

Learned Societies' Group on Scottish STEM Education

Policy advice

Education (Scotland) Bill

September 2024



About the work of the Learned Societies Group on Scottish STEM Education (LSG)

The Learned Societies' Group on Scottish STEM Education (LSG) identifies and promotes priorities for school STEM education in Scotland. This includes providing advice on school STEM education to decision-makers, including Ministers, MSPs, civil servants, and local authority representatives. Currently chaired by Professor Martin Hendry, its membership includes the Association for Science Education (ASE), British Computer Society (BCS), Edinburgh Mathematical Society (EMS), Institute of Physics (IOP), Institution of Engineering and Technology (IET), Royal Society of Biology (RSB), Royal Society of Chemistry (RSC), and Scottish Mathematical Council (SMC).

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Executive summary

The Learned Societies' Group on Scottish STEM Education (LSG) welcomes the opportunity to respond to the detailed call, from the Scottish Parliament Education, Children, and Young People's Committee, for views on the proposed Education (Scotland) Bill. The introduction of new legislation is an encouraging step towards reforming the education system in Scotland and delivering some of the changes that learners and teachers have been rightly demanding.

However, the LSG is concerned with several aspects of the Bill. Of paramount concern is the Bill's focus on delivering institutional reform through the establishment of Qualifications Scotland and an independent inspectorate before having determined the desired outcomes or processes needed to implement educational reform in Scotland. While institutional reform constitutes an important part of the educational reform agenda, the LSG believes that other aspects of reform should take precedence and that institutional reform can only be judged in the context of knowing what it is being asked to deliver.

Given the significant costs associated with establishing Qualifications Scotland, the LSG would like to see more concrete evidence that it will deliver meaningful change for key stakeholders, particularly learners and teachers.

The LSG is concerned that the Bill does not address the fundamental recommendations put forth in several high-profile reviews of Scottish education in recent years, including the *Curriculum for Excellence: Into the Future* (OECD), *Putting Learners at the Centre: Towards a Future Vision for Scottish Education* (Professor Ken Muir), and the *Independent Review of Qualifications and Assessment* (Professor Louise Hayward).

The LSG appreciates the Scottish Government's efforts to include the voices of learners and the teaching community through learner and teacher and practitioner Charters. To ensure these Charters are effective, the LSG suggests including more detail about how they will engage with stakeholders and a guarantee that stakeholders' feedback will be implemented. Furthermore, the LSG recommends that subject-specific stakeholders, such as representatives from organisations that comprise the LSG, are consulted through these Charters.

The LSG is also concerned by the lack of independence of the new inspectorate body and its associated Advisory Council and recommends that it be accountable to the Scottish Parliament instead of Scottish Ministers. The LSG also encourages the Scottish Government to more evenly balance scrutiny and support when it comes to the nature of inspections.

The LSG recommends that better data is collected and made available to evaluate the performance of the Scottish education system. Please see the LSG's response to the consultation on enhanced data collection for educational improvement for further details.¹

Finally, the LSG suggests that the Scottish Government provide an overview of what education reform will look like and how it plans to implement the various components.

¹ <https://rse.org.uk/programme/advice-paper/lsg-enhanced-data-collection-for-educational-improvement/>

Question 1: Several reports, including the OECD Review of the Curriculum for Excellence and Professor Ken Muir's report "Putting Learners at the Centre. Towards a Future Vision for Scottish Education", have recommended reforming the current Scottish Qualifications Authority. How well do you think the Bill addresses the concerns raised in those reports?

1. The LSG is concerned that the Bill does not address the fundamental recommendations put forth in both the OECD review and Muir review, as well as the *Independent Review of Qualifications and Assessment*. The LSG is disappointed that, despite extensive consultation and multiple commissioned reviews, the Scottish Government has failed to recognise some of the most important recommendations set out in those reviews- aligned with multiple issues and topics, of particular importance in the STEM context, that were previously highlighted in the relevant LSG policy advice papers: OECD review;² Muir review;³ Independent review of qualifications and assessment.⁴
2. For example, the LSG questions how the Scottish Government can implement a new qualifications body, Qualifications Scotland, without formally addressing the recommendations put forth in the *Independent Review of Qualifications and Assessment*. The LSG is concerned by the prospect of creating a new qualifications body without knowing what qualifications will look like in the future, given that the Scottish Government has yet to definitively announce which of the review's recommendations will be accepted. The LSG recommends that the Scottish Government immediately respond to the recommendations proposed by Professor Hayward before moving forward with the establishment of Qualifications Scotland. For more details on particular recommendations supported by the LSG, please see our advice paper on the **Independent** review of qualifications and assessment.⁵
3. Another example of an existing recommendation that has not been addressed by the Bill is the lack

