

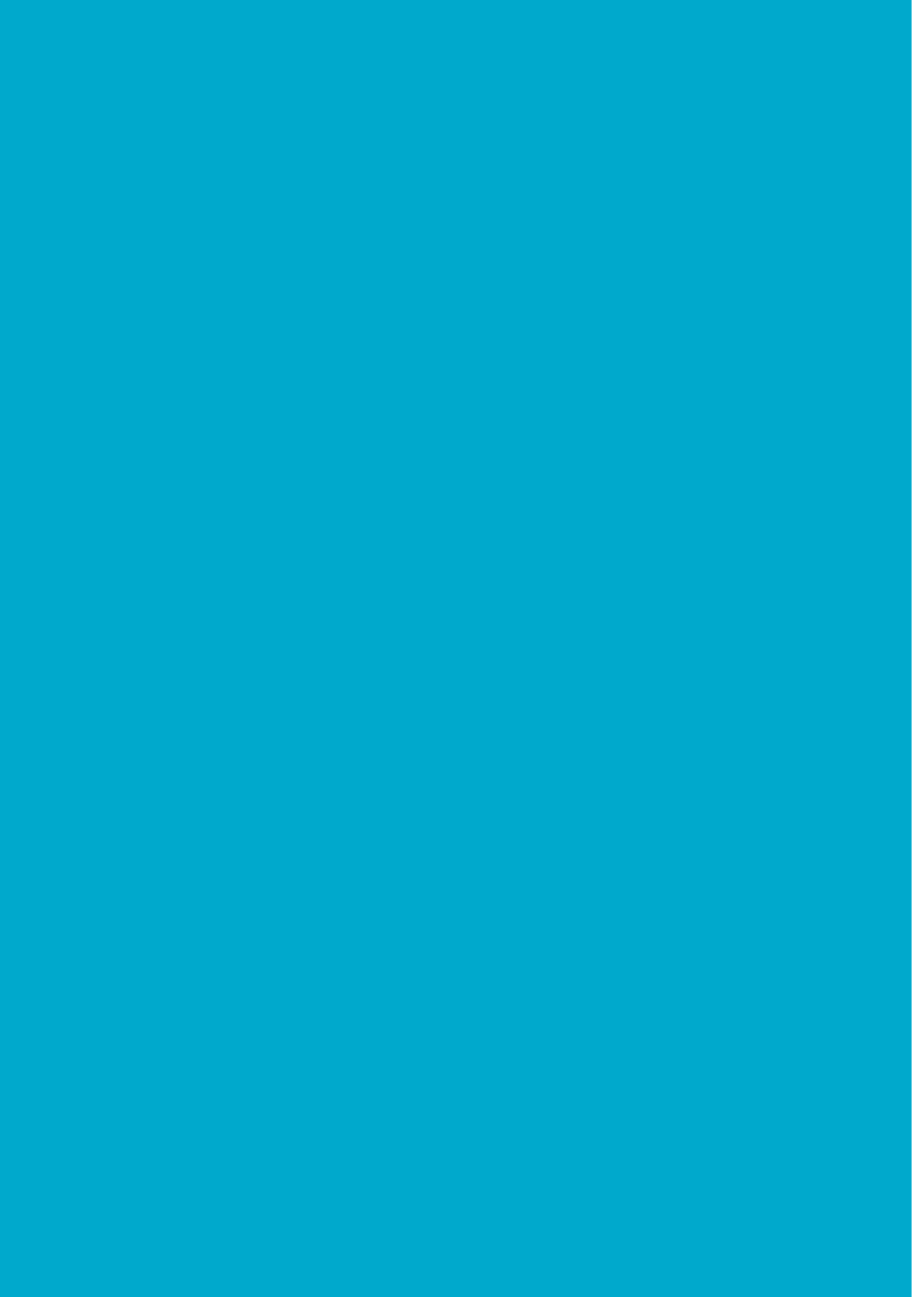


Wellbeing Scotland

The contribution of higher education to Scotland's wellbeing

Highlights:

- The social benefits of higher education are large – possibly larger than the direct labour markets and macroeconomic effects.
- Graduates help contribute to social capital. Experience of higher education plays a major part in creating effective, confident, good citizens. There are strong positive correlations between societies with higher proportions of graduates and higher levels of volunteerism, political and environmental awareness and racial, sexual and cultural tolerance.
- Universities create the right conditions to attract clusters of diverse talented, creative and open-minded people, beyond the university, that are responsible for driving forward the modern economy.
- Universities are major providers of and investors in Scottish art and culture. Scottish universities directly invested over £10million in cultural engagement activities in 2005/06 .
- Nearly one million people enjoyed a diverse range of cultural activities organised by Scottish universities in 2005/06.
- There are 491 sports clubs affiliated to Scottish universities representing nearly 22,000 members. More than three-quarters of Scottish universities pro-actively target their facilities at non-student community groups. Over 70,000 people took this opportunity.
- Universities are closely engaged with their local communities - tailoring activity to suit local needs including social cohesion, reducing social and economic inequalities, enhancing skills, supporting social enterprise and raising aspirations.



Introduction

Being fit and healthy, taking a walk in the park, going to the cinema or to an exhibition, listening to your favourite music, feeling like you belong, breathing clean air, doing something you haven't done before, learning something new, making a difference... These are small things in themselves but together they are what make it worth getting up in the morning.

This is the first major attempt to capture the effect higher education has on Scotland's wellbeing. By drawing on national and international evidence this report will show how the 'multi-dimensional' nature of higher education institutions makes them uniquely able to make an enormous contribution to the wellbeing of individuals and of society as a whole. It will show:

- The experience of higher education improves the lives of graduates (Part Two)
- The amount of higher education in a country has a strong correlation with measures of the 'good society' (Part Three)
- Higher education results in a 'clustering effect', attracting talented, creative and open-minded people from diverse backgrounds to Scotland (Part Four)
- Universities are major providers of and investors in cultural and social capital in Scotland (Part Five)
- Universities play a significant role in Scotland's sporting scene from producing the next generation of top athletes to providing sports facilities for the community (Part Six)
- Universities are active in widening participation and in promoting community engagement (Part Seven)
- Higher education has an important effect on the policies and practices which make Scotland a better and more attractive place in which to live (Part Eight)

This is a first contribution. We recognise that there is more valuable work which can be done to measure the impact of higher education on wellbeing. Nevertheless, we think the case is strong.

Part One: What is wellbeing?

The study of wellbeing is comparatively new and both 'wellbeing' and 'quality of life' are difficult concepts to define. The OECD suggests:

"[Wellbeing] has no set definition, but it is generally viewed as encompassing a range of social conditions such as a healthy lifestyle and environment, social cohesions and trust, civic engagement, a robust family life, and general life satisfaction (in addition to economic outcomes such as earnings and income)."

There are many things which contribute to our wellbeing. Among them are:

How well we look after our health and how involved we are with others

- Aside from the obvious health benefits, physical activity helps people feel better which is reflected in improved mood, reduced anxiety, improved physical self-perceptions, and improved self-esteem, particularly in those with initial low self-esteem.

