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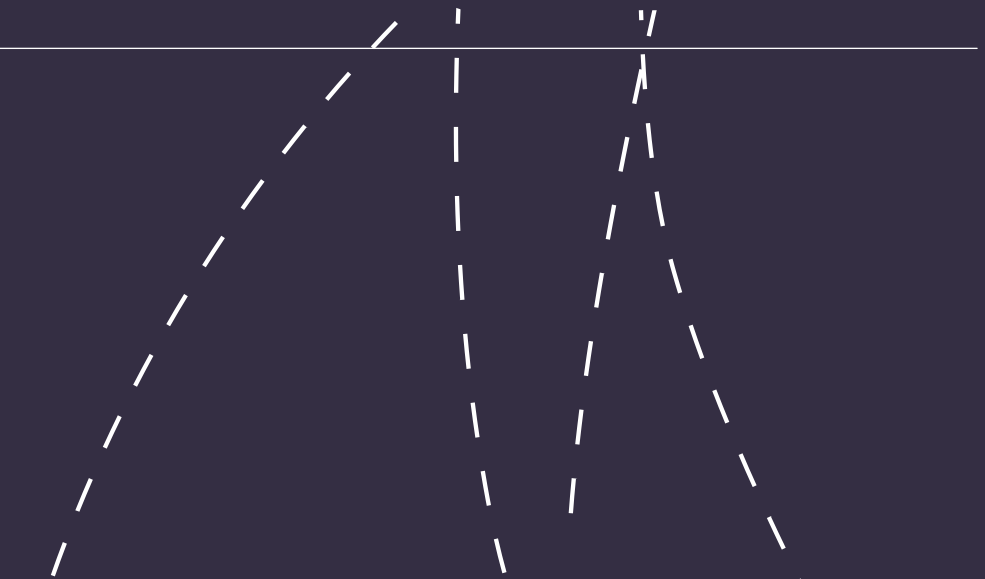
Tertiary Education Futures

A report by the Royal Society of Edinburgh and Young Academy of Scotland



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Executive summary

Purpose

The **Tertiary Education Futures** project was created by the Royal Society of Edinburgh (RSE) and the Young Academy of Scotland (YAS) as a 'blue-skies' thought experiment, informed by sectoral views gathered through a series of investigative roundtables. **It aims to stimulate continued creative thinking about how post-school education might evolve over the next few decades and what this means for learners and society.** Through their independence and convening power, the RSE and YAS are uniquely placed to facilitate frank, cross-disciplinary dialogue to inform public policy and address complex societal problems. In particular, while the Scottish Government, funding bodies, representative bodies and heads of Scotland's colleges and universities regularly come together to discuss future paths and models, we wanted to provide opportunities for practitioners, students and the wider public to join the conversation and share their experiences, ideas and ambitions for the future of tertiary education in Scotland.

Approach

The project centred on a series of roundtables held with different stakeholder groups which aimed to capture lived experiences as well as reflections on more general concepts such as collaboration in the sector or shared values in the tertiary system. The first roundtable brought together current learners from a wide selection of Scotland's post-secondary institutions. The second roundtable was roughly analogous to the first, looking to unpack the experiences of front-line university and college staff. The third roundtable focused on 'non-traditional' providers of post-secondary education, including the prison service, military, apprenticeships, private training providers and industry itself.

The fourth roundtable considered different examples of collaborations in the sector, while the fifth roundtable examined collaboration between institutions and other stakeholders (e.g. industry). The last roundtable examined shared values in the sector and set these in a global context by engaging international participants.

The findings from these roundtables were distilled into a set of key findings and themes that suggest how Scotland's tertiary system may look and operate in the future. These were further validated by sectoral leaders in a designated stakeholder workshop, where they were asked to appraise the themes by comparing them against their own experiences working in the system and to identify gaps in our thinking. Their knowledge of developments across the sector also helped to position the report within the broader policy context. **These findings are intended to serve as a starter for further dialogue.** We would encourage readers to engage critically with the themes and use them to render their own theories about where the tertiary sector is headed and what this means for Scotland. **By initiating a forward-looking conversation, Scotland can ensure it is well-placed to nurture a system that delivers for all learners, in all instances, whilst also empowering staff and society at large.**

Key findings:

- One of the most resounding themes across all six roundtables was that learner-centredness may become a defining feature of the evolving tertiary system. Learners will come from increasingly divergent backgrounds - including a potential rise in returners displaced from the job market by decarbonisation or automation - and require bespoke support in achieving success.

Executive summary (continued)

- Future learners will expect a more tailored, fluid experience that would fit into their existing schedules and allow them to demonstrate their adaptability to potential employers.
- To ease adaptation and build on the respective strengths of different providers, institutions might move towards a more collaborative system that relies on decentralised, reciprocal provision which would lead to a more agile and interdisciplinary delivery infrastructure.
- Fostering a culture of collaboration will require system-wide changes such as funding reforms. It will also mean a broader and more ambitious approach to collaboration that pursues collaboration in its widest sense.
- Taking a value-based approach to the topic of competition between institutions could help to unpack some of the sensitivities surrounding this issue, which continues to be a key barrier to building a more integrated system.
- If institutions can collectively identify values that are greater than their own self-interests - for example, the imperative to tackle societal crises - they can be motivated to overcome divisions and unite around a common cause.
- Changing demographics could occur in tandem with a shift in learner attitudes towards tertiary education, one which current system users have already begun to express.
- Learners understandably want to future-proof their education as far as possible and may look to alternatives if tertiary providers fail to modernise.
- The margins of traditional subject-based study will become progressively blurred as interdisciplinarity and problem-based learning take greater hold in curricula, assessment methodologies and qualifications. The tertiary system should work together with the school system to consider how interdisciplinary learning undertaken at the secondary level can be recognised and further facilitated at the tertiary level.
- Adaptable and behaviour-centred meta-skills such as innovative thinking and emotional intelligence will become increasingly vital and may in some cases displace the value of 'pre-packaged knowledge.' Qualifications awarded on the basis of competencies might further change the way education is provided.
- A process of regular reskilling - including through the pursuit of microcredentials - will become increasingly commonplace and the sector will need to adapt its offerings accordingly.
- Over the next decade and beyond, colleges will likely step into a more significant role as one of the primary vehicles for delivering a just transition.
- Learners may expect more agency in setting the course of their educational journey, weaving together different types of provision and stacking qualifications to suit their particular needs and interests.
- The future system may come to resemble a web of hyper-articulated progression pathways which lets learners enter and exit the system at multiple points of their choosing at different stages of their lives.
- Community learning and development partnerships have an important role in learning and the provision of accessible, local lifelong learning opportunities can be used to address disadvantage and improve outcomes.

Executive summary (continued)

- Although several of the themes in this report apply beyond the immediate Scottish context, others are distinctly characteristic of a developed, Western tertiary education paradigm. We must continue to look beyond our own borders to appreciate the varying and evolving role that tertiary education can play in different parts of the world and how this can enrich our understanding of our own system.
- The tertiary system has a responsibility to engender values rather than impose them, enabling individuals to discover more informed and empowered versions of themselves even if this transformation is a passive one. The challenge arises in how tertiary education can uphold these ideals without alienating those who regard it through a more pragmatic (though equally valid) lens, including funders and some system users.
- Traditional hierarchical curriculum development may gradually be replaced by a shared process of co-production.
- Further technological transformation is inevitable and the tertiary sector must ensure it is on the front foot in order to capitalise on its opportunities without disenfranchising staff.
- If the future system will be as learner-centred as we anticipate, it may require a sea change in how tertiary education is funded, potentially ushering in the concept of a lifelong learning funding entitlement. Reflecting changes seen across the public sector, this might include more participatory budgeting processes and funding decisions.

Acknowledgements

The Royal Society of Edinburgh and Young Academy of Scotland would like to sincerely thank all those who graciously served on the project advisory group in various capacities since its inception. Their expertise and understanding of the sector ensured the Tertiary Education Futures project added value to an intricate policy space and challenged our thinking in welcome and productive ways.

