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BRITISH COUNCIL
Scotland

A STRATEGIC ANALYSIS OF THE SCOTTISH HIGHER EDUCATION SECTOR'S DISTINCTIVE ASSETS

A study commissioned by British Council Scotland

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FOREWORD

The publication of this report represents something of a first by mapping out the distinctive assets of the Scottish higher education system and, consequently, providing British Council Scotland with a perfect opportunity to promote the sector internationally. By encouraging transnational connections between academic systems through a dynamic exchange of knowledge, ideas and information, we contribute to building trust and understanding between people and nations – something that is essential if we are to face global challenges and provide a more secure and prosperous world for future generations.

In commissioning the report, we were clear that we wanted to focus on the positive assets of the higher education sector in Scotland in a holistic way, rather than cataloguing the academic excellence and research strengths of each individual university. The authors have been able to pull out defining characteristics that, collectively, are unique to Scotland: primacy of the learner and a stress on life-long learning; an integrated and inclusive sector that is internationally active; a no-fees policy for undergraduates; high employability rates for graduates; strong links with business and industry; an innovative system of research pooling and research investment; high levels of research impact including a number of spinoff companies; success in winning research income; strong recruitment of international students; and, overall, an impressive global ranking position.

One outstanding finding among the many, taken from data published by i-graduate's International Student Barometer, is that the overall learning satisfaction of international students in Scotland was better than for both the rest of the UK and for the rest of the world. Of course, there are some areas that are weaker than others, and there is not always harmony between different players in the sector. But we wanted to tell a remarkable story of a national academic system that is world class and highly innovative: a story that deserves to be heard far and wide, and a story of which Scotland should be very proud.

Lloyd Anderson
Director, British Council, Scotland

EXECUTIVE SUMMARY

This report provides an account of the distinctive assets of the Scottish higher education sector. The research included interviews with senior staff (academic and administrative) at member institutions of Universities Scotland, Scottish education-related organisations and international education professionals. The interviews were supplemented by data analysis and a review of government documents and secondary sources.

The terms of reference (Appendix F) required an analysis of comparative strengths vis-à-vis the rest of the UK, Europe and beyond. The goal was an accessible evidence base of national-level assets to promote the existing and potential contributions of Scottish universities. The end result is partly a celebration of Scottish higher education and, to some extent, a critique.

Five distinctive assets were identified:

1 a joined-up and collaborative sector, helped by its modest size and a Scottish ethos of education as a public good. Evidence for this includes innovations in teaching, Scottish research pools, a collaborative approach to quality assurance, the current funding regime, a no-fees policy for undergraduates, and positive attitudes to the European Higher Education Area. It is strongly felt that working in partnership is 'part of the DNA of the Scottish sector'

2 quality assurance and credit recognition procedures that are owned by all Scottish universities. 'Enhancement Themes', an initiative of the Quality Assurance Agency for Higher Education (QAA Scotland), place learner benefit at the centre of considerations. The themes promote life-long learning and support both student mobility and articulation from the college sector

3 graduate employability and employment. Linkages between the higher education sector, business, industry and public-sector employers are strong. This is reflected in the high levels of graduate employment, the applied nature of many degree programmes, industry input to teaching, work placements and industry-commissioned research

4 innovative structures and pedagogy. New approaches to teaching and learning include flexible learning opportunities for students in remote locations, specialist postgraduate programmes that build on research pool expertise and responses to the specific needs of business and industry

5 research impact. Scottish research pools constitute an innovative approach to research collaboration that leverages excellence to concentrate activity and stimulate collaboration between universities (both domestically and internationally). Scottish universities secure high levels of research funding from the UK Research Councils and are also successful in forming spinoff companies.

Distinctive assets and excellence

For this report, it was agreed that 'distinctive assets' were not synonymous with 'excellence'. Distinctive assets were taken to be attributes that exhibited excellence while – additionally and uniquely – setting the Scottish higher education sector apart from its main comparators.

Excellence is therefore a larger category, and the purpose of this report was not to identify and list all areas of excellence at Scottish universities (although interviewees were asked to identify areas of excellence in teaching and research at their universities and in the sector generally). It is easy enough to say that all Scottish higher education institutions possess areas of excellence –that was one of the headlines after the 2008 Research Assessment Exercise (RAE). But the same can be said about universities in other parts of the UK, and about those in the other main higher education (HE) exporting countries.[1]

Research

Research impact as a distinctive asset in Scotland rests largely on prowess in science, technology, engineering and mathematics (STEM) research. It was pointed out, however, that while the STEM disciplines attract a high level of funding, as well as the close attention of the Scottish government, there is research excellence in arts, humanities, law and social sciences. These non-STEM subjects attract high-quality international postgraduate students to Scotland at a rate that surpasses the rest of the UK.

Scottish universities have a reputation for research excellence. This report provides data to show that Scottish access to funding from all of the UK Research Councils is clearly superior to the rest of the UK on a per-capita basis. But the RAE 2008 results, detailed in Appendix E, tell a different story: that the quantity of world-class excellence in research output at Scottish universities is modest when juxtaposed against the best research in the UK. Within the dual-support system for research funding, Scotland has over-performed in competitive funding from the UK Research Councils and produced a modest quantity of research deemed to be of world-class standard when set against the best 2008 RAE results for the UK as a whole.

International student recruitment and transnational education

Scottish universities, like those elsewhere in the UK, are very successful at recruiting international students from both EU member states and beyond. International students in Scotland rate their learning experiences as superior to those in the rest of the UK and other European study destinations. When compared with the rest of the UK, there are roughly similar proportions of international students enrolled at Scottish universities, although for some subjects, levels of study and source countries, there are definite variations. The main exception is for students from EU member states; for this group, Scotland is notably the most popular destination.

For non-EU students, what does appear to be important is the popularity of individual universities and/or programmes within them, rather than Scotland as a destination. For example, US students are highly concentrated at three Scottish universities and in social studies, arts and humanities. However, Nigerian and Indian students tend to seek vocationally oriented master's degree programmes at a limited selection of universities.

Postgraduate international student recruitment is an area in which Scottish universities perform well. In comparison to the rest of the UK, enrolments in areas such as law, pharmacy, nutrition and nursing are particularly strong. There are proportionately fewer international students in medicine, engineering, the creative arts and design, and Scottish universities would benefit from more non-EU students at undergraduate level.

Because transnational education (i.e. education delivered by an institution based in one country to students located in another) arose often

1 An exception to this rule is the US, where the sector is too big and diverse for the claim to make sense.

in discussions, a quick note is required here. Transnational education (TNE) is the mirror image of international student mobility and is growing faster than the growth of student mobility worldwide. While the UK HE sector is probably the world leader for delivery by TNE, the Scottish sector is relatively less involved. Heriot-Watt University has the fifth-largest number of TNE students in the UK and, according to Higher Education Statistics Agency data, only it and Edinburgh Napier University were in the UK TNE top 20 in 2011–12. Many Scottish universities may have TNE strategies (including for online and distance learning) but TNE does not constitute a distinctive asset of the whole Scottish sector.

Four-year degrees

A majority of interviewees cited the four-year undergraduate degree when asked about the sector's distinctive assets. It is distinctive in the UK context, but not further afield. The four-year degree also has pros and cons. Its flexibility and ability to offer students a wide undergraduate experience is an asset, though obviously not one unique to Scotland. Its downside is specifically within the UK context: for those international students and parents who lack specific knowledge of Scottish universities, their degrees can simply be seen as more expensive (because one year longer) than degrees elsewhere in the UK. And as for the anomaly of English students being charged tuition in Scotland, the majority of Scottish universities have amended their fees so that four years match the maximum cost of three years in England (£27,000).

Brand Scotland vs. Brand UK

When exploring the international aspects of Scottish higher education, its UK context cannot be overstated. Although this report does not purport to offer a statistical survey, it did gather first-hand, anecdotal evidence from international education professionals in Canada, Denmark, the Netherlands, Germany, Ireland, Hong Kong and New Zealand. All found it difficult to identify qualities that define Scottish higher education as distinct from the rest of the UK.

A clear message from these interlocutors is that excellence in Scottish higher education is not easily or routinely recognised as Scottish; rather, it is assumed to be virtually identical to UK HE by virtue of it being part of UK higher education. In other words, although some Scottish universities have global brands, there is only limited recognition abroad of a Scottish brand with a distinct offer. There are both political and practical messages with regards to efforts to include higher education in Scottish export initiatives abroad. It also clearly reflects – and perhaps explains – why student recruitment marketing activities overseas focus on UK universities with limited reference to Scotland.

Higher education and government

In general, the sector exhibits a certainty that the Scottish ethos of higher education as a public good presents a growing contrast to the marketisation of the sector elsewhere in the UK. The current no-fees regime came across in interviews as a source of pride and difference for Scotland. However, there was an understated question over the long-term certainty that no-fees will be able to continue, including beyond the autumn 2014 referendum on Scottish independence – no matter what the outcome. There was also a view that Scottish access to UK Research Councils' funds is at stake in the context of the current constitutional debate.

Consistent views were expressed with regards to the relationship between the Scottish government and HE sector. On the one hand, a (surprisingly) relaxed view prevailed over the 'outcome agreements' which have been required by the government since 2012. With a few exceptions, they are seen as an acceptable *quid pro quo* for the government which maintained public funding for higher education in Scotland when it was cut in other jurisdictions. The Review of Higher Education Governance presented a different story. With the exceptions of the University and College Union and the National Union of Students Scotland, interviewees clearly considered that the Scottish government is seeking to involve itself too directly in how universities are run, and that the prescriptions of the governance review are inconsistent with university autonomy.

1

INTRODUCTION

1.1 Background

This study was commissioned by British Council Scotland and undertaken by Neil Kemp and William Lawton. The terms of reference and brief are provided in Appendix F. The approach adopted involved a number of stages and activities that included:

- briefing meetings with British Council Scotland
- interviews with senior staff at all Scottish universities
- interviews with senior managers representing the main organisations involved in Scottish higher education, e.g. the Quality Assurance Agency for Higher Education (QAA Scotland), Scottish Funding Council (SFC), the Scottish Credit and Qualifications Framework (SCQF) and the National Union of Students (NUS) Scotland
- questionnaires sent to leading international education professionals in a selection of priority countries
- questionnaires sent to British Council Regional Education Advisers
- a review of literature and reports
- analysis of UK Research Council data covering funds awarded
- analysis of relevant Higher Education Statistics Agency (HESA) data covering student enrolments and transnational education (TNE) delivery
- a review of data from i-graduate's International Student Barometer (ISB).

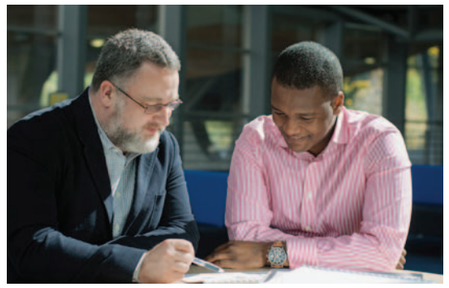
A list of interviewees and their organisations is provided in Appendix D.

1.2 Report

The report provides an overview of Scottish higher education as well as background to developments over recent years. It focuses on five 'distinctive assets' and provides details of other identified areas of excellence in Section 2.

1.3 Acknowledgements

The authors received great support and engagement from staff across the Scottish higher education sector, the Scottish government, national organisations as well as a large network of interviewees and respondents, listed in Appendix D. In particular, the authors would like to thank Lucy Young, Kate Walker, Liz Neil, Natasha Kozlowska and Lloyd Anderson at British Council Scotland for their guidance, providing access to their network of contacts and their perceptive comments on the study.



2

SCOTTISH HIGHER EDUCATION – THE CONTEXT

2.1 Background

This section explores the governance and operational aspects of Scottish higher education in the context of identifying excellence and the sector's distinctive assets. Table 2.1 provides some basic data to enable comparison of the sector across each UK country.[1]

Table 2.1: Comparison of universities for each country according to a variety of measures

	No of universities considered	Average size of institution (student nos)	% of UK Research Council money won*	% of UK research money from industry*	% of 3* & 4* research in RAE	No. of universities in *Times Higher Education* World University Rankings Top 200**	No. of universities in *Times Higher Education* World University Rankings Top 400**	Spin-off companies formed***
Scotland	14	11,627	14.7%	17.0%	52%	5	8	70
Wales	10	11,626	3.3%	3.9%	49%	0	4	5
England	89	15,982	80.4%	77.9%	55%	27	39	346
Northern Ireland	2	12,748	1.5%	1.5%	50%	0	1	11

Source: *Times Higher Education*, 5 July 2012; for details refer to www.timeshighereducation.co.uk/Journals/THE/THE/5_July_2012/attachments/Measures_of_strength.pdf
* Reports for 2009-10 (see *Times Higher Education*, 5 July 2012)
** Results for 2011-12
*** Results for 2007-11 (see *Times Higher Education*, 5 July 2012)

1 The study referenced in Table 2.1 only considered 14 universities in Scotland. However, there are 19 Scottish universities and higher education institutions funded by the Scottish Funding Council, all of which are members of Universities Scotland (see Appendix B for a full list).

On the basis of standard indicators, the *Times Higher Education* study referenced in Table 2.1 affirms that Scottish higher education is a success story. Scotland has a long tradition of respect for its universities and their achievements.

Four of the Scottish institutions which appear in the *Times Higher Education* World University Rankings Top 200 are older than all other UK universities, bar Oxford and Cambridge: St Andrews (founded in 1413), Glasgow (1451), Aberdeen (1495) and Edinburgh (1582). The older three were established by papal bull. As Phil Gummett, Chief Executive of the Higher Education Funding Council for Wales (HEFCW), commented:

> *Scotland maintains a healthy culture of respect for the university that is perhaps weaker in England and Wales... If you walk up the Royal Mile, Adam Smith is on one side and David Hume on the other.*

However, the Scottish sector has not sat on its laurels and become complacent; it has grown in diversity and responded to the evolving needs of society, business, industry and government while delivering high-quality research – blue skies and applied. For example, universities such as the West of Scotland and Highlands and Islands innovate to meet diverse community and societal needs across Scotland; Strathclyde and Robert Gordon have dynamic industry and business links; and Dundee is renowned internationally for excellence in medical education.

That said, there are real concerns, some impacting at present and others which may impinge in the coming years. These concerns and responses to them are considered by this study.

2.2 The Scottish government and the higher education sector

The current political culture in Scotland is consistent with the tradition of respect and support for higher education. With the sole (and important) exception of a 'governance' issue (see Section 2.5), the Scottish government's approach is perceived as facilitative. Many observers, both in Scotland and beyond, comment on the prioritisation of higher education, particularly as evidenced by the undergraduate no-fees policy for Scottish and EU-domiciled students (see Section 3.12).

Scotland has the same population as Yorkshire (about 5.3 million in 2012), but it occupies a very different political space. Education has constituted part of the Scottish national identity for centuries. The Scottish state, its current government and key stakeholders understand the centrality of education to Scottish national life and its future national success.

In general, the HE sector exhibits a certainty that the Scottish ethos of higher education as a public good presents a growing contrast to the marketisation of the sector elsewhere in the UK. The Scottish government has not (yet) embraced such reforms and continues to fund higher education mainly through public funding, rather than through loans and fees. However, a significant level of direction is provided to institutions to ensure that activities are oriented to the government's social and economic agendas. Examples include areas such as widening participation and the achievement of specific research interests that are linked to national economic priorities. As Michael Russell MSP, Cabinet Secretary for Education and Lifelong Learning, commented:

> *Our approach is to follow our own path, rejecting moves elsewhere in the UK for a wholesale transfer of the financial burden associated with learning from the state to the learner; instead we want to deliver a unique Scottish solution.*

Devolution has enhanced the Scottish government's capacity to make its own policy choices. Recent successes include growth in Scottish student numbers, greater recruitment of international students and increased research income. But there is a degree of entanglement between each of the devolved administrations and the UK government, and this results in a number of limitations impacting on the Scottish government. Constraints include the complexity of the devolution settlement and the need to operate as part of a wider UK higher education market in which English universities are numerically dominant (they account for over 80 per cent of all UK enrolments). Our findings and feedback suggest that while the Scottish education brand has achieved a high profile in some international markets, the UK HE brand has greater prominence due to previous investments in developing the 'Education UK' brand, and to the much greater number of universities (from England, Wales and Northern Ireland) that position themselves internationally as being a 'UK provider', rather than English, Welsh or Northern Irish.

The following provides a brief overview of the main features of Scottish higher education, how these differ from elsewhere in the UK, and some implications for future directions.

Market orientation: the Scottish approach is less market-oriented than is now the case in the rest of the UK. However, there are competitive influences as Scottish institutions need to respond to both the all-UK and international higher education markets to attract students, staff and research funding. In the UK context, the fact that over 80 per cent of student enrolments are at English universities, and that the system in England has become even more market-led, requires a Scottish response. This is particularly so due to large cross-border student flows, as Scottish institutions can increase their income by enrolling English students.

Demographic change: the population of 18-year-olds in Scotland is set to decline over the next ten years or so, and this group currently forms the largest portion of entrants to the university system. Any decline in enrolments will almost certainly result in less funding for the sector and will probably lead Scottish universities to seek more students from non-traditional backgrounds, including from older age groups.

Lifelong learning: Scottish policy has focused on encouraging an integrated approach to post-16 provision, with a greater role for colleges in the delivery of higher education and greater flexibility and mobility between the types of provision. The 2011 White Paper set out plans for all 16- to 19-year-olds to have a place in post-16 education and training.[2] The Scottish Credit and Qualifications Framework (SCQF) reinforces the approach to offer flexible mobility and the Scottish Funding Council has responsibility for both college and university sectors. This contrasts with the rest of the UK.

Quality assurance: the quality assurance (QA) system in Scotland focuses on enhancement in teaching and learning and its procedures lean more towards partnership buy-in rather than compliance alone. A separate Quality Assurance Agency for Higher Education (QAA) office, QAA Scotland, has responsibility for working with the Scottish sector. This is discussed in more detail in Section 2.12.

Widening participation: priority is given to widening access for lower socio-economic groups in Scotland, although progress in this area since devolution has been relatively limited (see Table 2.2). The Scottish government has supported a mix of interventions, one of which is a closer integration of the college and university sectors. The new outcome agreements, which must be settled by each university with the Scottish Funding Council, encourage widening access.

Research funding: the Scottish government has prioritised the improvement of research performance and has increased the financing of research to reflect this. While the outcomes of the all-UK Research Assessment Exercise (now the Research Excellence Framework) inform decisions on funding allocations, the Scottish government has increasingly sought to concentrate on research activity, including through disbursements that reflect economic priorities, and through collaborative research pools. The budgets of the UK Research Councils are not devolved and Scottish universities compete for these funds alongside all other UK universities.

2 'Putting Learners at the Centre: Delivering our Ambitions for Post-16 Education', Scottish government, September 2011. See www.scotland.gov.uk/Resource/Doc/357943/0120971.pdf

Table 2.2: Achievements of students in Scottish universities relative to the rest of the UK

	Number of universities	Average size of institution (student nos)	Average satisfaction score in National Student Survey 2011	% HE students from lower socio-economic backgrounds
Scotland	19	11,627	84.8	26.4
Wales	10	11,626	81.8	30.7
England	89	15,982	83.1	30.9
Northern Ireland	2	12,748	85.3	39.1

Source: 'Universities and constitutional change in the UK: the impact of devolution on the higher education sector'. Tony Bruce, Higher Education Policy Institute (2012).

2.3 Scottish Funding Council

The Scottish Further and Higher Education Funding Council (SFC) is a non-departmental public body of the Scottish government and its performance is accountable to the Scottish parliament. SFC was created in 2005 by the amalgamation of the Scottish Further Education Funding Council and the Scottish Higher Education Funding Council. It is one of the four UK HE funding bodies (the others are for England, Wales and Northern Ireland) and is responsible for funding HE teaching provision, research and costs related to staff, infrastructure and equipment within Scotland's university sector (16 universities and three HE institutions) and 37 colleges. SFC also collects and publishes statistical data on further and higher education and provides advice to the Scottish government. Current annual expenditure is about £1.6 billion for HE and £500 million for the college sector.

The Scottish government announced a large re-structuring programme in 2012 for the 37 independent colleges, based on college mergers and the creation of 13 college regions. The intention is to reduce the number of colleges by about a third.

The main area of policy overlap with the other UK funding bodies concerns research funding. All four funding bodies conducted the previous UK-wide Research Assessment Exercises, and the forthcoming Research Excellence Framework will be governed by a similar approach. There are also other areas of policy interchange; for example, SFC emulated the introduction of Key Information Sets by the Higher Education Funding Council for England (HEFCE) which contain programme information for prospective undergraduates.[3]

2.4 Scottish Funding Council and outcome agreements

SFC's role has been significantly augmented by the current Scottish government and it has a proportionately greater influence over the Scottish HE sector than its English counterpart, HEFCE. SFC has negotiated outcome agreements for 2012–13 with each of the universities and regional groupings of colleges. These were based on a letter of guidance to SFC from the Cabinet Secretary for Education and Lifelong Learning in September 2011; the letter also forming the basis for spending up to the 2014–15 financial year.[4] The letter mandates three priorities for the HE sector:

- access to higher education for people from the widest possible range of backgrounds
- improved collaboration with industry and the more effective exploitation of research
- a more coherent pattern of provision.

3 See www.hefce.ac.uk/whatwedo/lt/publicinfo/kis/ and www.hesa.ac.uk/includes/C12061_resources/SFC_letter.pdf?v=1.8

4 See www.sfc.ac.uk/web/FILES/About_the_Council/SFC_Letter_of_Guidance_21_September_2011.pdf

Universities were also asked 'to have regard to' other key areas:

- efficiency of the learner journey and the achievement of high levels of retention
- international competitiveness of research
- equality and diversity.

As 2012 was the first year of outcome agreements, the last three were presented as desirable options rather than mandatory requirements. The 19 university outcome agreements were published on the SFC website in late 2012[5] and it is apparent that most universities chose to address all six priorities in their plans. The two that appear to receive most attention are university-industry collaboration and widening participation, possibly because these best demonstrate the outward reach of the sector and are more easily quantifiable as targets.

The outcome agreements are understood by the HE sector as reflecting a desire on the part of the Scottish government for more leverage. Furthermore, they are perceived as a *quid pro quo* for the modest increases in Scottish HE funding outlined to 2014–15, at a time when most governments are cutting funds for the HE sector (although the Scottish college sector will experience a funding decrease). It is also likely that the Cabinet Secretary for Education and Lifelong Learning needed the outcome agreements in order to secure his government's endorsement of the funding increase.

