1. Summary of the impact

University of Glasgow-led research on assessment and learning directly shaped assessment policy and practice in Scotland, the UK and Norway. This included the development and implementation of the Assessment is for Learning Programme (AifL) and the Curriculum for Excellence (CfE) as well as changes to testing and monitoring under the Scottish Survey of Literacy and Numeracy (SSLN). The University of Glasgow’s contribution to the internationally renowned Assessment Reform Group prompted further curricular and assessment changes both within and beyond the UK. Most recently the impact of the Glasgow research has extended to Norway where it influenced the Norwegian Directorate of Education’s changes to assessment policy.

2. Underpinning research

Assessment is for Learning and Curriculum for Excellence

The Scottish Government’s Assessment is for Learning (AifL) Programme provides a coherent system through which Scottish schools and teachers use assessment to support and enhance pupils’ learning. The Government’s decision in 2001 to introduce AifL was informed by an extensive policy review and stakeholder consultation carried out by University of Glasgow staff, led by Professor Hayward (University of Glasgow, 1999-present). Hayward subsequently led numerous research projects, in collaboration with practitioners and policy-makers, which had a major impact on the development and success of the AifL Programme (e.g. Hayward et al (2005)).

In her article, ‘The complexities of change: formative assessment in Scotland’ written with Spencer (Hon. Senior Research Fellow, 2002-present) and published in the international and peer-reviewed Curriculum Journal in 2010, Hayward examined the reasons for the success of the AifL Programme. The research provided strong evidence that the use of formative assessment had a significant impact on pupils’ self-esteem, engagement with work, and attainment. Findings from the research led to the creation of a ‘change model’. For educational change to be sustainable, Hayward argued, it had to be designed to have Educational, Personal and Professional and Systemic integrity. Learners, teachers, policy makers and researchers had to work collaboratively with a common aim, to improve learning (Educational Integrity). The engagement of each person and each community was crucial to the success of the innovation (Personal and Professional Integrity). Practice changed when all communities were involved in design, development and evaluation leading to future action (Systemic Integrity).

Further research undertaken by Hayward and Spencer examined reading and assessment. Hayward and Spencer (2006) summarises this research which demonstrated that the validity of reading tests in national testing and monitoring programmes was poor and that perceived policy inconsistencies at the systemic level conflicted with the promotion of formative assessment. The research concluded that teacher professionalism, rather than any kind of testing system, should be the basis of assessment in schools.

Throughout the AifL programme, and as the findings and recommendations from the projects were disseminated, the curriculum in Scotland was being reformed through the Curriculum for Excellence (CfE). Launched by Scotland’s Minister for Education in 2004 and implemented in 2010-11, CfE radically transformed pre-school, primary, and secondary educational provision. The principles of the AifL Programme were influential in the creation and development of CfE. Reflecting this, the concept of curriculum was extended to include the totality of learning and assessment experiences and processes; the responsibility of learners has been recognised; the professional responsibilities and rights of teachers have been extended.
Assessment at Transition

Professor Hayward led the Assessment at Transition (AaT) project, funded by the Scottish Government in 2010-2012 (reported in Hayward et al 2012). The research was designed using the Educational Integrity model, developed by Hayward and Spencer in 2010 (see above), to explore how research might better support the alignment of assessment policy and practice. The context for the research was the challenge of progression in learning during the transition from primary to secondary school. However, the issues which emerged applied more generally to any point of transition, such as those within or between schools, and thus were of importance to every school and teacher in Scotland. The research used robust methodologies involving sophisticated data analysis of international research literature and Scottish policy documentation as well as extensive qualitative research with pupils and practitioners from 29 schools across 4 local authorities, meeting the international standards of originality and rigour. The research questioned the value of certain long-established transition practices and identified an alternative approach; this approach placed the use of a pupil-managed portfolio of their work designed to support dialogue between teachers and learners at the heart of the transition process. Several other key findings from the research demonstrated that:

- Teachers found it difficult to make confident judgements about the levels achieved by their pupils within CfE and would welcome more support; and
- Teachers recognised the importance of accountability but expressed concerns that some current practice could have negative effects on learning and teaching; there were significant problems with the ways in which schools used assessment information in their accountability systems; the report proposed new principles of accountability aligned with the principles of CfE.