Professor Anne Anderson FRSE (Chair)

Dr Keir Bloomer FRSE

Professor Alice Brown FRSE

Professor Sandro Carnicelli (Young Academy of Scotland)

Professor Paul Hagan FRSE

William Hardie

Professor Ellen Hazelkorn

Ann Hill

Dr Alice König (Young Academy of Scotland alumna)

Professor Karl Leydecker FRSE

Peter McColl (Young Academy of Scotland alumnus)

Martin McGuire

Dr Maureen McKenna

Lydia Rohmer

Dr Rebekah Widdowfield

Andrew Wilson FRSE

Additionally, we would like to gratefully recognise the many enthusiastic individuals and organisations that took part in our roundtables - this report would not have been possible without their thoughtful and honest contributions. We look forward to continuing to engage with the tertiary community as part of this project's legacy and related policy activities.

Lastly, we would like to acknowledge the work of RSE staff - Daria Tuhtar, Dr Cristina Clopot and James Thomas - in managing the project and in producing this final report and other outputs.

Foreword

Over the last two years it has been my privilege to chair an exciting joint initiative between the Royal Society of Edinburgh (RSE) and the Young Academy of Scotland (YAS) on Tertiary Education Futures. Our aims were to identify the future challenges and opportunities for tertiary education in Scotland. We sought to use our independence to explore the big picture and raise the topics that other organisations might avoid, including asking questions about the purpose and value of tertiary education as well as investigating the lived experiences of key stakeholders such as staff and students.

Working with YAS colleagues, notably Dr Alice König and Professor Sandro Carnicelli, has been very stimulating. They have been a constant source of ideas about how to approach the topic in ways that are different from a traditional 'top-down' systematic research review, instead encouraging us to focus on ways of directly teasing out the interests, aspirations and experiences of many different stakeholders in various facets of tertiary education.

As a result, our approach was to host a series of online roundtables with those involved in tertiary education, from current staff and students to non-traditional education providers including the Scottish Prison Service, the military and high-tech companies. We explored a key topic in tertiary education, looking at how providers collaborate to offer some of the desired flexibility that learners value and the factors that underpin or undermine effective collaborations and partnerships. The theme of collaboration and flexibility of provision had emerged as a key ask from many of our participants and so we expanded our exploration of this theme by hosting a roundtable on collaboration between traditional education providers and other sectors such as industry and enterprise agencies and local authorities.

Professor Anne Anderson FRSE
Tertiary Education Futures Chair

To balance these deep dives into examples of innovative provision in Scotland, we were also keen to explore the wider global context. We hosted a fascinating roundtable that took as its starting point the UNESCO report, *Thinking Higher and Beyond: Perspectives on the Futures of Higher Education to 2050*.[1] We invited a variety of international participants from around the world, including those from universities, colleges and the World Bank, to contribute to this thought-provoking discussion.

> *"We sought to use our independence to explore the big picture and raise the topics that other organisations might avoid, including asking questions about the purpose and value of tertiary education."*

[1] UNESCO International Institute for Higher Education in Latin America and the Caribbean. (2021). *Thinking higher and beyond: perspectives on the futures of higher education to 2050*. UNESCO. Retrieved February 13, 2023, from https://unesdoc.unesco.org/ark:/48223/pf0000377530

Foreword (continued)

Finally, we were able to host an in-person workshop at the RSE to which we invited tertiary education stakeholders, including colleagues from the Scottish Government, Scottish Funding Council, QAA Scotland, Universities Scotland and various senior staff from colleges and universities. Our aim here was to share our draft report and to test the resonances, or lack of them, against other developments in the sector.

Our goal in all our work was not to be prescriptive, nor to claim that our project provides definitive answers or policy imperatives. Rather, we aim to stimulate creative thinking around the challenges of providing a tertiary education offering that is fit for purpose today, and in twenty to thirty years' time, for both individuals and society. We hope that the voices of the wide range of individuals we have had the pleasure of engaging with over the course of the project are a useful addition to these debates.

Throughout this project, which of course was running during extremely difficult times for all those involved, there has been outstanding support from RSE staff: initially William Hardie; Daria Tuhtar, who has been with us throughout; and, more recently, Dr Cristina Clopot. The project was also able to draw on a wealth of expertise from our advisory group. I have hugely benefited from the expertise of YAS colleagues, Alice and Sandro, along with Professor Karl Leydecker FRSE, as we worked with Daria to plan events and reports.

Along with our roundtable participants, I would like to thank them all for their extremely valuable contributions even at times of great challenge. I hope that this report does justice to the rich and varied insights that so many individuals generously shared with us and that it is a useful contribution to helping shape the future of tertiary education in Scotland.

Introduction

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Introduction

Scene setting

From its ancient universities to the transformational thinking of the Enlightenment, to the technological advances forged by its rich industrial heritage, Scotland's national identity has been significantly shaped by the pursuit of knowledge and innovation. Today, it enjoys an enviable reputation as a world-leader in post-secondary education, attracting students from around the globe, scoring high on annual rankings of the world's top institutions and 'punching above its weight' in research outputs.

While these traditions will likely endure, they are set against an increasingly changeable backdrop, one which stands to transform tertiary education in ways we may not expect. This change is happening both within and around the sector, creating a positive feedback loop that only seems to be accelerating.

In some places, the lines that once divided further and higher education are either blurring or outright disappearing, with universities and colleges cooperating to provide seamless learning pathways grounded in both practical skills and theoretical knowledge. However, other boundaries - be they institutional, sectoral or even philosophical - seem to be becoming more entrenched, with consequences for how well the system can communicate and collaborate across these divides, and how learners can progress from one destination to the next. More and more people are enrolling in tertiary education - sometimes more than once, or later in life - demanding a rethink for how this education is funded and delivered. Industry is calling for adaptable graduates equipped with the transferable skills required to excel at jobs that may not even exist yet. Delivery is shifting from the lecture theatre to the home office (or kitchen table) as remote learning becomes an accepted post-pandemic norm, simultaneously increasing opportunity while also deepening the gulf of inequality.

Certain changes have been specific to the Scottish context. Alongside a long-running trend towards mass participation in higher education from the 1970s onwards, the last five to ten years have seen a number of significant developments impacting on the tertiary education system in Scotland, including:

- a suite of inter-connecting initiatives from the Scottish Government around skills, widening access, and the learner journey;
- changes in the delivery landscape, most notably the regionalisation of the college sector and the creation of colleges of scale; and
- new modes of delivery including graduate apprenticeships, online learning and greater 'articulation' of students between colleges and universities.

In addition, seismic shifts in the Scottish political landscape, brought on by Brexit and the push for a second independence referendum, could profoundly alter the system's international character and global relations.

The meta-context is no less complicated. In addition to its massive toll on public health, the Covid-19 pandemic brought society to a near-total standstill, upended businesses and prompted a mass reshuffling of the workforce confronted by the newfound insecurity of sectors like tourism and hospitality. Youth-driven social change movements, from Schools Strike for Climate to Black Lives Matter, are ushering in a new era of decolonised curricula and more ethical institutional practices. The unrelenting threat of climate change continues to evoke both concern and conviction amongst our youngest generations. The so-called Fourth Industrial Revolution, characterised by the merging of physical, biological and digital innovations, is allowing us to shape our lives to an unprecedented degree.

Introduction (continued)

From an economic standpoint, we stand poised on the brink of another global recession, while millions are facing extreme hardship brought on by a skyrocketing cost-of-living, rampant inflation and a volatile energy market. Globalisation is dissolving borders while the resurrection of bitter geopolitics in certain regions seeks to reinforce them. These challenges highlight the need for urgent, pragmatic and affordable solutions. They require the tertiary system to nurture the mindsets, ideas and quite often the optimism needed to restore balance and build resilience in an increasingly turbulent world.

In short, the Scottish tertiary education system is in a period of immense change and clinging to the status quo will only leave learners and society at a global disadvantage. As such, we must begin posing the necessary questions that will get us thinking about what lies ahead and how we can prepare to meet it head on. By embracing and capitalising on the dynamic context in which we find ourselves, the future begins to look full of possibility rather than precarity.

Project background

It was these debates and dichotomies that inspired the Royal Society of Edinburgh (RSE) and the Young Academy of Scotland (YAS) to initiate a conversation about the purpose, role, value and future of tertiary education, both within Scotland and more globally. **Tertiary Education Futures is a 'blue-skies' thought experiment, informed by stakeholder views, that is intended to stimulate creative thinking about how post-school education could evolve over the next twenty to thirty years and what this means for learners and society.**

Through their independence and convening power, the RSE and YAS are uniquely placed to facilitate frank, cross-disciplinary dialogue to inform public policy and address complex societal problems. In particular, while the Scottish Government, funding bodies, representative bodies and leaders of Scotland's colleges and universities regularly come together to discuss future paths and models, we wanted to provide opportunities for practitioners, students and the wider public to join the conversation and share their experiences, ideas and ambitions for the future of tertiary education in Scotland.