The HE sector's responses to the constraints represented by the outcome agreements are restrained. It was clear from the stakeholder interviews that most (but not all) found them to be a tolerable way forward, which suggests a good level of acceptance of the government's agenda. However, the introduction of similar contracts in England by HEFCE was felt by some to be unlikely. Universities Scotland's summary and press release was sanguine.[6] The National Union of Students (NUS) Scotland is a strong advocate of outcome agreements, mainly because of the focus on widening access. It also sees them:

> *as a key opportunity for NUS Scotland and students' associations to work with the sector and institutions to deliver on shared objectives... [They] allow for the setting of high-level, sector-wide objectives and local, institution-specific objectives which means we have the opportunity to work with the Scottish government, SFC and the sector to ensure these objectives meet with our priorities.*

2.5 Review of Higher Education Governance

The sector's tolerance does not extend to the outcomes of the independent Review of Higher Education Governance, convened by the Scottish government and published in January 2012. The review was under consideration by Scottish universities throughout 2012[7] and its recommendations included:

- a single statutory framework for the HE sector in Scotland (and transfer of the existing jurisdiction of the UK Privy Council to a committee including the First Minister of Scotland and subject to parliamentary scrutiny)
- elected Chairs of university governing bodies (often called Courts), at least two student members, at least 40 per cent female membership and representatives from staff trade unions
- meetings of governing bodies to be held in public where possible.

Scottish universities were reported in the press as being either bemused or seeing the Review as unnecessary.[8] Interviews for this study yielded stronger objections, centred on the view that its prescriptions for the composition

5 See www.sfc.ac.uk/funding/OutcomeAgreements/UniversityOutcomeAgreements.aspx

6 See www.universities-scotland.ac.uk/index.php?mact=News,cntnt01,detail,0&cntnt01articleid=134&cntnt01origid=18&cntnt01returnid=23

7 Ferdinand von Prondzynski et al, 'Report of the Review of Higher Education Governance in Scotland', January 2012. www.scotland.gov.uk/Resource/0038/00386780.pdf

8 See, for example, 'Scotland's university chiefs cool on governance review', Times Higher Education, 9 February 2012. www.timeshighereducation.co.uk/story.asp?storycode=418970

of university Courts is inconsistent with university autonomy. It clearly lacks support in the sector, the notable exceptions being (with a few qualifications) the National Union of Students (NUS) Scotland and (with no reservations) the University and College Union (UCU) Scotland.[9] A lengthy Post-16 Education (Scotland) Bill, which incorporates both the governance issues and the priority themes in the outcome agreements, was tabled in the Scottish parliament by the Cabinet Secretary for Education and Lifelong Learning on 27 November 2012.[10] UCU Scotland was critical of the bill on the grounds that it did not fully incorporate the recommendations of the Review of Higher Education Governance.[11]

Although the governance issue constitutes an exception, the more general perception of the Scottish government by the sector is positive and supportive. The quotes below indicate this and reflect a desire to continue to consider carefully the balance between autonomy and central direction:

> *We welcome the Scottish government's understanding of the importance of HE... It has generated a conducive operating environment and atmosphere across the sector.*

> *The general framework of HE policy and resources set by [the] Scottish government is sufficiently clear; our preference is that this continues to respect the autonomy of institutions as the principal drivers of strategy, rather than through centralised planning by government, and that the implementation of policy and resourcing continues to be through the [Scottish] Funding Council as an independent intermediary at arm's length from government.*

2.6 Universities Scotland

Universities Scotland is the representative body for the Scottish university sector. Its members are the Scottish Vice-Chancellors and Principals (who are also members of Universities UK). It plays a vital role as an interface between the sector and the Scottish government and works closely with Universities UK (UUK).

The asymmetry of UK devolution, as famously expressed in the West Lothian question in UK politics,[12] applies to the Universities Scotland-UUK relationship: UUK does not expect to be kept apprised of all developments and initiatives north of the border because they do not all have UK-wide relevance; Universities Scotland, however, does expect a voice in UUK initiatives. An ongoing example of this is Universities Scotland's role in UUK representations to the UK Border Agency with regard to student visa and immigration laws.

Another difference is that almost half of Scottish universities are not members of the four UK university 'mission groups', which are sub-groupings of institutions with research, advocacy and lobbying functions parallel to those of UUK. This in practice means that the task of Universities Scotland, in projecting a coherent Scottish voice, is less complex than UUK's task in representing and projecting UK HE interests – because the mission groups fulfil parts of these functions to a greater extent in the rest of the UK. The coherence of the Scottish voice is supported by what all stakeholders, including Universities Scotland, see as a more collectivist mindset in the Scottish HE sector.

Some policy priorities of Universities Scotland in 2012, as illustrated in its publications and briefings on its website, included the outcome agreements, knowledge transfer via links with business and broader society, widening participation, graduate employment, curriculum, funding, and technical information on Scottish constitutional options.

9 For NUS Scotland, see 'Review of Higher Education Governance – NUS Scotland Briefing: February 2012' as an example (www.nusconnect.org.uk/pageassets/campaigns/nations/scotland/prioritiyscotland/briefings/University-Governance-Review-NUS-Scotland-Briefing-February-2012.pdf). For UCU Scotland, see 'UCU Scotland comments on University Governance report', 2 February 2012 (www.ucu.org.uk/index.cfm?articleid=5894). The authors of this report were unable to secure an interview with UCU Scotland.

10 See www.scottish.parliament.uk/S4_Bills/Post-16%20Education%20Bill/b18s4-introd.pdf

11 'Greater transparency of university governance must be included in post-16 education bill, says UCU', 20 March 2013. See www.ucu.org.uk/6555

12 This refers to the fact that Scottish MPs can vote on issues that do not apply to Scotland, while English MPs cannot vote on devolved issues handled by the Scottish parliament.

2.7 Finance and fees

The interdependencies of the Scottish and rest-of-UK higher education sectors are reflected particularly in the different approaches to financing domestic undergraduates. The Scottish government recognised that from the 2012–13 academic year, Scottish universities would receive less funding than their English counterparts because the latter would be able to generate significant revenue through the new English domestic undergraduate fees of up to £9,000 a year per student. The changes were estimated to result in a relative funding need (for teaching) across the Scottish sector of about £200 million by 2014–15.[13] To help make up some of this shortfall, the Scottish government increased its allocations to universities. However, Scottish HEIs can also raise revenue (and help to bridge the gap) by attracting students from the rest of the UK and charging them fees of up to £9,000 a year – for which the students are able to obtain loans in the usual way. Revenue from these recruitment activities is intended to generate about £55 million a year across the sector,[14] although some universities will benefit much more than others.

Increasing fees charged by Scottish universities for undergraduate students from the rest of the UK was considered necessary in order to prevent Scotland becoming a low-cost alternative for other UK students. The Scottish government needed to balance the desire to encourage continuing cross-border student flows (including generating revenue) against ensuring that Scottish students were not squeezed out by an influx from the rest of the UK. But the continuing need to encourage some flow from the rest of the UK has resulted in average fee levels across Scottish institutions for these students of about £6,800 a year, in comparison with the average in England of around £8,350 a year.

Scotland is a net importer of EU students. EU regulations require that the same level of support for Scottish students is also available to students from all EU member states, meaning that no fees are charged to non-UK EU undergraduates in Scotland; EU students are also able to access government loans to cover living costs. However, the Scottish government is exploring possible approaches for raising revenue from non-UK EU students.

The fee levels for postgraduate programmes are at the discretion of universities and all EU students pay the same – whether Scottish, rest of UK or rest of EU. Most programmes have higher fees for non-EU students. The fee levels for postgraduate degrees tend to follow a similar pattern to that seen across all UK universities.

2.8 Economic development priorities

The Scottish government has identified eight key economic sectors for positioning Scotland as globally competitive.[15] These are:

- energy
- life sciences
- education
- financial and business services
- creative industries
- ICT and electronics technologies
- food and drink
- tourism.

A number of other sectors have been identified as important to the Scottish economy and for which there will be some imperative to focus research. These include: aerospace, defence and marine engineering, chemical sciences, construction, forest industries, healthcare, and textiles.

13 Tony Bruce, 'Universities and constitutional change in the UK: the impact of devolution on the higher education sector'. Higher Education Policy Institute (2012).
14 Tony Bruce, ibid.
15 'Scotland's International Trade and Investment Strategy 2011–2015', Scottish Development International, March 2011.

2.9 European Higher Education Area and the Bologna process

The Scottish government has expressed a strong commitment to the objectives of the European Higher Education Area (EHEA) and the Bologna process, as it considers that Bologna provides opportunities for Scottish higher education institutions, their staff and Scottish students. The Scottish government is part of the EU-wide Bologna Follow-Up Group and it chairs the Scottish Bologna Stakeholders Group, a sector-wide forum to inform Scottish government input to ministerial conferences, ensure effective engagement between the 'Bologna Experts' and higher education providers in Scotland, promote Scottish involvement in Bologna-related events, and promote understanding of Scottish higher education to a wider international audience.[16] The government is supportive of the EHEA and considers that it enables collaborative activities with European counterparts, encourages information exchange to improve the quality of teaching and learning and promotes student mobility. This positive European engagement by the government is perhaps another reason why more EU students end up studying in Scotland.

2.10 Structure and degree delivery

The Scottish university system has many similarities with those of the other countries of the UK, although there are distinctive features that identify Scottish higher education in particular. Aspects of funding were discussed previously and this section primarily covers teaching and degree awards.

There are 19 universities in Scotland and some have more than one campus to enable outreach and promote engagement across all Scottish communities. For example, Heriot-Watt University, in addition to its main Edinburgh campus, has centres in Orkney and the Borders, and the University of the Highlands and Islands operates through 13 centres.

Scottish HEIs are independent, self-governing bodies and are directly responsible for the degrees they offer and award in their name. They offer qualifications at undergraduate ('first cycle' in Bologna-speak) and postgraduate level (second and third cycles), as described in the Scottish Credit and Qualifications Framework (see Section 2.11).

Four-year undergraduate degree

The Scottish undergraduate degree is traditionally four years in duration for most subjects and leads to an 'Honours' degree. While it is not the norm, it is also possible to take a 'Pass' degree after three years. The four-year Scottish first-degree system is unlike that in the rest of the UK but is in common with much of the world, including continental Europe, North America and Australia. In 2012, the entire undergraduate system in Hong Kong was changed from three-year to four-year programmes, reportedly to provide students with a 'more rounded, liberal education' like that in North America.[17]

The Scottish approach, likewise, is perceived as allowing students in the arts, engineering, sciences and social sciences to take broader mixes of subjects in the first two years before progressing to specialise in the final two years. This flexibility has been seen as an opportunity. For example, at the universities of Stirling and Aberdeen, the first two years are presented as a liberal arts foundation. In addition to the strong academic preparation that this can provide, it enables access for students with non-traditional entry qualifications, including international students.

While there are many advantages associated with the Scottish four-year undergraduate degree, difficulties are experienced by Scottish institutions in marketing programmes to potential international students. Universities in the rest of the UK tend to dominate the promotional activity surrounding study in the UK, given their total size compared with that of Scotland; in particular their publicity emphasises the three-year honour's degree programmes. The consequence is that the benefits of the Scottish approach can be overlooked or seen as a more expensive route to a similar UK degree outcome as offered by universities elsewhere in the UK.

16 See www.scotland.gov.uk/Topics/Education/UniversitiesColleges/16640/Intllifelonglearnstrategy/bolognastakeholders
17 'Hong Kong's Universities Decide Bigger Is Better', *New York Times*, 31 January 2011. www.nytimes.com/2011/01/31/world/asia/31iht-educLede31.html

Postgraduate degrees

There are essentially two types of postgraduate degree: taught and research. The taught degrees are mainly one year in duration (up to two for certain awards) and lead to a master's award (e.g. MSc, MLitt, MA or MBA). Research degrees include MPhil and PhD awards.

The Scottish award of a master's degree at the end of a four-year undergraduate degree programme was reported as being of concern for some countries when local authorities were trying to assess recognition and international comparability of degrees. This has been particularly so in India. The one-year postgraduate master's also continues to pose some international recognition problems, but the situation is the same in the rest of the UK.

The role of the Scottish college sector in the delivery of higher education in Scotland is clearly distinctive. Colleges do not have their own degree awarding powers but one-quarter of HE places are provided by colleges through either Higher National Certificate (HNC) or Higher National Diploma (HND) programmes that lead to sub-degree-level HE qualifications. Scottish universities offer a range of routes for entry and/or credit transfer to their degree programmes – an advantage of the Scottish Credit and Qualifications Framework (see next section). Colleges have articulation agreements with universities so that HNC students can proceed to year two of degree programmes and HND students to year three of degree programmes. There is evidence that in some subjects, such articulation students perform better at degree level than those who only experience university study. In the rest of the UK, there are HE-FE linkages, including the relatively recent introduction of associate degrees, but the dynamic and integrated relationship between the college and university sectors is a distinctive asset of the Scottish system.

2.11 Scottish Credit and Qualifications Framework

The Scottish Credit and Qualifications Framework (SCQF) promotes lifelong learning in Scotland. The SCQF Partnership[18] was established as an innovative and inclusive approach to understand education and training structures, designed to assist all involved, whether learners, educators or employers. The Framework covers all levels of learning from basic (at Level 1) through to postgraduate degrees (doctorates are Level 12). It is a distinctive approach that prioritises and assists lifelong learning; it has also won acclaim both within Scotland and internationally from countries seeking to learn from the Scottish experience, for example, India, Ghana and Hong Kong.

The Framework provides clarification for all involved in delivering and receiving education or training. For example, it considers:

- the relationship between qualifications and learning programmes
- entry and exit points and routes for progression
- how to maximise opportunities for credit transfer
- how learners might plan their progression and learning for best impact
- how to minimise duplication in learning.

The Framework also offers a means to recognise prior learning as well as to include in-company education and training; as such it greatly helps with mobility and progression. For providers in education and training institutions and for businesses, the Framework helps understand how best to allocate credits to learning programmes and qualifications, how to map progression routes within and across the education and training sectors and how to provide guidance for the design and delivery of education and learning programmes, including setting entry requirements.

18 The Scottish Credit and Qualifications Framework Partnership manages the SCQF as a Scottish registered charity. Its Board of Directors comprises nominees from Scotland's colleges; Quality Assurance Agency, Scotland; Scottish Qualifications Authority; Universities Scotland; an employer representative; an independent Chair; and a Scottish government Minister.

Employers also benefit from the Framework, as it helps to define clear job descriptions and core competencies, clarify specific needs in staff recruitment and associated advertising, develop skills and learning strategies for the company, and help staff obtain appropriate development plans.

The Framework employs two measures to help understand and compare qualifications and learning outcomes: the SCQF Level Descriptors and Credit Points. Appendix C sets out the overall Framework and in this it can be seen that there are 12 SCQF levels; these offer a basis for broad comparisons between learning programmes and qualifications achieved in different contexts, such as the workplace and formal classroom study, and through a variety of modes. Over a lifetime, individuals can move between and across SCQF levels as they undertake new learning and acquire skills for particular contexts and circumstances.

The SCQF Level Descriptors have five broad headings and these apply to general outcomes for all levels (1 to 12).[19] These are:

- knowledge and understanding – mainly subject-based
- practice (applied knowledge and understanding)
- generic cognitive skills – e.g. evaluation, critical analysis
- communication, numeracy and IT skills
- autonomy, accountability and working with others.

SCQF Credit Points are awarded to learners when they achieve the specific learning outcomes of their programme or qualification. As such, they provide a means for learners, employers and learning providers to describe and compare the amount of learning that has been achieved, or is required to be achieved, for a learning programme or qualification. SCQF Credit Points quantify learning outcomes and are subject to valid, reliable methods of assessment.

2.12 Quality assurance in Scottish higher education

Quality assurance is ultimately about raising standards and ensuring all students have the best possible experience while studying.[20]

QAA Scotland is a part of the UK's Quality Assurance Agency for Higher Education (QAA) and has devolved responsibility for quality assurance in Scotland. While the QAA Scotland approach has been developed under the aegis of the Universities Quality Working Group, it also works in partnership with other national bodies, such as the Scottish Credit and Qualifications Framework and Education Scotland. Interviews with senior staff in Scottish universities, as part of this study, indicated a very positive attitude to Scotland's approach to quality assurance; there was excellent buy-in across the sector, with delivery seen as a partnership with QAA Scotland.

QAA Scotland has the responsibility to assure quality across the Scottish higher education sector and in particular to deliver an enhancement-led approach in their activities. 'Enhancement Themes' are a Scottish innovation that contrasts even with the new Quality Code for Higher Education that was launched in 2012 for the rest of the UK[21]. The Enhancement Themes have been developed with a strong and clear focus on how best to improve the learning experience of students, rather than mainly addressing compliance and threshold issues. The Enhancement Themes encourage staff and students across all Scottish universities to share good practice, collectively generate ideas and promote models of innovation across teaching and learning. While the Scottish approach is different to that set out in the recently launched QAA UK Quality Code, QAA Scotland reported that the strategies were compatible; there was close dialogue between QAA UK and QAA Scotland in all aspects of policy development and operational delivery.

19 See 'SCQF Handbook: User Guide' (2009), Section 2 for more detail. www.scqf.org.uk/content/files/SCQF%20handbook%20FULL%20-%20amended%20Dec%2009.pdf

20 UK QAA March 2012.

21 www.qaa.ac.uk/ASSURINGSTANDARDSANDQUALITY/QUALITY-CODE/Pages/default.aspx

The Enhancement Themes are part of the Scottish Quality Enhancement Framework (SQEF)[22]. See Section 4.4 for further details on both the Enhancement Themes that have been addressed by the sector and information about SQEF.

The Scottish system of higher education is evolving and QAA Scotland has the key role in ensuring that all students can have confidence in the education they receive at a Scottish university and that their degrees have currency and recognition wherever they might move – whether around the UK or internationally.

There is also good evidence that students in Scottish HEIs are generally more satisfied with their learning experiences than their counterparts in the rest of the UK; evidence comes from both the recent National Student Survey and the International Student Barometer reports (see Section 3). While it might be impossible to identify any direct causal relationship with the enhancement-led approach of Scotland, it must be more than mere coincidence.

2.13 Industry and business relationships

Scottish universities are unanimous in asserting their strong relationships with business, public-sector employers and industry; whether in research, teaching, work placements, internships, consultancies, training or the provision of other support services. There is also good use of external, practising professionals to support teaching and project activities in the universities. This close relationship has two visible results: investment in university-based research and better employment prospects for Scottish graduates.

Graduate prospects and employability

The graduate prospects data produced annually by the Higher Education Statistics Agency indicated that in 2009-10, an average of 67.4 per cent of graduates from Scottish universities were in employment following graduation, higher than the all-UK mean of 63.7 per cent[23]. The *Guardian University Guide* provides additional indication of this success, with five Scottish universities ranked in its top UK 20 for graduate employability (Robert Gordon, Glasgow, Edinburgh, Heriot-Watt and St Andrews).[24] Employability, in this context, means the proportion of graduates who find graduate-level employment within six months of graduation.

Enhanced employment success for Scottish graduates also derives from Scottish universities' ability to provide degree programmes that combine academic rigour with business and industry opportunities. This can be through work attachments and internships, applied research projects, and part-time programmes that offer opportunities for those in employment to enhance their technical and professional skills. For example, programmes include:

- MA History of Art and Art World Practice. A four-year undergraduate programme from the University of Glasgow in co-operation with Christie's Education. The programme involves two years at Christie's Education in London followed by two in Glasgow
- MBA in Luxury Brand Marketing from Glasgow Caledonian University. Offered through the university's London centre for professionals with some experience in the field
- BSc in Motorsport Design Engineering at the University of the West of Scotland. The programme focuses on high-performance engineering and design and students prepare racing cars for test sessions

22 www.enhancementthemes.ac.uk

23 These proportions are defined as the number of graduates who take up employment or further study divided by the total number of graduates with a known destination and expressed as a percentage. Only employment areas that normally recruit graduates were included.

24 www.guardian.co.uk/education/table/2012/may/21/university-league-table-2013

- MSc in Sustainable Aquaculture at the University of Stirling. This is a flexible programme for students seeking a career in aquaculture and includes options in aquaculture business management, sustainability and biotechnology. The Institute of Aquaculture at the university is rated the top of its kind in the UK and has been at the forefront of supporting the development of farmed species and the reduction of the environmental impact of farming activities
- MSc in Forensic Art at the University of Dundee. A highly applied programme designed for students seeking to work in all areas of forensic and medical art for the police and forensic services, museums, archaeology and the theatre among others. Students are given work experience opportunities with organisations around the world
- BA in International Hospitality and Tourism Management at Queen Margaret University. This is an applied undergraduate programme, designed to provide graduates with employable skills for the growing international market. To enhance their understanding of the industry, students have a nine-month work placement in the second year that can be in a company located overseas
- MA in Screenwriting at Edinburgh Napier University in partnership with Screen Academy Scotland. This brings in industry professionals and is designed to inspire creativity and equip students with applied, employable skills
- MEng in Drilling and Well Engineering at Robert Gordon University. The programme is offered both on campus and through open distance learning. For the latter, the practical components of the programme are conducted in the student's workplace
- MMus at the Royal Conservatoire of Scotland. The master's degree has flexibility to allow students both to develop their skills as musicians as well as to experience high-level performance through working with top orchestras and ensembles, including the Royal Scottish National Orchestra and Scottish Opera.

Research and its exploitation

This area is covered in more detail in Section 3. Table 2.1, however, indicated that the Scottish higher education sector won proportionately more private-sector research contracts than universities in England and Wales. Scottish universities also stimulated more spinoff companies than their counterparts in the rest of the UK.

Senior staff from Scottish universities, interviewed during the course of this study, reported a number of successful, applied research centres developed in partnership to support particular industry, business and social priorities in Scotland. A few examples:

- the Advanced Forming Centre at the University of Strathclyde has a major interest in the aerospace industry and is close to Glasgow airport
- the National Subsea Research Institute at the University of Aberdeen (also involving Robert Gordon University and the University of Dundee) is focused on UK and Scottish offshore interests
- the Edinburgh Cancer Research UK Centre at the University of Edinburgh provides comprehensive research and training for the next generation of cancer researchers, physicians, clinicians, psychologists and psychiatrists – it has a diverse funding base but predominantly from Cancer Research UK
- the Scottish Financial Risk Academy is a partnership of financial services firms and universities in Scotland whose formation was led by the Maxwell Institute, the joint mathematical research institute of Heriot-Watt and Edinburgh universities. It aims to improve the understanding of financial risk through enhanced industry-academic interaction, including student placements, knowledge transfer workshops, visiting scholars and risk colloquia
- the Scottish Institute for Policing Research at the University of Dundee collaborates with other Scottish universities and the Association of Chief Police Officers.

Spinoff companies

The PraxisUnico Spinoffs UK Survey reported that Scottish universities had created more spinoff companies than other parts of the UK over the past decade.[25] The survey identified 172 such firms in Scotland, followed by London (115) and South East England (85). The University of Edinburgh was the third most successful UK university in this endeavour, after Imperial College and Oxford. Among the Scottish spinoffs are:

- MTEM Ltd, a company formed to exploit oil-drilling technologies developed at the University of Edinburgh, was acquired by a Norwegian company for US$275 million in 2007
- Ambicare Health, based on research at the University of St Andrews and Ninewells Hospital, Dundee, markets a light-emitting plaster for the treatment of skin cancers
- Optoscribe is a spinoff from Heriot-Watt University offering novel 3D laser micro-manufacturing technologies.

It was reported in early 2013 that the number of university spinoffs covering life-sciences for Scotland had continued to grow, in spite of the downward trend in the rest of the UK.[26] One reason suggested for this Scottish success was that public-sector support in Scotland has held up over recent years compared with the rest of the UK.