of independence of the inspectorate. One of the key recommendations from Professor Muir's report was to introduce a new inspectorate body with '*its independence enshrined in legislation*'. The LSG is disappointed that the Bill still has the Chief Inspector reporting to Scottish Ministers instead of Scottish Parliament at large and would recommend amending this provision to adequately reflect Professor Muir's recommendation.

4. Overall, the LSG is concerned that the Bill lacks specificity regarding key provisions. The LSG is also concerned that the provisions regarding the creation of Qualifications Scotland appear exceedingly similar to the legislation which established the Scottish Qualifications Authority (SQA). Therefore, the LSG questions how much change will come from a Bill that exhibits many key similarities with the legislation that preceded it.

Question 2: The Bill sets out measures designed to better involve learners, teachers and others in the new body's decision-making. What do you think about these measures?

5. The LSG supports the new qualifications body accrediting and verifying all qualifications in Scotland but suggests that it is essential that they have the proper resources to do so. Given the significant financial constraints that the Scottish Government is currently facing, the LSG questions how this will be sufficiently resourced.
6. The LSG is also concerned about a lack of specialist teachers resulting in the dropping of certain subjects from the curriculum in schools across Scotland. This is a particular concern for subjects like computing science and other STEM disciplines. While the LSG is not necessarily in favour of non-subject specialist teachers teaching subjects they do not have a degree in, or training for, the alternative of having the subject disappear entirely is of greater concern. The LSG suggests that any provisions which exacerbate the shortage of subject-specific teachers be omitted.

² <https://rse.org.uk/programme/advice-paper/learned-societies-group-response-to-the-oecd-review-of-curriculum-for-excellence/>

³ <https://rse.org.uk/programme/advice-paper/learned-societies-group-response-to-professor-ken-muir's-education-reform-consultation/>

⁴ <https://rse.org.uk/programme/advice-paper/lsg-hayward-review-of-qualifications-and-assessment/>

⁵ <https://rse.org.uk/programme/advice-paper/lsg-hayward-review-of-qualifications-and-assessment/>

7. The LSG recommends that the Scottish Government includes a mechanism for processing concerns or complaints. As the Bill currently stands, there is no mechanism to do so and no guidelines for the overall reviewing process.

Question 3: The Bill also creates several Charters, designed to let people know what they can expect when interacting with Qualifications Scotland. What is your view of these Charters?

8. The LSG appreciates the Scottish Government's efforts to include the voices of learners and the teaching community through learner and teacher and practitioner Charters. While this may be an honest attempt to be more in touch with learners and teachers than the previous qualifications body, the LSG is concerned that the Charters will be merely symbolic in practice. For example, the SQA attempted a similar initiative whereby 20-30 learners were supposed to be recruited to participate in 'Learner Panels' to allow learners to *'feedback directly to the SQA and have their voices heard in decisions which affect them'*.⁶ However, there have been no further updates about these panels since their introduction last year.
9. Similarly symbolic efforts would waste significant resources and do little to inspire confidence **among learners, learners' parents, and those in the teaching profession**. To ensure the Charters are effective, the LSG suggests including more detail about how they will engage with stakeholders and ensure that their feedback is implemented. The LSG proposes that a statutory duty to consult learners and teachers be imposed on Qualifications Scotland and that within their annual report, they explicitly outline how they have met this obligation.
10. The LSG also questions the effectiveness of charters in implementing the change that learners, teachers, and practitioners are demanding. As such, the LSG encourages the Scottish Government to provide evidence that supports the idea that charters are an effective means of including a representative voice in decisions about qualifications.
11. The LSG recommends that greater detail is included about how the Charters will be implemented and

funded, and how they will achieve a representative voice for learners, teachers, and practitioners across Scotland. Of particular concern is ensuring that the voice of the STEM teaching profession is represented in these Charters. Given its composition of STEM organisations and stakeholders, the LSG would be well placed to offer its support and expert advice through these Charters.