This project's goal was not to draft a prescriptive set of recommendations for how the sector should respond to the myriad changes that are impacting upon it. It is also not intended as a definitive account of sectoral attitudes and opinions, recognising there are many regional, institutional and contextual nuances that would require more dedicated investigation to fully unearth. Rather, the report's findings have drawn recurring themes from a particular assortment of voices to serve as a starter for further dialogue. The use of the word 'tertiary' in the project title was intentional, signalling the need for systems thinking to capture the vital interdependencies upon which a successful future system will depend.

Approach

Since its inception, the project has been deliberately fluid and iterative, to allow space for themes to emerge organically without being constrained by preconceptions. We were keen for stakeholders themselves to set the intellectual direction of the project by identifying what they believe are the key issues facing the sector now and into the future. Their views would then lay the groundwork for further investigation and analysis, giving rise to a cyclical and self-steering pattern of discussion and reflection from which key themes could be brought out.

Introduction (continued)

The project advisory group, which was formed by a collection of sectoral leaders originating from both within the RSE/YAS and externally, would meet to deliberate over aspects of the tertiary sector and to propose potential lines of inquiry. The ideas that arose from these discussions were then road tested against the different perspectives represented by the various stakeholder groups. Stakeholders were encouraged to speak candidly, to dissect or even reject our original premises, and to pose their own provocations. The outcomes of the roundtables were then fed back to the working group for further consideration, reinitiating the process.

Recognising the remarkable complexity of the research landscape and the fact that substantial elements of the system lie outwith Scotland's ability to influence (for example, the Research Excellence Framework), the project did not delve into the future of research as a discrete topic, though it featured in some of our roundtable discussions in a broader sense. Further, such work is already taking place under the auspices of the Future Research Assessment Programme (FRAP[2]) and various other reviews of the research environment, to which the RSE/YAS have contributed in various capacities.

Tertiary education has been the focus of numerous policies and publications in recent years. This is symptomatic of the many changes that are acting upon the sector and Scotland's efforts to keep pace and adapt, as described in the introduction. Perhaps most significantly, former Minister for Further Education, Higher Education and Science, Richard Lochhead MSP, commissioned the Scottish Funding Council to undertake a review of coherent and sustainable provision of higher and further education (2020), the recommendations of which are still being enacted and will continue to play a pivotal role in shaping the sector's direction of travel.[3] *The Muscatelli Report*[4] (2019) and the *Cumberford-Little Report*[5] (2020) provided expert insights into the economic value of the tertiary sector and how these contributions can be strengthened. Numerous policies related to Covid-19 recovery (e.g. *Towards a Robust, Resilient, Wellbeing Economy for Scotland*[6] (2020)) and climate change (e.g. the report of the Just Transition Commission[7] (2021)) have pointed to the power of tertiary education in overcoming these crises and enhancing Scotland's capacity to withstand future instability. *The National Strategy for Economic Transformation*[8] (March 2022), arguably the most important policy document of the current parliamentary session, introduced a programme for action centred on a skilled workforce, looking specifically at how the education and skills system can better meet the needs of the modern economy and rise to the net zero challenge.

[2] *Future Research Assessment Programme*. Jisc. (n.d.). Retrieved February 13, 2023, from https://www.jisc.ac.uk/future-research-assessment-programme

[3] Scottish Funding Council. (n.d.). *Review of Coherent Provision and Sustainability*. Scottish Funding Council. Retrieved February 13, 2023, from https://www.sfc.ac.uk/review/review.aspx

[4] Muscatelli, A. (2019). *The Muscatelli Report: Driving Innovation in Scotland - A National Mission*. Retrieved February 13, 2023, from https://www.gla.ac.uk/media/Media_700300_smxx.pdf

[5] Cumberford, A., & Little, P. (2020). *The Cumberford-Little Report: One Tertiary System - Agile, Collaborative, Inclusive.* Retrieved February 13, 2023, from https://doc.edinburghcollege.ac.uk/c-l%20report.pdf

[6] The Scottish Government. (2020, July 23). *Towards a robust, resilient wellbeing economy for Scotland: Report of the Advisory Group on Economic Recovery*. Scottish Government. Retrieved February 13, 2023, from https://www.gov.scot/publications/towards-robust-resilient-wellbeing-economy-scotland-report-advisory-group-economic-recovery/

[7] The Scottish Government. (2021, April 27). *Just Transition Commission: A National Mission for a fairer, greener Scotland*. Scottish Government. Retrieved February 13, 2023, from https://www.gov.scot/publications/transition-commission-national-mission-fairer-greener-scotland/

[8] The Scottish Government. (2022, October 6). *Scotland's National Strategy for Economic Transformation*. Scottish Government. Retrieved February 13, 2023, from https://www.gov.scot/publications/scotlands-national-strategy-economic-transformation/

Introduction (continued)

On the back of this, the Scottish Government recently published an interim revised purpose and set of principles for the post school education, research and skills development system[9], feeding into the broader education reform agenda that is currently underway.[10]

> *"Common to all of these exercises is the question of how Scotland's education and skills system can remain competitive and relevant into the future."*

At the time of writing, a series of extensive reviews of Scotland's education system are either live or have recently concluded, prompted by the recommendations of the Organisation for Economic Co-operation and Development's (OECD) review of Curriculum for Excellence (CfE)[11] and Professor Ken Muir's independent review of the educational governance system in Scotland.[12]

An independent review of Scotland's qualifications and assessment system is currently being led by Professor Louise Hayward[13], while an independent review of skills delivery was launched at the end of September 2022.[14] Simultaneously, a 'national discussion' on education[15] is positioned to become one of the most far-reaching consultations on education policy since the national debate on education that preceded the creation of CfE in 2002. Common to all of these exercises is the question of how Scotland's education and skills system can remain competitive and relevant into the future. Any changes enacted at the school level will reverberate across the tertiary system, and it will be important to revisit the themes of this report once this reform agenda has concluded.

As one of its first steps, the Tertiary Education Futures project mapped this existing and emerging policy context to avoid duplication of work and consider how best to add value to the national discourse. By taking an overtly forward-looking approach and positioning itself as a starter for creative deliberation, we are confident that the Tertiary Education Futures project has succeeded in differentiating itself from these other policy initiatives.

[9] The Scottish Government. (2022, December 7). *Post School Education, research and skills development ecosystem - purpose and principles: Scope and approach*. Scottish Government. Retrieved February 13, 2023, from https://www.gov.scot/publications/purpose-and-principles-for-post-school-education-research-and-skills-development-ecosystem-scope-and-approach/

[10] The Scottish Government. (n.d.). *Education reform.* Scottish Government. Retrieved February 13, 2023, from https://www.gov.scot/policies/schools/education-reform/

[11] OECD. (2021, June 21). *Scotland's Curriculum for Excellence: Into the Future*. OECD. Retrieved February 13, 2023, from https://www.oecd.org/education/scotland-s-curriculum-for-excellence-bf624417-en.htm

[12] The Scottish Government. (2022, July 8). *Putting Learners at the Centre: Towards a future vision for Scottish education*. The Scottish Government. Retrieved February 13, 2023, from https://www.gov.scot/publications/putting-learners-centre-towards-future-vision-scottish-education/

[13] The Scottish Government. (2022, October 21). *Professor Hayward's Independent Review of Qualifications and Assessment - Public Consultation*. The Scottish Government. Retrieved February 13, 2023, from https://consult.gov.scot/education-reform/professor-haywards-independent-review/

[14] The Scottish Government. (2022, September 22). *Skills delivery independent review: terms of reference*. The Scottish Government. Retrieved February 13, 2023, from https://consult.gov.scot/education-reform/professor-haywards-independent-review/

[15] The Scottish Government. (2022, September 21). *Let's Talk Scottish Education.* The Scottish Government. Retrieved February 13, 2023, from https://consult.gov.scot/national-discussion-scottish-education/

Introduction (continued)

As described, the project centred on a series of roundtables held with different stakeholders groups. These initially focused on capturing the lived experiences and views of different categories of stakeholder (current learners, front-line staff, non-traditional providers) before pivoting to consider more abstract concepts such as collaboration and values, in response to the findings of the preceding roundtables which signposted to these topics as critical elements of a thriving future tertiary system.

