

Professor Louise Hayward's review of qualifications and assessment



Summary

- Qualifications and assessment differ in their purpose and while assessments are used as the basis for awarding/attaining qualifications, not all assessments will or should form part of qualifications.
- It is essential that the present reform agenda include a consideration of what assessment is for, how it is undertaken, and how it can be used to inform qualifications. Similarly, Scotland must consider the purpose of a qualification, who uses it, and what knowledge and skills it says the recipient possesses.
- There is an aspiration to achieve the four capacities for all learners. Information on the approach being taken to their development is therefore an important component to not only ensure progress but also to provide societal recognition of the importance of these aspects of our education system. The way in which this information is gathered in each of the four capacities should be appropriate to the nature of the learning and skills developed, with care taken to be as unintrusive as possible.
- The RSE has done considerable work on interdisciplinary learning (IDL), one of the four contexts. Subject-specific knowledge is no longer the primary determinant of suitability in the majority of graduate recruitment. What matters more are transferable skills and attributes, breadth of knowledge and experience, cross-disciplinary thinking, and problem-solving capabilities. IDL does not easily lend itself to traditional assessment and creative assessment methods will need to be researched and developed to support its delivery.
- Gathering evidence on learners' skills and competencies is becoming critical in an increasingly skills-driven 21st century world. Knowing how to learn and motivating learners to want to learn is fast becoming more important than what they learn. A decisive shift away from national, standardised knowledge-based testing as the sole means of assessment across the senior phase is implied.
- A way forward could be the introduction of task-based portfolios – not just in the senior phase, but more widely in educational practice across further education (FE) and higher education (HE) that are flexible and portable across many different progression pathways. Coupled to this is the need for educators and qualification designers to have the corresponding freedom to adapt and reshape qualifications in response to dynamic industry norms.
- The RSE supports the move to a more holistic and flexible system of assessment that allows learners to demonstrate their understanding and capacity for problem-solving in a variety of ways and is more in tune with the needs of employers and the skills and competencies required for the future.
- There must be a culture shift wherein society learns to trust and respect teachers as professionals with the capability to accurately assess student attainment as a vital complement to traditional assessment approaches. However, the profession will require wholesale support in reaching this stage.
- As the RSE noted in its response to the Muir review, there is a fundamental need for a clear and universally supported definition of what is expected at the end of each stage of education in Scotland, with respect to the content of learning, level of attainment, and qualifications to be acquired, if any.¹ Further, the lack of a seamless progression in learner pathways from Broad General Education (BGE) to senior phase qualifications, in whatever form these may emerge, seems to be the central and most important challenge to Curriculum for Excellence (CfE) as it is currently structured.

¹ <https://rse.org.uk/expert-advice/rse-education-committee-response-to-professor-ken-muir-education-reform-consultation/>

Summary (continued)

- Digital advances, e.g. artificial intelligence, will play a more significant role in the future of education and children's lives more generally and they have a significant role to play in assessment. Whilst there are some challenges in terms of accessibility, equity and efficacy, these methods bring opportunities for a wider range of assessment techniques, as well as raise fundamental questions about approaches to assessment itself. On the topic of equity, we must ensure that learners are able to access and successfully use these technologies.
- It is vital that young people are supported in deriving maximum benefits from their talents and skills and are given a clear understanding of the benefits of different learning and career pathways, rather than being directed towards destinations that may not suit them. Changing this mindset will require a widespread cultural shift. This shift will take time as learners, teachers, parents, and society in general adapt to new ways of conceptualising 'success.'

Introduction

1. The Royal Society of Edinburgh (RSE), Scotland's National Academy, is pleased to engage with Professor Louise Hayward's review of qualifications and assessment. Under the auspices of its Education Committee, the RSE has been following and contributing to the present education reform agenda, having responded to the Organisation for Economic Cooperation and Development (OECD) review of Curriculum for Excellence (CfE)², the Muir review³, and the national discussion on education⁴, and welcomes the potential for significant and systemic transformation to serve the best interests of learners, employers, and Scottish society. The RSE looks forward to engaging with subsequent stages of the review and would be pleased to meet with Professor Hayward and members of the Independent Review Group (IRG)⁵ to expand on any of the below positions.