25 See www.spinoffsuk.co.uk/ and www.bbc.co.uk/news/uk-scotland-scotland-business-13147563

26 'Spinoffs lose their momentum', *Times Higher Education*, 31 January 2013. See www.timeshighereducation.co.uk/news/spinoffs-lose-their-momentum/2001210.article

3

SCOTTISH UNIVERSITIES, THEIR STUDENTS AND REPUTATION

3.1 The international reputation of Scottish universities

There is much evidence to support the generally-held perception in Scotland that the Scottish higher education sector and its universities command great international respect. This section explores the various activities in which Scottish universities engage and endeavours to compare and contrast with other countries. To provide a brief overview:

Students

Scottish universities are very active internationally and recruit large numbers of overseas students, particularly at the postgraduate level. The proportions enrolled are greater than for the rest of the UK, and student feedback indicates a high level of satisfaction. The enhancement approach to quality assurance, involving students directly, is strongly appreciated by student bodies.

Research impact

There are two good indicators of the international success of Scottish university research: the impact studies from Evidence UK Ltd and the relatively high number of spinoff companies reported across the sector. Research pools are a unique Scottish development and help to ensure focus and build synergies across Scottish universities and their research teams.

Business and industry links

Scottish universities and their graduates have a strong reputation for graduate employability as indicated by Higher Education Statistics Agency data. There are many applied undergraduate and postgraduate programmes that involve business and industry directly – both to provide external lecturers as well as for student work placements.

Transnational education and global delivery

A number of Scottish universities have positioned themselves well in transnational education (TNE) over recent years and have achieved good growth. Heriot-Watt University is the Scottish TNE leader and accounts for 45 per cent of all Scottish enrolments. The business schools at the University of Edinburgh and the University of Glasgow have well-established international reputations for their MBAs offered through open distance learning (ODL), Robert Gordon University offers a number of oil and gas sector master's programmes through ODL, and the University of Edinburgh has an online LLM in Intellectual Property Law.

Global ranking

Scottish universities are ranked very highly in global league tables when the relative size of the country is considered – well ahead of the rest of Europe.

Each is considered in detail below.

3.2 Research at Scottish universities: quality, output and impact

Scottish universities enjoy a reputation for quality, high-impact research. This section examines results from the most recent Research Assessment Exercise (RAE) in 2008 and, as a further proxy for quality, also considers the Scottish sector's success in accessing competitive funding from the UK Research Councils over the past two years.

Research in all parts of the UK has a dual support system for funding. Competitive funding from the UK Research Councils is a UK responsibility and all institutions in the UK compete for it on an equal basis. As a consequence of the RAE (now superseded by the Research Excellence Framework [REF]), research funding is distributed by the four funding councils. In the case of Scotland, it originates with the devolved block grant and is allocated by the Scottish Funding Council (SFC) according to the results of the UK-wide assessment exercise.

This section demonstrates the strong relative accomplishments of Scottish universities in securing UK research funding in many disciplines, particularly science, technology, engineering and mathematics (STEM) and the law/technology interface. It also provides evidence that Scottish access to funding from all UK Research Councils is in excess of what would be expected for a sector of its size, and that in the case of some Research Councils, funding is notably disproportionate. It is therefore somewhat surprising that a close examination of the RAE 2008 results provides evidence that the quantity of research output considered world-class from Scottish universities is somewhat modest when juxtaposed against the best research in the UK. Scotland therefore over-performs in competitive funding from the UK Research Councils but underperformed in the last RAE round.

In a 2011 White Paper entitled 'Putting Learners at the Centre: Delivering our Ambitions for Post-16 Education', the Scottish government indicated its intention to 'maintain Scotland's world-leading position in university research' and maximise its contribution to economic growth.[27] Furthermore, it said that university research funded by the government 'should be closely aligned with our national priorities', namely sustainable economic growth, skills provision, jobs, and improving life chances.

27 'Putting Learners at the Centre: Delivering our Ambitions for Post-16 Education', Scottish government, September 2011. See www.scotland.gov.uk/Resource/Doc/357943/0120971.pdf

The government also asserted that 'now is the time for making a real step change in our approach'. This change was to direct SFC to increase the concentration of funding 'in a smaller number of universities with a track record of world-leading research' (p. 36). This process began immediately for the 2011–12 year, and the major decision was taken to remove 2* research (as rated in the 2008 RAE – see next section) from the Scottish Research Excellence Grant (REG). The differential in the quality weighting applied to 4* and 3* research was increased to 3:1 (from 2.4:1). This matches the quality weightings applied elsewhere in the UK. The forthcoming Research Excellence Framework will be completed in 2014 and will provide another mechanism by which to concentrate research funding.

The rationale for research funding is therefore now shifting from a sector development ethos to a rationale based either on governmental imperatives or boosting Scotland's profile in international rankings (or both). Stakeholder interviews for this study uncovered evidence of concern over the extent to which concentration will result from the REF, and such debates also occur in the rest of the UK.

In addition, the 2011 White Paper also affirmed the Scottish government's intention to 'ensure continuity of access to Research Council funding during the continuing process of constitutional reform, a position consistent with the deepening of our research pooling and our international performance' (p. 37). This is unsurprising given the successful track record of Scottish universities in accessing Research Councils funds.

Universities Scotland's response to the White Paper supported the concentration of research funding on the best research, 'wherever it occurs'.[28] The final phrase alludes to a quandary for the government: Universities Scotland pointed out that the 2008 RAE found world-leading research, in some areas, in every Scottish university. It stressed 'this achievement represents a distinctive quality of Scotland's university sector… and a phenomenal asset when marketing Scotland internationally' but left implicit the dilemma of how the government should reward excellence where it occurs while concentrating research funding in fewer universities.

3.3 Research Assessment Exercise

The Research Assessment Exercise (RAE) 2008 used a four-point quality scale and returned a 'quality profile' of research activity, rather than a single aggregate quality score, for each of 67 discipline-based units of assessment. Research needed to be 'world-leading' in order to secure 4* for any part of the profile. In 2001, more than half of submitted research was required to be of international excellence and the rest of national excellence to receive the highest rating. The 2008 methodology was intended to show the quality of research within departments in finer detail.

The criticism was that everybody could claim to be a winner by pointing to a pocket of excellence within one department. Many in Scotland, including the media, picked up on the claim by the Scottish Funding Council that 'every Scottish institution is undertaking world-leading research', that the proportion of Scottish research graded at the highest level had increased since the 2001 RAE, and that 'over half the assessed research in Scotland is either internationally excellent or world-leading' (i.e. graded 3* or 4*).[29] Not reported was SFC's note that the definition of the 'best' research had been 'stretched' somewhat in the RAE 2008.

The RAE 2008 overall grade results for Scotland are juxtaposed against the all-UK results in Table 3.1. Calculations for this study indicate that 15 per cent of output measured for the RAE in Scotland was at 4* level (versus 17 per cent for the UK) and that 33 per cent was at 3* level (versus 37 per cent for the UK). The combined total of 3* and 4* output in Scotland was therefore 48 per cent of all output graded, as opposed to 54 per cent for the UK.

28 Universities Scotland response to 'Putting Learners at the Centre', January 2012. See www.universities-scotland.ac.uk/uploads/USSummaryresponsePost16.pdf

29 See www.sfc.ac.uk/research/research_assessment/research_assessment.aspx; www.universities-scotland.ac.uk/uploads/USSummaryresponsePost16.pdf; www.heraldscotland.com/top-marks-in-research-means-cash-for-scots-universities-1.897749

Table 3.1: Definitions of RAE 2008 quality levels and relative scores of Scotland and all-UK

Quality level	Definition Quality that is... :	UK % at this quality level[30]	Scotland % at this quality level[31]
4*	...world-leading in terms of originality, significance and rigour.	17	15
3*	...internationally excellent in originality, significance and rigour but falls short of the highest standards of excellence.	37	33
2*	...recognised internationally in originality, significance and rigour.	33	34
1*	...recognised nationally in originality, significance and rigour.	11	16
Unclassified	...below the standard of nationally recognised work. (Or does not meet the published definition of research for the purposes of this assessment.)	2	2

Source: RAE report (2008)

3.4 Location of 'world-leading' and 'excellent' research in Scotland

As alluded to in Section 3.3, the Research Assessment Exercise 2008 results are presented in such a way as to indicate at least some 4* ('world-leading') or 3* ('internationally excellent') output from almost every part of every university. Identifying the pockets of expertise in specific disciplines can be done by recording which units of assessment at which universities have the highest percentage of research activity rated 4*. For example, one unit of assessment is named 'other hospital-based clinical subjects' (it excludes cancer and heart research, immunology and psychiatry). At the University of Edinburgh, 40 per cent of the research in this area was rated 4* and a further 40 per cent rated 3* (see Table 3.2 and Appendix E). Edinburgh was clearly the Scottish centre of excellence in this area and was the top UK university in this unit of assessment, although the University of Aberdeen scored 4* for 15 per cent of output and 3* for an impressive 60 per cent of output.

Table 3.2 shows which Scottish universities had the highest levels of 4* and 3* research activity for almost all of the 67 units of assessment. Some units that showed little activity at these levels are omitted. For comparison, the top universities in the UK are also provided, based on the same RAE 2008 results. The following is just the top portion of a long table of subject and university comparisons – the full table is provided in Appendix E.

Table 3.2: Proportion of research activity rated 4* and 3* in RAE 2008 units of assessment – top Scottish and top UK universities[32] (see Appendix E for full table)

RAE unit of assessment	Top Scottish universities	4* (%)	3* (%)	Top UK universities	4* (%)	3* (%)
Cancer studies	Glasgow	25	50	Cambridge Inst Cancer Research Manchester	35 35 30	45 40 60
Other hospital-based clinical subjects	Edinburgh Aberdeen	40 15	40 60	Edinburgh UCL	40 40	40 30
Health services research	Aberdeen	25	55	York Queen Mary	35 30	40 35
Primary care and other community-based clinical subjects	Aberdeen	25	40	Oxford Manchester Birmingham Nottingham	45 40 35 30	40 40 30 40
Allied health professions and studies	Glasgow, Glasgow Caledonian, and Strathclyde (joint submission)	15	45	UCL Hull, Lancaster, Surrey	25 20	35 40
Biological sciences	Dundee	25	40	Inst Cancer Research Oxford (Biochem)	40 35	45 40

30 See www.rae.ac.uk/news/2008/results.asp

31 Calculated by the authors using full Scotland results (the quality profiles for each of the 67 assessment units at each university) which were formerly available on the SFC website but not available in December 2012.

32 Source: RAE 2008 quality profiles by unit of assessment. See www.rae.ac.uk/Results/selectUOA.aspx

3.5 Access to UK Research Council funds

Stakeholder interviews for this study suggested a lack of consensus in Scotland with regard to the Scottish HE sector's prowess in accessing research funding. A common belief is that Scotland secures a greater proportionate share of research funding than England; others say that this is something of a myth. A simple analysis can be based on Scotland's population as a proportion of the UK population, which was 8.4 per cent in 2011 (5.3 million of 63.2 million). In 2010–11, researchers at Scottish universities accessed different levels of funding across the seven UK Research Councils' funds but, in all cases, it was higher than the 8.4 per cent based on population – see Table 3.3.

Researchers at Scottish universities competed exceptionally well to access funding in STEM-oriented subjects. In the case of the Science and Technology Facilities Council, Scottish researchers were awarded 22.7 per cent of the total UK funding in 2010–11, a rate almost three times that based on population. Scottish researchers received 15 per cent of UK funding from the Biotechnology and Biological Sciences Research Council, 14.9 per cent from the Natural Environment Research Council and 13.2 per cent from the Engineering and Physical Sciences Research Council (EPSRC).

Award rates in the humanities and social sciences were lower but still above the population base: 10.1 per cent of UK funding from the Arts & Humanities Research Council (AHRC) and 9.1 per cent from the Economic and Social Research Council (ESRC). English universities outperformed their population base (83.9 per cent of the UK population) for AHRC, EPSRC and Medical Research Council funding whereas Wales only did so for ESRC funding.[33] The notion that Scottish universities punch above their weight in accessing this funding is therefore accurate.

Table 3.3: Percentage of award funding from each UK Research Council for Scottish and English universities (2010–11)

Research Council	Scottish universities (Scotland = 8.4% of UK population)	English universities (England = 83.9% of UK population)
Arts & Humanities Research Council	10.1%	84.8%
Biotechnology and Biological Sciences Research Council	15.0%	81.0%
Economic and Social Research Council	9.1%	84.7%
Engineering and Physical Sciences Research Council	13.2%	85.1%
Medical Research Council	10.9%	86.1%
Natural Environment Research Council	14.9%	81.6%
Science and Technology Facilities Council	22.7%	73.4%

Source: calculated by the authors from funding tables supplied by the Research Councils UK Strategy Unit.

Drilling further down also elicits interesting findings on award recipients. In 2010–11, Heriot-Watt University (HWU) was awarded £12.5 million from the EPSRC, a figure exceeded in Scotland only by Edinburgh, Glasgow and Strathclyde. This research includes wave and tidal energy, flood control and petroleum engineering. HWU received a further £2.35 million from the European Research Council for work in quantum physics.

33 Note that Northern Ireland did not outperform its population base for funding from any Research Council.

3.6 Research impact

The issue of relative research impact was addressed in a 2009 report for the Scottish government by Evidence UK, a Thomson Reuters consultancy.[34] Relative to its GDP, Scotland's research is cited more often than that of any other country, and is second globally for citations per paper. In 2008, Scottish researchers published about 12,000 indexed papers. They represent 11–13 per cent of the UK's research base in most subject areas (again, significantly larger than the population share) and 17–18 per cent in environmental and biological sciences.

Scotland's share of global output fell between 2000 and 2008, which probably reflects China's fourfold increase in research output. The UK as a whole has a high citation share but Scotland's, at 1.8 per cent of the world total in 2008, was proportionately higher. It was highest of all for biological sciences (2.4 per cent). Internationally co-authored works tend to be cited more often – by 2008, 48 per cent of published Scottish research was co-authored, up from one-third in 1999. One-third of such international partnerships were with US researchers in 2008, but the trend is towards more research collaboration with France and Germany.

As noted in Section 2, Scottish university research leaves a proportionately larger footprint through commercialisation in spinoff companies than in the rest of the UK. The University of Edinburgh is the third most successful UK university at creating spinoffs, after Imperial College and Oxford. It was not possible in this study to identify any specific reasons as to why Scotland has been so successful in the commercialisation of research. However, there is a well-publicised and supported programme from Scottish Enterprise called the Proof of Concept Programme (PoCP)[35]. The initiative supports the pre-commercialisation of leading-edge technologies developed in Scotland's universities and research centres, the objective being to encourage and create new high-growth companies based in Scotland. There are also all-UK programmes with broadly similar aims under the Technology Strategy Board which are accessible to Scottish organisations, such as Smart and Knowledge Transfer Partnerships.

Scottish research was also found to represent better value for money than in the rest of the UK (in the context of public spending on research and development). But its share of PhD awards was not in keeping with the rest of the UK or comparators such as Denmark and Belgium, and private-sector research in Scotland is underdeveloped relative to England and other small countries. These last two points were both mentioned in the stakeholder interviews for this study.

3.7 Global ranking of Scottish universities

The number of global league tables has expanded recently along with the approaches adopted. Some seek to be very research-focused (e.g. the Academic Ranking of World Universities and the Leiden Ranking) while others offer a more holistic approach, drawing together both research impact, various student-related metrics and internationalisation trends. The *Times Higher Education* (THE) World University Rankings and the Quacquarelli Symonds (QS) Top Universities fall into the latter group, and Scottish universities achieve very high positions in both, relative to the size of the country. For example, the *THE* World Rankings place five Scottish universities in the top 200 (2011–12), and this was more than all other continental European countries except France, Germany and the Netherlands.

34 Evidence, 'International comparative performance of Scotland's research base', Office of the Chief Scientific Adviser, Scottish government, November 2009.
35 See www.scottish-enterprise.com/start-your-business/proof-of-concept-programme.aspx

To consider the ranking relative to the size of country, the total number of universities for a country in the global top 200 was compared with its total population (expressed in millions). This resulted in the following proportions (the lower the better):

Scotland	(1.0)	i.e. one top 200 university per 1.0 million population.
Switzerland	(1.3)	
The Netherlands	(1.4)	
Sweden	(1.9)	
Rest of UK	(2.0)	
Ireland	(2.4)	
Australia	(3.2)	
Canada	(3.9)	
US	(4.2)	

However, what is also apparent is that this very high-ranking position is not reflected in the perception of the 30,000+ academics from outside the UK who contributed to the *THE* 'Reputation' queries[36]. These respondents were from all around the world, although the largest group (44 per cent) was based in North America. Only one Scottish university appeared in the top 100 in 2011–12 for the 'Reputation' ranking – Edinburgh at 49th. This contrasts with its actual *THE* ranking of 36th seems to reinforce the comments received from leading international education professionals for this study (see Section 5), and suggesting their relative lack of awareness of the high standing of Scottish universities.

When UK domestic rankings are considered, there are variations between the different tables according to the methodology applied. Scottish institutions are ranked highest overall in the *Guardian University Guide*, as this ranking places greater emphasis on student satisfaction and graduate employability, both attributes that score highly for Scottish universities.

3.8 Students at Scottish universities

According to Higher Education Statistics Agency (HESA) data, there were 220,910 students in Scottish higher education in 2009-10. A further 50,300 were following HE programmes in Scottish colleges on a full or part-time basis.

The total number of students across all UK higher education institutions (excluding the college sector) was 2,493,415 in the same year (see Table A1, Appendix A). Additional analysis of these data indicates that:

- the proportion of all Scottish students following HE programmes (in both the university and college sectors) relative to total UK enrolments was 10.2 per cent in 2009–10. This compares with a Scottish population that comprises 8.4 per cent of the UK total[37] (see Table A1, Appendix A)
- Scotland has proportionately more students following HE programmes in the college sector than other UK countries. In 2009–10, this was 18.6 per cent of total Scottish HE enrolments compared with 4.6 per cent for England and 1.1 per cent for Wales (see Table A3, Appendix A)
- Scottish institutions have very successfully increased postgraduate enrolments (up 81.8 per cent from 2000–01 to 2009–10). All-UK growth was lower at 73.1 per cent. They were also successful in attracting part-time students at both undergraduate and postgraduate levels.

36 See www.timeshighereducation.co.uk/world-university-rankings/2011-2012/reputation-methodology.html
37 See http://www.ons.gov.uk/ons/rel/pop-estimate/population-estimates-for-uk--england-and-wales--scotland-and-northern-ireland/population-estimates-timeseries-1971-to-current-year/index.html

3.9 Domestic enrolment rates

Comparison of enrolment data from across the UK indicates that Scotland has dropped back over recent years in terms of enrolling students from lower socio-economic groups. However, when one also considers the Scottish college sector, enrolments are proportionately similar to the rest of the UK. The enrolment rate for female students is significantly higher than for males.

The Scottish government has expressed its concern over the need for Scottish universities to widen access; concerns originally expressed following a study based on 2005–06 enrolment data'[38] which indicated relatively poor performance. The government has adopted a more interventionist stance and has negotiated an agreement on widening participation targets with each Scottish university from 2013.

3.10 International students

In overall terms, the Scottish higher education sector recruits proportionately more international students (EU and non-EU) in comparison with the rest of the UK – see Tables 3.4 and 3.5. In 2009–10, the overall UK total for international enrolments was 405,800. The figure stood at 41,100 for Scotland – this compares with total populations of about 63.2 and 5.3 million respectively.

International enrolments have increased faster for Scottish institutions than for the rest of the UK, with non-EU international numbers reportedly up by 58 per cent over the period 2002–03 to 2009–10 compared with an increase of 47.4 per cent in England[39]. Non-UK EU enrolments increased by over 80 per cent at Scottish institutions for the seven years to 2009–10, compared with an increase of 35.2 per cent at English institutions. There are variations according to subject area, countries of origin and levels of study and those are discussed below.

The number of international undergraduate and postgraduate students was proportionately similar at Scottish and English institutions in 2009–10. However, there were a few minor differences: Scotland attracted proportionately more undergraduate students from the EU and slightly more postgraduates from both EU and non-EU countries.

Table 3.4: International students (EU and non-EU) according to country of study (2002–03 and 2009–10).

	2002-03		2009-10		Increase, 2002-03 to 2009-10
	Number	%	Number	%	%
Non-EU International					
England	160,670	8.9%	236,895	11.3%	47.4%
Wales	6,700	5.6%	17,185	13.4%	45.7%
Scotland	15,840	8.0%	25,075	11.4%	58.3%
UK Total	184,685	8.5%	280,760	11.2%	52.0%
EU (non-UK)					
England	72,530	4.0%	98,060	4.7%	35.2%
Wales	5,265	4.4%	6,845	5.4%	30.0%
Scotland	8,810	4.5%	15,930	7.2%	80.8%
UK Total	90,585	4.2%	125,045	5.0%	38.0%

Source: HESA (2002–2010 enrolment data).

38 A Trench, *op.cit*.

39 Tony Bruce; 'Universities and constitutional change in the UK: the impact of devolution on the higher education sector'; HEPI Oxford (2012).

The International Student Barometer (ISB – discussed in more detail in Section 3.15) provides evidence pertaining to levels of international student satisfaction, including the likelihood of an international student recommending their institution to a friend. This, in itself, offers a strong indication of overall satisfaction. The 2011 ISB suggests that international students in Scottish institutions are more satisfied than their counterparts in the rest of the UK as well as other European countries. Given this very positive endorsement of the Scottish experience, it makes sense to consider both the successes and areas of potential under-achievement. These are discussed in more detail below.

3.11 Non-EU international students

A key ambition of this study has been to determine whether the opportunities offered by the Scottish higher education sector are recognised internationally and, if so, the extent to which any such recognition varies by country.

Table 3.5 compares non-EU enrolments in Scotland with the rest of the UK. One can gauge variable levels of recognition across a number of countries by using international student enrolment data as a proxy measure. In addition, the table provides annual enrolment growth rates for the past five years.

Table 3.5: Non-EU international students in UK higher education – Scotland and the rest of the UK (2010–11).

Country	Scotland			Rest of the UK		
	2010-11	Proportion (%)	Annual growth	2010-11	Proportion (%)	Annual growth
Total	**32,940**	**100.0**	**7.9%**	**295,475**	**100.0**	**7.0%**
China	6,675	20.3	9.4%	64,725	21.9	6.9%
United States	5,420	16.5	6.6%	19,185	6.5	2.7%
India	3,630	11.0	5.7%	37,260	12.6	16.3%
Nigeria	2,600	7.9	20.9%	15,725	5.3	13.8%
Canada	1,270	3.9	5.9%	5,850	2.0	6.3%
Malaysia	1,195	3.6	5.3%	13,670	4.6	5.3%
Pakistan	960	2.9	15.6%	9,905	3.4	6.4%
Saudi Arabia	820	2.5	21.5%	10,030	3.4	31.4%
Norway	705	2.1	4.0%	3,685	1.2	5.5%
Taiwan	505	1.5	-1.1%	4,660	1.6	-3.6%
Hong Kong	490	1.5	-3.5%	10,435	3.5	2.7%
Thailand	475	1.4	23.5%	6,030	2.0	9.0%

Source: HESA accessed via British Council.

