

SFC REVIEW OF THE COHERENCE AND SUSTAINABILITY OF TERTIARY EDUCATION PROVISION: RSE FELLOWS AND YOUNG ACADEMY DISCUSSION SUMMARY

Background

- 1 On 4th August 2020, the Royal Society of Edinburgh (RSE), Scotland's National Academy, convened a discussion involving Fellows and Young Academy members with a range of experiences and interests related to higher and further education in Scotland. The discussion, held under the Chatham House Rule, was aimed at stimulating early stage input to the Scottish Funding Council (SFC) review of the coherence and sustainability of tertiary education provision in Scotland.¹
- 2 The RSE has inputted to the Scottish Government's separate reviews of the economic impact of universities and colleges. The SFC review provides a timely opportunity to consider the purpose of tertiary education in a systemic and holistic way, ensuring that provision effectively and efficiently meets the current and future needs of learners and those of the Scottish economy and society more broadly.
- 3 This summary captures the key issues raised during the discussion and includes additional reflections provided by participants after the meeting. This discussion report has not been endorsed by the meeting participants; and unless specified, it does not necessarily reflect the views of the RSE. It has been submitted to the SFC as an initial RSE contribution to the review. The RSE looks forward to engaging further in the review, including through the RSE and Young Academy of Scotland joint programme of activity aimed at stimulating debate on the future of tertiary education in Scotland. Links to relevant RSE activities, advice papers and reports are listed at the end of this discussion report.

- 4 The SFC review is being undertaken at a critical time for Scotland's tertiary education sector; not only in relation to the significant and long term impacts of Covid-19, but also the consequences arising from issues such as the UK's withdrawal from the EU; international competition; demographic change; evolving skills' needs; and the increasing role of digital provision.
- 5 Implementing systemic level change takes time and requires a full understanding of processes of change. Proposed changes will need to be carefully considered so that their implications are fully understood, and evaluation will need to be built-in from the outset. These points are particularly important to minimise the risk of unintended consequences.

Learning and Skills

New learning and teaching delivery models

- 6 Tertiary education providers have already agilely adapted learning provision in light of the impact of Coronavirus, including ongoing social distancing restrictions. There is an increasing need to consider more creative, diversified and flexible ways of delivering learning and teaching to meet the needs of learners, employers and society more generally. As well as exploring models being used elsewhere, there is an opportunity to consider whether there are approaches that Scotland can lead on. Several suggestions were made, including:

¹ More information about the SFC review is available at: http://www.sfc.ac.uk/web/FILES/Review/Review_Briefing_Note_June_2020.pdf

- Ensuring a more learner-centred and flexible approach to education and skills pathways, which takes account of the changing nature of skills needs. This would help provide for a more coherent learning continuum and, giving full recognition to prior learning, would enhance connections between and across tertiary education providers, as well as with employers and business. Such an approach could also help to remove the distinction between full-time and part-time provision.
- Connected to this, tertiary education providers should explore and take opportunities to develop new models of provision that meet the needs of learners and employers, including scope for more flexible and accelerated learning programmes. Such programmes could be used to help address areas in which there are sizeable skills gaps and unmet employer demand, including, for example, in data science and coding, in wider data literacy and in quantitative skills. More creative learning models, including accelerated learning programmes, would also be well placed to help learners and the wider economy realise the benefits of lifelong learning.
- Building on blended learning developments to reconfigure and adapt courses to meet learners' needs by making the most effective use of both virtual and on-campus learning. This could help improve access to tertiary education by addressing geographic barriers to learning.
- It will be important to ensure that the increasing move to blended learning is underpinned by investment in virtual learning platforms. This could benefit from institutional collaboration and SFC oversight to provide a coordinated approach and to support learners as they move between and across different parts of the tertiary education system.
- Ensuring the availability and resourcing of lifelong learning provision. While there is reference to the importance of lifelong learning, there continues to be concern that it is not being provided for at the level required, with provision and resources tending to prioritise the needs of younger learners undertaking full-time courses. It will be crucially important to ensure that learners and workers of all ages have the opportunity and support to reskill and upskill as labour market and skills needs change over time.
- Enhancing institutional collaboration, including, for example, through exploring more opportunities for developing and delivering joint courses. So long as it is based on the mutual will of institutions, this could be a means of developing high-quality programmes of scale and making efficient use of the resource available.
- A need to embed greater interdisciplinary learning (IDL) in education provision to support learners make connections across disciplines which is particularly important to addressing contemporary societal challenges which, by their nature, cut across disciplinary boundaries.