Participants received a set of written questions in advance of each roundtable to prime their thinking. However, these questions were by no means prescriptive, and free-flowing dialogue and debate were actively encouraged. Above all, we wanted the roundtables to serve as an unadulterated snapshot of participants' opinions on the purpose, role, value and future of tertiary education.

To this end, roundtables were conducted under the Chatham House Rule and, wherever possible, we tried to avoid dynamics that might cause participants to censor themselves (for example, having senior leadership present in discussions with more junior tertiary staff).

A comprehensive account of the methodology followed to plan and undertake the roundtables, as well as the thematic narrative that progressively emerged as a result of these discussions (*How do collaboration and the pursuit of shared values contribute to building a responsive, learner-centred tertiary system that caters to the diverse needs of society whilst also empowering the staff and institutions that deliver it?*), is provided in an annex.

Key findings

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Key findings

What follows are a set of key themes, synthesised from our roundtable findings, that suggest how Scotland's tertiary system may look and operate decades into the future. As described in the introduction, the Tertiary Education Futures project was conceived of as a thought experiment to spark curiosity about the future system, drawing on direct sectoral engagement to provide a starter for further speculation. For this purpose, specific provocations are presented in *italicised* text for readers to contemplate. We would encourage readers to engage critically with the themes and use them to render their own theories about where the tertiary sector is headed and what this means for Scotland. Whether or not these conclusions prove to be correct is secondary to the value of normalising this type of creative forecasting in informing our present-day policy responses.

One of the most resounding themes across all six roundtables was that **learner-centredness may become a defining feature of the evolving tertiary system.**

The student population has become more heterogenous in recent decades and their needs and ambitions have become correspondingly manifold. Where tertiary education was once reserved for the privileged few, **learners come from increasingly divergent backgrounds – including those benefiting from initiatives aimed at widening participation, as well as a potential rise in 'returners' displaced from the job market by decarbonisation or automation - and require bespoke support in achieving success.**

Rather than commit to a 'traditional' degree or diploma, awarded by a single institution in preparation for a discrete career path, respondents believed that **future learners would expect a more tailored, fluid experience that would fit into their existing schedules and allow them to demonstrate their adaptability to potential employers.** Simply put, learners will want to access education on their own terms, reflecting a predisposition towards convenience and flexibility engendered by the digital age.

Traditional delivery structures predicated on physical attendance, weekday classes, fixed curricula and defined beginning and end points could become increasingly incompatible with student requirements and demands.

Institutions will need to think carefully about how to accommodate these students in an equitable and sustainable way. Changes to delivery models will have ripple effects across a range of areas, from estates and physical resources, to staff recruitment and workloads, to organisational structures and governance arrangements. *What demands will learner-centredness place on tertiary staff and structures?* **Institutions may begin to rely on other players in the system in order to ease the burden of adaptation and build on the respective strengths of different providers, precipitating a gradual move towards a more collaborative system epitomised by more decentralised, reciprocal delivery.**

Participants considered that collaboration is likely to be most effective if it takes cues from the local context rather than being imposed top-down. This involves facilitating the growth and longevity of staff- and discipline-driven grassroots partnerships when they occur, rather than allowing them to be hampered by bureaucratic red tape. **Challenges remain around scaling up promising starts and making collaborative arrangements self-sustaining**, recognising that collaborations that rely too heavily on influential personalities may collapse if and when these individuals move on. **The idea of Regional Tertiary Collaboratives (in the model of school-focused Regional Improvement Collaboratives) was raised**. However, fostering **a culture of collaboration will require system-wide changes** such as funding reforms. It will also mean a broader and more ambitious approach to collaboration that pursues **collaboration in its widest sense**. In practice this means institutions are sharing resources, campuses and indeed opportunities, alongside sharing students across time.

Key findings (continued)

Taking a value-based approach to the topic of competition between institutions could help to unpack some of the sensitivities surrounding this issue, which continues to be a key barrier to building a more integrated system. Our sixth roundtable, which delved into the values that underpin institutional ideologies and practices, suggested that building a foundation of shared values could bridge the gap between staunch individualism and more collaborative future working. For example, one participant spoke about the successful integration of learning pathways between Robert Gordon University and North East Scotland College. In order for this partnership to have succeeded, there needed to be mutual trust between these institutions. This dynamic can arguably be extrapolated to many examples of college/university partnership working - colleges must trust that universities are not looking to impose their will on them nor 'poach' their learners, while universities must trust that colleges are adequately preparing learners to enter higher education. **If institutions can collectively identify values that are greater than their own self-interests - for example, the imperative to tackle societal crises - they can be motivated to overcome divisions and unite around a common cause.**

At the same time that tertiary education is attracting new learners, it risks losing others. **Changing demographics could occur in tandem with a shift in learner attitudes towards tertiary education, one which current system users have already begun to express**. Where earning a university degree was once an aspiration for many, some current learners reported a growing sense of disillusionment with the 'promise' of higher education. In a labour market that seems to be in a constant state of flux, universities are struggling to provide an assured return on investment, eroding the 'graduate premium' that a university degree once commanded. This frustration was not limited to university students; several college learners felt underwhelmed by their programmes, having expected more exposure to their chosen industry and meaningful placement opportunities.

This could point to a growing misalignment between what students are seeking to learn and what institutions are currently offering. Today's society is enduring compounded levels of hardship the likes of which have not been seen for decades, from the fallout of the pandemic, to the cost-of-living crisis, to an escalating climate and nature emergency. Formalised education, with its attendant time and financial commitments, could seem like an increasingly insecure prospect in such a capricious context.

Learners understandably want to future-proof their education as far as possible and may look to alternatives if tertiary providers fail to modernise. The ubiquity of the internet and the advent of social media have democratised access to knowledge; arguably, it has never been easier to become 'self-taught' and some learners are pursuing advanced study independently through the use of online resources. Rather than waiting for the tertiary system to catch up, employers are taking increasing ownership over their training needs by developing these services internally, opening the door to candidates who may lack the requisite education but can be upskilled in-house. With institutions relying heavily on student recruitment for their continued financial solvency, adaptation will be key to avoid 'losing' learners to alternative providers or destinations. **Building stronger links between institutions and providers could help to circumvent this attrition by providing a more agile and interdisciplinary delivery infrastructure.**

The margins of traditional subject-based study will become progressively blurred as interdisciplinarity and problem-based learning take greater hold in curricula, assessment methodologies and qualifications. So-called 'grand challenges' such as an ageing society and climate change are interdisciplinary by nature and their corresponding solutions must be too. Employees who are able to join up seemingly disparate concepts when problem-solving are better innovators than those who work - or think - in silos.

Key findings (continued)

This move towards interdisciplinarity is already taking place at the school level, being one of the four contexts for learning under Curriculum for Excellence. The Royal Society of Edinburgh has undertaken considerable work on promoting a systemic response to entrenching interdisciplinarity within Scottish classrooms.[16]

However, this emphasis on interdisciplinarity is often lost at the secondary-tertiary interface, as admissions decisions continue to be based on pupils' performance in discrete academic subjects. **The tertiary system should work together with the school system to consider how interdisciplinary learning undertaken at the secondary level can be recognised and further facilitated at the tertiary level**. There are some encouraging exceptions to this generalisation; notably, the London Interdisciplinary School has been a trailblazer in mainstreaming interdisciplinarity across the entirety of its teaching and learning.[17] Unfortunately, many tertiary institutions continue to operate in distinctly compartmentalised ways. As one prominent example, the research funding system, whilst professing a commitment to interdisciplinarity in principle, tends to reward disciplinarity in practice, disincentivising collaborative working.

Changing this narrative will require a significant mindset shift in how learning and knowledge are conceptualised and how attainment is awarded. As one example, participants wondered whether **adaptable and behaviour-centred meta-skills such as innovative thinking and emotional intelligence will become increasingly vital and may in some cases displace the value of 'pre-packaged knowledge'** (to use a participant's phrasing) from an employer perspective.

Although **competencies** have informed industry hiring decisions since at least the 1970s, they have only recently become part of the shared tertiary-industry vernacular. Generally defined as a measure of one's ability to integrate and apply knowledge, skills and experiences to achieve success in the workplace, competencies may significantly shape the nature of qualifications. Graduates will be expected to present an increasingly holistic account of their capabilities, and their achievements will need to have demonstrable and immediate relevance to employers desperate to fill shortfalls in key sectors. If competence-based qualifications can build industry needs into their design from the outset, they may begin to undercut the value of more traditional qualifications whose multi-year timelines and emphasis on disciplinarity are falling more and more out of step with the realities of the labour market.