12. The LSG also suggests the need for wide and continuous engagement with other stakeholders, such as teaching unions. Qualifications Scotland should engage with stakeholders outside of the Strategic **small** Advisory Group (whose membership is likely to be small and comprised of many of the customary stakeholders) and ensure transparency throughout the entire process.

Question 4: Part 2 of the Bill establishes the role of HM Chief Inspector of Education in Scotland, setting out what they will do and how they will operate. What are your views of these proposals? E.g. Do they allow for sufficient independence?

13. As mentioned, the LSG is greatly concerned by the lack of independence of the new inspectorate body and its associated Advisory Council. The LSG recommends that the inspectorate body be accountable to Scottish Parliament instead of the Scottish Ministers. The independence of the inspectorate body is particularly important if this body is to inspect the entirety of Scottish education policy. While the independence of the inspectorate is vitally important, the LSG acknowledges that there must still be sufficient oversight of its activities (for example, appointments to the Advisory Council).
14. The LSG is concerned that the role of inspection as articulated by the Bill promotes a culture of performativity in the way that inspections are carried out. This in turn has adverse effects on teachers' job satisfaction and retention. Instead, the LSG encourages the Scottish Government to more evenly balance scrutiny and support when it comes to the nature of inspections.

⁶ <https://syp.org.uk/project/sqa-advisory-group/>

15. The LSG cautions that the inspectorate system can be very damaging if inspections are not done effectively. This reiterates the importance of establishing the inspectorate as a mechanism for supporting schools, providing constructive recommendations for improvements, and signposting to the necessary resources to implement those improvements. The inspectorate should exist as a non-punitive, quality assurance system. There must also be acknowledgement during inspections that implemented policies may be ill-fitting in practice; these findings should be reported back to policymakers to encourage continuous improvement.

Question 5: What are your views on the reporting requirements set out in the Bill, including the requirement to report on the performance of the Scottish education system?

16. The LSG recommends that better data be collected and made available to evaluate the performance of the Scottish education system. The LSG suggests that better educational outcomes will only come when there is an understanding of the performance of the whole system, supported by data. For example, the LSG notes the existence of national policies attempting to address issues like the under-representation of women in certain STEM fields which are not underlain by the appropriate data-gathering mechanisms to determine how these numbers compare across subjects. For more information on the LSG's position on the importance of data, please see our response to the consultation on enhanced data collection⁷ and paragraph 11 of our response to the Independent review of qualifications and assessment.⁸

17. There must be transparency around what data is collected and how this data is captured and reported. Data is also vitally important for the Chief Inspector and their team when reviewing the entirety of the Scottish education system.

Question 8: In your view, what should the outcomes of the Bill be?

18. The LSG feels that it cannot fully assess the desired outcomes of the Bill because of the many concerns regarding implementation it has outlined. As mentioned, the LSG would encourage the Scottish Government to focus on the more pertinent aspects of the reform agenda before embarking on institutional reform.

19. The LSG recommends that the Scottish Government provide an overview of what education reform will look like and how it plans to implement the various components. The LSG would also suggest that the Scottish Government make it a priority to respond to the recommendations put forth in the various commissioned reports mentioned elsewhere in this response, particularly Professor Hayward's *Independent Review of Qualifications and Assessment*.

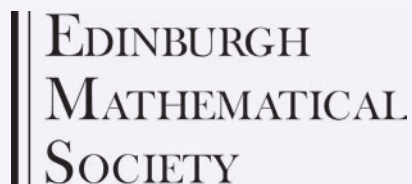
20. Overall, the LSG would like to see meaningful efforts to reform the education system. This would ideally move towards a system that better prepares learners for the jobs of the future and an increasingly technological world.

⁷ <https://rse.org.uk/programme/advice-paper/lsg-enhanced-data-collection-for-educational-improvement/>

⁸ <https://rse.org.uk/programme/advice-paper/lsg-hayward-review-of-qualifications-and-assessment/>



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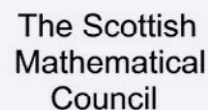
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