As is clear from Table 3.5, there are only a few significant differences:

US and Canada: Scottish HE is clearly well recognised in North America, given the sector's successes relative to the rest of the UK. However, only a very limited number of Scottish universities are involved. Three quarters of US enrolments are at just three universities: Edinburgh (33.3 per cent), St Andrews (30.0 per cent) and Glasgow (10.6 per cent). A large majority participate in either undergraduate or longer-term study-abroad programmes in the arts, humanities and social sciences.

Other successes: Scottish higher education institutions have successfully increased enrolments from China and India, although the rate of enrolment growth from the latter has slowed recently. Recent indications are that Indian enrolments have been adversely hit by changes to UK immigration policies. Nigeria has been a success story for Scottish HE, with above-average participation and enrolment growth. However, students from India and Nigeria do tend to pursue mainly vocationally-oriented postgraduate programmes at a limited number of universities – nearly 70 per cent of Nigerian students are located at just four Scottish universities. Chinese students tend to be much less concentrated, both in terms of institution and subject areas.

Under-recruiting source countries: In comparison with the rest of the UK, Scottish enrolments are relatively low from Malaysia, Saudi Arabia, Hong Kong, Thailand, Sri Lanka, Bangladesh, Vietnam and Turkey. Each of these international student markets has experienced an increase in the number of students recruited to the UK. What needs to be determined is why Scotland has been relatively less successful in these markets. Is it a lack of knowledge of Scottish excellence in HE or are Scottish institutions less active than their counterparts in the rest of the UK?

3.12 EU student enrolments

When EU (non-UK) enrolments are considered, it is clear that the Scottish sector is very successful in terms of attracting EU students compared with the rest of the UK (see Tables 3.6 and A7). This is almost certainly an indication that EU students are aware of Scottish higher education opportunities, particularly the no-fees policy at undergraduate level, which may be a strong 'pull' factor. However, access to relatively low-cost programmes is clearly not the only reason for success, as there has also been good enrolment growth and demand for master's-level programmes, including for those where fees are set at full cost (e.g. business and management areas).

Table 3.4 indicated the strong growth rate in enrolments to Scotland and Table 3.6 shows notable growth from most EU states. Additionally, Scotland appears to be relatively more attractive to students from Ireland, Poland and from across Scandinavia. Large numbers of Irish students have traditionally been attracted to Scottish universities which continue to be popular study destinations.

Table 3.6: EU international students in UK higher education – Scotland and the rest of the UK compared (2010–11).

Country	Scotland			Rest of the UK		
	2010-11	Proportion (%)	Annual growth (%)	2010-11	Proportion (%)	Annual growth (%)
Total	**20,270**	**100.0**	**8.3%**	**132,070**	**100.0**	**4.6%**
Ireland	3,180	15.7	1.2%	14,275	10.8	0.7%
Germany	3,160	15.6	7.7%	17,595	13.3	4.5%
France	2,505	12.4	4.3%	15,700	11.9	1.7%
Poland	1,600	7.9	21.5%	6,490	4.9	11.0%
Greece	1,315	6.5	-1.5%	11,445	8.7	-6.5%
Spain	980	4.8	2.8%	7,845	5.9	-0.4%
Italy	905	4.5	10.3%	8,150	6.2	6.2%
Sweden	690	3.4	8.9%	3,295	2.5	1.1%
Lithuania	685	3.4	60.2%	3,305	2.5	31.4%
Bulgaria	575	2.8	-	4,160	3.1	-
Finland	535	2.6	9.8%	1,855	1.4	1.3%
The Netherlands	515	2.5	6.8%	3,705	2.8	5.8%
Romania	465	2.3	-	4,330	3.3	-
Belgium	410	2.0	5.8%	3,000	2.3	4.1%
Czech Republic	330	1.6	22.4%	1,270	1.0	6.4%
Cyprus	310	1.5	19.0%	11,310	8.6	10.0%
Latvia	290	1.4	52.6%	1,780	1.3	29.9%
Denmark	285	1.4	0.7%	1,610	1.2	-0.2%
Hungary	265	1.3	27.1%	1,055	0.8	7.1%

Source: HESA, accessed via British Council.

3.13 Subjects studied by international students

Is there any evidence that Scotland has become the destination of choice for international students in particular subject areas? There are a few indications from international student enrolment patterns that suggest some subjects in Scottish institutions are more (and conversely some less) popular than for the rest of the UK. When enrolment proportions are considered by subject, some of the main observed variations include:

- subjects allied to medicine are relatively more popular for all students and at all levels of study in Scotland. There is a wide mix of subjects that fall within this general heading including physiotherapy, medical technologies, pharmacy, nutrition, nursing, ophthalmology etc.. However, for clinical medicine, Scotland would seem to be less popular. This is somewhat surprising given its global reputation in this area
- Scottish universities attract proportionately more postgraduate law students. The same cannot be said for undergraduate law students
- Scotland's higher education institutions attract proportionately fewer international students in the creative arts and design compared with the rest of the UK
- Scottish universities attract proportionately fewer international engineering and technology undergraduates
- Scotland attracts proportionately more social studies undergraduates. This is probably due to the large number of North American students in Scotland following programmes in this area.

3.14 International student enrolments in the rest of Europe

This section briefly explores how well Scotland is faring in the international student recruitment market compared with other European countries. Overall, the UK is by far the most successful country in Europe in terms of attracting international students, both from EU and non-EU source countries. For most EU member states, international students fall into three broad categories:

- exchange and study-abroad students from the EU (particularly via Erasmus) and North America
- undergraduate enrolments (mainly from the EU)
- international students (mainly non-EU) following master's degree programmes delivered in English.

There are difficulties in making objective comparisons as the data available from most EU countries are not as detailed as that available from the UK and Germany. Table 3.7, based on UNESCO student-mobility reports, provides one means of assessing Scottish performance against other European countries in relation to attracting international students.

As is apparent from this comparison, Scotland is extremely successful. However, in order to disaggregate Scotland from the rest of the UK, the analysis is based on Higher Education Statistics Agency (HESA) returns, which tend to be higher than those data included in the UNESCO reports (the latter does not provide a separate figure for Scotland). In comparison with all-UK HESA and UNESCO data for the UK, the actual proportion for Scotland is closer to the UK (All) proportion.

Note that in Table 3.7, total population data are employed for comparison rather than total higher education enrolments. The enrolment data required for each country was either not comparable across countries given the manifold differences in higher education systems or not accessible at all.

Table 3.7: International students as a proportion of the general population

	International students	Population (2008)	Enrolments as proportion of total population
Australia	230,635.00	21,960,000	1.05%
Scotland[40]	45,005	5,170,000	0.87%
New Zealand	31,570.00	4,280,000	0.74%
Austria	53,400	8,318,000	0.64%
United Kingdom (all)	341,800	61,193,000	0.56%
France	243,440	63,983,000	0.38%
Ireland	12,790	4,401,000	0.29%
Canada	93,480.00	33,213,000	0.28%
Germany	189,350	82,217,000	0.23%
Finland	11,300	5,300,000	0.21%
United States	624,470.00	303,825,000	0.21%
The Netherlands	30,050	16,405,000	0.18%
Denmark	6,390	5,472,000	0.12%

Source: UNESCO Institute of Statistics Table 18A.

In addition, the comparable data for Canada, the US, Australia and New Zealand are provided in Table 3.7. From these, it is clear that Australia attracts a higher proportion of international students relative to Scotland, with New Zealand at a level closer to that of Scotland.

There are also very different patterns in terms of source countries according to the European destination country, and these sharply contrast with Scottish main-source countries:

The Netherlands: about half of all international students are from Germany and Belgium; from non-EU source countries, China dominates.

Germany: while Chinese students represent the largest single group with over 20,000 enrolled, German universities attract many students from across Eastern Europe, with large numbers from Bulgaria, Ukraine, Poland and Russia.

Denmark: non-EU international student enrolments at Danish universities collapsed to a few hundred after the introduction of full fees in 2008. The majority of international students are from Europe and North America on exchange programmes. However, there are significant numbers of longer-term students from Iceland, Norway and Sweden.

France: a large proportion of international students in French universities are from North and West Africa and Vietnam. There are over 20,000 Chinese students enrolled and France is the most popular European destination for Brazilian students (about 3,000 in 2008). Russia, Romania and Poland each have over 3,000 students enrolled at French institutions.

40 The international enrolment data for Scotland are taken from HESA-British Council tables. UK HESA-British Council data are normally higher than those from UNESCO tables due to definitional differences.

3.15 International Student Barometer student satisfaction surveys

The International Student Barometer (ISB) from the International Graduate Insight Group (i-graduate) provides a useful measure of the satisfaction of international students in relation to their studies and living experiences while studying at their chosen university. It also indicates how international students select their country and institution and assesses the most important factors that might influence that choice. By benchmarking an aggregate figure for all international students surveyed in Scotland against aggregate numbers for both all-UK and rest-of-the-world respondents, a picture of relative performance is possible. In addition, the current year's responses can be compared against previous years to identify any significant changes.

The following is a summary of the results from the autumn 2011 survey. Given the timing, it included a large group of newly enrolled students in each country. Large sample sizes[41] help to ensure that the results are statistically generalisable.

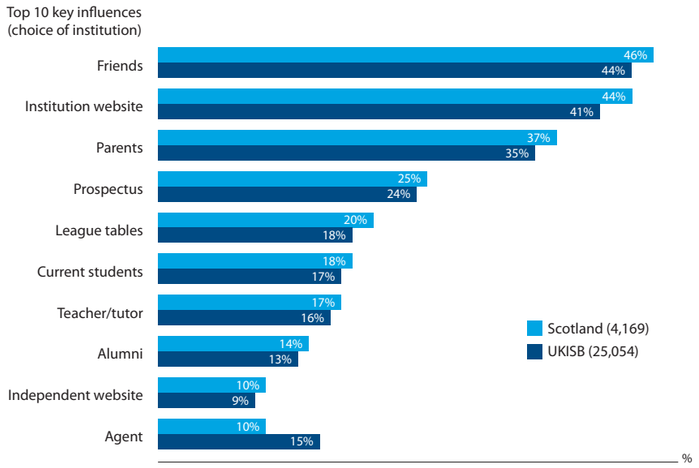
- the overall learning satisfaction of international students in Scotland was better than for both the rest of the UK and the rest of the world. This is an excellent and very important result for Scotland as there is a very high correlation between overall levels of learning experience satisfaction and the likelihood that a student will recommend their study destination to others
- the influence of friends on choice of study destination was reported to have the highest impact in Scotland compared with the other countries reviewed. Additionally, the likelihood of a current student recommending study in Scotland to their friends has increased over the five-year period to 2011. High levels of satisfaction vis-à-vis the student learning experience can reinforce positive messages from students and alumni to their friends and family and directly promote study in Scotland
- word-of-mouth is more important as a means of informing potential students about Scotland as a study destination than it is for the rest of the UK. Sources of word-of-mouth promotion include current students, alumni, teachers, friends and parents as well as social media (see Figure 3.1)
- students in Scotland indicated that country rather than institution was the primary consideration when choosing a study destination. What is unclear from the responses is whether students in Scottish institutions considered the country to be Scotland or the UK more generally. However, it is worth noting that EU students were included in the sample and probably considered Scotland as a distinct study destination, particularly given the no-fees policy at undergraduate level. It is also worth highlighting that the importance of country over institution has improved from 2008 to 2011
- the quality of teaching and the reputation of both the institution and the qualification awarded were considered to be relatively more important factors for choosing to study in Scotland. It was also noteworthy that the standing of the country's education system and research quality were seen to be of slightly less significance for students in Scotland (relative to the rest of the UK).

From this analysis, it would seem that individual Scottish institutions successfully promote their own marketing messages, rather than any potential international student understanding a total Scottish 'offer'. For EU students, the financial benefits associated with studying in Scotland, relative to elsewhere, are higher (i.e. lower costs to achieve a quality degree delivered in English).

It might be concluded that students are becoming more in tune with the international education market and the universities within it – whether assessed from financial or perceived quality perspectives (or a combination of both). This more insightful approach is heightened by greater access to word-of-mouth messages – from current students, friends, alumni and agents.

41 Sample sizes were 10,414 for Scotland, 66,657 for all-UK and 209,414 for all international respondents.

Figure 3.1: Top-10 key influences on choice of study destination for international students – Scotland and all-UK compared.



Source: International Student Barometer (autumn 2011).

Areas of note

In addition to the positive learning experience, feedback from students indicates that Scotland performs very well relative to other countries (including the rest of the UK) in the following areas:

- 'good place to be'
- campus environment
- safety
- social activities
- careers advice.

Some areas where relative underperformance was noted across the Scottish higher education sector (relative to the rest of the UK) included:

- transportation
- eco-friendliness
- financial support
- ability to earn money while studying.

3.16 International students – some comments

Scotland is a top global destination for international students and has achieved many successes; outside the UK, only Australia is seen to be relatively more successful. When compared to the rest of the UK, there are similar proportions enrolled at Scottish universities based on the relative sizes of the sectors. However, there are distinct variations for some specific subjects, levels and source countries. The main exception is for students from EU member states – for this group, Scotland is the most popular destination.

For non-EU students, the popularity of individual universities and/or programmes within them seems to be important, rather than Scotland as a destination. For example, US students are highly concentrated in three Scottish universities and in social studies, arts and humanities whereas Nigerian and Indian students tend to seek vocationally oriented master's degree programmes in a narrow selection of universities.

While there are proportionately fewer students in the creative arts and design compared with those enrolled in the rest of the UK, this might be due to a relative capacity constraint across the Scottish sector. There could be opportunities to expand recruitment in these areas – the Edinburgh Festivals have certainly meant that the city (and by association Scotland) is seen as a leading global centre for artistic achievement.

3.17 Transnational education

Scottish universities have successfully contributed to the UK-wide provision of transnational education (TNE) to students around the world. TNE encompasses many delivery modes, including franchising, validation, articulation, twinning, distance learning (including online) and other partnership-type arrangements. TNE programmes might combine more than one mode of delivery. Data on TNE are very limited – at the time of this study, the most complete record available for the UK was from the Higher Education Statistics Agency (HESA) for 2010–11. HESA returns cover all programmes that are fully delivered overseas but they do not allow for comparisons by subject etc., although they do provide details of individual university enrolments. Unfortunately, data on the TNE activities of other countries are almost non-existent.

Table 3.8 indicates Scottish TNE enrolments between 2008–09 and 2010–11. While the Scottish total indicates a proportionately smaller share of total UK enrolments (about five per cent), interpretation of these data is not straightforward. Four large providers dominate UK TNE delivery registrations (from HESA 2010–11):

- University of London International Programmes had some 44,050 students registered internationally
- Open University UK had 20,710 students enrolled on its programmes delivered outside the UK
- University of Wales (UW) Validation Service accounted for 15,425 registrations, although this number is likely to decline following recent changes to the UW Validation Service
- some 239,945 students were registered on Association of Chartered Certified Accountants (ACCA) programmes, and through their agreement with Oxford Brookes University, students can opt to co-register on a university programme. They have ten years to complete the degree and only a small proportion of these students are likely to graduate through Oxford Brookes.

More universities have developed their own overseas campuses. The number of students enrolling is growing very quickly as more programmes come on-stream.

Table 3.8: TNE enrolments at Scottish universities compared with all UK universities.

	2010-11	2009-10	2008-09
Total (All Scotland)	**24,915**	**24,455**	**22,385**
Heriot-Watt	11,575	11,220	10,130
Edinburgh Napier	3,315	2,965	2,240
Strathclyde	2,525	2,870	2,685
Glasgow Caledonian	2,195	2,120	2,280
Robert Gordon	1,520	1,535	1,180
Dundee	1,215	1,180	1,240
Queen Margaret University	980	830	810
Stirling	565	620	485
Edinburgh	440	275	185
Abertay	205	405	705
Aberdeen	190	155	110
West of Scotland	105	265	280
Highlands and Islands	60	0	0
Glasgow	25	15	10
All UK (less Scotland enrolments)	**478,880**	**384,230**	**365,750**
All UK (less Scotland and UK large distance-learning providers[42]	**158,750**	**143,520**	**125,045**

Source: HESA-British Council TNE data tables.

Heriot-Watt is the second most successful UK university for TNE provision after the University of Greenwich (if provision from the Open University, Oxford Brookes University, University of Wales and University of London International Programmes are excluded for reasons explained previously). Heriot-Watt currently accounts for about 45 per cent of all Scottish TNE enrolments and offers a number of programmes, including distance MBAs through its Edinburgh Business School and its campus in Dubai. A Malaysian campus will open in 2014. While there are seven Scottish universities in the top quarter of UK TNE-providing universities, Scottish enrolments have been growing at a slower rate than for the rest of the UK over the past three years.

The University of Dundee and Robert Gordon University offer an interesting mix of degree programmes with many taught virtually. For example, Dundee's programmes embrace arts, applied healthcare and technologies, while Robert Gordon has a selection of postgraduate programmes applied to the oil and gas sector (covering law, management and finance, as well as technical topics). Queen Margaret University has successfully grown its partnerships for delivery, including with the East Asia Institute of Management in Singapore.

Glasgow Caledonian University has developed a number of collaborative degrees in health-related areas (e.g. physiotherapy, radiography and medical laboratory sciences) in partnership with the government of Oman. This has expanded and doctoral programmes will be included for delivery in Oman in the future.

While UK TNE enrolments have been greatly enhanced by the activities of University of London International Programmes, the Open University and the ACCA-Oxford Brookes arrangement, there are no equivalent bodies or partnerships involving Scottish institutions or organisations.

In summary, Scottish universities would seem to under-recruit to their TNE programmes (relative to the rest of the UK), although the existence of large UK recruiting universities such as the Open University and Oxford Brookes University tends to distort the true picture.

42 Large distance-learning providers are Open University, University of London International Programmes, University of Wales (Central) and Oxford Brookes University.

4

DISTINCTIVE ASSETS AND CASE STUDIES

4.1 Background

It was clear from the research, responses and interviews conducted for this study that all Scottish higher education institutions have many areas of excellence. However, it was challenging to define parameters to enable the classification of activities or assets as distinctive and excellent. We ultimately decided to identify attributes or combinations of attributes that exhibited qualities deemed excellent and that were in some ways unique to Scottish higher education.

Section 2 of this report (covering context) provided some clear examples of excellence. These have been distilled to enable the presentation of five distinctive assets of Scottish higher education. There are others that might fall into this category: these have been referred to elsewhere and some are picked up in the concluding remarks. The specific topics described below derive from the research conducted for this study and have been agreed following consultation with a broad selection of Scottish policy makers and academic staff.

4.2 Distinctive assets

The five principal distinctive assets proposed to represent Scottish higher education are set out below:

- a joined-up and collaborative sector, made possible by its size and the Scottish ethos for public good. The impact of this is seen in the delivery of teaching, research and policy, including research pooling; Scottish approaches to quality assurance; positive attitudes to the European Higher Education Area; and a no-fees policy for undergraduates
- carefully planned and implemented systems of quality assurance and credit recognition that are agreed collectively by all Scottish universities. These are developed as Enhancement Themes whereby the benefit to the learner is placed at the centre of all considerations. The approach also helps to enhance life-long learning and student mobility
- graduate employability and employment, including the strong links between the Scottish higher education sector, business, industry and public-sector employers. These relationships manifest in different ways, including the high employment rate of Scottish graduates, the applied nature of many Scottish degree programmes, the frequent use of lecturers from industry to ensure direct relevance of teaching, work placements for students and industry commissioned research in universities
- innovative structures and pedagogy developed across Scottish universities, such as flexible learning opportunities for students, including those in remote locations. Other examples include applied programmes which build on applications of the research expertise of the university (or research pool) and programmes developed specifically to relate to identified needs of business and industry. The Quality Assurance Agency for Higher Education (QAA Scotland) Enhancement Themes help to ensure a common focus on impact on the learner
- research impact resulting from the Scottish research pools which concentrate activity and stimulate collaboration between universities in an innovative manner. Scottish universities do particularly well in securing research funds from the UK Research Councils and also produce larger numbers of spinoff companies than universities in the rest of the UK. In terms of subject areas, STEM-related disciplines in Scottish universities attract a particularly high proportion of funding and the impact is relatively high.

4.3 A joined-up and collaborative sector

4.3.1 Background

A clear asset of the Scottish higher education (HE) sector is its joined-up nature. Triangulated connections between institutions, the Scottish government and its agencies are always in play. Almost all interviewees for this study referred to the scale of the Scottish higher education sector as not too big yet not too small, as in the case of other small countries. A number of stakeholders noted that the scale permitted the core decision-makers to meet in one room. Principals and Vice-Principals indicated that they could meet with the Cabinet Secretary for Education and Lifelong Learning within a day of calling.

Scale was proposed as one factor in what was seen by many as the Scottish sector's 'absolutely extraordinary' ethos of collaboration. But working in partnership was also seen as 'part of the DNA of the Scottish sector', or indeed 'part of the new DNA' of the sector – the latter phrase suggesting that the willingness to work collaboratively is greater now than in the past. As one interviewee suggested:

> *... over the past five years, an assumption had emerged that 'everything is collaborative' and that this had become an operating assumption at the SFC [Scottish Funding Council] in its dealings with the HE sector.*

4.3.2 Evidence

There were many good instances of sector-wide collaboration identified and explored as part of this study. The co-operation of all institutions with QAA Scotland to develop the Enhancement Themes is one good example. There has also been a coherent and national approach to present Scottish HE internationally with Scottish government and British Council support. Scottish Development International's offices in India are further indication of a well-co-ordinated Scottish approach.

A distinctive and major manifestation of the collaborative ethos in Scottish HE is the research-pooling initiative conceived and part-funded by the Scottish Funding Council (SFC) since 2004. The research pools provide a structure and incentive for universities to pool resources and hence gain a competitive advantage in the context of increasing international competition. This includes bidding for external funding against the best universities in England and elsewhere, and attracting international talent to Scotland. Accessing major funding from the forthcoming EU Horizon 2020 Framework Programme requires collaboration between research groups. A Team Scotland approach is seen as more persuasive and a more efficient use of resources, whether competing for funding or jointly supervising PhDs.

The SFC website lists 14 pooling initiatives: [43]

- Scottish Universities Physics Alliance (SUPA)
- ScotCHEM (Chemistry)
- WestCHEM (Chemistry)
- EaStCHEM (Chemistry)
- Edinburgh Research Partnership in Engineering and Mathematics (ERP)
- Glasgow Research Partnership in Engineering (GRP)
- Marine Alliance for Science & Technology for Scotland (MASTS)
- Northern Research Partnership (NRP)
- Scottish Alliance for Geoscience, Environment and Society (SAGES)
- Scottish Institute for Research in Economics (SIRE)
- Scottish Universities Life Sciences Alliance (SULSA)
- Scottish Imaging Network: A Platform for Scientific Excellence (SINAPSE)
- Scottish Informatics and Computer Science Alliance (SICSA)
- Soillse (Gaelic language and culture).