Being able to participate in a strong and vibrant cultural life

- Studies have shown that people who increase their amount of leisure activities, including cultural activities, over a ten year period report more positive feelings about their quality of life by the end of that period than those who had not.
- Qualitative results show that when evaluating quality of life respondents placed a high importance on both social and solo activities that involved culture.

Living in communities with a wide range of activities and organisations with which we can interact

- A long-term evaluation that mapped a series of cultural data against other indicators of quality of life found a correlation between level of cultural participation and subjective perceptions of the community quality of life as “excellent”.
- Cultural action builds community organisational capacity, empowers local groups and nurtures active, engaged citizenship. It is also key to nurturing a confident, cohesive and questioning identity.

Having an attractive, healthy environment around us

- 85 per cent of people feel that the quality of public space and the built environment has a direct impact on the way they feel and 91 per cent believe that well designed outdoor spaces improve people’s quality of life.
- Trends in public value surveys show increasing awareness and concern for the environment and climate change and an increase in the importance people attach to this.

Part Two: Changing people’s lives

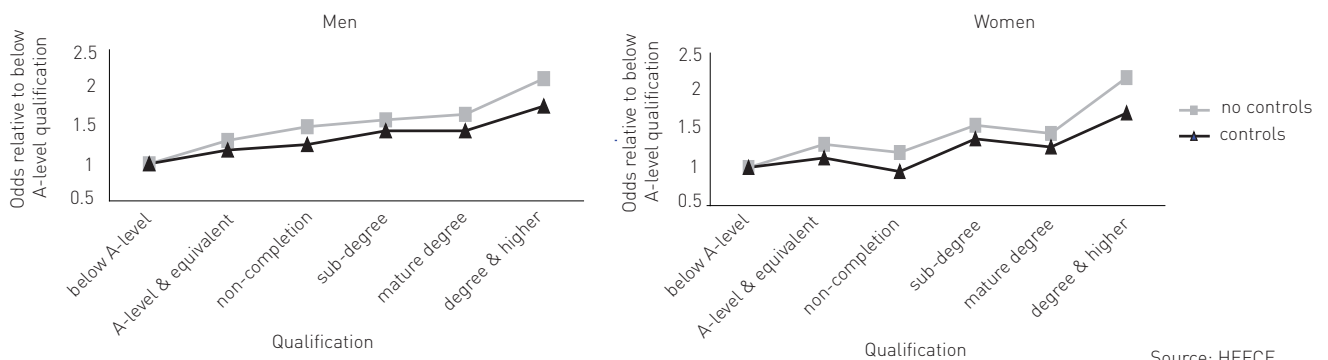
While the economic benefits of getting a degree are well recognised, the other benefits an individual will experience are less well known. In its recent assessment of the wellbeing of nations the OECD concluded that the “social benefits of education are large – possibly larger than the direct labour markets and macroeconomic effects”.

The conclusion to be drawn from the evidence in this section is not that graduates are ‘better’ than non-graduates. But it is intended to show that a higher education improves life chances in more ways that simply economic ones.

Being healthy

Self-reported quality of health improves markedly with increased educational attainment; the OECD found that health was one of the clearest benefits of education. A UK study showed that even after controlling for variables such as socio-economic status, education was still a determining factor in the reported health of both men and women. The results were statistically significant.

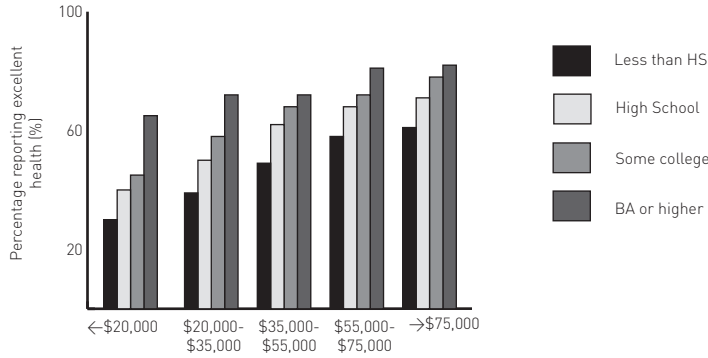
Figure 1: The likelihood of excellent health by qualification



Source: HEFCE

Even if you factor out the effect of the increase earning potential of graduates there remains an important link between higher education and health. Figure two shows that in a study in the US no matter what income bracket, those with a higher education report better health. Depending on income bracket, graduates are between 20 and 100 per cent healthier than those who fail to complete high school.

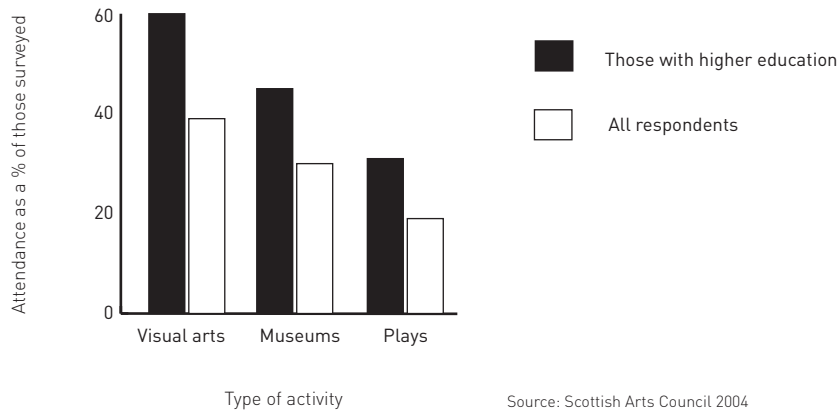
Figure 2: Percentage of adults reporting excellent or very good health by income and level of education



Being culturally active

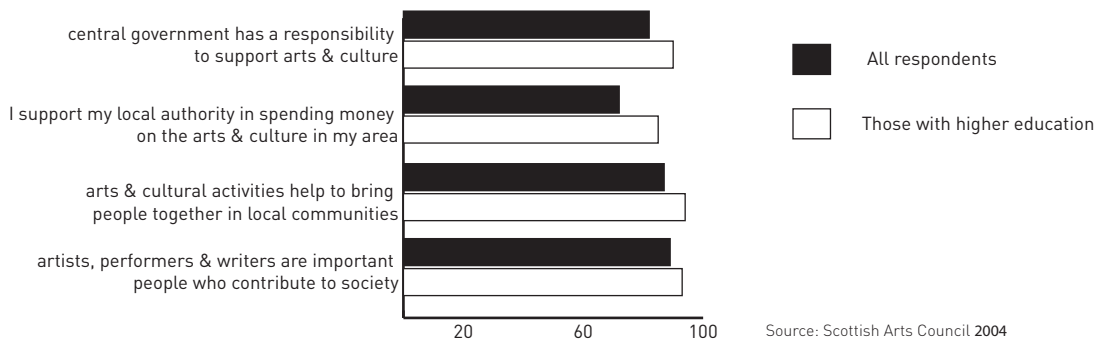
A survey into the enjoyment, attendance and participation in the arts in Scotland showed that graduates were amongst the most likely to value and to regularly attend cultural events and exhibitions. The Scottish Arts Council survey found that on average graduates were 10 per cent more likely to attend plays than the average respondent, nearly 15 per cent more likely to visit a museum and over twenty per cent more likely to attend visual art exhibitions.