Forces such as globalisation and disruptive innovation are reshaping the economy at an unrelenting and sometimes staggering rate, giving rise to the lifelong - or at least repeat - learner looking to regularly update credentials that risk becoming obsolete within a few years or less. A process of **regular reskilling** - including through the pursuit of **microcredentials** - will become increasingly commonplace and the sector will need to adapt its offerings accordingly. Businesses are responding by developing specialised stand-alone credentials to upskill their existing workforce and entice new hires. Some Scottish institutions have recognised this change is taking place and are starting to diversify their programmes, though the sector continues to lag behind industry in this respect. It is worth looking at international examples of these more innovative credential delivery systems and what lessons could be applied to the Scottish context.

[16] Royal Society of Edinburgh. (2022, April 5). *Interdisciplinary learning in schools.* Royal Society of Edinburgh. Retrieved February 15, 2023, from https://rse.org.uk/expert-advice/interdisciplinary-learning-in-schools/

[17] Gombrich, C. (2023, February 2). *Should future learning be problem-based?* Royal Society of Edinburgh. Retrieved February 15, 2023, from https://rse.org.uk/resources/resource/blog/should-future-learning-be-problem-based/

Key findings (continued)

Additionally, more work remains to be done in Scotland to establish the appropriate funding and regulatory structures to make microcredentials a successful complement to traditional tertiary pathways.

Historically, the relationship between universities and colleges has been decidedly uneven, despite some positive examples of productive co-working. Universities categorically wield greater influence as a function of their scale and perceived prestige; at their most defensive, they can function as gatekeepers of the university-college exchange, ensuring the power balance remains in their favour. **Over the next decade and beyond, colleges will likely step into a more significant role as one of the primary vehicles for delivering a just transition.** Universities must see this as an opportunity to facilitate meaningful partnerships rather than an encroachment on their figurative territory.

Learners may expect **more agency in setting the course of their educational journey, weaving together different types of provision and stacking qualifications to suit their particular needs and interests**. Driven by learner demand, integrated learning pathways could become the default rather than the exception as new routes are identified (perhaps pioneered by a single enterprising student in some instances) and consolidated within an ever-expanding - potentially even infinite - roadmap of coherent learning journeys. **The future system may come to resemble a web of hyper-articulated progression pathways which lets learners enter and exit the system at multiple points of their choosing at different stages of their lives**. Not all of this learning will be formal. The third roundtable, focusing on non-traditional providers, discussed the **important role of community learning and development partnerships and how the provision of accessible, local lifelong learning opportunities can be used to address disadvantage and improve outcomes**.

Participants also highlighted the importance of intermediaries (e.g. third sector organisations) in identifying education needs and gaps in different contexts and communicating these to wider tertiary providers. Transitions between different stages must be adequately supported to ensure learners can progress from one stage to the next without losing momentum or confidence. *What will this integration mean for institutional identity and sovereignty if the system comes to expect seamless integration as a matter of course?*

The Scottish Credit Qualifications Framework (SCQF)[18] was named as one mechanism by which this interconnectedness could be further facilitated, given past successes such as Higher National Diploma (HND)/ Degree transitions, the use of Scottish Vocational Qualifications (SVQs) in Higher entry placements, and the recognition of prior learning for advanced entry. Although the SCQF has been in place for over 20 years, it was regarded as underutilised in practice and could therefore be further promoted, particularly among young people and their parents or carers.

Our sixth roundtable considered tertiary education in terms of its moral obligations to its immediate community of learners and staff, to its region and to society at large. It was also the only roundtable to overtly go beyond the Scottish or even UK tertiary landscape and instead look to international examples, allowing us to draw broader generalisations while also identifying unique features of the Scottish – and, occasionally, the developed, Western – context. In addition to imparting knowledge and encouraging inquiry, universities and colleges provide a forum for values to be dynamically explored and adopted. In other words, **the tertiary system has a responsibility to engender values rather than impose them, enabling individuals to discover more informed and empowered versions of themselves even if this transformation is a passive one**.

[18] Scottish Credit and Qualifications Framework. (n.d.). *About the Framework*. Scottish Credit and Qualifications Framework. Retrieved February 15, 2023, from https://scqf.org.uk/

Key findings (continued)

Although several of the themes in this report apply beyond the immediate Scottish context, others are distinctly characteristic of a developed, Western tertiary education paradigm. We must continue to look beyond our own borders to appreciate the varying and evolving role that tertiary education can play in different parts of the world and how this can enrich our understanding of our own system.

However, they can also serve as a stronghold of core societal values such as independent thought and civilised debate, especially in divisive times.

The challenge arises in how tertiary education can uphold these ideals without alienating those who regard it through a more pragmatic (though equally valid) lens, including funders and some system users. For some, tertiary education is just a means to an economic end – *should these learners be mandated to take modules in, say, ethical leadership or responsible debate if they are seeking to get a qualification as quickly and inexpensively as possible?* As one participant shared, this is particularly the case in developing economies, many of which are still contending with basic issues such as access and affordability. Their priorities may necessarily be more utilitarian, but are no less important than learners in more developed countries for whom tertiary education is as much about personal fulfilment as it is about gaining a qualification. This is not to say that these are mutually exclusive, and that a learner in a developing economy would not derive intangible benefits from their experience. Rather, it reminds us that, in order to be a truly public good, tertiary education must meet individuals where they are.

Traditional hierarchical curriculum development may gradually be replaced by a shared process of co-production. Cohorts are entering tertiary education with a deeper awareness of the world around them and an enhanced capacity to challenge the status quo. For example, in response to high-profile cases of social injustice, learners have prompted a global movement towards decolonising curricula and uplifting marginalised voices within academic discourse. They want a curriculum that mirrors their convictions and reflects the realities of an increasingly complicated and interconnected world. By inviting learners and staff to join a process of **co-creation** in a meaningful rather than tokenistic way, the tertiary system can begin to actualise the values which underpin it and inspire faith in shared ideals.

The idea of co-creation should also make space for lived experience and different forms of knowledge, such as indigenous knowledge. Values such as trust, integrity and transparency are both implicit and indeterminate: their importance is undeniable, but implementation can be a challenge. This shared ownership extends beyond just the curriculum and could include negotiating governance structures, budget-setting and other practical aspects. Our second roundtable revealed frustrations among tertiary staff who felt at the mercy of shifting institutional priorities, significant departmental cuts, unrealistic student expectations and tenuous contracts. Staff lie at the heart of delivery and so it becomes imperative to ensure they feel empowered.

Indeed, many of the changes mentioned previously will require a significant response from staff. There was a view among participants in our second roundtable that the role of teachers is likely to expand. Preparation and training for this needs to be brought in as early as possible, including with postdoctoral researchers and PhD students, so that professional development and resilience are prioritised from the start of their careers.

As in other sectors, the digital revolution has been a mixed blessing for tertiary education. It has paved the way for those from remote regions to access the same opportunities as their more centrally located peers. However, in some instances, it has created a growing sense of unease among lecturers and administrative staff who worry their roles could be replaced by virtual proxies or automation. While the pandemic demanded rapid reactions, some of these contingency measures may become incorporated into standard practice.

Key findings (continued)

Further technological transformation is inevitable and the tertiary sector must ensure it is on the front foot in order to capitalise on its opportunities without disenfranchising staff. Achieving this balance might involve institutions taking a social partnership approach to adopting new technologies in ways that are helpful to learners and protect job security.

One example of this approach is that of libraries. With the invention of Google and the digitisation of resources, libraries could have allowed themselves to become archaic. Instead, the sector opted to meet this perceived threat head-on. By actively participating in their own transformation, libraries carved out a continuing role in civil society without undermining their influence.

'How should tertiary education be funded?' is understandably a loaded question. From the outset, Tertiary Education Futures elected to distance itself from detailed discussions of the current funding regime and whether it is fit for purpose. Instead, the project directed the same forward-looking lens at funding: how would the changes that could take place across the sector necessitate a change - or even a paradigm shift - in the funding situation? This would circumvent the sensitivities of critiquing current funding arrangements and ensure that the themes covered in the preceding three sections could be rooted in considerations of practical delivery.