This policy innovation is considered to be a major success for the sector. This study has uncovered modest evidence that it is recognised as such by the media beyond the UK.[44] Universities Scotland notes that it brings together researchers across Scotland's universities to deliver a collective impact 'which is genuinely greater than the sum of its parts'.[45] The Principal of the University of Edinburgh was quoted in 2008 as saying that:

> *The pools are a postmodern construct that allow people to be full members of their universities and full members of inter-institutional alliances.*[46]

Scottish successes in the 2008 Research Assessment Exercise (see Section 3) were attributed in part to pooling by the likes of the Scottish Universities Physics Alliance (SUPA) and EaStChem, the joint chemistry research School of Edinburgh and St Andrews.[47] Indeed, interviewees for this study attributed the very survival of chemistry in Scotland to the creation of collaborative research pools.

43 See www.sfc.ac.uk/research/researchpools/researchpools.aspx

44 See, for example, 'In Physics, Scotland's Unified Field of Research Draws Global Interest', *Chronicle of Higher Education*, 8 May 2011. chronicle.com/article/Scotlands-Unified-Field-of/127416/?sid=at&utm_source=at&utm_medium=en

45 'Towards a Scottish solution', Universities Scotland, October 2010.

46 'A collective ambition that builds up to a critical mass', *Times Higher Education*, 12 June 2008. See www.timeshighereducation.co.uk/story.asp?storyCode=402333&sectioncode=26

47 See 'Scots universities pool research to join world leaders', *Guardian*, 18 December 2008. www.guardian.co.uk/education/2008/dec/18/rae-scotland

In early 2012, the UK Technology Strategy Board took the decision to headquarter its Offshore Renewable Energy (ORE) Catapult innovation centre at the University of Strathclyde's Technology and Innovation Centre. This is seen as a consequence of the involvement in the bid of the Energy Technology Partnership, in which Strathclyde has a leading role.[48]

Interviewees for this study noted that not all of the initiatives were equally successful and that some might cease to exist after the initial phase of research pools funding comes to an end. SFC contributed £150 million and the universities added a further £300 million to the first phase of research pooling. In the current (second) phase, SFC funding is only £15 million a year.

4.3.3 Case study: Scottish Universities Physics Alliance

One of the research pools identified as an outright success in stakeholder interviews is the Scottish Universities Physics Alliance (SUPA), one of the first to be established. SUPA pools physics research and postgraduate teaching across eight Scottish universities: Aberdeen, Dundee, Edinburgh, Glasgow, Heriot-Watt, St Andrews, Strathclyde, and the West of Scotland. Its current Chief Executive Officer (CEO) is James Hough, a Research Professor in Physics and Astronomy at the University of Glasgow.

SUPA was established in 2005 'to place Scotland at the forefront of research in physics and astronomy, the aim being to pool and enhance Scotland's strongest physics research to develop international leadership and provide a magnet for researchers and sponsors worldwide'.[49] SUPA's main research areas are astronomy and space physics; condensed matter and materials physics; energy, nuclear and plasma physics; particle physics; photonics; and physics and life sciences. Staff produced some 6,000 journal publications during the first five years of SUPA-affiliation.

The cross-institute SUPA Graduate School has won acclaim and put into place the structures for an all-Scottish PhD in 2011.[50] This includes video conference suites in partner institutions and setting standards for attainment and quality assurance. All students are required to undertake a minimum of 40 hours' coursework and 20 hours of skills training. The latter includes research commercialisation, patenting and attracting venture capital. An extensive range of courses is delivered across the eight partners. An international studentship competition has been a success – in 2011, SUPA received 414 applications from 63 countries which resulted in 11 admissions. Many of those are part of international research projects.

The SUPA CEO notes that the work of the research pools now extends far beyond Scotland and that this international aspect is important to the future of both the Scottish higher education system and the Scottish economy.[51] He highlights that scientific research is increasingly cross-disciplinary and that the pools in physics, chemistry, engineering, energy and the life sciences therefore have a growing number of international collaborative ventures. This applies to both knowledge transfer and industrial involvement.

Research groups in SUPA collaborate with researchers elsewhere in Europe, the US, India and China, thereby developing into international research pools with a Scottish core. An example is the Science Bridges project in photonics (SU2P) which was initially funded by SFC, Scottish Enterprise and Research Councils UK. The Councils contributed £1.6 million over three years but it is now self-sustaining.[52] The university partners are Glasgow, Heriot-Watt, St Andrews and Strathclyde, along with CalTech in California and Stanford. They support research and commercialisation in photonics and its applications in physics, engineering, energy and the life sciences in collaboration with local industries. This includes:

48 Interview with Stuart Fancey, SFC, Glasgow, 22 May 2012. The ETP includes three regional engineering pools. See also www.offshorewindscotland.org.uk/index.php/news_and_events/news/scotland_to_host_offshore_renewables_hub_hq

49 'SUPA Phase I – Report to the Scottish Funding Council', July 2011. www.supa.ac.uk/files/SUPA%20PHASE%20I%20%20Report%20to%20the%20Scottish%20Funding%20Council%20July%202011_Revised%20Renumber.pdf

50 Ibid.

51 See engageforeducation.org/news/international-research-pooling/ (November 2011).

52 See www.su2p.com

- funding entrepreneurial fellows to work at the US universities on high-tech, industrially relevant, cross-disciplinary projects
- funding exchange visits for academics
- involvement of local Scottish companies
- establishing an investor network which aims to break down the barriers between academia and the investment community to realise new commercial opportunities based on Scotland's photonics research.

Beyond the commercial and scholarly benefits, it is important to recognise the impact of such international collaborations in less-quantifiable, public-diplomacy terms. Among the partners in California, at least, the awareness of world-leading and entrepreneurial scholarship in Scotland is assured.

4.4 Enhancing quality and enabling mobility

Scotland has pioneered carefully planned and implemented systems of quality assurance and credit recognition that places benefit to the learner at the centre of all considerations. Quality assurance in Scottish higher education is delivered through a series of Enhancement Themes that focus on student needs. These are implemented sector-wide as well as by individual institutions.

The Scottish Credit and Qualifications Framework (SCQF) provides a structured approach to ensure flexible access to higher education and enables students to move easily between and within both the college and university sectors.

4.4.1 Evidence

Partnership working by SCQF and Quality Assurance Agency for Higher Education (QAA Scotland) has helped to ensure that:

- enhancement of the student learning experience is fundamental to the mission of all Scottish higher education institutions – QAA Scotland frames its quality assurance activities around this primary objective
- an integrated, single-qualifications framework led by SCQF is in place with strong institutional buy-in. In contrast, England has four separate frameworks for HE, further education, vocational education and schools. In Scotland, students are able to move flexibly and confidently between each level of education or training. Any previous credits obtained are well understood and there is recognition of prior learning. The SCQF model is frequently referred to in other countries as having great applicability internationally and staff from SCQF are invited to present overseas.

QAA Scotland has a positive relationship with the higher education sector and does not attract the negative press that has been seen in England. Feedback was positive from the senior university staff consulted for this study and the National Union of Students (NUS) Scotland was enthusiastic and supportive in regard to the Enhancement Themes (see next section).

QAA Scotland review teams include student representatives as well as a non-UK member as part of moves towards delivering Bologna compliance. There is evidence that students in Scottish higher education institutions (HEIs) are generally more satisfied with their learning experiences than their counterparts in the rest of the UK. Evidence comes from both the National Student Survey and the International Student Barometer reports discussed previously.

4.4.2 Enhancement and quality assurance

The enhancement-led strategy for quality assurance was pioneered by QAA Scotland and is considered a mature and responsible approach to understanding and responding to the changing needs of students. The process has involved defining 'Enhancement Themes' that run across all quality assurance processes and review periods. It has comprehensive buy-in across the HE sector, something that has been enabled by the manageable size of the sector in Scotland. All Scottish HEIs are engaged in the process – each has a representative on the Theme Steering Committee and appoints its own team to participate directly. There is also provision to engage with and learn from the experiences of higher education professionals in other countries. To date, the following Enhancement Themes have been addressed:

- Graduates for the 21st Century: Integrating the Enhancement Themes
- Research-Teaching Linkages: Enhancing Graduate Attributes
- The First Year: Engagement and Empowerment
- Flexible Delivery
- Employability
- Responding to Student Need
- Assessment.

The current theme is Developing and Supporting the Curriculum.

The requirements are set out within the Scottish Quality Enhancement Framework (SQEF) and are delivered by the Scottish Higher Education Enhancement Committee (SHEEC). The approach involves co-operation with the Scottish Funding Council, QAA Scotland, Universities Scotland, NUS Scotland and the Higher Education Academy. The primary objective for the SHEEC is to ensure that the learner journey is more effective for students, more efficient for staff and more affordable for all concerned. The enhancement-led approach aligns with many of the ideas contained in the Scottish government's position paper, 'Putting Learners at the Centre: Delivering our Ambitions for Post-16 Education'.[53]

The QEF is improvement-oriented quality assurance, focusing on learner experiences and outcomes rather than compliance. Delivery involves five interrelated activities and levels of consideration:

- the national Enhancement Themes
- institution-led quality reviews at the level of disciplines and service areas
- Enhancement-led Institutional Reviews (ELIR)
- student engagement in quality management, including student members on all ELIR review teams
- communicating information about institutional quality to the public.

As the system evolves, QAA Scotland is responsible for ensuring that students can have confidence in the education they receive at a Scottish university and that Scottish degrees are recognised both elsewhere in the UK and internationally.

The lead responsibility for delivering activities rests with the individual HEIs. They are encouraged to develop an appropriate strategy tailored to institutional needs and have internal review processes in place. External Enhancement-led Institutional Reviews take place periodically (typically every three to five years).

53 www.scotland.gov.uk/Publications/2011/09/15103949/0

4.4.3 Scottish Credit and Qualifications Framework

As noted in Section 2.11, the Scottish Credit and Qualifications Framework (SCQF) Partnership was established to develop a flexible approach to life-long learning in Scotland. It was conceived as a strategy to deliver benefits for all involved in education and training, namely learners, teachers and employers. SCQF offers a means of recognising all forms of prior learning, including in-company education and training, thereby greatly helping mobility and progression.

It has proved successful as it clarifies how best to allocate credits to learning programmes and qualifications, maps progression routes within and across the education and training sectors and provides guidance for the design and delivery of education and learning programmes, including entry requirements. The approach has helped to break down barriers between the college and university sectors, particularly for programmes whereby the student progresses directly from college to university.

Two measures are applied to compare qualifications and learning outcomes: Level Descriptors and Credit Points. All levels of learning are included in the SCQF, from basic (defined as Level 1) to doctoral degrees (Level 12). SCQF Credit Points are used to quantify learning outcomes and are awarded to learners when they achieve the specific requirement(s) of their programme or qualification. They provide a means for learners, employers and the learning providers to describe and compare the amount of learning that has been achieved, or is required to be achieved, for a particular programme or qualification. The overall Framework can be found in Appendix C and the descriptions of the 12 SCQF Levels can be obtained from the SCQF webpages.[54]

The Level Descriptors define five broad headings that are applied to the outcomes for all levels (from one to 12). These are:

- knowledge and understanding (mainly subject-based)
- practice (applied knowledge and understanding)
- generic cognitive skills e.g. evaluation and critical analysis
- communication, numeracy and IT skills
- autonomy, accountability and working with others.

The headings enable the broad comparison of learning programmes and qualifications, irrespective of context, setting or mode of study. Over a lifetime, individuals can move among and across SCQF Levels as they undertake new learning and acquire new skills. The approach further assists employers by providing a means to clearly outline job descriptions and the associated competencies.

There has been considerable international interest shown in the Scottish approach of a unified framework. For example, customised awards approved and certified by the Scottish Qualifications Authority (SQA) are now being benchmarked against the SCQF and delivered in South Asia. The Hong Kong government reviewed the Scottish experience and SCQF in detail when developing the Hong Kong Council for Accreditation of Academic and Vocational Qualification (HKCAAVQ). In 2012, a memorandum of understanding pertaining to co-operation was signed by SCQF and HKCAAVQ. As noted in Section 2, the Hong Kong university system changed its undergraduate provision to four-year degrees in the same year.

54 See www.scqf.org.uk/features/Framework.htm

4.4.4 Case Study: 'Developing and Supporting the Curriculum'

The Enhancement Theme for 2011–14 is 'Developing and Supporting the Curriculum' (DSC), and the first phase of implementation has now been completed. DSC builds on the work of the previous theme, 'Graduates for the 21st Century', which considered the attributes graduates should develop during their studies. DSC addresses how students might acquire these attributes and poses three broad questions:

- how is the curriculum, in its broadest sense, shaped and delivered?
- who are our students and for whom is the curriculum designed?
- what support is required for staff?

To deliver DSC, a Theme Steering Committee was appointed which represents every Scottish HEI and includes student members. Each HEI was required to establish its own team which addressed the above questions in relation to institutional priorities. A number of opportunities were provided to encourage staff and students to share experiences and learn from each other, including regional roadshows (both open and discipline-based), the annual Enhancement Themes conference, and national symposia, events and meetings. In addition, a DSC student network was formed. Various studies were commissioned covering staff, students and the curriculum, as well as a review of national and international HE policy issues. QAA Scotland provided support funds to all HEIs to cover the costs involved in developing and supporting the theme. Outcomes from the first year of the theme and an overview of general progress were reported. Case studies were also presented and, from these, the sector's commitment to DSC was very clearly demonstrated.[55] Potential topics to consider in phase two of DSC were also identified and it was agreed that three priority areas would be taken forward:

- Curriculum for Excellence and its impact on higher education
- the flexible curriculum
- staff: enhancing teaching.

In phase two, each of these topics will be explored and developed through commissioned work and supported by the types of working groups described previously. HEIs will each consider the implications of the topics and how they might be applied at discipline level, highlighting and sharing examples of good practice and identifying areas for development.

4.5 Graduate employability

4.5.1 Background

Scottish graduates have greater prospects of securing appropriate employment than their fellow students at universities in the rest of the UK. This no doubt contributes to the attractiveness of Scottish universities for both domestic and international students. Links between universities and employers, whether local, national or international, enhance employability and contribute to strong institutional reputations.

55 Professor Terry Mayes, Glasgow Caledonian University: 'A synthesis of the first year of the Enhancement Theme 2011–12 and some options for 2012–14'. See www.enhancementthemes.ac.uk/docs/paper/developing-and-supporting-the-curriculum-briefing-paper2.pdf?Status=Master&sfvrsn=4

4.5.2 Evidence

The Graduate Prospects data from the Higher Education Statistics Agency indicated that, on average, 67.4 per cent of Scottish graduates were in employment following graduation. This level is above the all-UK mean of 63.7 per cent. The *Guardian University Guide* provides additional confirmation of this success, with five Scottish universities ranked in its top UK 20 for graduate employability (Robert Gordon, Glasgow, Edinburgh, Heriot-Watt and St Andrews). Employability, in this context, is defined as the proportion of graduates who find graduate-level employment within six months of graduation.

International Student Barometer feedback indicated greater levels of satisfaction among international students in Scotland with regards to employment-related advice and support received (relative to their counterparts in the rest of the UK and across Europe).

Scottish higher education institutions actively seek to expand their relationships with local businesses, industries and other organisations. This is accomplished by a variety of means, including:

- industry-supported research at universities – Scottish universities win a higher proportion of awards than universities in the rest of the UK
- consultancy support from universities to businesses
- short, specialist programmes tailored to the needs of individual employers
- spinoff companies – a larger proportion have grown from research undertaken in Scottish universities than for the rest of the UK (see Section 2)
- teaching staff from business and industry being directly involved in the delivery of programmes.

Scottish universities offer a wide mix of undergraduate and postgraduate taught programmes that involve employers through a variety of means:

- working attachments and internships as an integral part of the degree programme
- part-time programmes (including those delivered by distance learning) that encourage and enable students to study while in employment and apply newly-acquired knowledge and skills to their work situation
- programmes that are directly applied to a particular employer interest (e.g. actuarial science).

4.5.3 Employability-related case studies

A number of case studies are presented below which provide examples of programmes at Scottish universities that have won acclaim for responding to employer needs.

University of Aberdeen offers an interesting suite of undergraduate degrees that include a year of programme-specific paid employment. Students have the option to pursue a further year of study on-campus which, after a total of five years, enables them to obtain the postgraduate MSci degree as opposed to an undergraduate qualification. For example, the degree programme in Biomedical Pharmacology with Industrial Placement follows this approach with the fourth year spent in industry. These placements might be in a variety of company types, including some large pharmaceutical businesses, both in the UK and overseas.

Increasingly, employers use such work experience as a means to pre-select the most appropriate students for graduate roles in their companies. Thus an industrial placement year frequently provides a passport to future employment opportunities for graduates.

As a sector, Scottish higher education produces highly employable graduates. However, **Robert Gordon University** (RGU) reported that 97 per cent of its graduates from undergraduate programmes were in employment or further study within six months of completing their programme last year. There are good reasons for this enviable success.

As one of the world's oil capitals and the largest oil and gas centre in Europe, Aberdeen has a good concentration of employers and offers many professional employment opportunities. RGU has adopted a number of approaches to enhance the employability of its graduates, including:

- placements: 90 per cent of undergraduate students have a work-based placement in their third year. Placements might be in business, industry or the public sector and work is academically accredited – students undertake a related assignment. There is a good correlation between student work placements and final employment in the placement host company
- a high proportion of the programmes are professionally validated and accredited to offer a pathway to membership of the relevant professional body. RGU academic staff are directly involved in the professional bodies and this helps to ensure relevance and conformity to the profession's regulatory requirements
- a large number of employer partnerships have been developed. Beyond these, established discipline-based Employer Liaison Boards can advise on the relevance of course structures and content
- programmes are offered for flexible study through RGU's virtual learning environment, reflecting the changing preferences of students. This allows those in employment to study and pace themselves according to their availability
- industrial scholarships: these are offered in co-operation with the relevant employers and industries[56]
- students are systematically encouraged to volunteer, with accreditation where appropriate. The Student's Union encourages students to become more broadly engaged in university opportunities.

RGU's success is the result of a concerted effort which can affect the student lifecycle – applicants are highly motivated to apply and secure a place as a result of the university's employability record. The university has other good examples of programmes that develop professional skills with direct relevance to employment, particularly related to the energy sector. These include a suite of master's degree programmes including: MSc in Oil and Gas Engineering, MSc in Oil and Gas Accounting, LLM in Oil and Gas Law, MBA in Oil and Gas Management and MSc in Oil and Gas Information Technology.

The University of St Andrews has a specialist centre for Photonics Engineering. It offers a joint Photonics Engineering doctoral programme with Glasgow, Heriot-Watt and Strathclyde that leads to the award of the EngD degree (at the equivalent level of a PhD). The programme takes four years to complete with about 25 per cent of the time spent on taught coursework in the areas of photonics and management. The remaining 75 per cent is dedicated to research which is normally based in the company sponsoring the research programme. The aim is to produce doctoral graduates with the technical and managerial skills essential to becoming research leaders in the rapidly-evolving areas of optics and photonics.

Heriot-Watt University (HWU) has a strong tradition of research and teaching as well as developing co-operative activities with the business and industrial sectors. HWU offers a wide mix of applied teaching programmes from across its Schools, all of which have been developed to equip graduates with the essential skills to secure appropriate, graduate-level employment. Two of these programmes are described below.

BA Hons in Fashion Technology (linked programmes also cover design, communication and marketing and retailing). In addition to developing design and production techniques, there is a focus on the achievement of practical outcomes by students. This includes involvement with leading design studios and fashion houses. Students are able to follow a working attachment in their final year and also undertake an applied project. Furthermore, all students are encouraged to take part in international competitions, including working to briefs set by companies.

MSc in Actuarial Management. The programme has been developed as part of an integrated pathway to professional recognition as an actuary. It is one of the few university programmes recognised by the Institute and Faculty of Actuaries. Many of the staff involved are qualified actuaries as well as academics in finance and statistics. The department has produced an excellent short video[57] containing interviews with Heriot-Watt alumni employed in insurance and related financial business.

56 www.rgu.ac.uk/future-students/finance-and-scholarships/scholarships/scholarships
57 See www.youtube.com/user/HWActuarial?blend=3&ob=5#p/a

4.6 Innovative structures and pedagogy

As this study progressed, it became increasingly clear that some excellent examples of innovation (and distinctiveness) in approaches to teaching and learning existed in a variety of Scottish universities and academic departments. The objectives and impact of the Enhancement Themes in Scottish quality assurance have already been considered elsewhere in this report. Additionally, the research pools have helped universities with common interests to work closely in both teaching and research, resulting in a number of collaborative postgraduate degrees. The Photonics Engineering Doctorate was described earlier; another MSc in Neuroimaging offered through the Scottish Imaging Network (SINAPSE) pool is wholly online and involves support from the universities in SINAPSE.[58] A few additional examples are presented below as brief case studies.

4.6.1 University of the Highlands and Islands

Background: a good example of both distinctiveness and innovation in teaching can be found at the University of the Highlands and Islands (UHI). There is probably no other university in the world like it. It was conceived in 1991 as a federal and collegiate university based on existing further education colleges. UHI entered into a degree validation agreement with the Open University in 1998, participated in the 2001 RAE, attained taught degree awarding powers in 2008, and became a university with postgraduate degree awarding powers in February 2011.

UHI is a partnership network headquartered in Inverness and spread across 13 colleges and research institutions, from Argyll in the southwest to Shetland in the north. Colleges have autonomous status and their own websites – for example, Sabhal Mòr Ostaig on Skye is a Gaelic-medium college with a bilingual website.

UHI had 7,653 students enrolled in 2010–11. More than one-third were in the 30–49 age group, 94 per cent from Scotland, 53 per cent part-time, two-thirds studying at certificate and diploma levels, and seven per cent at postgraduate level.

Teaching: UHI employs combinations of technologies depending on the programme, namely: [59]

- video conferencing that connects staff and students at other UHI campuses and beyond
- audio conferencing via telephone and Skype
- virtual learning environment, using the Blackboard e-Education platform, a web-based system
- online interaction as part of a group
- face-to-face in classrooms, in full or in part.

The combinations of technologies cut across four broad types of programmes:

- most distinctive are UHI's 'network programmes' that blend online and video conferencing across campuses. Some 15 undergraduate and six MA programmes are taught in this manner
- mainly face-to-face instruction for site-specific programmes such as the BSc in Marine Science at the Scottish Association for Marine Sciences (SAMS) in Oban and the BA in Archaeology at Orkney College
- those designed primarily to meet local needs. For example, UHI provides a three-year BSc in Oral Health Science for dental therapists. The degree is taught in Inverness, Dumfries and Stornoway using technologies including remote 3D imaging
- programmes delivered wholly online.

58 The SINAPSE (Scottish Imaging Network) consortium involves Aberdeen, Dundee, Edinburgh, Glasgow, St Andrews and Stirling. See www.sinapse.ac.uk
59 Interview with UHI senior management members, Inverness, 11 July 2012.

Governance: UHI's mission intersects positively with the goals of the Scottish government. The use of distance technologies allows UHI to keep local talent closer to their homes, mitigate brain drain, and contribute to the Scottish government's desire to stabilise the Highland population. UHI indicated an ability to align with the priorities that inform the Scottish government's new outcome agreements with little difficulty. This relaxed stance did not extend to the government's review of HE governance.