Figure 3: Attendance at cultural events



Graduates were also shown to value the arts more than the average respondent. Graduates were marginally more positive in their attitudes to artists and performers and their role in society than the average respondent. Differences in opinion between graduates and the average sample became more marked where questions related to the prioritisation and financial support of the arts; 85 per cent of graduates would support their local authority spending money on arts and culture in their area, whereas only 71 per cent of all respondents felt this way.

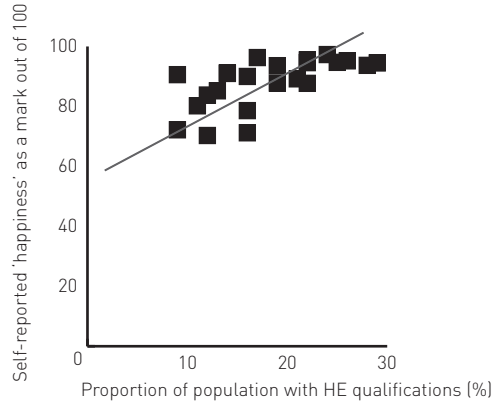
Figure 4: Attitude towards the arts and culture



Being happy

Studies which measure individual happiness tend to look at the national level. The graph below shows that there is a clear link between having a degree and feeling happy. While other factors undoubtedly play a part, a statistical analysis shows that there is indeed a strong link between how happy a person is and the likelihood that they are a graduate (the likelihood that this is a product of chance is less than one per cent).

Figure 5: Self reported 'happiness' in the proportion of the population with higher education qualifications



Part Three: Higher education and the good society

Many of the positive characteristics graduates possess as a result of their higher education 'spill-over' to the rest of society to the direct and indirect benefit the wider community. Societies with high proportions of graduates demonstrate greater social and civic responsibility across a number of indicators including:

- awareness and interest in politics and environmental issues
- tolerance for racial, sexual and cultural diversity
- likelihood to volunteer and other social goods.

The graphs below plot the proportion of the population with a higher education qualification in different OECD countries against certain attitudes, characteristics and activities.

The evidence in this section illustrates that graduates are not 'better' or 'more moral' than non-graduates but show that where a society has high levels of higher education the society as a whole is likely to be more open, active and tolerant. This is not only a function of the attitudes of graduates themselves but of higher education on wider social attitudes.

Volunteering

On average populations with a higher proportion of people with higher education qualifications also have higher proportions of people that volunteer. The correlations vary in strength across the type of voluntary activity; particularly strong correlations are evident in voluntary activity for environmental, political, human rights and cultural groups.

Figure 6: Likelihood to volunteer

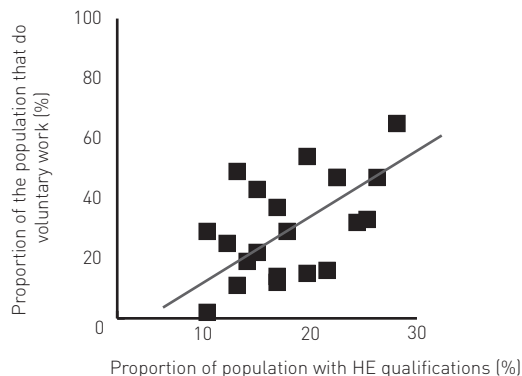
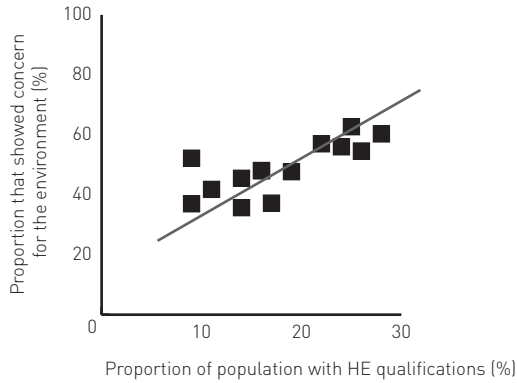


Figure 7: Concern for the environment



The scatter graphs indicate there are positive correlations between higher education and various measures of social capital. Whilst correlations can not be interpreted to mean causation, as there are a number of determining factors at work, it is possible to test their statistical significance using a Spearman's Rank correlation.

Spearman Rank correlations

Spearman's Rank correlation compares several pairs of data and assesses the strength and direction (negative or positive) of a relationship between two different variables. The results will always be a value between 1.0 and -1.0. A result close to 1.0 indicates there is a strong positive relationship between the variables whereas a result close to -1.0 suggests a strong negative correlation. The final aspect of a Spearman Rank correlation calculation takes the sample size into account before determining the likelihood that this correlation occurred by chance. A result higher than five per cent is statistically insignificant.

Figure 8: Statistical significance of the correlations between higher education & "good society"

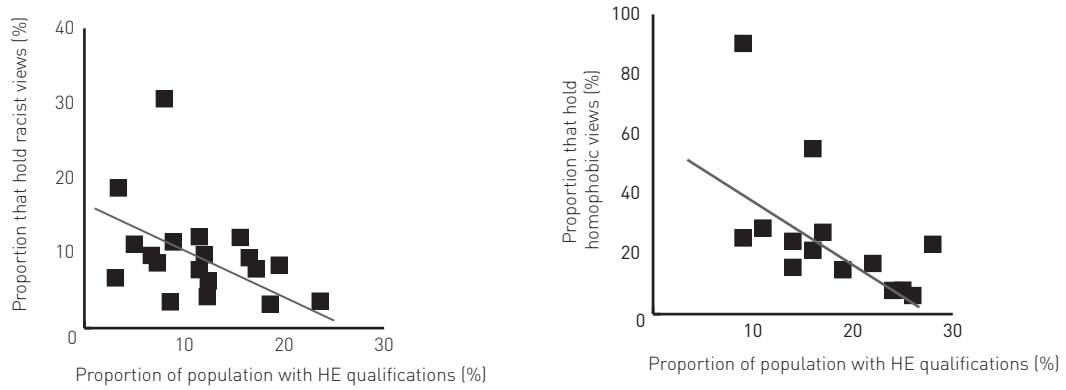
Correlations between the proportion of people with higher education qualifications in the population and a range of characteristics	Value	Possibility that correlation occurred by chance	Strength of correlation
A value between 1.0 and 0.5 indicates a positive correlation			
Likelihood to volunteer	0.68	Less than 1%	Good
Volunteering: Likelihood to be actively involved in environmental or human rights groups	0.68	Less than 1%	Strong
Concern for the environment (as indicated by willingness to support investment in environmental policy)	0.75	Less than 1%	Strong

Negative relationships also exist between the relative proportions of people with higher education and a series of other characteristics; beliefs and behaviours that would be considered as contradictory to the development of a 'good society'. Figures 9, 10 and 11 suggest a negative relationship between the proportion of the population with higher education qualifications and the proportion of the population to hold prejudiced views such as homophobia, racism and xenophobia. Figure 12 also suggests that societies with higher proportions of graduates are less inclined to spend time alone, a behaviourism that sociologists identify as counterproductive to the development of social capital.