General comments:

2. **Qualifications and assessment differ in their purpose and while assessments are used as the basis for awarding/attaining qualifications, not all assessments will or should form part of qualifications.**
3. Assessment should inform learning and teaching and allow for an understanding of a learner's current knowledge and skills, identify gaps, and support development through the application of knowledge.
4. Both assessments and qualification can support an understanding of the quality of the education system both within the classroom and at the national/international level.
5. Qualifications should attest to what the learner knows and can do and provide valuable insight into an individual's knowledge and skills as they progress to college, university, or through the workplace. They should result from assessments that are appropriate to the curriculum being studied and take a variety of forms, rather than being limited to traditional pen and paper examinations.
6. It is essential that the present reform agenda include **a consideration of what assessment is for, how it is undertaken, and how it can be used to inform qualifications.** Similarly, Scotland must consider **the purpose of a qualification, who uses it, and what knowledge and skills it says the recipient possesses.** Importantly, there must be consideration of the unintended consequences that may arise from overreliance on a particular form of qualification.
7. Every three years, the OECD conducts Programme for International Student Assessment (PISA) testing of half a million learners in over 80 countries to assess the quality of their education systems. It is likely that this testing will in future focus on testing the teaching of the skills and competencies required for thriving in the 21st century.⁶ The reform of the qualifications in Scotland should take this important change into account.

² <https://rse.org.uk/expert-advice/rse-education-committee-response-to-oecd-review-of-curriculum-for-excellence/>

³ <https://rse.org.uk/expert-advice/rse-education-committee-response-to-professor-ken-muir-education-reform-consultation/>

⁴ Publication pending; please contact Daria Tuhtar, RSE Policy Manager, for a copy of the response: dtuhtar@therse.org.uk

⁵ <https://www.gov.scot/groups/independent-review-of-qualifications-and-assessment/>

⁶ <https://www.theneweuropean.co.uk/the-education-reforms-britain-and-the-world-needs/>

Question 1

a) Should information be gathered across all four capacities?

Yes/No/Unsure

8. There is an aspiration to achieve the four capacities for all learners. **Information on the approach being taken to their development** is therefore an important component to not only ensure progress but also to provide societal recognition of the importance of these aspects of our education system.

b) Please consider each of the capacities in turn. What kinds of information should be gathered on learners' progress and achievements in each capacity?

9. **The way in which this information is gathered** in each of the four capacities should be appropriate to the nature of the learning and skills developed, with care taken to be as **unintrusive as possible**. The purpose should be formative and not for a qualification.

10. The RSE would consider that the **four contexts** for learning under CfE are often overlooked in favour of the four capacities; however, they are arguably more important in realising the full potential of the educational system.

11. To this end, the RSE has done considerable work on **interdisciplinary learning (IDL)**, one of the four contexts. Knowing how to learn and motivating learners to want to learn is becoming as important as – and arguably more important than – what they learn. Students need to learn how to process, evaluate, and use information, identifying useful and relevant knowledge and information to solve problems and understand concepts. Some jobs continue to require specific knowledge and skills (medicine, engineering, science, etc.), but many vacancies no longer require graduates from specific disciplines; in fact, in its 2019 annual recruitment survey, the Institute of Student Employers found that over 86% of large employers now say that the degree subjects of candidates do not matter.⁷ Subject-specific knowledge is no longer the primary determinant of suitability in the majority of graduate recruitment. **What matters more are transferable skills and attributes, breadth of knowledge and experience, cross-disciplinary thinking, and problem-solving capabilities.** These should be actively developed throughout and across our education system.

12. However, as the RSE noted in its seminal paper *Embedding Interdisciplinary Learning in Scottish Schools*, the assessment of IDL is a major, complex challenge and it is one that will have to be addressed if IDL is to feature prominently in school education.⁸ The subject-based National Qualification courses and assessments are currently a barrier to the development of IDL within secondary schools. Clear criteria will be required about what it is within IDL that will be assessed. **IDL does not easily lend itself to traditional assessment and creative assessment methods will need to be researched and developed to support its delivery.** On this topic, as was noted in our response to the national discussion, universities can serve as powerful gatekeepers of traditional methods of qualification and assessment and will need to be brought on board in order to achieve systemic change.

13. The Building Our Curriculum Self-Help Group (BOCOSH) report concluded that successful accreditation of IDL would be a major motivation for its credibility and delivery.⁹ Currently, however, the Scottish Baccalaureates in Expressive Arts, Languages, Science, and Social Sciences (all at SCQF level 7), which includes an interdisciplinary project as a mandatory component, is the only SQA qualification that formally recognises IDL. However, the low uptake and issues relating to schools' capacity to offer the Baccalaureate means that most learners are likely to have very limited exposure to formally recognised IDL within the senior phase. We would recommend that IDL be included in a wider array of qualifications and awards.

Question 2

What, if any, information on learners' achievements obtained outside school and college should be gathered? Please explain your response.