UHI's governance concerns are in fact closer to home, according to a review commissioned by its own court in 2011. This report, the full text of which does not appear to be publicly available, noted the distinctive assets of UHI but concluded that management structures and the relationships between the centre and the constituent colleges were unsustainable.[60] While the federal and decentralised structure of UHI should ideally be seen as a strength, the report has it as '13 disparate academic partners'. A further problem was that tensions between the centre and colleges had been exacerbated by the 'severe budgetary cuts' faced by the FE sector (UHI hosts both sectors in the same buildings).[61] The review called for radical changes in governance structures that, we understand, are underway.[62]

Another concern of UHI is the loss of research funding as a consequence of the Scottish government's directive to stop funding 2* research. This is considered 'mission critical' by UHI and contrary to its capacity-building requirements, but it has already been implemented and the consequences will carry over to the Research Excellence Framework (REF) in 2014.

The number of people directly benefiting from UHI's education and skills, and the innovative means to deliver both, are modest in comparison to what could be achieved. But the concept of a strategic centre for colleges in the Highlands and Islands in a complex higher education environment was a visionary project. The UHI structure provides this region of Scotland with a greater international reach and partners from the Arctic to the Mediterranean. UHI is also the lead institution in Soillse,[63] a research pool on Gaelic language and culture, and a partner in three others.

4.6.2 The University of Strathclyde: Vertically Integrated Projects (VIP)

The Vertically Integrated Projects (VIP) programme aims to develop graduates for the 21st century by bringing together students at all stages of their studies. First-year undergraduates through to doctoral students work together with academic staff on a variety of interdisciplinary projects. Through their involvement, students gain both academic credits and also learn a range of new technical and professional skills.

The programme is based on a partnership with Georgia Institute of Technology, where the concept originated. Current projects include:

TextLab: this project has the objective of selecting, preparing and analysing digital texts using approaches and technologies drawn from English and humanities, linguistics, statistics and information sciences. The application of digital and statistical techniques to investigate computer-based texts provides opportunities for students to develop linguistic and statistical tools for textual analysis and visualisation. It also engages students in the exploration of such areas as authorship, dating, linguistic comparison, influence and association in literary and cultural history.

Sustainable energy for development: the aim is to explore how remote communities in developing countries might appropriately take advantage of small power devices to help meet their energy needs. A key output is to develop prototype products for use by individual consumers and inform design parameters for off-grid, battery-based electrical services.

60 A summary is available at www.capitaconsulting.co.uk/case-studies/Pages/The-University-of-the-Highlands-and-Islands.aspx
61 Quoted by former UK Scottish Office Minister Brian Wilson at www.brianwilsonwrites.com/docs/WHFP_20120504.pdf
62 See www.inverness-courier.co.uk/News/UHI-must-change-now-or-face-the-consequences-23042012.htm
63 See www.soillse.ac.uk/index-en.php

The students involved are from a range of academic backgrounds and interests including areas such as renewable and portable energy technologies, energy storage approaches, energy management, economics and international development.

The research issues considered include:

- exploring the correlation of energy and social wellbeing and associated energy costs in developing countries
- current methods of delivering off-grid electrical services
- optimisation criteria for central charging stations and distributed battery-based consumer units.

4.7 Distinctive research

Section 4.3 offered the Scottish research pools as exemplars of the collaborative nature of Scottish higher education and the impact of a selection was reviewed. Looked at from a different angle, research collaboration itself constitutes a distinctive asset of the sector. It is not surprising that the government and agency interviewees identified research pools as such; it is also the case that almost every university representative mentioned them first in the lists of attributes that they offered.

The core motivation for using public funds to encourage pooling of research resources was to enhance the sector's access to other funds. This appears to have been a success: university staff interviewed during the course of this study attributed proportionately high UK Research Council funding and Scottish universities' superior performance in the 2008 Research Assessment Exercise (RAE) compared with the 2001 RAE to the pools.[64] This was discussed in more detail in Section 3, as was research impact and the success of Scotland's research centres in establishing spinoff companies.

4.7.1 The SCRIPT Centre at the University of Edinburgh

A further example of distinctiveness in Scottish research is the SCRIPT Centre, formerly known as the Research Centre for Studies in Intellectual Property and Technology Law.[65] It is based at Edinburgh's School of Law and was created in 1998. The centre received 10 years of Arts & Humanities Research Council (AHRC) funding (2002–12) on the strength of its integrated approaches to intellectual property law, information technology law, and health (notably medical jurisprudence and ethics).

SCRIPT staff pursue ground-breaking research at the interface between law, policy-making and technologies. A central question is how the law is deployed in responding to new scientific, cultural and technological challenges. Beyond the intellectual property and information technology cores, current work includes biotechnology, genetics, artificial intelligence, the distribution of legal knowledge via the internet, and regulation of electronic commerce and the media. Professor Graeme Laurie, a former Director of SCRIPT, says that the centre is unique in the UK as it has the personnel, connections and expertise to cross-synthesise research in these diverse fields and also produces and disseminates new research which is targeted to meet the needs of industry and society. Professor Burkhard Schafer, the current Director, adds that SCRIPT acts as a non-partisan broker between people (lawyers, Google, NGOs, EU Commissioners etc.) whose professional lives would normally keep them apart.[66]

64 See also www.guardian.co.uk/education/2008/dec/18/rae-scotland
65 See www.law.ed.ac.uk/ahrc/index.aspx
66 Personal communications.

Scotland has one of the world's few mixed legal systems – it bridges continental European and Anglo-American legal traditions. Although law is usually understood as 'national', SCRIPT similarly bridges the different approaches to technology regulation in the US and Europe and allows these traditions to learn from each other. SCRIPT's international network is strong in Europe, Latin America, China and India. SCRIPT has more than 20 doctoral students and operates online degrees as part of Edinburgh's institution-wide online and distance-learning strategy (e.g. an LLM in Innovation, Technology and Law). The online journal, *SCRIPTed*, is the only European journal in the American law school tradition.

Other law and technology centres exist – including in the US, Hong Kong, Italy, Canada and Indonesia – and copyright, biotechnology, cyberlaw and new media are growth industries. But SCRIPT is probably unique in that its core members combine the legal regulation of computer technology with IT for the justice system. In the latter case, they work with computer scientists to develop the next generation of software tools (e.g. to combat and prosecute online investment fraud and to enable the police to analyse crime scenes).

A further distinctive aspect of SCRIPT is its work in arts and cultural studies. SCRIPT started the GiKII conference series on law, technology and popular culture (which now has branches in East Asia and Australia), a unique geekfest for lawyers, techies, engineers and artists to brainstorm about the future regulatory landscape and anticipate future problems.

4.7.2 CREATe and SHIP

Twenty two projects were delivered during the 10 years of Arts & Humanities Research Council (AHRC) funding to 2012. SCRIPT is now at the centre of two new developments that again illustrate the efficacy of Scottish collaboration in accessing UK research funds. It is part of the Centre for Copyright and New Business Models in the Creative Economy (CREATe), a Glasgow-led consortium started in autumn 2012 (formally launched on 31 January 2013) to support the growth of the creative industries.[67] Strathclyde and St Andrews are part of the consortium, and from south of the border are Nottingham, Goldsmiths and the University of East Anglia. Agencies involved are the National Endowment for Science, Technology and the Arts (NESTA), the Intellectual Property Office and the Technology Strategy Board. It is funded with £1.7 million from the University of Glasgow and £5 million from the AHRC, Engineering and Physical Sciences Research Council (EPSRC) and Economic and Social Research Council (ESRC).[68] The research programme includes new business models in cultural industries, UK and international copyright reform, attitudes to unlawful consumption in the music and games industries, and the impact of copyright enforcement and new business models on civil rights such as privacy and freedom of expression.

A further new collaborative research project is the ScottisH Informatics Programme (SHIP), which aims to optimise the value of health records for research while protecting patient privacy.[69] SHIP has leadership from the University of Dundee and brings together the SCRIPT Centre, the University of Glasgow, the University of St Andrews and the Information Services Division of NHS Scotland. It is funded by the Wellcome Trust, Medical Research Council and ESRC. SHIP devised a governance framework to guide data custodians through decisions about whether to allow linkage of their data. These principles were subsequently adopted by the Scottish government as the basis for a new data linkage service within the government.[70]

67 See www.create.ac.uk
68 'New research centre will investigate copyright in a digital world', University of Glasgow, 31 January 2013. www.gla.ac.uk/news/headline_259740_en.html
69 See www.scot-ship.ac.uk

5

INTERNATIONAL PERCEPTIONS OF SCOTTISH HIGHER EDUCATION

5.1 Overview

As part of the research for this study, questionnaires were sent to a number of leading international educationists in a selection of countries agreed with British Council Scotland. Questionnaires were directed at active researchers and senior managers in international higher education. They were asked a number of open-ended questions relating to the distinctive assets of Scottish higher education in order to encourage narrative responses.

Twenty five responses were received which, when considered together, offer a number of insights that can be summarised as follows:

- while the cultural and political differences of Scotland were recognised, very few respondents were able to articulate discernible differences (or distinctive assets) in higher education between Scotland and the rest of the UK. About one-third said they had no knowledge of Scottish higher education at all
- respondents from other EU countries had the most knowledge; several commented on the four-year degree structure and tuition fees in Scotland, relative to the rest of the UK
- the international standing and status of individual Scottish universities were identified but Scottish higher education was not perceived as an entity in its own right. It was rather viewed as part of a wider UK sector, as demonstrated by the following questionnaire response excerpt:

  While there are differences derived from the distinctive Scottish university tradition, from an outsider (foreign) perspective the issue is more one of relative standing of individual universities, within and beyond Scotland in the wider UK.

- there were mixed perceptions regarding the relative strengths and weaknesses of Scottish research and teaching, although there was endorsement of Scotland's ability to develop international institutional collaboration, its strength in the oil and gas sectors and its history and philosophy.

The following sections assess some of the more detailed feedback received.

5.2 What is distinctive about Scottish higher education?

Questionnaire recipients' understanding of Scottish distinctiveness beyond higher education was addressed. While many respondents recognised a separate Scottish cultural identity, many were unable to comment on current political arrangements. Herewith a representative sample from respondents who expressed a view:

- *yes, distinct, but linked. Has a form of 'home rule', its own parliament, is (perhaps) more interested in continental Europe than the rest of the UK*
- *differently financed, somehow more social democratic*
- *I see Scotland as an independent country with its own currency, a different university system*
- *since the devolution took place, Scotland has gained more autonomy, including the formation of a regional parliament.*

For those respondents with some understanding, there was a perception that higher education was accorded a higher priority by the Scottish government relative to the rest of the UK. But there was less understanding and some confusion over details of the Scottish higher education system. Europeans were the best informed:

> *Since the introduction of substantial fees for EU citizens in England, the difference between the two destinations has become very noticeable. Prior to this, other than the obvious differences in geographic location/surroundings, Scottish and English universities seemed like chips off the same block.*

Widening participation was not perceived as a particular success story. The ability of Scottish institutions to form international collaborations was identified positively, as was Scotland as a welcoming destination for international students. Outside these areas, most of the respondents were cautious, even negative, about what Scotland does well, and very few endorsed the distinctive assets identified elsewhere in this study. For example, the following were given only limited recognition as areas in which Scottish HE has been successful:

- research and teaching (although teaching scored marginally higher)
- a well-integrated system of higher education
- high employability of graduates from Scottish universities
- ability to exploit research and develop spinoff companies.

5.3 Beyond individual institutions

Knowledge of the strengths and weaknesses of Scottish higher education as a sector (beyond the strengths of individual universities) was apparent only to a few respondents, and even then views were variable. This section explores a little more of the detail behind this, with the intention of considering how best to promote those areas considered to be distinctive.

Few of the respondents were able to identify how many Scottish universities were ranked in the global top 200 – most thought just one or two. Only about ten per cent of respondents came close to the figure of five in the *Times Higher Education* Global Ranking 2011.

A number of European academic colleagues suggested that the national relationships within the UK are complex either to explain or promote internationally:

> *Most people in the Netherlands still speak of 'England' when they mean the UK and Scotland is not really seen as a separate country/area in terms of higher education and research. Only students and staff working closely with colleagues or studying there will know the difference. In that case they start saying 'UK' instead of 'England' but I hear few speak about 'Scotland'.*
>
> *If Scottish universities have distinctive assets, and I actually have no doubt that they have as individual institutions, I am not aware of a bundling of such assets in a way that they fit under one banner. This is a problem of most countries and not unique to Scotland. Given the fact that Scotland globally does not have a strong identity as a 'country', but more of a 'region' under the British flag, the time is ripe, with the differentiation in fees… to create a different profile. I am not sure how you would leverage this for the non-Europeans. The explanation as to why there are three types of Europeans (the Scottish, the English, and the continentals) on top of the non-Europeans will be difficult.*

From an Irish respondent:

> *My only concrete knowledge comes from the US market where St Andrews is without doubt our biggest competitor and the one associated with us frequently. We often find people think it is in Ireland (or sometimes that our universities are in Scotland)…*
>
> *Education in Ireland tends to work with the seven Irish universities as a group, rather than focus on one, as we feel that we need to get the Ireland message out there first.*
>
> *My perception of Scottish universities on the ground is that they work independently of each other only, which is good for [individuals] but doesn't seem to get the 'Scotland' message out there.*

5.4 Research and teaching expertise

Respondents were asked to rate research and teaching in Scottish higher education on a subject basis and compare it with that of their own country. Nearly half said they had no knowledge and could not comment. Those that did provided a number of indications as to perceptions of relative strengths and weaknesses.

The majority of respondents identified Scottish research in oil and gas engineering as relatively high quality, followed by history and philosophy, languages and literature, and social sciences. Medical and health sciences, the performing arts and education also received positive comments. Surprisingly, however, business and finance, physical sciences, mathematics and computing, biosciences and renewable energy were all ranked lower.

In the main, the responses for teaching followed a similar pattern to research strengths according to subject area, except that medical and health sciences were perceived as being of lower quality.

5.5 Overall perceptions

Some further comments are provided below to illustrate the wide variety of understanding and perceptions about Scottish higher education:

Quite a high proportion of high-quality ancient universities compared with England. Slightly different academic structure with four-year undergraduate programmes where English are typically three, and slightly confusing use of 'masters' upon completion.

Four-year degrees, older universities, more European in model.

I know that the HE system is funded differently, as Scottish students don't have to pay fees. But, as far as I know, quality assurance is still done at UK level.

Yes, from the outside it seems very independent. It would be similar to the Irish system and close in some ways to the US system.

There is absolutely no doubt that Scotland is very special but by spending energy saying how distinct it is from England, the messages tend to be lost somewhere somehow. Internationally, the emphasis of Scotland being distinct from England simply does not matter. The question most students, parents and academia would be asking is why [the] UK and not the USA or Canada, for example.

A different culture and mentality, more similar to north-western Europe.

I am aware of a distinct Scottish philosophical tradition underpinning education, and I would assume the differences noted (above) have an effect on the character of higher education. But without direct experience of this, I can't say more.

My general impression of Scottish higher education is high. On the other hand... my knowledge of the system is poor.

Scotland is more of a holiday destination than a HE brand, at least in the Netherlands.

6

CONCLUSIONS

6.1 Overview

This study identified institutions, organisations and activities that might be described as distinctive assets of the Scottish higher education sector, both in comparison with the rest of the UK and internationally.

Interviews and questionnaires carried out as part of this study elicited several distinctive attributes which enhance the specific areas examined in the case studies presented in Section 4, namely:

- the primacy of the learner and stress on life-long learning
- an enhancement-led approach to quality assurance and the Scottish Credit and Qualifications Framework (SCQF)
- an integrated and inclusive sector with examples of shared values and decision-making
- a sector which is internationally active, including with Scottish government support
- a notable willingness to develop new international partnerships
- a no-fees policy for Scottish and EU-domiciled undergraduates which has resonance internationally
- a high employability rate for graduates of Scottish universities
- established links with business and industry in Scotland, the wider UK and internationally
- research pooling, government investment in research and a focus on areas of priority for Scotland
- research impact, including a number of spinoff companies. Even very recent studies covering the life sciences indicated that Scotland continues to improve while the rest of the UK is faring less well
- research income won from the UK Research Councils and elsewhere
- success in the recruitment of international students across disciplines and levels
- Scotland's global ranking position, in particular the ratio of top 200 universities to national population – higher than that of any other country

A recurring theme, fed back through interviews and from sector representatives, was that Scottish universities, whatever their mission, worked together: they had shared values, were involved in policy decisions and the sector was inclusive. The commitment from the Scottish government to invest in higher education was welcomed overwhelmingly, if not unanimously. The contrast of the market-led system of high fees and loans in England contributed to the Scottish ethos of education as a public good.

This environment of co-operation across Scottish higher education also includes the college sector. In Scotland, colleges interrelate more dynamically with universities in comparison with the further education sector in the rest of the UK. Colleges also offer degree programmes and the unified SCQF, with its recognition of prior learning, enables transfers between colleges and universities. It will be interesting to see how this relationship evolves over the next few years with the establishment of the new college regions and mergers within each of these.

Scottish institutions were also identified as more willing to develop collaborations for both research and teaching in parts of the world that others see as more difficult. This was a comment fed back through discussion with British Council staff based overseas.

6.2 Research quality and impact

This study confirms that the reputation of the Scottish higher education sector for quality research is justified. Science, technology, engineering and mathematics (STEM) subjects, especially health and related sciences, clinical sciences, biological sciences and mathematics, are particularly noteworthy. World-class excellence in geosciences, marine energy, law, philosophy, literature, linguistics, social sciences and engineering can be found across the sector.

The dominance of STEM research in Scotland is supported by an analysis of competitive awards from the UK Research Councils. Scottish universities win more awards per capita than English universities, and their performance in the Science and Technology Facilities Council, Biotechnology and Biological Sciences Research Council, Natural Environment Research Council, and Engineering and Physical Sciences Research Council is exceptional.

Scottish universities have a great track record for the establishment of spinoff companies, significantly more so than for the rest of the UK university sector. Additionally, the research impact studies explored in Section 3 clearly indicate the relative success of Scottish research.

Curiously, Scottish results in the Research Assessment Exercise 2008 appear to be less impressive than generally understood. Forty eight per cent of the assessed research in Scotland attained the two top grades of 4* or 3*. This is certainly impressive, but not as high as in England and not as high as reported ubiquitously in Scotland.

In response to the Scottish government's directive to concentrate research funding in fewer universities, the Scottish Funding Council eliminated 2*-rated research from its Research Excellence Grant starting in 2011–12. This is of great concern in many parts of the sector and there is no reason to suppose that the new Research Excellence Framework will mitigate that direction of travel.

6.3 International students

As a study destination, Scotland is very attractive to international students, particularly in comparison with European (non-UK) countries and North America. As a country, only Australia is more successful in terms of proportion of international students in the total university student population. Scotland's popularity as an international study destination is broadly similar to the rest of the UK, although for students from non-UK EU member states, Scotland outperforms other UK countries.

International students are important to Scotland: they add to the country's knowledge economy, conduct vital research and benefit the Scottish economy, both directly and indirectly. At an institutional level, the fees they pay are an important source of revenue, particularly given the increasing pressure on university budgets and constrained national funding.

A university or Scotland as the study destination? What seems to be important for non-EU students is the popularity of individual universities and/or programmes within them, rather than Scotland as a destination. American students, for example, are concentrated in three universities, and Nigerian and Indian students tend to seek vocationally oriented master's degree programmes in a limited number of universities. This might be due to a number of reasons: the international profile of the university (including global ranking); the investment in market positioning; or the less tangible concept of Scotland as the destination, rather than a specific programme or university. These were all areas commented upon by the international education professionals contacted during the course of this study.

There is, of course, the other difficulty, in that the rest of the sector in the UK accounts for over 85 per cent of enrolments, and their marketing strategies frequently refer to their strength within an internationally acclaimed 'UK' sector.

International students are increasingly insightful when it comes to choosing programmes and universities. Access to better materials online has proved important, but prospective students' awareness is also enhanced by word-of-mouth messages from current students, friends and alumni as well as by social media. It would be fruitful to conduct market research to explore the best use of social media and e-marketing to attract potential students from target countries and markets to Scotland's universities.

Opportunities for Scotland: while there are proportionately fewer students in the creative arts and design compared with those enrolled in the rest of the UK, this might be due to a relative capacity constraint across the Scottish sector. However, given some of the strengths of Scottish institutions in these areas and the demand for programmes in creative arts, an initiative to promote Scotland as a destination for creativity could have good results.

While Scottish universities have achieved real success and recognition in a number of countries, there are also some in which Scottish institutions under-perform in terms of student recruitment relative to their counterparts in the rest of the UK. Some of the larger student source countries where Scottish enrolments are relatively low include Malaysia, Saudi Arabia, Hong Kong, Thailand, Sri Lanka, Bangladesh, Vietnam and Turkey. These are all international student markets in which there has been overall recent growth for recruitment to the UK. What needs to be explored in more detail is why Scotland has been relatively less successful in these countries. Is it the students' lack of knowledge of Scottish excellence in higher education or are Scottish institutions less active in these markets than their counterparts in other UK countries?

Four-year undergraduate degrees: another interesting discussion that evolved during the course of this study concerned Scotland's four-year undergraduate degrees (and separately the award of an MA for some of these programmes). There were mixed views regarding the four-year programme. However, most interviewees judged it to be a Scottish asset as it offered a broader learning experience with greater flexibility and attracted students from a variety of academic backgrounds. But the concern was that ultimately Scottish four-year programmes would compare less favourably with the highly publicised three-year honours degrees on offer in the rest of the UK. The net result is that enrolment on undergraduate programmes by non-EU international students is comparably lower than in the rest of the UK. Given that Scottish universities are keen to recruit more international undergraduates, this disparity needs to be addressed, probably through improved communication of all the associated benefits. After all, both the US and Australia offer four-year undergraduate programmes and successfully attract large numbers of international undergraduate students.

It was suggested that a more focused approach to marketing and communications, including developing collaborative activities, would deliver additional benefits:

> *It was very evident that Scotland plc is very well placed to make a strong international offer. Scottish universities are cognisant of each other's differences and strengths. Given the smaller scale than in England and Wales, a combined marketing effort would help international students navigate the system.*

Transnational education: there are growing opportunities to deliver higher education programmes globally and the UK is a leading international provider. Certain Scottish universities are very successful in this area and new programmes are being developed across the sector. Overall, however, Scottish higher education institutions do not perform quite as well as the rest of the UK. A suggestion is that a Scottish TNE portal could be established, with all universities promoting their open distance learning (ODL) programmes. Any such portal should be optimised to ensure it is highly visible in the main ODL markets.

> *TNE can provide a more affordable way of accessing the high quality that Scottish universities can offer... Leadership in the Scottish HE sector about how to maximise this opportunity would position Scotland well for the future (this requires more than individual universities having international marketing strategies).*

6.4 Communicating Scottish higher education internationally

This study has provided clear evidence to support both the distinctive assets and principle areas of excellence of Scottish higher education. It is vital that these are communicated internationally as together they describe a dynamic and modern Scotland that is focused upon its students and conducive to international partnerships for education, research, business and industry. Through international outreach and the promotion of opportunities, wider trade benefits beyond education exports might accrue, as well as greater inward investment.