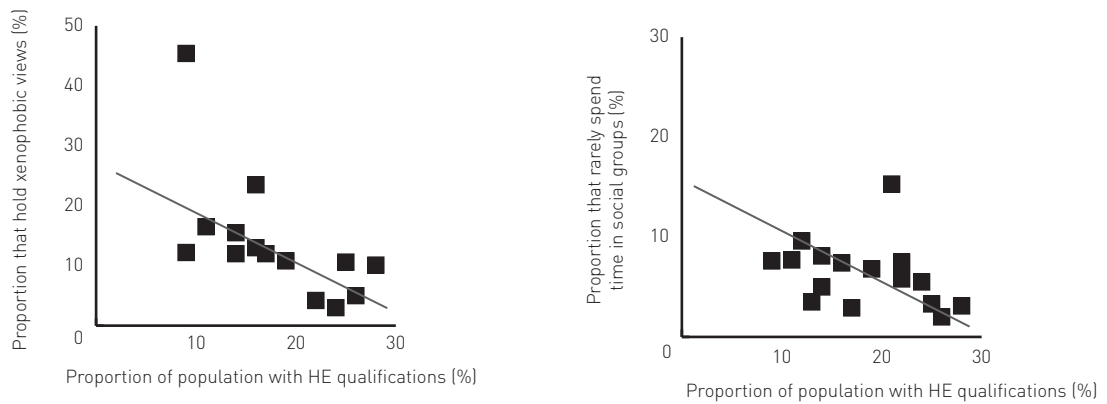
Social commentators have noticed a general decline in the level of social capital amongst developed nations over the past two decades. Sociologist Robert Putman argues that the presence of a strong higher education sector can help to stem to the deterioration of social capital in developed nations:

"they [human capital and social capital] are clearly linked in a kind of virtuous circle with education tending to increase social capital and at the same time social capital tending to increase educational performance. The decline in social capital in the US might have been even sharper had it not been for the quality and strength of our higher education."

Figures 9 & 10: Correlations between higher education and the likelihood of being racist and homophobic



Figures 11 & 12: Correlations between higher education and the likelihood of being xenophobic and avoiding social contact



As with the previous correlations, these results were tested for their statistical significance using the Spearman Rank Correlations. Their significance holds up.

Figures 13: Correlations between higher education and a range of views

Correlations between the proportion of people with higher education qualifications in the population and a range of characteristics	Link to HE	Possibility that correlation occurred by chance	Strength of correlation
A value between -0.5 and -1.0 indicates a negative correlation			
Likelihood to hold homophobic views	-0.68	Less than 1%	Good
Likelihood to hold racist views	-0.68	Less than 1%	Strong
Likelihood to hold xenophobic views	-0.66	Less than 5%	Good
Likelihood to rarely spend time in social groups	-0.55	Less than 1%	Strong

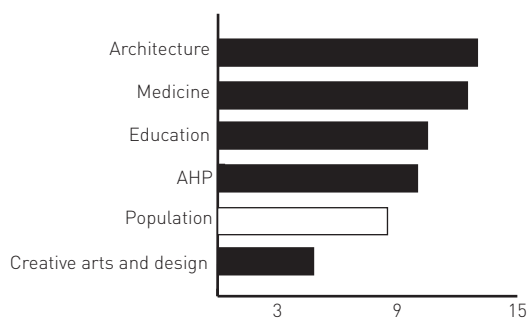
Part Four: Producing and attracting talented, creative people

Higher education makes a substantial contribution to the educational, physical and cultural well being of Scotland through the 54,000 graduates it produces every year:

- Of those 54,000 thousand, **7,415 are medical professionals**, who will care for the health of our nation.
- **5,420 are teachers** who will be responsible for educating the next generation.
- **1,375 are qualified architects and planners**, responsible for shaping the towns and cities around us.
- **2,230 will become the artists, musicians, actors and designers** that help to ensure we have creative and diverse artistic expressionism and the vibrancy that makes our country cultured.

In many subjects Scotland attracts and educates proportionally higher numbers of students than the rest of the UK. There are proportionally more students studying medicine, architecture and teaching in Scotland than the rest of the UK relative to population size.

Figure 14: Number of students studying chosen disciplines as a proportion of the UK



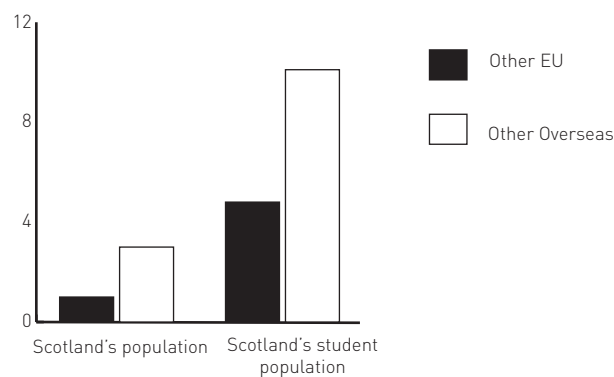
Number of students studying in Scotland as a proportion of the UK

Scottish universities recruit talented and creative staff and students from a wide variety of racial and ethnic backgrounds, economic statuses, sexual orientations, and national origins, making university communities clusters that are open to free speech, self-expression, political activism and a broad diversity of ideas.

The economist Richard Florida argues that the creative people that drive the modern economy favour diversity and a wide variety of social and cultural options. As universities provide the conditions for openness and self-expression Florida believes they help establish the conditions required to attract and retain creative talent beyond the university and spur growth in the economy. Florida's assertions are based on a study of American institutions but they might have particular applicability to Scotland as his study found the potential for influence is greater in smaller regions where universities play larger and more significant roles in shaping regional norms and values. Scotland has 11.9 per cent of the UK's universities and 10.4 per cent of the UK's undergraduates (FTE) relative to only 8.5 per cent of the UK's population.

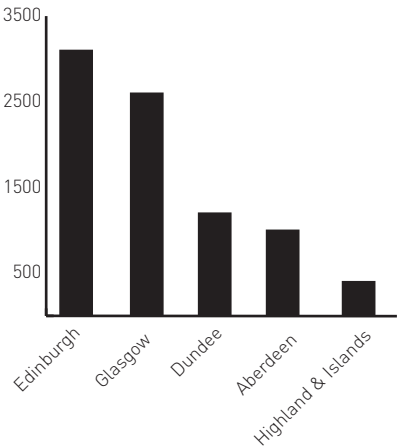
Data on the profile of Scotland's student population is limited. However it is possible to look at the diversity of nationalities within Scotland's student population – talented people that were attracted to Scotland because of its universities. Scotland attracts high numbers of international students. 15.6 per cent of Scotland's students are of non-UK domicile giving Scotland a greater proportion of international students than anywhere else in the UK. The scale of this diversity is highlighted when compared to Scotland's population as a whole; Scotland's population is only 0.88 per cent non-UK and only 2.5 per cent "other overseas" as registered in the 2001 census.

