchanged. Where a significant discrepancy is noted between the school-generated marks and the view of the moderator, students' marks can be either adjusted. (for example, Malta) or feedback provided in order for schools to make the appropriate corrective action (for example, Canada Province X). Samples of student work and teachers' marking can also be reviewed to verify that the assessment judgements (marking of students' work) are at the national standards. In such cases, moderators can recommend the adjustment of marks by schools, based on the review process (New Zealand).

Reflecting the multiple approaches within individual jurisdictions, many systems, at some level, require that schools take steps themselves to ensure that assessment procedures and grading practices are standardised internally before marks are awarded to students. It is important to acknowledge the contribution of internal moderation/standardisation to successful external moderation practice: The data show that most, if not all, jurisdictions require schools to run their own appeals systems meaning that robust systems of internal moderation are essential and assumed or required. Internal moderation supports the credibility of the assessment by ensuring that the assessment is valid, and marking judgements are verified, before external moderation of internally assessed standards is undertaken by moderators contracted by the examination body.

The research participants identified some challenges to external moderation systems. Despite the availability of training for teachers, misconceptions and mistrust of moderation by teachers are not uncommon. Lack of understanding and misconceptions by teachers and parents apply to the nature of moderation, especially where statistical adjustments are used as part of statistical moderation or moderation by inspection.

Many jurisdictions seek to complement moderation 'findings' with informative feedback for schools and teachers. However, production of feedback that is relevant to teachers, that can help them to align their marking with national standards and that is timely in its delivery adds to the workload of those providing it.

The study revealed several support mechanisms available to teachers regarding the external moderation of SBA though the nature and extent of this support varies significantly across educational systems. These support mechanisms are influenced by factors such as the size of the education system and its global representation (in the case of IB), the availability of financial and human resources, and the transparency of the system, particularly regarding the accessibility of materials in the public domain. Additionally, some systems integrate external moderation training into teachers' career progression to enhance their professional development. Within systems, several forms of support are made accessible to teachers, encompassing online materials, training sessions conducted both online and in-person, as well as post-moderation feedback forms. Notably, certain systems integrate external moderation training as a part of a teacher's career progression and overall professional development (evident, for example, in New South Wales, Australia). Official websites of examination authorities serve as a hub for online materials, offering guidelines, educational videos and explanatory documentation on the procedures involved in external moderation. Such material, evident in Australia, New Zealand, Hong Kong and Scotland, is accessible to teachers, parents, students and the public. It is important to note that these materials serve an educational purpose not only for teachers but also for parents and students seeking to understand the mechanism of moderation of SBA. Guidelines on good assessment practice, especially in the context of SBA, are a common form of support to ensure that assessment standards are consistently implemented. The International Baccalaureate (IB) system provides teachers with marking guidelines to ensure their familiarity with IB standards.

To further enhance teachers' knowledge on external moderation of SBA, various training and workshop opportunities are available. These initiatives are provided by examination authorities themselves (for example, Hong Kong, England and Malta), independent Continuing Professional Development agencies (Canada) or national ministries (Ghana). While certain systems offer these training opportunities free of charge (Hong Kong, Caribbean), others require participants to pay a fee (IB, England). Participation in training sessions is generally voluntary, although specialised modules might be available to teachers with limited prior experience in school-based assessment or those involved with new and revised examinations, as well as in instances where teachers' assessments significantly deviate from the marking standards (Hong Kong, England). Non-mandatory training places the responsibility on teachers to familiarise themselves with the procedures of external moderation. In the aftermath of the Covid-19 pandemic, there has been a notable shift towards online training implementations. In smaller systems or those presently undergoing digitalisation, wherein they contend with challenges related to Wi-Fi connectivity, face-to-face training remains the favoured modality. The preference for on-site training, as observed in Ghana, stems from its perceived benefits, although it should be noted that the operational costs associated with face-to-face training are higher compared to online alternatives.

Post-moderation feedback serves as another crucial form of support, enabling teachers to gain insights into administrative procedures related to moderation, students' strengths and weaknesses, and examples of best practices. This approach has been implemented in

systems such as South Africa, Hong Kong, the Caribbean and Province X in Canada. In Malta, school representatives engage in meetings with exam board officials to receive feedback and gain insights into nuanced occurrences during the moderation process. Additionally, informal avenues for sharing best practices have been observed in New Zealand, where teachers collaborate through dedicated subject-specific Facebook pages.

This study highlights policy and practice surrounding external moderation of SBA in a variety of education systems. Publicly available information (explored in Stage 1 in the study), though found to be useful in capturing practice at a high level, left some detail unclear. This necessitated more focused analysis drawing on interviews with examination officials in some jurisdictions (Stage 2), a process of analysis that is ongoing. The findings to date suggest that there is no universal approach to external moderation. We identified four distinct approaches, commensurate with the literature. In addition, all systems rely on some form of internal moderation of scores before they are submitted for external moderation. Protocols for such internal moderation vary also. As analysis of Phase 2 data unfolds, we anticipate greater clarity about the nature of the commonalities and differences in relation to both external and internal moderation, and about the rationale for practices employed in particular contexts. The present study should provide useful information to policymakers and assessment practitioners to reflect on their own system in relation to international benchmarks of practice.

Note

1. Many authors use the term ‘social moderation’ in a sense that is synonymous with consensus moderation, while others use it as an overarching term for moderation by consensus, inspection, and verification. For example, Daly et al. (2011) positions social moderation as an umbrella term for any approaches that use individuals’ judgement (expert moderators, teachers, verification) whereas Cuff (2018) tends to use consensus and social moderation interchangeably. To avoid confusion, the term ‘social moderation’ is not used widely in this paper.

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