14. We agree with this concept in principle but do not offer specific examples.

Question 3

a) Should information be gathered on learners' skills and competencies as part of their senior phase?

Yes/No/Unsure

⁷ <https://ise.org.uk/page/ISEPublications>

⁸ <https://rse.org.uk/expert-advice/interdisciplinary-learning-in-schools/>

⁹ https://issuu.com/bocshgroup/docs/bocsh_idl_jan_2015

15. **Gathering evidence on learners' skills and competencies is becoming critical in an increasingly skills-driven 21st century world.**¹⁰ Current assessment approaches tend to emphasise knowledge, which is constantly developing and changing in response to new research and ideas across curriculum areas. Indeed, human knowledge is, by some estimates, now doubling every two years, or even faster in some fields. Knowledge is now outpacing our ability to make sense of it. The careers for which we think we are preparing young learners may change radically – or may not exist – a decade hence. The issue of what is to count as important knowledge will remain a germane question as we move further into the current century and the information age.

16. **Knowing how to learn and motivating learners to want to learn is fast becoming more important than what they learn.** Students need to learn how to process, evaluate, and use information - and the knowledge that emerges - to solve problems and to understand concepts. This has profound implications across our education system, and especially for the ways in which we assess and for what we assess. **A decisive shift away from national, standardised knowledge-based testing as the sole means of assessment across the senior phase is implied.** Such a move should and would have a positive impact across our education system, including further education (FE) and higher education (HE).

b) If you have views on how this might best be done, please provide them here.

17. The ability to apply knowledge and skills is now fundamental to the success of any learner as they progress to further study or into work, and this must be appropriately captured by the right form of evidence.

18. However, prevailing assessment models can be limited by rigid adherence to industry standards which fail to leave room to incorporate examples of emerging practice that are quickly becoming mainstreamed. This can be particularly true in the case of professional vocational qualifications, giving them a shelf life in terms of their demonstrated alignment with employer needs. **A way forward could be the introduction of task-based portfolios – not just in the senior phase, but more widely in educational practice across FE and HE - that are flexible and portable across many different progression pathways.** This would take account of the often-rapid pace of innovation across different industries and help to prolong the relevance of those discrete learning experiences rather than needing to wait for qualifications to be updated at the macroscale. **Coupled to this is the need for educators and qualification designers to have the corresponding freedom to adapt and reshape qualifications in response to dynamic industry norms.**

19. In this vein, authentic assessment is now gaining a foothold in higher education as a way of improving the learning experience and employability skills of students.¹¹

Question 4

Please share your thoughts on what a 'better balanced' assessment system would look like. As well as considering the balance between external examination and internal assessment you may also wish to comment on the frequency of examinations.

20. A better balanced assessment system could look different for every pupil and for the nature of what is being assessed; however, it is clear that an overemphasis on external examination and subject content – as has been in the case in the Scottish qualifications system thus far - is uniformly unhelpful, stifling curricular creativity and disadvantaging pupils that struggle with traditional examinations. **The RSE supports the move to a more holistic and flexible system of assessment that allows learners to demonstrate their understanding and capacity for problem-solving in a variety of ways and is more in tune with the needs of employers and the skills and competencies required for the future.**

21. Some of this flexibility is already present within the system but remains under-valued by broader society. Internal assessments can hold a negative association for many, who regard them as less robust than – and therefore inferior to – external examination. For example, with the introduction of the National Qualifications, there emerged a clear preference for externally assessed National 5 qualifications as opposed to internally assessed National 4 qualifications, again predicated on the assumption that the former are more rigorous and therefore better prepare pupils for further study. **There must be a culture shift wherein society learns to trust and respect teachers as professionals with the capability to accurately assess student attainment as a vital complement to traditional assessment approaches. However, the profession will require wholesale support in reaching this stage.** Professional learning will be crucial in enhancing teachers' assessment literacy. This should take place both within the context of Initial Teacher Education but also within career-long professional learning. The 2020 alternative assessment model highlighted the value of teachers receiving greater support in making professional judgments of learner performance.

¹⁰ <https://www.theneweuropean.co.uk/the-education-reforms-britain-and-the-world-needs/>

¹¹ <https://doi.org/10.1016/j.stueduc.2021.101030>

22. We discuss the potential role of digital advances in shaping assessment in response to question 7.

Question 5

Please share your thoughts (advantages/disadvantages) on the idea of introducing an achievement, award or qualification at the end of the BGE.