Despite this, funding remains a key and inescapable influence, particularly in a period of severely constrained public sector spending. A de facto reliance on international student recruitment and disparities in how colleges and universities receive and utilise funding dictate their respective ability to participate in an integrated tertiary system. Further, other elements of the system (the so-called 'non-traditional providers') can struggle to access resources (as one example, respondents pointed to the Flexible Workforce Development Fund which has ringfenced funding for colleges while other providers are excluded).

This inevitably engenders and perpetuates competition between different providers that should be working towards common aims. **If the future system will be as learner-centred as we anticipate, it may require a sea change in how tertiary education is funded, potentially ushering in the concept of a lifelong learning funding entitlement.** This thinking is already present in England, though it continues to be reserved for college or university provision.

In its purest sense, such an entitlement would encapsulate other types of providers and follow the learner irrespective of their route or destination. Such a shift would understandably destabilise the sector if not undertaken with due care, yet it may hold the key to dissolving the competitive forces which currently inhibit true system coherence. *How would the system respond if individuals could direct their funding towards any post-secondary learning pathway, irrespective of its connection to either college or university?*

Reflecting changes seen across the public sector, participants also discussed the **potential role for more participatory budgeting processes and funding decisions**. This evoked a key theme that emerged during our values roundtable, that of tertiary education's growing accountability to civic society. Although tertiary education is sometimes classed as a public good, it often views broader society from a safe, objective distance, perpetuating its elitist connotations. Giving the public an explicit stake in sectoral outcomes would uphold tertiary education's status as a true public good and ensure sectoral decision-making is value-led.

Whatever their form, future funding models should be designed with collaboration and learner-centredness at their heart.

Sectoral reflections on Tertiary Education Futures

Sectoral reflections on Tertiary Education Futures

The Tertiary Education Futures project was committed to a 'bottom-up' process of data collection, beginning with current users of the system before considering front-line providers and, lastly, more senior institutional figures. As a concluding step, we considered it vital to present our key findings directly to sectoral leaders and decision-makers. In doing so, we hoped to reaffirm the project's value as a sector-informed tool to provoke conversation and further theorising. We also sought to uncover how its themes might play out in the context of related policies and government initiatives, some of which are more philosophically or practically aligned with the Tertiary Education Futures report than others.

To this end, we hosted an in-person workshop at the RSE building in late January 2023 to road test the draft report with organisations such as Scottish Government, funding bodies, representative bodies and the heads of Scotland's colleges and universities. Participants were given a copy of the draft report in advance and asked to reflect on the key themes in the context of small discussion groups, facilitated by members of the Tertiary Education Futures advisory group. We were interested to see which themes resonated with participants based on their own experiences of the sector, and whether they found any themes surprising or deserving of further examination. We were also curious how the report might connect to broader policy developments, including those described in the background to this report, as well as those identified by stakeholders as being relevant.

A summary of their views is provided below. The positive response to the report heartened us, and it had its intended effect of stimulating spirited debate and discussion.

General views

More generally, there was **reflection on the persistent use of the word 'system', which implies a uniformity of vision and purpose that may not actually exist in practice.** Although achieving greater coherence is undoubtedly important, the heterogeneity of the sector must be appropriately recognised and respected. Rather than something that must be overcome, the complexity of the tertiary 'ecosystem' is a strength and something to be capitalised upon by forging stronger links between its constituent parts.

It was proposed that **many features of the current tertiary model can and should be carried into the future**. Pockets of particularly innovative or effective practice can be found across the sector and there need to be better mechanisms for peer learning and institutional sharing, particularly between colleges and universities where knowledge exchange is less prevalent than between universities. The sharing of physical resources and digital infrastructure is equally important.

"We hosted an in-person workshop at the RSE building in late January 2023 to road test the draft report with organisations such as Scottish Government, funding bodies, representative bodies and the heads of Scotland's colleges and universities."

Sectoral reflections on Tertiary Education Futures (continued)

Applicability to the wider policy landscape

Participants noted the **timely nature of the report, given the ongoing education reform agenda and funding challenges that the sector is facing, as well as the thematic similarities** across many recent publications on tertiary education, including the Cumberford-Little report and the SFC report on coherent provision and sustainability. Tertiary education is very much on the national radar, with multiple related initiatives that are currently underway. **However, the tertiary policy landscape is complex and it is not always clear if and how these initiatives are working towards common aims**. A non-exhaustive list of related policies and initiatives, as identified by workshop participants, is included below:

- The Quality Assurance Agency for Higher Education Scotland (QAA)[19] is working on quality and data alignment and a glossary of terms for micro-credentials;
- The Regional Learner Passport Partnership (RLPP), covering universities and colleges from Edinburgh to Stirling have created a learner pathways app which allows learners to identify next steps in their education[20];
- Careers by Design[21] (Skills Development Scotland);
- UNESCO Institute for Lifelong Learning[22];
- The Promise Scotland[23];
- National Performance Framework[24];
- Covid Recovery Strategy[25] and related documents; and
- national commitments around community wealth building.[26]

Some respondents felt that a more precise definition of 'tertiary' education was needed from the outset to allow for comparison against Scottish Government's definition of 'post-school education, research and skills.'

Participants noted a **recurring gap between the ambition contained within the report and related policy documents, and delivery**. As one example, while there is **growing support for interdisciplinarity, existing frameworks and structures continue to inhibit its implementation**. This is further exacerbated by enduring departmental and academic attitudes that sustain rigid disciplinary boundaries and outdated assessment and qualification models.

Although the report is intended to be forward-looking, participants felt it should **not lose sight of current constraints and the structures that could hinder the aspirations that have been identified** (e.g. targets, articulation agreements etc.).

[19] QAA Scotland. (2023, February 2). *Scotland's quality body for higher education*. QAA Scotland. Retrieved February 16, 2023, from https://www.qaa.ac.uk/scotland

[20] Regional Learner Passport Partnership. (n.d.). *Find your route to university*. Pathways. Retrieved February 16, 2023, from https://www.pathways.ac.uk/

[21] Skills Development Scotland. (2022). (rep.). *Careers By Design.* Retrieved February 16, 2023, from https://www.skillsdevelopmentscotland.co.uk/media/48884/career_review_main_report.pdf

[22] UNESCO. (n.d.). UNESCO Institute for Lifelong Learning. Retrieved February 16, 2023, from https://www.uil.unesco.org/en

[23] *Home*. The Promise. (n.d.). Retrieved February 16, 2023, from https://thepromise.scot/

[24] The Scottish Government. (n.d.). National Performance Framework. Retrieved February 16, 2023, from https://nationalperformance.gov.scot/

[25] The Scottish Government. (2021, October 11). *Covid Recovery Strategy: for a fairer future*. The Scottish Government. Retrieved February 16, 2023, from https://www.gov.scot/publications/covid-recovery-strategy-fairer-future/

[26] *Community wealth building*. Scottish Government. (n.d.). Retrieved February 16, 2023, from https://www.gov.scot/policies/cities-regions/community-wealth-building/

Sectoral reflections on Tertiary Education Futures (continued)

For example, it was acknowledged that metrics such as the Research Excellence Framework have a disproportionate impact on institutional decision-making and priority-setting and can impede progress. Some consideration and analysis of the present baseline could help to gauge the practicality of realising some of the themes and inform associated solutions (for example, if institutions are narrowly focused on meeting targets, how can these targets be broadened into missions or other outcomes that leave room for creative interpretation whilst still encouraging and rewarding high performance).

Preparing for the next generation of tertiary education users

Key challenges remain at the secondary-tertiary transition point. Scotland is already revisiting the nature of school qualifications and assessment under the auspices of the Hayward review and this thinking should be permeating the tertiary sector to ensure alignment between these educational stages. It was also observed that secondary students are not afforded enough opportunity to pause and reflect on their future and many continue to be pushed in the direction of university even if it does not suit them. As a result, learners can enter the tertiary phase with a very narrow understanding of their options.

Participants agreed the system must be **tapped into what young people are expecting of the system.** These views may diverge significantly, with some learners acting as engaged 'agents of change' to transform the sector and others holding a more traditionalist or transactional view of tertiary education. Both of these perspectives are equally valid but present different implications for how tertiary education is conducted.

Aspiration and pragmatism do not have to be mutually exclusive but will require creative approaches to ensure that **learners with different priorities can coalesce around a set of shared values and objectives**. On the topic of values, some participants wondered what current learners (in the context of roundtable one) had identified as core tertiary values, either explicitly or more subtly.