Figure 15: Scotland's population and student population by nationality



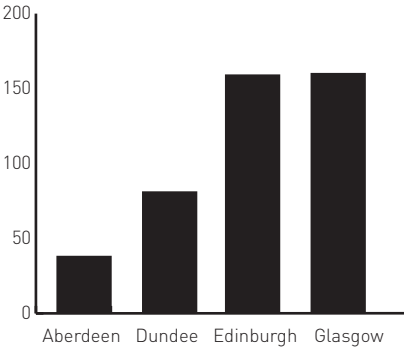
The table below shows the dispersal of the creative arts and design students that are currently studying in Scotland. The majority of creative arts and design students cluster in the central belt of Scotland due to the high concentration of higher education institutions in this area however more than 2,500 creative types choose to stay in Dundee, Aberdeen and the Highlands and Islands as a direct result of the reputations of our higher education institutions.

Figure 16: Number of creative arts and design students by Scottish region



Scotland’s higher education institutions also employ internationally renowned creative arts and design staff as lecturers and researchers. Many of these are employed in the institutions on a part time basis. Their part time employment allows them to pursue a portfolio career and remain actively involved in Scotland’s art scene outside of academia.

Figure 17: Distribution of creative arts and design staff as employed in Scottish higher education institutions (Staff FTE 2004/05)



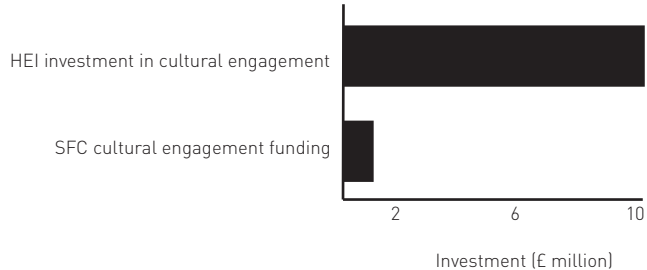
Part Five: Investing in culture

Scotland is home to two world famous art schools and an internationally renowned academy of music and drama. These institutions are central to the vibrancy of Scotland’s cultural life. But all 20 institutions contribute to Scotland’s arts and culture by committing significant financial resource and staff time. This is not a bolt-on or peripheral activity. This is intrinsic to the work of universities. They mount exhibitions, hold lecture series, festivals, performances, they are guardians of historic buildings and rich historic archives and collections, they host writers in residence and run community arts projects.

It is very difficult to find meaningful impact measures of the arts and culture. The indicators presented in this section of the report are borrowed from analyst Francois Matarasso in his attempt to establish a ‘local cultural index’. Matarasso suggests that assessing the frequency of performances, audience figures and the diversity of events on offer helps to measure the cultural vibrancy of a community.

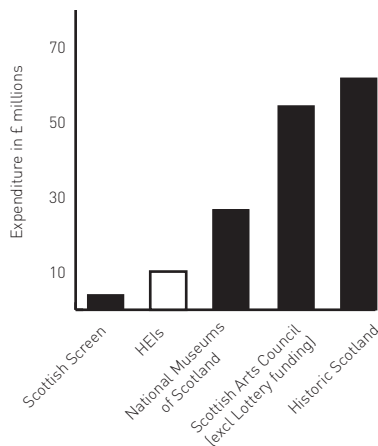
Scotland’s 20 higher education institutions invested more than £10 million in cultural engagement activities in 2005/06 alone. This actually underestimates universities contribution as data was available for only sixteen institutions. Even this estimate of £10 million is 20 times as much as the dedicated funding stream for cultural engagement that came on-stream last year.

Figure 18: Investment in cultural engagement by source



The table below demonstrates the expenditure of the higher education sector in 2005/06 as compared to the expenditure of some of Scotland’s national agencies for the arts and culture. Understandably the higher education sector does not equal the expenditure of the agencies that have national responsibility for arts and culture. However figure 18 shows that universities’ expenditure on cultural engagement is significant. At one sixth of the total expenditure of the Scottish Arts Council, Scottish universities can be seen to make a very real financial contribution to Scotland’s cultural vitality.

Figure 19: Expenditure on the arts and culture



Nearly 1,000,000 people enjoyed a diverse range of cultural opportunities organised by universities in 2005/06

Scottish universities house more than 40 museums, galleries and theatres - all of which are open to the public. They range in size between small intimate venues to centres of national and even international significance. The galleries and arts spaces that are owned and run by Scotland’s higher education institutions are enjoyed by large numbers of the public. Over 680,000 people visited some of the sector’s biggest galleries

and art centres in 2005/06. To help put this figure into context the galleries and arts spaces of Scotland’s universities were visited by just over 50 per cent as many people as the six National Galleries based in Edinburgh.

A further 250,000 people attended university, museums, heritage buildings and lectures throughout 2005/06. These figures understate the real picture as many universities do not keep records of visitor numbers. However, this figure also compares well to other cultural providers as it is nearly one fifth as many people that visited the six National Museums of Scotland in the same period. Visitor numbers for attendance at music, theatre and drama events are less well recorded across the sector as a whole. However the RSAMD alone attracts around 100,000 people to events throughout the year making a significant cultural contribution to Scotland.

Figure 20: Visitor numbers to University and National Museums and National Gallery attractions