23. As the RSE noted in its response to the Muir review, there is a **fundamental need for a clear and universally supported definition of what is expected at the end of each stage of education in Scotland**, with respect to the content of learning, level of attainment, and qualifications to be acquired, if any.¹² Further, **the lack of a seamless progression in learner pathways from Broad General Education (BGE) to senior phase qualifications, in whatever form these may emerge, seems to be the central and most important challenge to CfE as it is currently structured**. Introducing an achievement, award, or qualification at the end of the BGE could help to ease the historically abrupt transition from BGE to the senior phase by clearly laying out the expectations for what learners should have achieved by the end of S3, including in preparation for subsequent National Courses. As an example, National 5 courses were constructed on the premise that learners should have achieved curriculum level 4, including the development of the associated skills, prior to entry. However, Scottish Government data at the end of BGE would suggest that not all learners entering a National 5 course have obtained this level. Such an achievement, award, or qualification should also have both standalone merit and transferability for those individuals wishing to leave school or college at S4 and perhaps pursue alternative pathways.

Question 6

Please share your thoughts (advantages/disadvantages) on the idea of introducing a type of leaving certificate in the senior phase.

24. The RSE does not offer a particular position on this question.

Question 7

How should Scotland's qualifications and assessment system make best use of digital technologies?

25. Digital advances, e.g. artificial intelligence, will play a more significant role in the future of education and children's lives more generally and they have a significant role to play in assessment. **Whilst there are some challenges in terms of accessibility, equity and efficacy, these methods bring opportunities for a wider range of assessment techniques, as well as raise fundamental questions about approaches to assessment itself.**

26. The emergence of sophisticated artificial intelligence software such as ChatGPT, which has been shown to mirror 'legitimate' answers to exam questions to a credible degree, means the system must be well-prepared to guard against and tackle cases of academic misconduct. Scotland must therefore think carefully about how to incorporate digital technologies into qualifications and assessment protocols to ensure that neither integrity nor fairness are compromised.

27. **On the topic of equity, we must ensure that learners are able to access and successfully use these technologies.** Although Scottish Government has committed to providing every school-aged child with a digital device by the end of this parliamentary session (2026), there is no guarantee that these pupils will then have access to reliable Internet connectivity, a suitable home working environment, and the levels of support necessary to make the most of these technologies. As such, any technological interventions must be holistic, considering what support different learners will need to take full advantage of digital technology.

Question 8

How can we make sure that proposals for a future qualification system will uphold the rights of all learners to demonstrate their achievements?

28. **It is vital that young people are supported in deriving maximum benefits from their talents and skills and are given a clear understanding of the benefits of different learning and career pathways, rather than being directed towards destinations that may not suit them.**

¹² <https://rse.org.uk/expert-advice/rse-education-committee-response-to-professor-ken-muir-education-reform-consultation/>

However, the predominant view among parents, teachers, and society in general continues to be that Highers are the de facto metric of school and learner attainment in Scotland, despite that fact that learners themselves may hold different ambitions.

29. All too often, the SQA qualifications (National 5, Higher, and Advanced Higher) results that are published every summer form the mainstay of the way in which the education system in Scotland is judged. If we truly aspire to value wider achievement and encourage different pathways, a broader and more holistic measure must be developed and recognised by all.

30. The Scottish Credit and Qualifications Framework (SCQF) has been in place for over 20 years and yet other qualifications at the same level (SCQF 6) are not yet regarded with the same parity of esteem. Foundation Apprenticeships at SCQF 6 have gone some way towards addressing this issue but there remains a challenge with how vocational and other qualifications are promoted and perceived. Changing this mindset will require a widespread cultural shift. This shift will take time as **learners, teachers, parents, and society in general adapt to new ways of conceptualising 'success.'**

Question 9

Is there anything else in relation to the reform of qualifications and assessment which is not covered in this consultation which you would like to raise?

31. While the focus of the review is on the senior phase, it is important to recognise that changes enacted at earlier stages of the school system (e.g. the early years) could interact with later reforms to produce unintended consequences. For example, Scotland is on the brink of introducing the option of automatic deferred entry to primary school for all children. Under the current assessment and qualification regime, it is possible these children could reach leaving age without having undergone any sort of formalised assessment procedure or exam system. We must consider how these learners can be empowered to demonstrate their achievements in the absence of 'traditional' qualifications.

Additional information

32. Any enquiries about this advice paper should be addressed to Daria Tuhtar, Policy Manager, at dtuhtar@theRSE.org.uk.



CREATED IN 1783 BY ROYAL CHARTER
SCOTTISH CHARITY NO. SC000470

22–26 George Street
Edinburgh
EH2 2PQ

Telephone: +44 (0)131 240 5000
Email: info@theRSE.org.uk

Discover more at rse.org.uk