Increased flexibility must be coupled with **balanced, well-informed, and contemporary careers advice** that shows learners how they can take advantage of the full range of options that exist and, importantly, transfer their skillsets to new contexts to facilitate career changes. Depending on how quickly societal norms adapt to a new status quo, learners may face lingering pressure from parents, teachers and other sources. Thus this impartial advice will be critical in ensuring learners do not make decisions about their futures by default.

Unresolved tensions

While the report envisages a future in which tertiary education fulfils a malleable purpose, participants speculated about the compromises would need to happen in order to make this possible. **As part of this, there was discussion around what it is reasonable for society to expect of tertiary education and of learners.** For example, to what extent are meta-skills an intentional versus an incidental outcome of tertiary education? If learners have not acquired them, is their experience any less valuable? Others challenged the concept of learner-centredness, arguing that it should not be conflated with unassailable individual choice and could perhaps be better defined as a **commitment to decisions made in the learner's best interest**, which are not always the same.

Sectoral reflections on Tertiary Education Futures (continued)

It was agreed that there needs to be **better dialogue and constructive debate between employers and the tertiary sector**. Although the system must necessarily look to fill industry needs, it is important that future curricula continue to hold space for more exploratory, abstract and research-led study. Some participants felt that Scotland has not clarified its national position on 'learning for learning's sake' which could potentially exclude more casual or self-motivated learners from funding opportunities and other support mechanisms.

The report explores how the nature of qualifications is shifting towards a growing emphasis on micro-credentials and other short, hyper-focused offerings to facilitate career changes and lifelong learning. Some participants wondered whether this change might **undermine the community-building and co-production of knowledge** that naturally occurs between learners and instructors over the course of longer modules. What do learners potentially miss out on by repeatedly dipping in and out of the system?

Quality assurance was identified as a potential key barrier to realising many of the scenarios (e.g. learner-centredness, greater fluidity and flexibility, etc.) described by the report. If the system indeed moves away from certain structures and practices, there will be a need to ensure their replacements are functioning effectively and still producing high-quality outcomes for learners, employers and other stakeholders as well as demonstrating accountability to funders.

Areas for further exploration

There was a view that the **role and identity of the lecturer** did not come through very strongly in the draft report, including how they **contribute to innovations in practice** such as curriculum-making. More concerningly, early to mid-career researchers are under immense pressure to deliver on institutional demands. If learner-centredness is to potentially become a central tenant of the future system, this should not come at the expense of the wellbeing and professional autonomy of the lecturer.

The idea of **curriculum innovation and co-production** generated considerable discussion, with some foreseeing potential for radical change in this area. **Place-based and other holistic approaches** could become more common and consolidate the role of tertiary institutions as community 'anchors' that shape local identity and build resilience.

Participants noted a **dichotomy between individual autonomy and societal need** that could perhaps be further unpacked. In a time of dwindling resources, where should public investment be directed and how should it be balanced between meeting the needs of the individual and addressing pressing societal challenges such as skills gaps?

There can be a **communication breakdown** between tertiary education, industry, and the rest of society. People are not always aware of current skills gaps in the market and the opportunities these could present to them in terms of career opportunities. Similarly, less conventional initiatives – say, aimed at 'late' learners or returners – are not always adequately publicised. It would be interesting to examine whether messages are getting through to the right audiences and what information gaps need filling.

The report's themes take on new meaning in light of the cost-of-living crisis and Scotland's drive to tackle more persistent inequalities, particularly in terms of child poverty. It could be useful to **re-examine the themes against this backdrop of inequalities** to consider how changes enacted to and by the sector do not perpetuate or worsen these issues.

Despite the report's caveat, participants were nevertheless interested in discussing funding and its implications. There was **broad agreement that diversifying funding sources and models is important**, including at the post-graduate level where existing funding resources can be limited. This could include a consideration of how to secure more industry funding to avoid placing further pressure on already limited public finances.

Conclusion

Conclusion

We hope that the momentum created by the Tertiary Education Futures project can be sustained by further stakeholder discussion and that other bodies may wish to pick up on some of the themes presented in this report. As the preceding sections illustrate, it is truly a transformational time for tertiary education.

The title of the project, Tertiary Education Futures, implies that multiple trajectories and outcomes are possible, and we believe this to be the case. By initiating a forward-looking conversation, Scotland can ensure it is well-placed to nurture a system that delivers for all learners, in all instances, whilst also empowering staff and society at large.

We hope that subsequent exercises, be they initiated by the RSE and YAS or others, pick up where this report leaves off and continue to incorporate foresighting into present-day policy conversations to unlock the potential that the future tertiary education system holds.

Appendix: Approach

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Appendix: Approach

What follows is a description of our approach to engaging with different elements of the sector and in sourcing roundtable participants. It also recounts how an overarching thematic narrative both emerged from our discussions and drove subsequent discussions. How do collaboration and the pursuit of shared values contribute to building a responsive, learner-centred tertiary system that caters to the diverse needs of society whilst also empowering the staff and institutions that deliver it?

Roundtable 1: Current learners

The first roundtable featured current learners from a wide selection of Scotland's post-secondary institutions, covering:

- City of Glasgow College
- Dumfries and Galloway College
- Edinburgh College
- Edinburgh Napier University
- Glasgow Caledonian University
- New College Lanarkshire
- Queen Margaret University
- University of Edinburgh
- University of Glasgow
- University of St Andrews
- University of Stirling
- University of the West of Scotland

We considered our natural starting point to be connecting with current learners as the users and primary drivers of the system. Participants were largely self-selected and sourced by contacting student unions and elected student representatives, advertising via social media and tapping into RSE and YAS post-secondary networks.

These learners formed a diverse group, comprising both domestic and international students; first-time students and returning learners looking to reskill; those studying part- and full-time; and pursuing a wide range of qualifications. Our only ask was for learners to have been enrolled in, and attending, their course prior to the Covid-19 pandemic so that they had some experience of tertiary education undisrupted by lockdowns and the various contingencies they necessitated.

As elaborated on in the section on *key findings*, learners expressed a clear desire for more flexible, individualised and practical pathways to provide them with the versatility to navigate multiple careers and weather economic volatility. Not only do learners want the freedom to pursue multiple pathways, they want to leave university or college with the ability to 'shapeshift' (as one participant of our second roundtable put it) between different professional identities. For some, this extends beyond Scotland. As one participant in our first roundtable emphatically put it, tertiary education should prepare you to work or live anywhere in the world, in recognition of the increasing globalisation of society.

Participants received the following prompts:

What are the factors that lead people to enrol in college or university in Scotland?

What are the factors that influence a person's choice of programme and institution?

Have you gotten what you have expected out of your course?

What has been the most valuable aspect of your course?

To what extent will your future plans make use of what you have learned during your current course?

What would you say is the purpose or value of tertiary education, based on your experience?

Appendix: Approach (continued)

Roundtable 2: Frontline university and college staff

The second roundtable was roughly analogous to the first, looking to unpack the experiences of frontline staff. In particular, we were interested in how staff might respond to the greater demands of a more tailored and learner-oriented system as described by the participants of the first roundtable. The term frontline was considered to mean any staff who are directly involved in supporting learners or in delivering teaching, irrespective of their specific role. As with the first roundtable, participants were predominantly chosen from existing RSE/YAS networks though individuals were welcome to recommend additional participants. Their institutions were as follows:

- City of Glasgow College
- Dumfries and Galloway College
- Edinburgh College
- New College Lanarkshire
- University of Aberdeen
- University of Edinburgh
- University of Glasgow
- University of the Highlands Islands
- University of St Andrews
- University of Strathclyde
- University of the West of Scotland
- West Highland College UHI

Despite an earnest commitment to providing learners with the best possible education, participants reported feeling increasingly under pressure and envisioned a future in which staff are more empowered to contribute to institutional and sectoral decision-making and develop within their profession.

Participants received the following prompts:

What is the purpose, role and value of tertiary education today?

Looking 20-30 years ahead, do you think that the purpose/role/value will have changed significantly? If so, in what ways?

What factors/stakeholders will have the most impact on the development of tertiary education over the next 20-30 years?

In what ways do you think your roles will (or should) change?

What aspirations do you, as front-line staff, have for the future of tertiary education in Scotland?

What concerns do you, as front-line staff, have about the future of tertiary education in Scotland?

What support/training/resources will you need over the next decade to deliver teaching and research that meet society's future needs?

