


# Examples of the impact of research from Scottish universities

## Audit of higher education in Scottish universities



This supplement accompanies the main report [Audit of higher education in Scottish universities](#) . Scottish universities' research extends across many areas, including medicine and technology. This supplement describes examples of the impact of research discoveries by Scottish universities.

University	Examples of research impact
The University of Dundee	<p><a href="#">Exploring the link between diabetes drugs and reductions in cancer rates</a></p> <p>Research at the University of Dundee found that a drug commonly used to treat diabetes, metformin, may help prevent cancer. One study demonstrated that people with diabetes taking metformin were 30 per cent less likely to develop cancer than those taking other medications. This research has also had a significant impact on cancer research. Worldwide, 52 case-controlled trials have been carried out to examine the effect of metformin on various types of cancer.</p>
The University of Edinburgh	<p><a href="#">Reducing blood transfusions cuts deaths, risks and costs</a></p> <p>Declining supply and increasing demand for blood products, alongside high screening costs, means that blood for transfusions is becoming increasingly scarce and expensive. Research carried out at the University of Edinburgh identified new ways to reduce unnecessary transfusions and conserve blood supplies. The research has also influenced UK guidance on transfusions and has led to 'cell salvage'; that is the recovery of lost blood during surgery which is then re-infused into the patient. This practice is now carried out by all NHS boards in Scotland that undertake major surgery. Between 2001 and 2012 there was a 22 per cent reduction in the number of transfusions in Scotland and England, which has generated savings of £100 million per year. It is estimated that 500 lives are saved per year due to the reduction in blood transfusions.</p>

Cont.

University	Examples of research impact
Glasgow Caledonian University	<p>Poverty – Challenging perceptions and informing practice</p> <p>Research was carried out on the public perceptions of poverty, tackling child poverty, and media coverage of poverty in Scotland. The study found that realistic representations of poverty were scarce and few documentaries contributed to improving public understanding of the causes or experience of poverty. This research informed the third sector and campaigning organisations when revising their media engagement strategies. The findings also secured pledges from political leaders to challenge negative portrayals of those in low income communities, and to avoid stigmatisation of those experiencing poverty. Further research helped to develop workshops and training resources for policy makers and public sector practitioners in Scotland. It went on to inform future policies and guidance for tackling child poverty in Scotland</p>
The Open University in Scotland	<p>Developing age-friendly kitchens</p> <p>Scotland and the UK's population is ageing. Open University researchers have been working with design and manufacturing teams to build and test kitchens that will allow people to remain in their homes as they age. The research has been the first to incorporate the views of older people into kitchen design, and it has helped identify user-friendly design features that will benefit not only older people, but people of all other ages. Outputs from the research include 'The easier kitchen: making it happen, a design guide for older people, kitchen designers, manufacturers and installers.'</p>
Queen Margaret University	<p>Developing pioneering technologies to help diagnose and treat speech disorders</p> <p>QMU's expertise in speech sciences research is helping to improve the lives of children and young adults who have severe or long-lasting speech communication difficulties. With over twenty years' experience of research into speech production and the creation of speech technologies, the research team is applying its skills to help improve the diagnosis and treatment of speech disorders. Collaborating with NHS speech and language therapists, charitable funders and schools, the team has trialed a range of techniques which have had significantly positive impacts on people with enduring speech problems who were struggling to improve their speech with traditional speech therapy methods.</p>
Royal Conservatoire of Scotland	<p>What's Going On?</p> <p>Published in 2003, <i>What's Going On?</i> explored the provision of music tuition for young people in Scotland. The report estimated that up to 100,000 children in Scotland would like to take part in musical activities if they had the opportunity. It also identified several barriers to participation, which were used to inform a framework for improving access to music tuition. The most significant outcome was the creation of the Youth Music Initiative (YMI). The YMI is Scotland's national youth music programme. Creative Scotland reported 1.7 million attendances to the YMI between 2003/04 – 2010/11. In 2015, an independent evaluation of the programme highlighted its positive impact in tackling inequality, contributing to the Curriculum for Excellence, supporting the development of new jobs, and empowering communities.</p>

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Scotland's Rural College (SRUC)	<p>Improving animal welfare during transportation</p> <p>Sixty billion animals are transported world-wide each year. Research undertaken by SRUC examined ways to improve animal comfort during transport. The research assessed the effects of different temperature conditions on animals being transported and provided a basis for establishing objective levels of comfort. The research findings led to European Directives on Animal Welfare being changed to improve animal comfort during transport and has informed changes to transport vehicles' design and use.</p>
University of Stirling	<p>Developing a successful rapid Ebola detection test</p> <p>Research by the University of Stirling as part of a Wellcome Trust project led by the Pasteur Institute of Dakar in Senegal, helped develop a rapid saliva test for ebola contained within a suitcase-sized mobile laboratory. Three mobile labs operated in Senegal and Guinea during the most recent ebola outbreak, and evaluations showed the test was reliable. The project successfully developed and deployed a low-cost mobile laboratory using a rapid, highly sensitive and specific assay which can be stored at room temperature and operated by local teams with its own energy supply. This meant the test could be set up quickly, in areas without healthcare clinics or hospitals, and allowed the quick detection of the ebola virus.</p>

Source: Audit Scotland using information supplied by Scottish universities



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