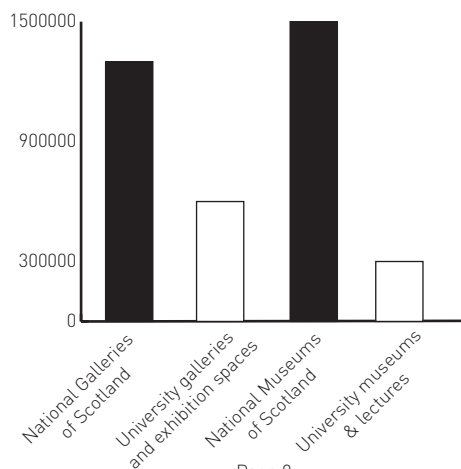
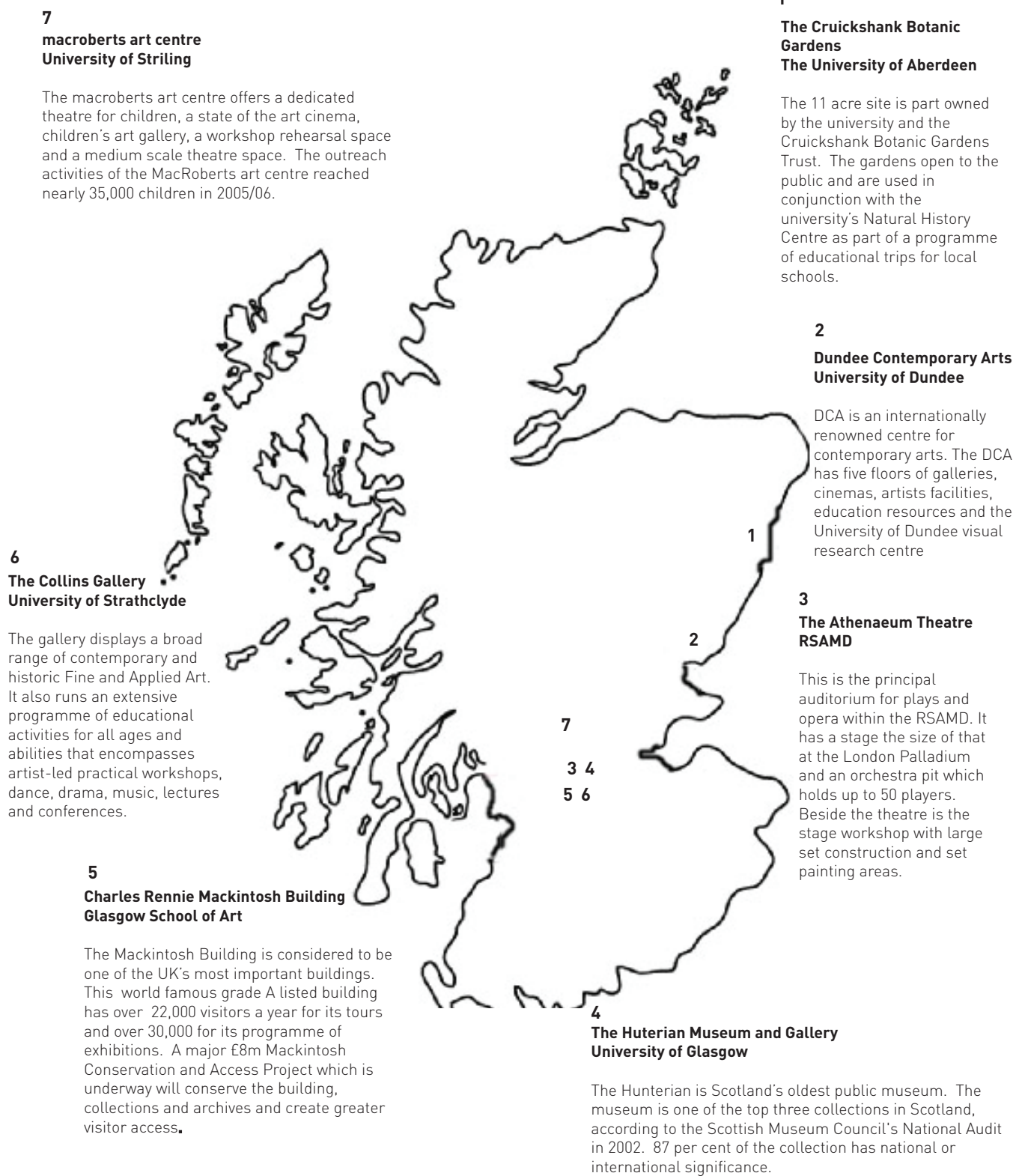


Figure 21: A snapshot of creative spaces and their locations in Scotland



A recent audit of the higher education sector’s cultural engagement activities found that the twenty-one institutions have relationships, partnerships or associations with over 80 different local, regional, national and international organisations or agencies dedicated to the arts and culture. Of those 80, nearly 60 have a specific Scottish focus.

In 2005/06 alone Scottish universities organised or played a major role in 26 local and national festivals and 28 major one-day events as well as eight other ongoing projects or initiatives. The diversity of events is enormous; including celebrations of Scotland’s Celtic heritage to digital games festivals; from high fashion to the built environment. Like the more permanent university-owned galleries and museums these events attract large audiences and many have a huge impact on the region.

Figure 22: Some examples of cultural engagement organised by higher education institutions in Scotland

Cultural or community engagement events organised (or significantly contributed to) by HEIs in Scotland			
Art	Ideas Factory Look (city-wide art festival) HAGGIS (Hunterian Gallery) Art in the Park Annual Degree shows Glasgow International	Culture	Word Festival North East Storytelling festival Dundee International book Prize Edinburgh International Book festival National Poetry Day StAnza Poetry Festival The James Tait Memorial Prize for Biography and Fiction
Music	International music prize North Atlantic Fiddle Convention Aberdeen Youth music initiative Scottish International Piano Festival Sound Festival of Contemporary Music StringFest Dundee Guitar Festival Academy Feis Scottish Music Tour	Community Groups	Young Muslims Aberdeen Young Roots Initiative Encourage Scottish International Childrens' Festival WOW Childrens Magazine Club Asylum YouthWorks
Design	Six Cities Festival of Design Living Cities Mackintosh Festival Block Architecture Festival Doors Open	Fashion	Annual undergraduate and postgraduate fashion shows Catwalk Fashion Shows at Harvey Nichols London Fashion Week Shanghai Fashion Week
Film	Edinburgh International Film festival Edinburgh African Film Festival	Science	National Science Week Discovery Days Café Scientifique Fabulous Finds Day Orkney International Science Festival
Digital	Techfest Edinburgh International Games Festival Dare to be Digital	Other	Tartan Week Year of Highland Culture Heritage & Environment Conference Highland Heritage Club

Scottish higher education institutions are committed to expanding their cultural contribution. They all have cultural engagement strategies and have set targets to increase and better record the volume of activity undertaken. Scottish higher education institutions are committed to expanding their cultural contribution. They all have cultural engagement strategies and have set targets to increase and better record the volume of activity undertaken.

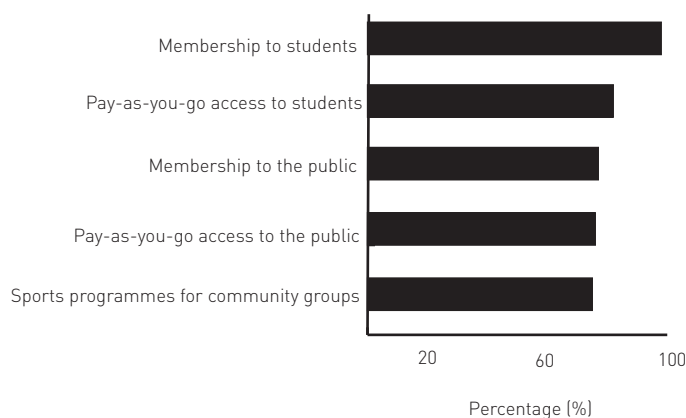
Part Six: Contributing to sport

Universities make a significant contribution to sport in Scotland. They produce the athletes that go on to represent Scotland successfully at national and international level, they support sports and athletics clubs, organise intra-mural sports competitions and build and maintain sports facilities that are amongst the best available in Scotland and are accessible to students, staff and wider communities.

Universities provide students with excellent opportunities to participate in sport. An audit of sports participation in 2006 found that 88 per cent of institutions offer their students membership of university sports facilities and 82 per cent offer 'pay as you go' access. In 2005/06 there were over 2.2 million visits to sports facilities in the 11 institutions that provided data. Scotland's universities support 491 affiliated sports clubs representing 21,676 members and almost two-thirds (63 per cent) of institutions organise competitive intra-mural programmes. Evidence suggests that the increased opportunity to participate in sport whilst at university has a lasting effect on students; a study in Glasgow showed that graduates maintained their activity levels at higher rates than the average population well after graduation.