Roundtable 3: 'Non-traditional' providers

By this stage, we had begun to cultivate an understanding of some of the key opportunities and challenges the sector is facing. However, as the working group reflected on the composition of the first two roundtables, it was considered that our engagement strategy may have focused too narrowly on the more 'obvious' components of the system (i.e. colleges and universities) at the expense of reaching more unconventional stakeholders. As such, the third roundtable made a concerted effort to recruit what were broadly termed 'non-traditional' providers of post-secondary education, including the prison service, military, apprenticeships, private training providers and industry itself. Although these providers can be seen as peripheral, they fill critical gaps in provision and can succeed in reaching learners that might otherwise reject tertiary education. They also exemplify the flexibility and customisable delivery that the system is looking to mainstream.

Appendix: Approach

However, their relationship to colleges and universities is often ambiguous and more work can be done to ensure their offerings are universally recognised and integrated within existing learning pathways.

Participants received the following prompts:

Do you consider your sectors to be a form of tertiary education?

What sort of educational experience are you providing? Is the emphasis on knowledge gain and/or skills development, or on something else? What destinations are you preparing learners for?

What types of learners do you tend to attract? What are their motivations for pursuing this type of learning?

What does your sector offer that other tertiary bodies do not or cannot offer?

What is your relationship with other players in the tertiary education space (e.g. colleges and universities), employers and wider society? How do they view or value the education you provide? Do you see this relationship changing in the future?

Looking to the future, how will your sector serve Scotland and society? Do you foresee a growing demand for what you have to offer?

Roundtable 4: Collaboration between institutions

With the canvassing of different stakeholder groups complete, the project decided to delve deeper into some of the mechanisms and concepts which underlie the holistic, flexible provision that participants believed would characterise the future system. It is clear that this flexibility cannot be achieved in the absence of effective, wholesale collaboration, yet its success factors can remain elusive. At a time of increasingly constrained public funding that can drive institutions to protect their own interests, participants were asked how this culture of competition can be dismantled and replaced with fruitful and mutually beneficial collaboration.

Participants represented different examples of inter-institutional collaboration across Scotland, including those spanning both universities and colleges, as well as several of the key educational agencies tasked with administering funding and sectoral relationships. The consensus was that collaboration is undermined by issues such as a lack of institutional buy-in, misconceptions about what each partner brings to the table, and collaborative models that ignore regional sensitivities. While there is no single remedy to these problems, focusing on a shared vision and values can help transcend these obstacles and build partnerships with longevity and true impact.

Participants received the following prompts:

Collaboration is generally accepted as being a good thing for tertiary education. Can participants help unpick the value of collaboration, whether that be to institutions themselves, learners, staff, broader stakeholders and to society; and whether some forms of collaboration are more valuable than others?

What are the conditions and 'success' factors that underpin collaboration; and what are the barriers that hinder collaboration?

What are the respective roles of culture, structure and leadership in supporting and sustaining collaboration?

Looking to the future, is there a need to strengthen collaboration between tertiary education providers in Scotland; if so, in what ways, and how can this be supported, and by whom?

Additionally, a subset of participants was asked to prepare written provocations to further stimulate discussion. These pieces covered discrete aspects of collaboration, including whole-system coherency and university-college partnership working.

Appendix: Approach (continued)

Roundtable 5: Collaboration between institutions and other sectors

Replicating the approach taken in the fourth roundtable, the fifth roundtable examined collaboration between institutions and other stakeholders (e.g. industry). Participants included universities, colleges, local authorities, businesses, enterprise agencies and other sectoral governing bodies who are either actively engaged in collaborative working or who help to facilitate these relationships. Those present agreed there is a general push for collaboration but that collaboration for collaboration's sake is unhelpful. However, those which are genuinely learner-centred can be incredibly valuable by offering the chance to develop the practical, cross-sectoral skills and competencies that are sought after by the contemporary job market. While tertiary institutions (and their non-sectoral counterparts) can be eager to set up collaborative arrangements, it can be difficult to know where to find willing partners and to ensure that institutions uphold a spirit of collaboration. Some institutions continue to regard collaboration with a degree of wariness, believing they will dilute their own accomplishments, disenfranchise smaller institutions, potentially lead to unwanted financial obligations or lack sustainability. It is true that collaborations can be marred by power imbalances and rely too heavily on a select few 'champions' to keep them afloat, making them difficult to sustain once these galvanising personalities have moved on.

Interestingly, participants felt many of these hurdles can be mitigated by developing a set of shared values at the outset to remind partners of what they are ultimately there to achieve and why it matters.

Developing these values means going back to basics - overtly naming the principles and standards that will set the tone for any collaboration - and should itself be a collaborative process, with all parties having open and honest conversations about their goals for the collaboration as well as any reservations they may hold. This helps engender mutual trust and understanding, reaffirm common ground and mediate budding conflicts. Values can also serve to inspire collaborations which persist past growing pains or stagnation.

Participants received the following prompts:

Collaboration among tertiary education providers and broader stakeholders is generally accepted as being a good thing. Can participants help unpick the value of collaboration and whether some forms of collaboration are more valuable than others?

What are the conditions and 'success' factors that underpin collaboration; and what are the barriers that hinder collaboration? How can barriers to collaboration be overcome?

What are the respective roles of culture, structure and leadership in supporting and sustaining collaboration?

Looking to the future, is there a need to improve and strengthen collaboration between tertiary education providers and broader stakeholders in Scotland; if so, in what ways, and how can this be supported, and by whom?

Appendix: Approach

Roundtable 6: International perspectives on values

As the above sections describe, the fourth and fifth roundtables struck a more philosophical tone. Values such as democratic leadership, transparency, integrity, trust and honesty are vital components of a coherent, agile tertiary system founded on synergistic collaboration. Indeed, one participant described collaboration as 'an act of solidarity' above all else - a coming together to produce better outcomes for the players involved, for learners and for society more widely. More fundamentally, values are perennial, helping to provide a reassuring sense of continuity even as an unpredictable future peers over the horizon.

Negotiating a shared set of values does not come without its challenges. While often seen as self-evident, values can nevertheless be difficult to precisely define and may be misappropriated to perpetuate an unwelcome status quo or to protect the interests of a select few in-groups. Values can also be at odds with the behaviours that are seen as necessary to achieve more pragmatic aims such as financial solvency or academic reputation. When an institution is not acting in accordance with its purported values, it is noticeable, eroding learner engagement, staff morale and societal perceptions. Given these risks, how can tertiary settings - and the system at large - identify and promote the values that will align with the future it wishes to build?

For additional framing, we chose to complement our own scoping questions with a focus on the UNESCO report, *Thinking higher and beyond: perspectives on the futures of higher education to 2050*[27], which acknowledges that 'values such as respect, empathy, equality, and solidarity should be at the core of future higher education institutions and their missions' and ties these into the future of higher education, which validated our own line of thinking.

This was coupled with an opening provocation delivered by Professor Rajani Naidoo, Vice-President (Community & Inclusion) at the University of Bath and a UNESCO Chair in Higher Education Management.

For this roundtable, we purposely looked to involve international contributors in order to pinpoint universalities but also to reveal differences between the Scottish and global contexts. Participants represented a selection of countries from North America, South America and continental Europe and hailed from both the university and college sectors.

Participants received the following prompts:

How do we successfully reconcile moral or value-based aims with the commercial or economic factors that tend to drive institutional decision-making and priorities?

Democratic leadership, transparency, integrity and honesty were identified as cornerstone values. What other values should the tertiary sector look to mainstream or emphasise across its culture, ambitions and operations?

Can some values be misused or misinterpreted? For example, can upholding historic values serve to perpetuate exclusion or discrimination?

Do tertiary institutions have a responsibility to be strongholds of values at a time of increasing societal division and combative political attitudes?

In response to the UNESCO report:

How would you like HE to be in 2050?

How could HE contribute to better futures for all in 2050?

More in-depth reports on each of the roundtables are available on the RSE webpage.[28]

[27] UNESCO International Institute for Higher Education in Latin America and the Caribbean. (2021). *Thinking higher and beyond: perspectives on the futures of higher education to 2050*. UNESCO. Retrieved February 13, 2023, from https://unesdoc.unesco.org/ark:/48223/pf0000377530

[28] Royal Society of Edinburgh, Tertiary Education Futures, Retrieved February 13, 2023, from https://rse.org.uk/expert-advice/tertiary-education-futures-project/

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