The main concern identified emerged from feedback from leading international educationists in a number of targeted countries. There was a general lack of knowledge about Scottish higher education, the Scottish distinctive identity, the differences in higher education provision in Scotland compared with the rest of the UK and the sector's comparative advantages. There was also little awareness of the high ranking of Scottish universities in global league tables. While this might not be a major surprise given the relative size of the Scottish system compared with the rest of the UK, what must be of concern was the poor awareness, even among leading international education professionals. Two quotes from Scottish university staff demonstrate their understanding of the need:

> *Scotland must grow its international brand position – it works in [the] US but not elsewhere. This needs to be developed and promoted in key markets.*

> *[The] need is to promote Scotland as an education destination, in a coherent approach, across the sector and also with Visit Scotland.*

Although there was familiarity with specific universities and their international profiles, the overall implication was that more might be done to promote Scottish higher education (drawing on many of the findings discussed throughout this study). The Education UK Scotland brand, if it is to continue, probably needs to be refreshed and communicated in all the target markets. A few suggestions for Scottish HE brand messages:

- delivering excellence for students' learning experience
- cutting-edge research that produces successful spinoff companies
- a very high success rate in new spinoff businesses
- globally, the most integrated university system
- Scottish graduates are top for employability
- business and industry come to Scotland to seize upon our innovation.

Jamil Salmi, former Head of Higher Education at the World Bank, commented that the mark of a truly global leading university is its ability to tell the world just how good it is. The same approach must hold for a country's total HE system.

An approach to communicating the Scottish asset base more effectively might be to build awareness around one theme or topic at a time. Just two of the identified assets are briefly considered below:

Research pooling: this unique Scottish approach to building research strength, enhancing research impact and encouraging greater economic benefits would have powerful resonance internationally, particularly in countries with resource constraints. This might also be undertaken as part of a wider Scottish strategy to expand international links, particularly with trade priority countries. Scottish researchers strongly endorsed the approach to pooling:

> *One thing that makes the Scottish HE sector distinctive – something the Scottish government has always gotten bang right and one of the reasons for me to come to Scotland – is that where many other countries pit one university against the other in competition (with the result of duplication of effort and dilution of critical mass), Scotland emphasises co-operation and pooling of resources. ... [We] benefited greatly from interacting with these Scottish pooling initiatives ...this ensures that we work with the best people there are in Scotland – not just the ones in our university.*

However, concern was expressed that this success was not being fully promoted:

> *Distinctiveness is the research base and the Scottish approach to pooling – we need to promote [this] more strongly, as Scotland is not achieving the international impact it deserves...*

Graduate employability: Scottish institutions have excellent stories to tell, including dynamic relationships with employers and innovative means of supporting students. Given that most countries now place a strong emphasis on securing employment for young people, robust Scottish messages would be listened to.

The Glasgow Commonwealth Games will provide many opportunities to profile Scotland. Consequently, it would seem sensible to build alliances with the marketing and communications that will no doubt be part of this. Any reinvigorated promotion and communications strategy should take into consideration the most cost-effective means to deliver its message (according to the needs of the different target groups in each priority country). Clear market segmentation will be essential to ensure messages are clearly received.

Any communications strategy for Scotland would need to address a number of audiences, including:

- business and industry leaders in priority countries and sectors
- government and higher education sector decision-makers
- potential international students and their advisers.

HE institutions and associated bodies as well as other internationally-facing Scottish activities and organisations (e.g. Visit Scotland and Scottish Enterprise) would need to reflect and reinforce the strategy.

APPENDIX A
DATA

Table A1: Higher education students by mode and level of study and country of institution, 2009/10

	Postgraduate		Undergraduate		Other undergraduate		All students		Total
	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time	
United Kingdom	**298,255**	**280,450**	**1,208,625**	**212,865**	**125,275**	**367,945**	**1,632,155**	**861,260**	**2,493,415**
% age of UK total	**12.0**	**11.2**	**48.5**	**8.5**	**5.0**	**14.8**	**65.5**	**34.5**	**100.0**
Scotland	29,120	24,805	127,315	10,415	6,520	22,735	162,955	57,955	220,910
% age of Scotland total	13.2	11.2	57.6	4.7	3.0	10.3	73.8	26.2	100.0
Wales	14,265	14,050	68,560	3,905	5,190	21,915	88,015	39,870	127,885
% age of Wales total	11.2	11.0	53.6	3.1	4.1	17.1	**68.9**	**31.2**	100.0
Northern Ireland	5,005	6,130	30,180	3,285	335	6,055	35,520	15,470	50,990
% age of NI total	9.8	12.0	59.2	6.4	0.7	11.9	69.7	30.3	100.0
England	249,865	235,465	982,565	195,260	113,235	317,240	1,345,665	747,965	2,093,635
% age of England total	11.9	11.2	46.9	9.3	5.4	15.2	**64.2**	**35.7**	100.0

Source: Patterns and trends of higher education 2011 (Universities UK, 2011)

Table A2: Percentage change in higher education student numbers by UK country for the nine years to 2009/10

		England	Wales	Scotland	Northern Ireland	United Kingdom
Full-time	Undergraduate	25.8%	13.8%	19.8%	10.9%	24.2%
	Postgraduates	40.5%	64.4%	54.6%	17.5%	42.2%
Part-time	Undergraduate	16.8%	-12.5%	32.0%	-6.5%	15.4%
	Postgraduates	17.2%	49.5%	31.5%	10.8%	19.5%
Overall Totals	Undergraduate	30.5%	27.1%	17.1%	17.7%	28.5%
	Postgraduates	72.9%	82.2%	81.8%	26.4%	73.1%

Source: Patterns and trends of higher education 2011 (Universities UK, 2011)

Table A3: Higher education students by HE and Colleges sectors, mode of study and country of institution, 2009/10

Country of institution	College sector enrolments		HE Sector enrolments		Total All	Proportion all UK enrolments
	Full-time students	Part-time students	Full-time students	Part-time students		
England	22,215	78,240	1,345,665	747,965	2,194,085	82.6
Wales	525	855	88,015	39,870	129,265	4.9
Scotland	30,620	19,695	162,955	57,955	271,225	10.2
Northern Ireland	4,475	6,930	35,520	15,470	62,395	2.3
United Kingdom	**57,835**	**105,720**	**1,632,155**	**861,260**	**2,656,970**	**100.0**

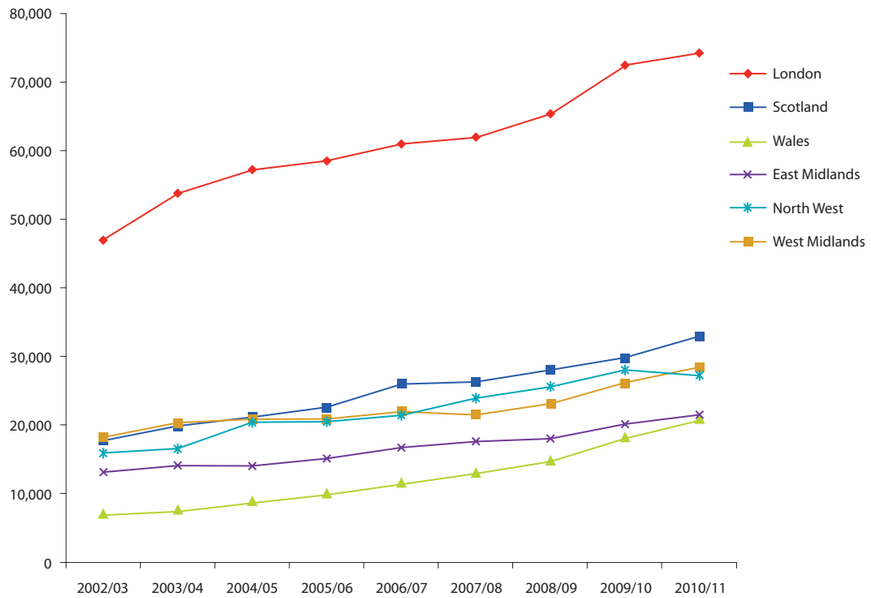
Source: Patterns and trends of higher education 2011 (Universities UK, 2011)

Table A4: All enrolments in higher education institutions according to domicile and levels – Scotland and rest of UK compared.

	Domicile	Scotland total	Scotland proportions	UK (non-Scotland)	UK proportions
PG Research students					
PGR	UK	5,399	53.7	44,266	56.2
	EU (non-UK)	1,460	14.5	10,433	13.3
	Non-EU	3,199	31.8	24,009	30.5
Total PGR		10,058	5.9	78,707	5.2
PG taught students					
PGT	UK	12,891	49.7	135,991	55.4
	EU (non-UK)	2,778	10.7	22,874	9.3
	Non-EU	10,252	39.6	86,696	35.3
Total PGT		25,921	15.3	245,561	16.3
Undergraduate students					
UG	UK	113,838	85.1	1,027,783	86.7
	EU (non-UK)	10,777	8.1	57,730	4.9
	Non-EU	9,172	6.9	99,538	8.4
Total UG		133,787	78.8	1,185,051	78.5
All students					
All levels	UK	132,128	77.8	1,208,039	80.0
	EU (non-UK)	15,015	8.8	91,037	6.0
	Non-EU	22,623	13.3	210,243	13.9
Total (All)		**169,766**	**100.0**	**1,509,318**	**100.0**

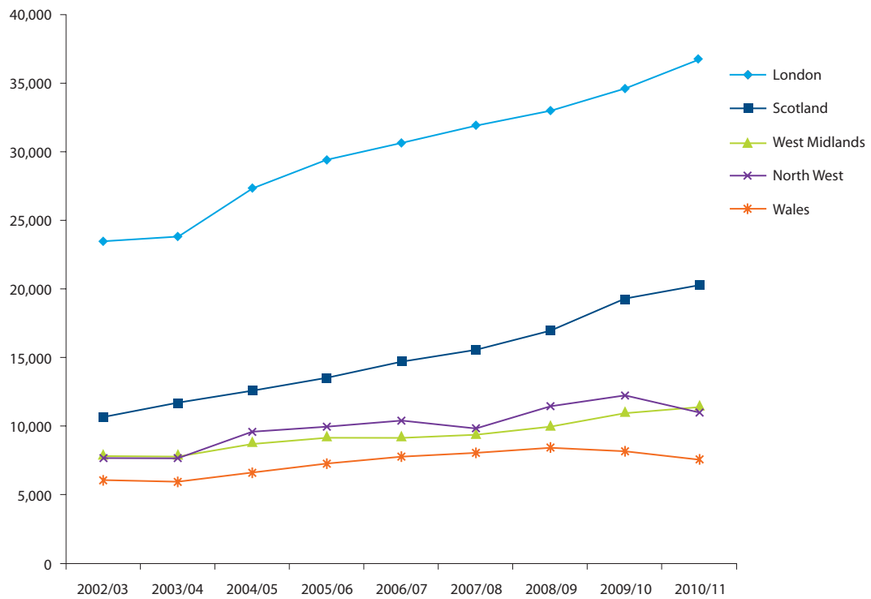
Source: HESA 2010-11 – accessed via British Council

Figure A1: Trend in international (EU) enrolments to Scotland, Wales and select UK regions



Source: HESA 2010–11 – accessed via British Council.

Figure A2: Trend in international (non-EU) enrolments to Scotland, Wales and select UK regions



Source: HESA 2010–11 – accessed via British Council.

Table A5: Transnational education enrolments at Scottish universities compared with enrolments across all UK universities.

	2010/11	2009/10	2008/09
Total (All Scotland)	**24,915**	**24,455**	**22,385**
Heriot-Watt	11,575	11,220	10,130
Edinburgh Napier	3,315	2,965	2,240
Strathclyde	2,525	2,870	2,685
Glasgow Caledonian	2,195	2,120	2,280
Robert Gordon	1,520	1,535	1,180
Dundee	1,215	1,180	1,240
Queen Margaret University, Edinburgh	980	830	810
Stirling	565	620	485
Edinburgh	440	275	185
Abertay, Dundee	205	405	705
Aberdeen	190	155	110
West of Scotland	105	265	280
Highlands and Islands	60	0	0
Glasgow	25	15	10
Glasgow School of Art	0	0	45
All UK (less Scotland enrolments)	**478,880**	**384,230**	**365,750**
Less large distance providers*	**158,750**	**143,520**	**125,045**

* Large providers are Open University, London University International, University of Wales (Central), Oxford Brookes University

Source: HESA 2010–11 – accessed via British Council.

Table A6: Non-EU student enrolments to UK HE, according to main source countries, proportions and five-year growth rate - Scotland compared with rest of the UK

Country	Scotland			All UK		
	2010/11	Proportion (%)	Annual growth	2010/11	Proportion (%)	Annual growth
Total	**32,940**	**100.0**	**7.9%**	**328,415**	**100.0**	**7.0%**
China	6,675	20.3	9.4%	71,400	21.7	6.9%
United States	5,420	16.5	6.6%	24,605	7.5	2.7%
India	3,630	11.0	5.7%	40,890	12.5	16.3%
Nigeria	2,600	7.9	20.9%	18,325	5.6	13.8%
Canada	1,270	3.9	5.9%	7,120	2.2	6.3%
Malaysia	1,195	3.6	5.3%	14,865	4.5	5.3%
Pakistan	960	2.9	15.6%	10,865	3.3	6.4%
Saudi Arabia	820	2.5	21.5%	10,850	3.3	31.4%
Norway	705	2.1	4.0%	4,390	1.3	5.5%
Taiwan	505	1.5	-1.1%	5,165	1.6	-3.6%
Hong Kong (SAR)	490	1.5	-3.5%	10,925	3.3	2.7%
Thailand	475	1.4	23.5%	6,505	2.0	9.0%
Singapore	415	1.3	3.5%	4,840	1.5	7.6%
Switzerland	390	1.2	12.6%	2,815	0.9	8.8%
Kazakhstan	370	1.1	46.4%	2,245	0.7	38.2%
Russia	335	1.0	23.8%	3,565	1.1	9.7%
Libya	315	1.0	13.8%	3,020	0.9	19.4%
Japan	305	0.9	-2.7%	4,100	1.2	-9.2%

Source: HESA 2010–11 – accessed via British Council.

Table A7: EU student enrolments to UK HE, according to main source countries, proportions and five-year growth rate - Scotland compared with rest of the UK

Country	Scotland			All UK		
	2010/11	Proportion (%)	Annual growth	2010/11	Proportion (%)	Annual growth
Total	**20,270**	**100.0**	**8.3%**	**152,340**	**100.0**	**4.6%**
Ireland	3,180	15.7	1.2%	17,455	11.5	0.7%
Germany	3,160	15.6	7.7%	20,755	13.6	4.5%
France	2,505	12.4	4.3%	18,205	12.0	1.7%
Poland	1,600	7.9	21.5%	8,090	5.3	11.0%
Greece	1,315	6.5	-1.5%	12,760	8.4	-6.5%
Spain	980	4.8	2.8%	8,825	5.8	-0.4%
Italy	905	4.5	10.3%	9,055	5.9	6.2%
Sweden	690	3.4	8.9%	3,985	2.6	1.1%
Lithuania	685	3.4	60.2%	3,990	2.6	31.4%
Bulgaria	575	2.8	–	4,735	3.1	–
Finland	535	2.6	9.8%	2,390	1.6	1.3%
Netherlands	515	2.5	6.8%	4,220	2.8	5.8%
Romania	465	2.3	–	4,795	3.1	–
Belgium	410	2.0	5.8%	2.2	4.1	–
Czech Republic	330	1.6	22.4%	1,600	1.1	6.4%
Cyprus (EU)	310	1.5	19.0%	11,620	7.6	10.0%
Latvia	290	1.4	52.6%	2,070	1.4	29.9%
Denmark	285	1.4	0.7%	1,895	1.2	-0.2%
Hungary	265	1.3	27.1%	1,320	0.9	7.1%

Source: HESA 2010–11 – accessed via British Council.

Table A8: Non-EU student enrolments to UK HE, according to main subject area, their proportions and five-year growth rates - Scotland compared with rest of the UK

Country	Scotland			All UK		
Subject Area	2010/11	Proportion (%)	Annual growth (%)	2010/11	Proportion (%)	Annual growth (%)
Total	**32,940**	**100.0**	**7.9%**	**328,415**	**100.0**	**7.0%**
Business & administrative studies	9,300	28.2	10.3%	102,100	31.1	9.9%
Engineering & technology	3,870	11.7	10.2%	43,415	13.2	8.4%
Social studies	2,575	7.8	12.0%	26,925	8.2	4.9%
Languages	1,820	5.5	10.7%	17,090	5.2	5.3%
Subjects allied to medicine	1,790	5.4	3.2%	16,445	5.0	6.6%
Historical and philosophical studies	1,670	5.1	12.2%	7,170	2.2	3.6%
Law	1,480	4.5	7.7%	14,500	4.4	4.7%
Biological sciences	1,410	4.3	5.0%	11,010	3.4	5.8%
Combined	1,410	4.3	1.0%	7,605	2.3	1.8%
Computer science	1,390	4.2	2.2%	19,575	6.0	3.7%
Architecture, building & planning	1,035	3.1	7.1%	7,880	2.4	7.3%
Physical sciences	1,025	3.1	12.3%	9,175	2.8	8.2%
Creative arts & design	1,000	3.0	7.7%	14,110	4.3	7.1%
Medicine & dentistry	935	2.8	6.9%	8,155	2.5	6.2%
Education	675	2.0	-4.2%	8,630	2.6	0.5%
Mathematical sciences	545	1.7	2.8%	6,100	1.9	8.1%
Veterinary science	490	1.5	16.8%	755	0.2	12.4%
Mass communications and documentation	305	0.9	-2.4%	6,245	1.9	7.5%
Agriculture & related subjects	230	0.7	7.5%	1,525	0.5	4.7%

Source: HESA 2010–11 – accessed via British Council.

Table A9: Research student enrolments to UK HE, according to main countries of origin, their proportions and five-year growth rates - Scotland compared with rest of the UK

Country	Scotland			All UK		
	2010/11	Proportion (%)	Annual growth (%)	2010/11	Proportion (%)	Annual growth (%)
Total	**6,735**	**100.0**	**6.6%**	**58,345**	**100.0**	**4.5%**
China	655	9.7	8.3%	5,535	9.5	2.7%
United States	635	9.4	6.0%	3,930	6.7	4.4%
Germany	435	6.5	9.2%	3,275	5.6	7.5%
Malaysia	285	4.2	3.9%	2,230	3.8	4.6%
Italy	275	4.1	13.7%	2,430	4.2	7.5%
India	270	4.0	5.2%	2,195	3.8	4.3%
Greece	265	3.9	-3.1%	2,440	4.2	-4.8%
Saudi Arabia	220	3.3	18.3%	2,160	3.7	20.5%
Canada	205	3.0	5.8%	1,465	2.5	3.2%
Nigeria	205	3.0	13.3%	1,395	2.4	15.6%
Ireland	190	2.8	5.6%	1,510	2.6	4.8%
Pakistan	180	2.7	29.2%	1,500	2.6	16.3%
France	150	2.2	-1.9%	1,300	2.2	-0.2%
Poland	150	2.2	20.1%	920	1.6	19.7%
Libya	145	2.2	12.6%	1,095	1.9	17.2%
Iran	120	1.8	8.4%	1,235	2.1	12.7%
Thailand	105	1.6	4.3%	1,195	2.0	2.9%
Spain	100	1.5	-3.6%	875	1.5	0.8%
Taiwan	100	1.5	-1.0%	1,060	1.8	-2.7%

Source: HESA 2010–11 – accessed via British Council.

Table A10: Research student enrolments to UK HE, according to main subject area, their proportions and five-year growth rates - Scotland compared with rest of the UK

Country	Scotland			All UK		
Subject Area	2010/11	Proportion (%)	Annual growth (%)	2010/11	Proportion (%)	Annual growth (%)
Total	**6,735**	**100.0**	**6.6%**	**58,340**	**100.0**	**4.5%**
Engineering & technology	990	14.7	5.4%	9,875	16.9	3.5%
Biological sciences	785	11.7	5.0%	5,215	8.9	6.4%
Physical sciences	640	9.5	7.1%	5,520	9.5	6.0%
Historical and philosophical studies	630	9.4	7.0%	3,555	6.1	3.3%
Social studies	525	7.8	10.4%	6,475	11.1	2.9%
Business & administrative studies	525	7.8	6.1%	4,500	7.7	6.6%
Subjects allied to medicine	435	6.5	13.1%	2,785	4.8	9.2%
Languages	390	5.8	5.7%	3,500	6.0	2.2%
Computer science	385	5.7	3.1%	3,320	5.7	2.5%
Medicine & dentistry	320	4.8	13.5%	3,330	5.7	7.1%
Law	245	3.6	4.7%	1,720	2.9	5.4%
Architecture, building & planning	205	3.0	3.8%	1,330	2.3	3.9%
Education	150	2.2	10.8%	2,720	4.7	0.8%
Mathematical sciences	140	2.1	0.0%	1,585	2.7	6.0%
Agriculture & related subjects	135	2.0	8.4%	535	0.9	2.6%
Creative arts & design	130	1.9	7.6%	1,595	2.7	7.9%
Mass comms and documentation	45	0.7	12.5%	585	1.0	4.9%
Veterinary science	30	0.4	-12.9%	120	0.2	-3.7%
Combined	30	0.4	43.1%	80	0.1	-15.0%

Source: HESA 2010–11 – accessed via British Council.

Table A11: Enrolled EU postgraduate taught students in UK HE, according to country, proportions and five-year growth rates – Scotland compared with rest of the UK.

Country	Scotland			All UK		
	2010/11	Proportion (%)	Annual growth (%)	2010/11	Proportion (%)	Annual growth (%)
Total	**4,110**	**100.0**	**7.3%**	**38,590**	**100.0**	**2.9%**
Ireland	980	23.8	7.7%	6,420	16.6	3.5%
Germany	675	16.4	14.0%	5,225	13.5	8.1%
Greece	575	14.0	-3.4%	5,160	13.4	-9.8%
France	370	9.0	3.3%	4,195	10.9	3.1%
Spain	240	5.8	7.8%	2,030	5.3	5.0%
Poland	205	5.0	15.4%	1,490	3.9	7.8%
Italy	165	4.0	17.1%	2,425	6.3	7.0%
Netherlands	110	2.7	0.9%	1,315	3.4	3.0%
Romania	100	2.4	–	900	2.3	–
Cyprus (EU)	80	1.9	5.9%	2,530	6.6	4.7%
Belgium	70	1.7	18.5%	810	2.1	5.7%
Malta	55	1.3	1.9%	485	1.3	3.4%
Bulgaria	50	1.2	–	715	1.9	–
Denmark	50	1.2	-6.5%	595	1.5	0.9%
Austria	45	1.1	17.6%	530	1.4	8.0%
Lithuania	45	1.1	24.6%	340	0.9	15.6%
Finland	40	1.0	14.9%	430	1.1	6.1%
Portugal	40	1.0	2.7%	715	1.9	4.6%
Sweden	40	1.0	-6.2%	605	1.6	-1.9%
Slovakia	40	1.0	–	295	0.8	25.4%
Czech Republic	35	0.9	28.5%	350	0.9	11.3%
Hungary	35	0.9	28.5%	300	0.8	9.6%
Luxembourg	20	0.5	5.9%	180	0.5	1.8%
Latvia	20	0.5	32.0%	180	0.5	4.4%
Estonia	15	0.4	24.6%	120	0.3	11.4%
Slovenia	15	0.4	0.0%	105	0.3	-4.2%
Gibraltar	5	0.1	0.0%	105	0.3	8.4%

Source: HESA 2010–11 – accessed via British Council.