Recruiters are increasingly seeking to employ those with a breadth of knowledge, skills and problem-solving capabilities rather than subject specialists, with a survey reporting that 82% of graduate recruiters do not mind what degree subjects applicants have.²

While examples of interdisciplinary approaches within tertiary education exist, there remain a range of barriers to wider adoption of IDL, including a lack of clarity as to what IDL is, disciplinary silo thinking, a lack of capacity for practitioners to collaborate on planning courses and timetabling and other logistical issues. IDL can only be successful if it is underpinned by a firm understanding of the disciplines. It requires a system-level approach to planning and delivery. The RSE has undertaken substantial work in this area, including having hosted a major conference on IDL in education in 2019.³

² Annual Survey 2017 Report; Key trends and issues in student recruitment 2016-2017, Institute of Student Employers

³ Interdisciplinary Learning: Creative Thinking for a Complex World (2019) <https://www.rse.org.uk/event/interdisciplinary-learning-creative-thinking-for-a-complex-world/>
RSE IDL Advice Paper (2020) https://www.rse.org.uk/wp-content/uploads/2020/02/RSE_IDL_February2020.pdf

- 7 It is crucially important that in implementing changes to learning and teaching models that full consideration is given to the implications for equality, diversity and inclusion, including the additional support that may be required for some learners.
- 8 Consideration also needs to be given to time and resource requirements, particularly the impact that processes of change have on the practitioners who are ultimately responsible for course delivery. This brings into focus the need to support the career-long professional development needs of practitioners to ensure they can deliver new modes and models of learning effectively.
- 9 In this context, it is notable that the SFC review briefing document identifies four primary stakeholders: students, colleges and universities, government and public interest, and employers and industry. However, practitioners are not specifically mentioned. It will be important that the review actively seeks to gather their views. Engaging with practitioners will be a key component of the RSE and Young Academy of Scotland Tertiary Education Futures activity.
- 10 The SFC may also find it useful to consider current perspectives on academic freedom within institutions and how this influences learning and teaching, research culture and the expression of student perspectives. For example, a recent large-scale survey of UK-based academics shows that strongly-held political attitudes are restricting the freedom of those who disagree to research and teach on contested subjects, thereby undermining academic freedom.⁴
- Meeting individual and wider economic and social needs*
- 11 While tertiary education is hugely important to equipping learners so that they can valuably contribute to supporting economic growth in Scotland, this and other utilitarian objectives are not the only purposes of education. Tertiary education fulfils a much broader personal and societal role, with many of the benefits being difficult to quantify. It is crucially important that a core purpose of tertiary education remains focused on enabling all individuals irrespective of background to extend the breadth and depth of their knowledge and understanding in ways that inspire them personally and socially.
- 12 Tertiary education has a fundamental role in enabling learners to gain higher order skills, including complex problem solving, critical and independent thinking, cultural intelligence, responsible debate, resilience and adaptability, that people will require to thrive in modern societies as well as in the workplace.
- Skills needs and business and industry engagement*
- 13 A perennial issue continues to be the need to develop more effective ways of matching tertiary education provision with current and future skills gaps in the Scottish economy. This is likely to become increasingly challenging given the difficulty of identifying future skills needs. This reinforces the importance of a tertiary education system that can flexibly and agilely respond to changing skills needs. This also emphasises the role of tertiary education in equipping learners with the interpersonal and higher order skills referred to above.
- 14 As part of the review, it will be important that SFC engages with businesses and their representative organisations across a range of different sectors and of various sizes in order to get a better handle on their skills priorities.
- 15 Tertiary education providers and learners need to have a clear line of sight on current and future skills needs so that providers can plan their courses to meet these skills priorities, and so learners are as well informed as possible as they make choices about their education and training pathways.
- 16 This highlights an opportunity for tertiary education providers to tailor their provision to more closely meet the needs of local and regional employers, potentially linked to greater use of accelerated programmes of the kind mentioned above. Additionally, courses should have practical placements embedded in them where possible, as this provides learners with practical and soft skill experience that businesses need. This could also link to providing scope for more creative funding models where employers contribute more financially to demand-led skills and training provision.