Assessment Reform Group

The Assessment Reform Group, of which Hayward was a member, investigated formative assessment practices across the UK in a Nuffield Foundation-funded project (2006-8), entitled ‘Analysis and Review of Innovations in Assessment’ (ARIA), (Gardner at al, 2010). This research synthesised findings from analyses of assessment initiatives across the UK to produce insights to inform policy and practice. These included:

- Pedagogical changes necessary to ensure effective formative and summative assessment by teachers;
- Factors that facilitate or hinder successful uptake of assessment for improved learning by teachers; and
- The need for policy change at both school and system levels to ensure a productive balance between accountability in terms of standards and the quality of pupils’ learning.

Hayward made a distinctive and unique contribution to this ARIA research, based on her extensive record of research on these issues in the Scottish context.

3. References to the research

4. Details of the impact

Directly Influencing national curriculum policy and practice in Scotland

University of Glasgow research as part of the AiFL and ARIA programmes, particularly the research reported in Hayward et al., (2005); Hayward and Spencer, (2010); and Gardner et. al, (2010), are clearly reflected in the Curriculum for Excellence assessment strategy and supporting guidance. Under CfE, the central importance of assessment of and for pupils’ learning is now emphasised. The research shaped the new Curriculum by placing 3 key issues at the heart of CfE assessment policy and practice, namely: the emphases on self- and peer-assessment as means of developing learners’ reflectiveness about their own learning; the importance of developing teachers’ professional understanding of assessment matters and professional action on them; and, crucially, the need for initiatives to demonstrate educational, professional and systemic integrity.

Building the Curriculum 5: A Framework for Assessment (2011) sets out the Scottish Government’s assessment policy and guidance. The Framework directly references seven research projects and publications to which Hayward was a key contributor, demonstrating a high level of influence of the research on assessment within the national curriculum guidance. Additionally, Hayward and Spencer’s research on reading and assessment directly affected national assessment policy and practice. Hayward and Spencer (2006) identified a lack of provision for testing inference and evaluation skills in reading. Following meetings with the research team, Scottish Government officials agreed to evaluate these skills in the Scottish Survey of Literacy and Numeracy (SSLN), which monitors performance in literacy and numeracy at P4, P7 and S2 [1].

Two further projects, commissioned by the Scottish Qualifications Authority (SQA), Scottish Government and a local authority (Highland Council) in 2008, identified ways in which formative assessment could promote higher attainment in SQA high stakes examinations and examined the crucial contribution of the learner through self- and peer-assessment. This research for the Highland Council has informed both SQA support for practitioners and the development of policy and practice in that authority.

Shaping National Education Policy and Guidance to Teaching Professionals

Assessment at Transition (AaT), led by Hayward, influenced education policy and practice in a range of ways. The research team presented emerging research findings to representatives from Scottish Government and Education Scotland (the public body tasked with supporting quality and improvement in Scottish education) in a series of stakeholder seminars in late 2011 and 2012. These policy seminars were used as a forum to explore policy debates and build commitment amongst members of the policy community to the project findings. The Scottish Government subsequently published the findings on its website.

The final AaT report, written in a style intended to communicate clearly with different communities, was well received by education policy-makers and professionals, resulting in major impacts on policy and practitioner development in Scotland. As well as receiving positive public endorsement from Education Authorities [2], the project findings were used to influence national policy and guidance in a number of ways. For example, the AaT report demonstrated that teachers lacked knowledge and confidence about how best to assess the progress made by their pupils, in general, and how best to evidence attainment of a curricular level. These findings were directly addressed by Education Scotland’s 2013 publication Assessing Progress and Achievement of Levels in the 3-15 Broad General Education, which specifically advised schools and teachers on these matters.