Table A12: Enrolled EU postgraduate taught students in UK HE, according to main subject areas, proportions and five-year growth rates – Scotland compared with rest of the UK.

Country	Scotland			All UK		
Subject Area	2010/11	Proportion (%)	Annual growth (%)	2010/11	Proportion (%)	Annual growth (%)
Total	**4,115**	**100.1**	**7.4%**	**38,590**	**100.0**	**2.9%**
Business & administrative studies	925	22.5	10.8%	9,200	23.8	2.8%
Engineering & technology	520	12.7	8.2%	4,310	11.2	2.8%
Subjects allied to medicine	445	10.8	10.1%	2,245	5.8	3.9%
Social studies	310	7.5	14.1%	3,950	10.2	3.1%
Computer science	270	6.6	-0.4%	1,405	3.6	-1.9%
Law	265	6.4	7.5%	2,300	6.0	2.2%
Education	205	5.0	-6.0%	3,010	7.8	-1.5%
Architecture, building & planning	190	4.6	4.8%	1,275	3.3	2.6%
Biological sciences	180	4.4	13.6%	1,640	4.2	4.8%
Creative arts & design	165	4.0	15.6%	2,555	6.6	10.0%
Languages	140	3.4	10.5%	1,725	4.5	2.2%
Physical sciences	135	3.3	15.7%	1,015	2.6	3.6%
Historical and philosophical studies	80	1.9	7.8%	805	2.1	2.7%
Mathematical sciences	70	1.7	1.5%	465	1.2	0.4%
Mass communications and documentation	70	1.7	-7.8%	1,285	3.3	5.7%
Agriculture & related subjects	65	1.6	13.2%	345	0.9	2.8%
Medicine & dentistry	45	1.1	2.4%	890	2.3	6.5%
Combined	25	0.6	10.8%	135	0.3	27.5%
Veterinary science	5	0.1	-12.9%	45	0.1	-5.6%

Source: HESA 2010–11 – accessed via British Council.

APPENDIX B
LIST OF SCOTTISH UNIVERSITIES AND HIGHER EDUCATION INSTITUTIONS

University of Aberdeen
Principal: Professor Sir Ian Diamond
Address: Regent Walk, Aberdeen AB24 3FX

University of Abertay, Dundee
Principal: Professor Nigel Seaton
Address: Bell Street, Dundee DD1 1HG

University of Dundee
Principal: Professor Pete Downes
Address: Perth Road, Dundee DD1 4HN

University of Edinburgh
Principal: Professor Sir Timothy O'Shea
Address: Old College, South Bridge, Edinburgh EH8 9YL

Edinburgh Napier University
Principal: Professor Dame Joan K Stringer DBE
Address: Craiglockhart Campus,
Edinburgh EH14 1DJ

University of Glasgow
Principal: Professor Anton Muscatelli
Address: Glasgow G12 8QQ

Glasgow Caledonian University
Principal: Professor Pamela Gillies CBE
Address: 70 Cowcaddens Road, Glasgow G4 0BA

Glasgow School of Art
Principal: Professor Seona Reid
Address: 167 Renfrew Street, Glasgow G3 6RQ

Heriot-Watt University
Principal: Professor Steve Chapman
Address: Riccarton, Edinburgh EH14 4AS

University of the Highlands and Islands
Principal: Mr James Fraser
Address: Executive Office, Ness Walk,
Inverness IV3 5SQ

Open University in Scotland
Director: Dr James Miller
Address: 10 Drumsheugh Gardens,
Edinburgh EH3 7QJ

Queen Margaret University
Principal: Professor Petra Wend
Address: Edinburgh EH21 6UU

Robert Gordon University
Principal: Professor Ferdinand von Prondzynski
Address: Schoolhill, Aberdeen AB10 1FR

Royal Conservatoire of Scotland
Principal: Professor John Wallace
Address: 100 Renfrew Street, Glasgow G2 3DB

Scotland's Rural University College (SRUC)
Principal: Professor Bob Webb
Address: King's Buildings, West Mains Road,
Edinburgh EH9 3JG

University of St Andrews
Principal: Professor Louise Richardson
Address: St Andrews, Fife KY16 9AJ

University of Stirling
Principal: Professor Gerry McCormac
Address: Stirling FK9 4LA

University of Strathclyde
Principal: Professor Sir Jim McDonald
Address: 16 Richmond Street, Glasgow G1 1XQ

University of the West of Scotland
Principal: Professor Seamus McDaid CBE
Address: High Street, Paisley PA1 2BE

APPENDIX C
SCOTTISH CREDIT AND QUALIFICATIONS FRAMEWORK

SCQF Levels	SQA Qualifications			Qualifications of Higher Education Institutions	Scottish Vocational Qualifications
12	Some SQA qualifications are changing between 2013-2016. See www.sqa.org.uk/readyreckoner			Doctoral Degree	
11				Masters Degree, Integrated Masters Degree, Post Graduate Diploma, Post Graduate Certificate	SVQ 5
10				Honours Degree, Graduate Diploma, Graduate Certificate	
9			Professional Development Award	Bachelors/Ordinary Degree, Graduate Diploma, Graduate Certificate	SVQ 4
8		Higher National Diploma		Diploma of Higher Education	
7	Advanced Higher Scottish Baccalaureate	Higher National Certificate		Certificate of Higher Education	SVQ 3
6	Higher				
5	Intermediate 2 Credit Standard Grade				SVQ 2
4	Intermediate 1 General Standard Grade	National Certificate	National Progression Award		SVQ 1
3	Access 3 Foundation Standard Grade				
2	Access 2				
1	Access 1				

See: http://www.scqf.org.uk/content/images/misc/medframework2013.jpg

APPENDIX D
INDIVIDUALS CONSULTED (INTERVIEWS AND WRITTEN COMMUNICATIONS)

Individuals consulted (interviews and written communication)

Respondents	Name	Designation/Organisation
International respondents		
Denmark	Line Verbik Byriel	CIRIUS, Copenhagen
	Britta Løck Worm	University of Southern Denmark
Netherlands	Robert Coelen	VP International, Stenden University
	JMW (Hans) de Wit	Amsterdam University of Applied Sciences
	Hanneke Teekens	NUFFIC, The Hague
	JGHM van Liempd	Tilburg University
	Jeanine Gregersen	Maastricht University
New Zealand	Melanie Chapman	New Zealand High Commission, India
	David Baker	University of Auckland
	Chris Berry	University of Auckland
	Arthur Chi	Massey University
Canada	Janine Knight-Grofe	Canadian Bureau for International Education
	Patrick Deane	McMaster University
Australia	Louise Goold	Monash University
	Dennis Murray	CEO, International Education Association of Australia
Hong Kong	Richard Armour	Secretary General, UGC
	Winnie Eley	The Hong Kong Polytechnic University, Hong Kong
India	JJ Nandi	IEN Private Ltd
Malaysia	Nina Adlan Disney	International Education Consultant
Sweden	Niklas Tranaeus	Swedish Institute
Ireland	Gill Roe	Enterprise Ireland
Europe	Bernd Wachter	CEO, Academic Cooperation Association, Brussels
Germany	Rolf Hoffmann	Director, Fulbright Foundation
British Council international staff		
India	Sally Goggin	
Wider South Asia	Nils Tomes	
Americas	John Bramwell	
Middle East	Sally Ward	
Sub-Saharan Africa	Brian Wilson	
Scottish organisations		
Scottish Credit and Qualification Framework	Aileen Ponton	Chief Executive
Royal Society of Edinburgh	Dr William Duncan	Chief Executive
Scottish Development International	Mark Newlands	Head, Education
	Kimberley Daly	Senior International Business Executive
Scottish Funding Council	Dr Stuart Fancey	Assistant Director
QAA Scotland	Dr Bill Harvey	Director
Universities Scotland	Simon Jennings	Deputy Director
	Ulrike Peter	International Policy Officer
Scottish Government	Lindsay Galbraith	Research and International Team, Higher Education and Learner Support Division
	Margaret Irving	Research and International Team
	Susan Whittaker	Research and International Team
NUS Scotland	Robin Parker	President

Respondents	Name	Designation/Organisation
Scottish universities and HEIs		
University of Aberdeen	Rachel Sanderson	Director of Marketing, Student Recruitment and Alumni Relations
	Professor Neil A.R. Gow	Director of Research, School of Medical Sciences
University of Abertay, Dundee	Paul Durrant	Director of Business Development
University of Dundee	Professor Peter Downes	Principal
University of Edinburgh	Professor Nigel Brown	Senior Vice-Principal
	Professor Steve Hillier	Vice-Principal International
	Professor Graeme Laurie	Professor of Medical Jurisprudence
	Professor Burkhard Schafer	Director, SCRIPT Centre for IT and IP Law
Edinburgh Napier University	Professor John Duffield	Vice-Principal
University of Glasgow	Fiona Docherty	Director International
	Jon Lewin	Research Information Manager, College of Social Sciences
	David Nisbet	Research Support Officer, College of Science and Engineering
Glasgow Caledonian University	Professor Pamela Gillies	Principal
Heriot-Watt University	Ruth Moir	Director of International Development
University of the Highlands and Islands	James Fraser	Principal
	Dr Gary Campbell	Dean of Learning and Teaching
	Dr Jeff Howarth	Vice-Principal (Research and Enterprise)
	Dr Crichton Lang	Vice-Principal (Academic)
Open University in Scotland	Pete Cannell	Deputy Director
	Lucy Macleod	Deputy Director
	Dr James Miller	Director
Queen Margaret University, Edinburgh	Professor Petra Wend	Principal
Robert Gordon University	Professor von Prondzynski	Principal
	Hamish Walker	Faculty Project Officer, Faculty of Design & Technology
Royal Conservatoire of Scotland	Professor Maggie Kinloch	Vice-Principal
	Hugh Hodgart	Dean of Drama
	Havilland Willshire	Dean of Music
Scotland's Rural University College	Professor Geoff Simm	Academic Director and Vice Principal Research
University of St Andrews	Professor Lorna Milne	Vice-Principal (Proctor)
University of Stirling	Professor Gerry McCormac	Principal
University of Strathclyde	Professor Kenny Miller	Vice-Principal
	Linda Wallace	Strategic Research and Knowledge Development Manager
	Deborah Reid	Research and Knowledge Exchange
University of West of Scotland	Professor Paul Martin	Deputy Principal

APPENDIX E

AREAS OF EXPERTISE IN SCOTTISH UNIVERSITIES ACCORDING TO RESEARCH ASSESSMENT EXERCISE (RAE) 2008 SUBJECT RESULTS

Proportion of research activity rated 4* and 3* in RAE 2008 units of assessment, top Scottish and top UK universities[1]

RAE Unit of assessment	Scottish university	4*, 3* (%)	Top UK university	4*, 3* (%)
Cancer studies	Glasgow	25, 50	Cambridge Inst Cancer Research Manchester	35, 45 35, 40 30, 60
Other hospital-based clinical subjects	Edinburgh Aberdeen	40, 40 15, 60	Edinburgh UCL	40, 40 40, 30
Health services research	Aberdeen	25, 55	York Queen Mary	35, 40 30, 35
Primary care and other community-based clinical subjects	Aberdeen	25, 40	Oxford Manchester Birmingham Nottingham	45, 40 40, 40 35, 30 30, 40
Allied health professions and studies	Glasgow, Glasgow Caledonian, and Strathclyde (joint submission)	15, 45	UCL Hull, Lancaster, Surrey	25, 35 20, 40
Biological sciences	Dundee	25, 40	Inst Cancer Research Oxford (Biochem)	40, 45 35, 40
Agriculture, veterinary and food science	Aberdeen Edinburgh	20, 35 20, 35	Warwick	20, 40
Earth systems and environmental sciences	Edinburgh	15, 55	Cambridge Oxford Reading Birkbeck, UCL	40, 50 35, 50 30, 45 25, 55
Chemistry	Edinburgh and St Andrews (joint)	30, 40	Cambridge Nottingham Oxford	40, 40 30, 55 30, 45
Physics	St Andrews Edinburgh	25, 40 20, 45	Lancaster	25, 45
Pure mathematics	Edinburgh and Heriot-Watt (joint)	25, 45	Imperial Warwick Oxford	40, 45 35, 45 35, 40
Applied mathematics	St Andrews Edinburgh and Heriot-Watt (joint)	25, 45 15, 50	Cambridge, Oxford Warwick	30, 45 30, 30
Computer science and informatics	Edinburgh Glasgow	35, 50 30, 50	Cambridge Edinburgh, Imperial, Southampton	45, 45 35, 50
Electrical and electronic engineering	Glasgow	20, 45	Leeds Bangor, Surrey	30, 50 30, 40
General engineering and mineral and mining engineering	Heriot-Watt (petroleum)	20, 45	Cambridge Imperial (bioengineering)	45, 45 25, 50
Civil engineering	Dundee	15, 70	Imperial Swansea	40, 55 35, 60
Architecture and the built environment	Edinburgh and Edinburgh College of Art (joint)	25, 45	UCL Sheffield (architect) Cambridge	35, 40 35, 35 30, 50
Town and country planning	Aberdeen Heriot-Watt	20, 40 20, 30	Sheffield Cambridge	35, 30 30, 45
Geography and environmental studies	St Andrews Edinburgh	20, 40 20, 35	Bristol, Durham, Cambridge, Oxford	30, 40
Economics and econometrics	Glasgow Edinburgh	25, 50 25, 45	LSE Essex, Oxford, Warwick	60, 35 40, 55
Business and management studies	Strathclyde	25, 40	London Business School Imperial	55, 30 35, 50
Law	Edinburgh	30, 25	LSE UCL Oxford	45, 30 35, 40 35, 35

1 Source: RAE 2008 quality profiles by unit of assessment. See www.rae.ac.uk/Results/selectUOA.aspx

RAE Unit of assessment	Scottish university	4*, 3* (%)	Top UK university	4*, 3* (%)
Politics and international studies	Glasgow	15, 30	Essex, Sheffield Aberystwyth	45, 30 40, 25
Social work and Social policy and admin	Edinburgh	30, 35	LSE Bath	50, 30 35, 40
Sociology	Edinburgh	30, 25	Manchester Essex, Goldsmiths, Lancaster	40, 20 35, 25
Anthropology	Aberdeen Edinburgh St Andrews	30, 25 25, 35 25, 30	LSE Cambridge (social anthropology)	40, 25 35, 35
Psychology	St Andrews Glasgow	20, 45 20, 40	Cambridge Oxford	35, 50 35, 45
Middle Eastern and African studies	Edinburgh	25, 45	Oxford Cambridge	40, 30 35, 40
Asian studies	Edinburgh	10, 25	SOAS Oxford	30, 35 25, 30
European studies	Heriot-Watt	10, 20	Southampton LSE	30, 25 20, 45
French	Aberdeen	20, 35	Oxford King's College London (KCL)	30, 35 25, 40
German, Dutch and Scandinavian languages	Edinburgh St Andrews	25, 25 20, 40	KCL Cambridge, Oxford, UCL (German)	25, 35 25, 30
Celtic studies	Edinburgh Glasgow	20, 30 10, 50	Cambridge University of Wales Centre for Advanced Welsh and Celtic Studies Ulster	45, 30 35, 45 35, 40
English language and literature	Edinburgh Glasgow, St Andrews Aberdeen	40, 30 35, 35 30, 35	York Exeter Queen Mary Oxford De Montfort	45, 30 45, 20 40, 30 40, 25 40, 20
Linguistics	Edinburgh Queen Margaret	30, 30 10, 30	Edinburgh Queen Mary Essex	30, 30 25, 55 25, 35
Classics, ancient history, Byzantine and modern Greek studies	St Andrews	15, 45	Cambridge Oxford KCL, UCL	45, 25 40, 30 30, 35
Philosophy	St Andrews Stirling Edinburgh	40, 35 25, 45 20, 45	UCL KCL Sheffield	45, 30 35, 40 35, 35
Theology, divinity and religious studies	Edinburgh St Andrews	30, 30 20, 30	Durham Cambridge	40, 25 35, 25
History	Aberdeen Edinburgh, Glasgow	30, 30 25, 35	Imperial Cambridge, UCL	40, 40 40, 25
Art and design	Dundee Glasgow School of Art	35, 20 25, 25	Reading (Typography & graphic communication) Royal College of Art	45, 35 40, 25
History of art, architecture and design	Glasgow St Andrews	45, 40 15, 60	UEA Glasgow	50, 20 45, 40
Communication, cultural and media studies	Stirling Queen Margaret	10, 60 10, 30	Leicester (museum studies) Westminster UEA	65, 30 60, 30 50, 40
Music	Glasgow Edinburgh	35, 30 20, 45	Royal Holloway Birmingham, Manchester	60, 30 50, 35

APPENDIX F
TERMS OF REFERENCE FOR THE STUDY

Expression of Interest for: Strategic Analysis of the Scottish Higher Education Sector's Distinctive Assets

Background

British Council

The purpose of the British Council is to create international opportunities for the people of the UK and other countries and build trust between them worldwide.

British Council Scotland builds long-term international relationships and trust between the peoples of Scotland and other countries, mindful of the international priorities of the Scottish government. It does this through working with partners to achieve the following global outcomes for the benefit of Scotland:

- enhanced UK leadership of 'and shared learning from' international education
- new ways of connecting with 'and seeing each other through' the arts
- stronger global citizenship among people in the UK and worldwide.

Higher Education

Higher education supports a knowledge economy and is increasingly recognised as vital to a nation's global competitiveness. It is the ultimate enabler for extending our global reach and influence. The British Council helps to position the UK as an international leader in higher education by working to enhance learning, teaching, research and knowledge transfer, and to increase the international competitiveness of the UK and partner countries.

Our corporate plan 2011–15 renews the focus on internationalising higher education, with UK leadership at the heart of this, as well as the creation of new opportunities for collaboration between government, higher education institutions and business.

The strategic priorities for British Council's global policy in higher education are as follows:

- bringing UK institutions to new global audiences
- showcasing the UK at events of international importance
- developing skills and leadership in the education sector
- harnessing the power of education in achieving international development goals.

Scotland is home to an extremely diverse and successful HE sector, comprising 19 institutions that range from small specialist establishments to some of the oldest and most highly regarded universities in the world. British Council Scotland works with our HE partners to promote the sector overseas, broker partnerships in key markets and engage Scottish institutions in relevant global policy discussion. Our key partnerships are with higher education institutions and national organisations in Scotland, including Universities Scotland, the Scottish Credit and Qualifications Framework (SCQF) Partnership, the Scottish Qualifications Authority (SQA), the Scottish Funding Council, Scottish Development International (SDI), the Scottish government – in particular its Education Directorate – and national initiatives. We also work closely with international higher education policy bodies overseas with an interest in Scotland.

Purpose and objectives

It is in the above context that British Council Scotland wishes to commission a strategic analysis of the Scottish HE sector's distinctive assets in comparison with the rest of the UK at both a European and global level. The objective is to have a demonstrable evidence base of national-level assets that can feed into the story that we tell about Scotland's HE sector overseas and the areas where it has a unique and distinctive contribution to make. Consultation with the sector has identified a need for this as, while there is a substantial amount of data available, there is a need to update, collate and present this in an accessible form that represents a comprehensive Scotland-wide overview demonstrating the totality of the international comparative strengths of the sector.

The analysis will have the following uses:

- it will assist the HE sector in Scotland in demonstrating comparative capacity, promoting and responding to opportunities in specific markets, subject and thematic areas
- it will enable British Council Scotland and other national bodies to direct overseas experts and visit requests to the most appropriate Scottish contacts
- it will inform a comprehensive set of marketing and case-study materials highlighting comparative strengths
- it will provide British Council Scotland with an evidence base for our partnership and programme strategy in education and for the promotion of Scottish expertise in our global programmes.

Deliverables

It is anticipated that this strategic analysis will produce the following outputs:

- an executive summary of Scotland's comparative strengths in HE that can be used by a range of partners as a briefing and information document for external visitors. It is expected that this will not exceed five A4 single-side pages and will be produced in line with British Council brand and messaging guidelines
- a full analysis that supports the executive summary that can be shared with national-level HE sector partners, and includes a range of case studies. It is expected that this should not exceed 30 single sides of A4
- A set of recommendations for internal British Council use regarding potential partnerships and initiatives. Within this, particular focus should be given to alignment with the Global Policy Strand of the Internationalising Higher Education Initiative and priorities of Scottish stakeholders, including the Scottish government.

Approach and methodology

The consultant will be expected to work with British Council Scotland to define the exact parameters and methodology to be used. However, it is anticipated that the analysis will draw on a key set of quantitative indicators, desk research and qualitative data obtained through consultation with a range of stakeholders. British Council Scotland will support this process by providing access to relevant corporate strategies and brokering introductions with stakeholders.

Analysis should be cross-disciplinary and across a range of themes including research and innovation, learning and teaching, and knowledge exchange. In addition, analysis should cover a diverse range of subject areas including life sciences, arts and humanities, business, finance, energy, education, science, engineering and the creative industries. Geographical focus should also be broad in nature as the British Council is particularly keen to gain an all-Scotland picture based on analysis of the comparative UK, European and global strengths of all 19 HE institutions. In addition, it is anticipated that analysis will make reference to a synopsis of the universities' international strategies.

It is expected that quantitative indicators that will be used as a base for comparative international analysis at UK, European and global level will include but not be limited to:

- Research Assessment Exercise (RAE) scores
- funding awarded from UK and European Research Councils
- funding awarded from other UK and international sources including commercial and industrial as well as foundations and charities
- international student numbers, by institution and subject area
- significant international partnerships that align with the international priorities of both the British Council and Scottish government.

It is expected that consultations will be carried out with, but not limited to, the following stakeholders:

- the Scottish government, education and international units
- Universities Scotland
- Scottish Development International
- the Scottish Funding Council
- the Quality Assurance Agency for Higher Education, Scotland
- British Council Scotland
- the British Council Strategic Business Unit leads for higher education
- the British Council Regional Education leads for key markets (e.g. India, China, and the Americas).

Qualifications and experience

It is expected that the successful candidate will have:

- at least ten years' experience of working in the HE field, preferably in Scotland at the national policy level
- experience of working in the area of international higher education with a focus on Scotland
- substantial experience of research and analysis
- experience of drafting reports and briefs, including those for external publication.

TimeLine

Expressions of interest, no longer than two A4 single-side pages, summarising a proposed approach to the analysis as well as an indicative budget, should be submitted to Linda Hamilton at Linda.Hamilton@britishcouncil.org with accompanying CV.