Scotland's universities make their sports facilities widely available to community groups beyond the institution. The study found that 77 per cent of institutions offer membership and/or 'pay-as-you-go' access to their sports facilities to the general public. Three quarters of institutions (75 per cent) proactively target sports programmes at specific sections of the local community. These activities accounted for over 70,000 visits in 2005/06 of which, 29,000 were made by children and 32,000 by 'older people' (over 50s). Again these figures under-estimate the true figure as not all respondents were able to provide figures for each target group.

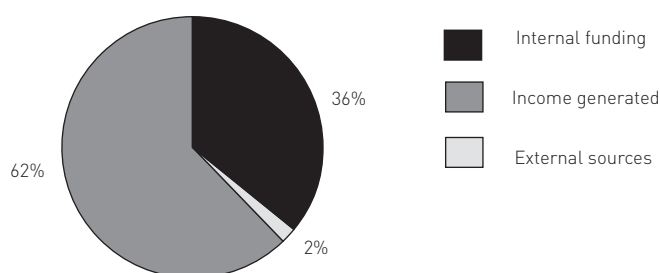
Figure 23: Percentage of institutions that offer access to sports facilities



Resources invested in sport

The scale of university activity in this area requires universities to invest considerable resources into sport. The total revenue budget for the 15 university sports departments that were able to respond to the 2006 survey was £12 million (which excludes revenue budgets for academic courses). Institutions generate a large percentage of this money themselves; nearly two-thirds (62 per cent), an estimated £7.4 million, was generated through facility hire, sales, membership and other means. A further 36 per cent was provided through internal funding and two per cent was obtained from external funding sources.

Figure 24: Total revenue budget for university sports departments



Scottish universities nurture future top athletes by offering sports scholarships and bursaries to talented sports men and women. 77 per cent of institutions provide support to student performance athletes and 71 per cent of institutions offer financial support in the form of sport scholarships/ bursaries. In 2005/06 there were 381 students studying in Scottish institutions with a sport scholarship or bursary support.

In addition, 41 per cent of institutions provide a range of services for performance athletes outside of the university community including access to facilities, physical conditioning, administrative support and cash awards. Other institutions offer support indirectly through a variety of sports agencies; 59 per cent of institutions work with the Scottish Institute of Sport and 65 per cent work with their Area Institute of Sport.

Many of Scotland's higher education institutions are home to Scotland's national sports teams and play host to major sporting events. Scotland's National Hockey Academy is based at Edinburgh University's Peffermill site, Stirling University hosts the National Academies for Tennis and Swimming, and Heriot Watt university has been the centre for Scottish Squash for over a decade.

Part Seven: Engaging with communities

It is a misperception that universities are detached from their wider communities. Higher education institutions across Scotland are actively engaged with their communities in a variety of ways. A study by the ESRC suggests that new relationships between universities and their environments have developed since the expansion of the sector helped to diversify both institutions and the student body.

The university sector in Scotland adds value to the excellent work being done by the agencies and organisations tasked with regenerating and strengthening communities and narrowing the gap between the advantaged and the disadvantaged. In addition universities are involved in a number of projects and initiatives of their own. A survey of institutional engagement with their wider communities was undertaken. The results show that institutions co-ordinate a broad range of projects with diverse sections of their communities. The maps below plot these activities according to the objective of the project and the area of impact.

It is important to emphasise that this is by no means an exhaustive list of the range of community engagement activities. However, it is hoped that this sample helps to demonstrate the range and geographic diversity of engagement activities throughout Scotland

Examples of higher education community engagement

Promoting social cohesion & community mindedness



Glasgow University Student Community Action (GUSCA) University of Glasgow	Coordinates student volunteers in the local community. Activities include assisting in classrooms, tutoring refugee children after hours and coaching children in sports clubs. An initiative called "sexpression" involves students in the delivery of sexual health education to young people in a way the pupils can relate to.
Centre for Older Person's Agenda Queen Margaret University Edinburgh	The centre promotes and facilitates the empowerment of older people bringing their experience to policy and practice development. The Centre provides learning opportunities that contribute to the mental health and well-being of older people and provides training and support for professionals.
Youthworks Royal Scottish Academy of Music & Drama	The Youthworks music centres work in areas of social deprivation to enhance wellbeing and to provide the vehicle in which culture can make a difference to an individual's life. The Sighthill Centre in Glasgow caters mainly for asylum seekers and those of non-Scots origin and teaches through the aegis of Scottish traditional music. The Youthworks project reaches 1,474 school-aged pupils.

Developing & enhancing skills



The SWELL Project UHI Millennium Institute	SWELL supports the work of local learning centres in some of the most remote communities in the Highlands and Islands offer policy makers the opportunity to use the centres to meet community needs, improve skills and economic competitiveness and strengthen already fragile communities.
The Clinical Faculty The University of Paisley	The University's School of Health, Nursing and Midwifery has a formal partnership, known as the 'Clinical Faculty', with NHS Greater Glasgow and Clyde. The partnership, which was the first of its kind in Scotland, benefits the NHS Board as health care professionals have greater access to CPD and research expertise at the university and the university benefits from increased teaching contributions from active health professionals.
Scottish Documentary Institute Edinburgh College of Art	The Scottish Documentary Institute aims to create synergy between the practice and study of documentary film, to link industry and academia - in Scotland, the UK and internationally. The Institute organises public talks, screenings and seminars. It runs production and training initiatives for new filmmakers.

Reducing social & economic inequalities



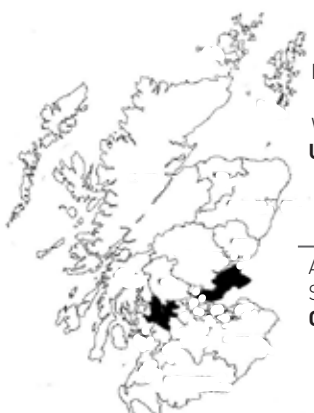
<p>Interdisciplinary Research Centre Heriot-Watt University</p>	<p>The centre acts as a national centre of expertise on issues of social inclusion and service provision. It aims to raise the level of standing and policy significance of service access and consumption and how to promote social justice and stimulate wider community-based regeneration.</p>
<p>The Social Dimensions of Health Institute University of St Andrews University of Dundee</p>	<p>The institute was established to wrestle with tough problems such as inequalities in health and health care. Central to this is communication with stakeholders and the centre brings academics together with research-active health professionals from Tayside and Fife.</p>
<p>Raploch Urban Regeneration Company University of Stirling</p>	<p>The university works with the Raploch Urban Regeneration Company which aims to turn around the prospects of the area. The university shares knowledge, expertise and resources and facilities for the benefit of Raploch residents. The university also benefits as it is able to apply research and knowledge transfer in a local community setting at the forefront of regeneration in Scotland.</p>