The Scottish Government, following consideration of the problems of progression and of evidencing attainment outlined in the AaT report, tasked Education Scotland to identify significant aspects of learning in each curricular area, develop progression frameworks (rubrics) for these and bring together annotated exemplification of pupil work to illustrate attainment of a curricular level in terms of these rubrics. This was a major recommendation of the research. The research team contributed to the project planning with senior Education Scotland staff; George MacBride (Hon. Senior Research Fellow 2006 –present) from the AaT team also participated in the project [3].
Education Scotland also used the AaT research findings in their project work with mathematics practitioners across nearly all education authorities in Scotland. In this context, the research served as an evidence base for Education Scotland’s in-depth review of pupils’ responses to the 2011 numeracy survey of the Scottish Survey of Literacy and Numeracy [4].

**Stimulating Practitioner Debate and Influencing Strategy and Practice**

The *Times Education Supplement Scotland*, the market-leading education publication in Scotland, reported on the AaT work in August 2012 and followed this up in September 2012 with a 4-page feature on the research which reported that the issues raised by the AaT findings were of relevance to every teacher in Scotland. The report has stimulated discussion and changes in practice in local authorities across Scotland, as exemplified by:

- Hayward presented findings to all head teachers in Glasgow; DVD of the presentation sent to every Glasgow school and screened at a ‘Learning Day’ to every teacher in Glasgow; all teachers required to implement the findings into their professional learning programme [5].
- Falkirk Council’s Curriculum Support Officer used the report for discussions with headteachers; the Council used findings to revise advice to schools on assessment, profiling and reporting [6].
- The Quality Improvement Officer for Aberdeen City Council used the report to clarify difficulties in assessment at stages of transition; the QIO issued the report to all primary and secondary headteachers with whom she worked to inform their practice [5].
- In addition to web dissemination, more than half of Scotland’s Education Authorities (17) specifically requested the full AaT Report from the University of Glasgow.

**International Policy Influence: Informing Policy Developments in Norway**

Policy-makers and practitioners in Norway used the assessment research findings as an evidence base to develop their Education policy [7]. Hayward presented the research to the Norwegian Education Directorate in Oslo on 23 October 2012 as part of the Norwegian Assessment for Learning 4-year programme (2010-14) involving more than 400 schools. Hayward was invited to Norway as an expert on the basis of her ‘*more than 20 years of expertise in assessment issues*’. Reporting on the implementation of the project, the Norwegian Directorate drew on the findings of Hayward and Spencer (2010) and AaT to inspire many of the changes effected by the Norwegian programme. The related OECD Report *Building Trust and Accountability: the Assessment for Learning Programme in Norway* also cites the work of ARG, with which Hayward was significantly involved, as influencing Norwegian policy direction on assessment. The DVD of Hayward’s presentation in Oslo is a key feature of the Directorate’s Assessment for Learning web resource designed to aid and inform the work of teachers and practitioners across Norway.

**5. Sources to corroborate the impact**

1. (former) Leader of Assessment Team at Scottish Government can attest to impact of AifL programme on CfE assessment and the design of the SSLN [Details Provided].
2. TESS Coverage of AaT Research: 11 September 2009; 19 September 2011; 14 September 2012, including positive endorsement from Education Authorities in published letter from Deputy Director of Education, Glasgow City Council attesting to influence of report on assessment strategies and forward planning: 10 August 2012
3. Education Scotland Statement re: impact of research on curriculum development, professional guidance and practitioner debate. [Available from HEI]
4. HMIE email re: impact of research on Mathematics across the Curriculum [Available from HEI].
5. Education Scotland film of Hayward’s address to all Glasgow headteachers on AaT: Link
6. Quality Improvement Officer, Aberdeen and Curriculum Support Officer, Falkirk Council correspondence attesting to AaT impact on practitioner debate and policy guidance in local schools [Available from HEI]
7. Norwegian Directorate of Education Statement re: policy changes prompted by AaT [Available from HEI].