⁴ *Academic Freedom in the UK: Protecting viewpoint diversity*; Policy Exchange, August 2020 <https://policyexchange.org.uk/wp-content/uploads/Academic-freedom-in-the-UK.pdf>

Research and Innovation

The relationship between HE R&D and Business R&D

17 While Scottish Higher Education Research and Development (HERD) investment is relatively high in both UK and OECD terms, Business Enterprise Research and Development (BERD) has over the long-term lagged behind. This is often cited as one of the key reasons behind slow productivity growth in Scotland. It is, however, worth noting that in 2016, BERD spend exceeded HERD spend in Scotland for the first time since 2001. Notwithstanding, Scotland's BERD spend (0.8%) as a percentage of GDP remains below that of the UK (1.15%). The historic disconnect between HERD and BERD suggests that Scotland is not taking full advantage of its strength in HERD.

Scotland's research ecosystem

18 Scotland requires a healthy research ecosystem that balances the need for long-term fundamental, curiosity-based research with shorter-term applied and mission-led approaches. It is important to note that current scientific advances, including those being developed and deployed to address the Coronavirus pandemic will, in many cases, have only been made possible by decades-long research. It is crucial, therefore, that different parts of the research ecosystem are not pitted against one another when a full spectrum of research is required. A key to success will be providing the resources to create and sustain the complete ecosystem needed to realise the benefits of research.

19 In this context, the review is also an opportunity to consider how best Scotland can nurture, develop and support research talent.

20 Scotland has a strong research base, but continues to struggle to translate this into successful innovation through the commercialisation of research. While there are examples of successful initiatives including RSE Enterprise Fellowships and Converge Challenge, further consideration needs to be given to how to align

investment in innovation with research in universities. This will require engagement and collaboration across government and its agencies, with tertiary education institutions and businesses.

21 The preceding points also make clear the continuing need to improve public understanding of the scientific and research process, including its inherent uncertainty and that much scientific understanding is provisional. While the Coronavirus pandemic has brought these issues to the fore, it is important that there is an ongoing, long-term focus on improving public understanding on the value of research and consequent support for public investment in research.

22 Given the SFC's oversight of both learning and teaching and research in Scotland, the review will need to consider how the SFC balances potentially competing priorities for learning and teaching and research in a climate of constrained public finances.

23 As part of this, the conditions for allocating research funding indicate that there is an inherent tension that needs to be resolved between supporting a diverse tertiary education sector and competitively funded research excellence, both of which are highly desirable.

Relationship between Scottish and UK structures and policy levers

24 The review will need to consider the extent to which the SFC is able to influence research policy in Scotland given that many of the key structures and levers reside at the UK level, including, notably UK Research and Innovation (UKRI) and the main research councils. As part of this, the SFC will need to consider whether it would wish to play a more active role in influencing the research agenda for Scottish institutions and, if so, how this would relate to institutional autonomy and identifying and balancing research priorities. This also raises important questions relating to the resources and tools that the SFC has at its disposal, as well as its relationship with UK research funding structures.

⁵ As a share of GDP, Scotland's HERD spend (0.69%) was higher than that of the UK (0.40%) in 2017; Gross Expenditure on Research and Development Scotland 2017, Scottish Government (2019) <https://www.gov.scot/publications/gross-expenditure-on-research-and-development-scotland/>

⁶ *Ibid.* 5

25 In this context, consideration needs to be given to the way in which the Research Excellence Framework (REF) influences institutional behaviour, whether it is appropriately incentivising the whole spectrum of research endeavour, and whether its cost in terms of human and financial resources is proportionate. While this is not an area that the SFC can address unilaterally given that the REF is a UK-wide system, its significance for influencing and incentivising the research agenda within Scottish universities means that it is an important consideration for the current review.

Building on Research Pooling and the Innovation Centres

26 Research pooling in Scotland has been successful, particularly in achieving cultural change through encouraging collaboration between institutions and, in turn, scaling-up research activity by enabling collaborations to more effectively compete for external funding. The independent review of research pooling, to which the RSE contributed, makes important recommendations for the future, particularly as to how the Scottish Government through the SFC should invest to support Scotland's current and future research needs, including ensuring that Scotland remains internationally research competitive.

27 The SFC review into the coherency and sustainability of tertiary education will need to discuss and articulate how the Scottish Government and the SFC will take forward the research agenda recommendations made in the review of pooling.

