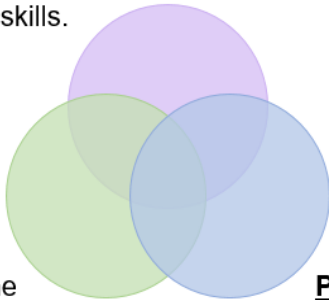


Institution: University of Strathclyde		
Unit of Assessment: C23 - Education		
Title of case study: Improving teaching and assessment practice and informing policy in literacy and attainment		
Period when the underpinning research was undertaken: 2012-2020		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
Prof Sue Ellis	Professor	04/09/1989 – 30/09/2020
Dr Vivienne Smith	Lecturer	01/06/2004 – 11/07/2020
Jenny Carey	Senior Teaching Fellow	16/08/2016 – present
Adele Rowe	Research Associate	01/10/2016 – 31/07/2018
Period when the claimed impact occurred: 2017 – July 2020		
Is this case study continued from a case study submitted in 2014? No		
1. Summary of the impact		
<p>Strathclyde literacy researchers developed the Strathclyde 3 Domains assessment tool and associated pedagogies that raised literacy attainment and increased teacher autonomy. Directly benefiting 18,700 pupils in Scotland, the tool enhanced teacher noticing, knowledge and attitudes, raised attainment, narrowed the attainment gap associated with poverty, and shortened the tail of underachievement. It has also informed national policies, pedagogies and assessments in Scotland, was labelled 'outstanding' by HMIE, and been embraced by Scottish government ministers and teacher educators in the EU, USA and Australia.</p>		
2. Underpinning research		
<p>Addressing the key national and international policy aim of raising literacy attainment, Prof Sue Ellis' research explored how literacy educators could learn to employ insights from many disciplines in literacy teaching and assessment, and in curricula, environment and system design. Adopting an 'ecology of practice' orientation, using design experiment methodology and social practice theories of teacher noticing and professional learning, Ellis and her team sought to understand and influence how knowledge is used when making decisions.</p>		
<p><u>Cognitive knowledge skills:</u> Phonological awareness; phonic/alphabetic skills; decoding cues and strategies; concepts about print; comprehension skills.</p>		
		
<p><u>Cultural and social capitals:</u> Home practices; values and beliefs; funds of knowledge; resources available; ideas; experiences; people; activities; home literacies.</p>		
<p><u>Personal and social identity:</u> Aspirations; read identity; friendships; view of self as a reader and how positioned by others; entitlement.</p>		
<p>In Phase 1 (2012–14) Ellis and Smith developed a theoretical tool and associated pedagogies, which positions literacy learning, teaching and assessment in relation to three knowledge domains: cultural and social capitals; personal and social identity; and cognitive knowledge skills (as outlined in the figure above). As a conceptual model for thinking about the whole child as a literate being, the Strathclyde 3 Domains assessment tool acts to shift teachers' thinking</p>		

about different kinds of evidence of literacy [R1]. It is also a practical tool to embed systems and promote sustainable change, shaping the evidence that informs decision-making discussions at school, class and individual child levels [R2]. These competing epistemologies explicitly broaden the evidence base for asset-based assessment possibilities. They contextualise literacy attainment with data from a child's life to identify levers for change, key shifts in learning, and systemic change to promote inclusion and equity. Trials of the tool at the Strathclyde Literacy Clinic saw student teachers noting observational data about their pupils within the 3 circles of the diagram. Using this data to identify key actions and learning priorities, the student teachers delivered responsive, tailored assessment and teaching with high-poverty, low-achieving pupils [R3, R4]. The tool enabled teacher 'noticing' and diverse pedagogic action, suggesting new instructional pathways and design principles for learning environments and systems. It also enhanced student-teacher agency, professional identity and social values.

From 2015-2017, the 3 Domains tool was trialled as a literacy intervention with 650 qualified staff teaching 12,696 pupils in a middle-ranked local authority (Renfrewshire). Findings indicated that the 3 Domains Tool widened the evidence pool teachers considered concerning children's literacy, regardless of staff experience [R5]. By focusing on overall learning, and including previously marginalised information about children's cultural/social capital and identity, educators made robust, situated decisions that increased attainment, inclusion, pupil equity and wellbeing. Systematic analyses of teacher surveys, teaching records, case studies, interviews and school spending records showed shifts in professional knowledge, noticing, pedagogic actions and resource use. Reliance on de-contextualised assessments, worksheets and programmes lessened, with more emphasis on personalisation, reader networks, pupil choice, book access, environments and children's literature. Observations showed an increase in in-task assessment and coaching, authentic activities and adaptive teaching.