Developing and supporting social enterprise



<p>Conservation & Development in Sparsely Populated Areas (CADISPA) University of Strathclyde</p>	<p>CADISPA works with remote and rural communities in Scotland to find sustainable development solutions to economic, social and environmental problems. The project informs and empowers local people in regard to development options so progress is made with a sound community mandate. The research outputs are also used in undergraduate and postgraduate teaching and students are actively involved in helping communities research their own responses to local sustainability.</p>
<p>Castlemilk and Carmunock Community wind-farms Glasgow Caledonian University</p>	<p>The idea of an urban community wind farm capable of income generation to help community regeneration was conceived by the University's School of the Built and Natural Environment. The University offers field research and expert advice on renewable energy and sustainability issues. The University has been approached to scope the feasibility of such projects for other community-based wind-farm projects in the area.</p>
<p>Intergration through Enterprise Napier University</p>	<p>The pilot project helps entrepreneurs from refugee and immigrant communities in Glasgow to overcome the barriers they face in setting up businesses. The University supports the new enterprise through tailored business creation workshops that offer help with business plans, market research, sourcing funding, and business networking. This project is part funded by the European Social Fund under the EQUAL Community Initiative Programme which exists to combat all forms of discrimination that prevent most disadvantaged groups from accessing the labour market.</p>

Raising the aspirations of Scotland's school children



<p>Working Together to Improve University of St Andrews</p>	<p>The project aims to raise university aspirations among 14 & 15 year school pupils in Fife. Undergraduate students act as one-to-one role models and mentors for the pupils throughout the completion of a short project. This gives pupils an advance taste of the responsibility and freedom of university-style learning.</p>
<p>Artists & Designers in Schools Glasgow School of Art</p>	<p>Artists & Designers in Schools encourages GSA students to run creative projects with pupils in primary schools in disadvantaged areas. More than one hundred students are involved and the work culminates in an exhibition of the work at Glasgow School of Art. GSA also holds portfolio workshops and surgeries in secondary schools with low participation in higher education to support and encourage pupils.</p>

Part Eight: Sustaining our environment, improving our surroundings

Scottish universities contribute to the sustainability not only of Scotland but to the rest of the world. Over 70 per cent of Scotland's higher education institutions are actively involved in a variety of ways:

- Research and development into new forms of power generation
- The creation of new technologies that help to sustain our environment
- Transferring our knowledge to industry and government so that they can implement cutting-edge thinking in this area
- Making a valuable contribution to the theories that exist about how to best meet the challenges of sustainable development
- Helping to conserve Scotland for future generations
- Educating the next generation on the importance of environmental awareness in schools and local communities
- Providing expertise to the developing world

This is not an exhaustive list of initiatives. It is intended to illustrate the range and focus of environmental and sustainability projects in Scotland.

Figure 25: Examples of higher education sector's contribution to the environment

Research and development into new forms of power generation
Marine Energy Research Consortium Uiveristy of Edinburgh, The Robert Gordon University, Heriot Watt University, University of Strathclyde (and Lancaster University). The EPSRC-funded Supergen Marine Energy Research Consortium is a collaborative research programme looking at marine energy conversion and delivery. The intention of the programme is to achieve a step change in the development of generic marine energy technologies which have the potential to make a significant contribution to UK renewable energy production and can help to meet the Government's ambitious target of a 60 per cent reduction in greenhouse gas emissions by 2050.
Creation of new technologies that help to sustain our environment
Centre for the study of Environmental Change and Sustainability: Edinburgh University . CECS promotes interdisciplinary environmental research and strengthens links with external users of environmental research. Active research areas include the causes and impacts of global environmental change and the technologies and policies needed to achieve sustainable development and management of the world's natural resources.
Transferring knowledge to industry and government
Abertay Centre for the Environment: Abertay University Dundee. ACE works with Small and Medium Enterprises (SME's) across Eastern Scotland to develop new, more environmentally friendly products and services and to devise processes and working practices that reduce environmental costs and improve profitability. Ace has joint partnerships with a range of agencies to deliver 'best practice'. Over 220 public and private organisations have benefited from the services ACE provides. The Centre for Environmental and Waste Management: University of Paisley. CEWM is a centre of excellence in health and safety, waste management and environmental management. Services provided by this unit include: environmental audit and training, waste audit and minimisation, and health and safety advice and training.
Contributing to the debate around environment issues
SUE-MoT: Dundee University, St Andrews, Glasgow Caledonian (Loughborough & CPSRC). The long-term aim of the programme is to develop models to promote sustainable development for all decision-makers associated with urban development, helping them take account of the scale, life cycle, location and context of the project at every stage of the development process. SUE-MoT investigates and identifies barriers to sustainability assessment and provides tools and approaches to overcome them helping to improve stakeholder awareness and competence. Mackintosh Environmental Architecture Research Unit (MEARU): Glasgow School of Art. The Research Unit is a dedicated science-led green research unit focusing on sustainable environmental design and to user-centred, low energy, eco sensitive architecture

Helping to conserve Scotland for the future

Institute for Coastal Science and Management: University of Aberdeen. The Institute conducts research into a variety of marine issues. These include the management of the marine resources of Scotland with special reference to Aquaculture, management of coastal conservation sites, measurement of coastal change and interpretation of recent and historical tsunami evidence.

Centre for Mountain Studies: UHI Millennium Institute. The centre's research and knowledge transfer focuses on mountain environments and the people that depend on them. Specific areas include research to establish best policy to ensure the careful management and long-term flow of benefits to both mountain and lowland populations. The Centre works with a variety of local, national and international agencies.

Educating the next generation

Caledonian Environment Centre: Glasgow Caledonian University. The Centre manages the "Bright New Scotland" schools education programme which is a team of environmental specialists, qualified teachers and Eco-Schools assessors who promote environmental citizenship in Scottish schools. CEC also manages "Remade Scotland" to strengthen recycle material markets in Scotland.

Providing expertise to the developing world

The David Livingstone Centre for Sustainability: University of Strathclyde. The Centre has a multi-disciplinary framework which enhances environmental, economic, engineering, design and sustainable development expertise. Specific research fields include sustainable environment, infrastructure, transportation, environmental assessment, innovation and technological progress which are applied to the issues of disaster management, human development, alleviation of poverty and environmental protection in both developed and developing countries.

The Centre for Environment and Human Settlements: Heriot Watt University. An international centre that provides teaching, training, research & development in the fields of environment and human settlements (civil society roles, services and housing) as the developing world undergoes rapid urbanisation. The Centre works with a wide range of government, private sector, voluntary and international organisations.

Conclusion

Wellbeing Scotland is the first major analysis of the contribution that higher education makes to Scotland's wellbeing. What is remarkable is the range of ways in which higher education contributes; from the impact it has on the lives of graduates and the spill-over benefits to wider society; as significant producers of arts and culture; as clusters for talented and creative people; as institutions that actively engage with their local, national and international communities; and in ensuring that Scotland is conserved and protected for future generations. The concept of wellbeing escapes easy definition as there are so many elements to it, just as there are so many elements to higher education in Scotland. And, as wellbeing is core to the human experience these activities are at the very core of Scotland's 20 higher education institutions.

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