28 Similarly, the review is a timely opportunity to consider the extent to which Scotland's Innovation Centres have met their intended aims, including improving both universities and colleges' engagement with businesses on innovation activity.

Funding and Finance

The need for a coherent and sustainable strategy for funding tertiary education

29 It is clear that fees for teaching international students cross-subsidises both research and teaching of home students at Scotland's

universities. Given that universities, and some colleges, face substantial losses from international fees and other sources of income, the SFC review needs to consider a more sustainable approach to the funding of tertiary education.

30 It will be important to ensure that funding is based on a coherent and shared long-term vision of the tertiary education system, developed by the Scottish Government in partnership with the tertiary sector, business and other stakeholders. It should include consideration of incentives and mechanisms for improving collaboration and potential co-funding between colleges and universities.

31 As part of this, the review can help to bring more transparency and understanding about how tertiary education is currently funded, including the distinction between the funding of universities and colleges and how funding is allocated between and across institutions. This is a pre-requisite to enable the SFC to undertake a comprehensive review of the funding for the whole tertiary education system.

Challenging underlying policy assumptions

32 The Review provides an important opportunity to consider underlying Scottish Government policy assumptions about the future shape and funding of tertiary education. Significantly, in the review documentation, the Scottish Government has stated that full-time Scottish students will continue to have 'free' tuition at universities and colleges. While this is a legitimate policy choice for government to make, it needs to be recognised that it imposes a significant constraint on the review and places pressure and opportunity costs on Scotland's public finances, particularly at a time of resource scarcity and economic uncertainty. It also creates inequalities with other learners – notably those studying part time – and may serve as a barrier to incentivising more flexible forms of provision. It is therefore important that the SFC adopts an open mind as the review considers ways in which funding sustainability can be achieved to meet the needs of learners, institutions and the tertiary education system at large.

- 33** In order to take a holistic view of tertiary education funding, future tuition fee policy needs to be considered alongside student support. In particular, it is important that the model of tertiary education funding is a progressive one so that the most disadvantaged learners and their families do not incur higher levels of debt compared to their more affluent peers.
- 34** Given the significance of, and public interest in, the funding of tertiary education and student support, this is an area which would benefit from wide-ranging, facilitated public debate. The SFC review should consider the extent to which it could facilitate such debate. The future funding of tertiary education will also be a key area of focus for the RSE's Tertiary Education Futures' work.

Other creative approaches

- 35** In light of the historically low interest rates, there is scope for the review to consider the extent to which tertiary education institutions, working with the Scottish Government and the SFC, could make more extensive use of borrowing to fund their activities, particularly for capital expenditure aimed at creating future growth and a return on investment.
- 36** As highlighted in the learning and skills section, there is scope for the review to consider how public funding of tertiary education could be balanced with greater financial input from business and industry, particularly where provision is designed and developed to meet their skills needs. This might be particularly relevant to provision aimed at upskilling and reskilling workers to address current and future skills gaps.

Governance, collaboration and connectivity

Balancing collaboration and competition

- 37** There currently exists a high degree of collaboration within the higher and further education sectors in Scotland, including, for example, the Enhancement Themes which encourage higher education institutions, staff and students to work together and share and learn from current and innovative practice.

- 38** While a competitive element will continue to be required, especially given the global market place for tertiary education, this needs to be balanced with collaborative approaches. However, there are policy areas which have introduced the potential for unhelpful competition between and across the sectors. For example, the widening access agenda means that there is competition among universities to attract increasing numbers of widening access students from a limited pool of applicants to meet institutional and sectoral targets, and competition between universities and colleges for such students. The review will also need to be alive to the potential for unhelpful competition between institutions especially at a time of diminishing financial resource. These points reinforce the need for a review of the coherency of tertiary education policy as a whole.

Using appropriate measures

- 39** Linked to the above point, the Scottish Index of Multiple Deprivation (SIMD) is used to identify disadvantaged learners for the purposes of widening access. However, as an area-based measure of deprivation, SIMD is incapable of providing the necessary individual-level data. Reliance on SIMD means that many learners identified by SIMD as being deprived will not be, and many learners who are deprived will not be identified as such. The Commission on Widening Access had recommended that a fuller set of measures is required to support decision making about individuals.

Outcome Agreements

- 40** Currently, each tertiary education institute must prepare and agree with the SFC an Outcome Agreement, setting out what they are delivering in return for public investment. The review is an opportunity to appraise the Outcome Agreement process and to consider other measures of evaluating the impact of the tertiary education sector. The SFC should continue to work with institutions to ensure that the focus is on *outcomes* as opposed activities and actions.

Learner Journey

- 41** While the review is focussed on the future of tertiary education, this cannot be done without considering the learner journey more broadly, particularly the links between tertiary education and the senior phase (S4-S6) of school education. The SFC review has an opportunity to consider and build on the recommendations of the 15-24 Learner Journey Review, particularly with a view to giving learners greater flexibility in their learning pathways, improving collaboration between schools, colleges and universities and making the most effective and efficient use of the public investment in education, including minimising unnecessary duplication.⁷
- 42** These points also bring into focus the need to generate a better understanding of the knowledge and understanding that young people would be expected to have by the time they leave school, how this relates to the knowledge, skills, attitudes and values that learners need to thrive now and in the future, and what these mean for curriculum design and planning across the school and tertiary education systems.
- 43** In relation to ensuring that learners, schools and tertiary education providers have up-to-date information and data on employers' needs and skills' gaps to inform learner choices and course provision, the review should consider how data is collected, curated and made available across the education system.

Link to wider economic strategy

- 44** The future priorities and shape of tertiary education are likely to be heavily influenced by structural economic change, particularly that which emerges from Scotland's response to the Coronavirus pandemic. It is therefore important that the SFC review of tertiary education is able to take account of broader future economic developments.

International connections

- 45** As autonomous and diverse institutions, there will be different approaches to internationalisation to suit the requirements of individual institutions. The review is an opportunity to consider, as a whole, the tertiary education sector's international ambitions, relationships and values, including the scope for greater strategic collaboration, and how these align with domestic priorities. There is also a need to consider the resilience of current and future approaches, given the way in which Coronavirus has starkly demonstrated the extent to which some institutions are very reliant on fee income generated from international students.

⁷ 15-24 Learner Journey Review, Scottish Government, May 2018
<https://www.gov.scot/publications/15-24-learner-journey-review-9781788518741/>

Links to Relevant RSE activities and advice papers:

RSE reflections on the Cumberford-Little report, One Tertiary System (2020)

<https://www.rse.org.uk/wp-content/uploads/2020/07/RSE-Response-to-Cumberford-Little-Report.pdf>

RSE reflections on the Muscatelli report, Driving Innovation in Scotland (2020)

<https://www.rse.org.uk/wp-content/uploads/2020/03/RSE-Response-to-the-Muscatelli-Report.pdf>

RSE Interdisciplinary Learning in Education advice paper (2020)

https://www.rse.org.uk/wp-content/uploads/2020/02/RSE_IDL_February2020.pdf

RSE Interdisciplinary Learning Conference outcomes and outputs (2019)

<https://www.rse.org.uk/event/interdisciplinary-learning-creative-thinking-for-a-complex-world/>

RSE response to the Scottish Government-commissioned review into the economic impact of Scottish colleges (2019)

<https://www.rse.org.uk/wp-content/uploads/2019/10/RSE-Response-to-the-Review-of-the-Economic-Impact-of-Colleges-1.pdf>

RSE response to the Scottish Government-commissioned review into the economic impact of Scottish universities (2019)

<https://www.rse.org.uk/advice-papers/response-to-sir-anton-muscatelli-review-into-economic-impact-of-scottish-universities/>

RSE response to the SFC independent review of research pooling (2019)

https://www.rse.org.uk/wp-content/uploads/2019/02/AP19_02.pdf

RSE response to Migration Advisory Committee on the impacts of international students in the UK (2018)

https://www.rse.org.uk/wp-content/uploads/2018/02/AP18_02.pdf

RSE response to the Scottish Government-commissioned independent review of financial support for students (2017)

https://www.rse.org.uk/wp-content/uploads/2017/09/AP17_22.pdf

RSE response to the Scottish Parliament's Education and Culture Committee on SFC Spending and Outcomes (2015)

https://www.rse.org.uk/wp-content/uploads/2016/09/AP15_17.pdf

RSE report on Entrepreneurial Education in Scotland (2015)

https://www.rse.org.uk/wp-content/uploads/2016/09/AP15_09.pdf

Additional Information

Any enquiries about this Advice Paper should be addressed to William Hardie (email: whardie@these.org.uk).

Responses are published on the RSE website (<https://www.rse.org.uk/>)

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