Attainment analysis showed a statistically significant rise in average Standardised Age Scores on from 96.4 in August/September 2016 to 101.0 in May/June 2017, where the average score nationally is 100. The association between attainment and poverty significantly weakened, and the underachievement 'tail' shortened in every Scottish Index of Multiple Deprivation (SIMD) quintile [R5]. The tool aided nuanced delivery of sociologically informed change, and the study generated new knowledge about conditions for large-scale change: leadership; sustained attention; multiple fast-feedback loops; and flexibility to align professional knowledge, resources, planning, monitoring and assessment systems [R5, R6].

Phase 3 (2017–20) involved replication studies in Clackmannanshire (n=382) and the Glasgow Govan Cluster 10 (n=97). The Govan data focused on shifts in teacher attitudes/ knowledge in an urban area of high social deprivation, and Clackmannanshire's on how the 3 Domains Tool operated for small schools experiencing entrenched rural poverty. Changes in teachers' noticing, knowledge and empathy were documented [R6]. Case studies of 16 'hard-to-teach' children also showed the tool prompting theories of change explicitly rooted in children's lives, teacher agency and imagination; and system changes in instruction, pupil progress meetings, and planning.

3. References to the research (Strathclyde affiliated authors in **bold**)

- R1 Ellis, S.** and **Smith, V.** (2017). 'Assessment, teacher education and the emergence of professional expertise', *Literacy*, 51 (2), 84–93. DOI: <https://doi.org/10.1111/lit.12115>
- R2 Ellis, S.**, Thompson, I., McNicholl, J. and **Thomson, J.** (2016). 'Student teachers' understandings of poverty and learners' educational attainment and well-being : perspectives from England and Scotland', *Journal of Education for Teaching*, 42 (4), 483–499. DOI: <https://doi.org/10.1080/02607476.2016.1215542> [Submitted as REF2]
- R3 Ellis, S.** (2017). 'The Strathclyde Literacy Clinic: Developing Student Teacher Values, Knowledge and Identity as Inclusive Practitioners', in Menter, I., Peters, M. A. and Cowie, B. (eds), *A Companion to Research in Teacher Education*, 121–133. Springer. Available from <https://bit.ly/2HUXATg>

R4 Ellis, S., Thomson, J. and Carey, J. (2017). 'Generating Data, Generating Knowledge: Professional Identity and the Strathclyde Literacy Clinic', in Ng, C. and Bartlett, B. (eds), *Improving Reading and Reading Engagement in the 21st Century: International Research and Innovation*. Springer. <https://bit.ly/3seoVlv>

R5 Ellis, S., Anderson, J. and Rowe, A. (2017). 'Report on the Renfrewshire Literacy Approach August 2015–July 2017'. Project report, University of Strathclyde. Available from <https://bit.ly/33yYrR9>

R6 Ellis, S., Rowe, A., Carey, J. & Smith V. (2019). 'Teacher Noticing in Language and Literacy Landscapes of Practice', in Simpson, A., Pomerantz, F. and Ellis, S. (eds), *Developing Habits of Noticing in Literacy and Language Classrooms*. Routledge. [Submitted as REF2]

Notes on the quality of research: All journal articles and book chapters were peer-reviewed ahead of publication. **R1** won the Wiley Research in Literacy Education Award, as the best article in the Journal of Literacy in 2017 with regards to relevance, accessibility, originality, clear theoretical position, sound methodology, and critical analysis. The body of research was supported by GBP276,000 funding (e.g. Ellis (PI), Levers for change to narrow attainment gaps, Scottish Government & Renfrewshire Council, 05/10/2015-31/12/2018, GBP169,975.)

4. Details of the impact

The compelling evidence provided by the research of the benefits of the Strathclyde 3 Domains model led to widespread media attention between 2016 and 2019, including on BBC News and in the Herald, Times and Telegraph. Through the projects led by Ellis and her wider engagement activities, this research has:

- Raised attainment and narrowed the attainment gap associated with poverty;
- Improved teacher practice, through enhanced teacher noticing, knowledge and attitudes;
- Informed national policies relating to literacy programmes and assessments.

Raising attainment and narrowing the attainment gap associated with poverty

Participation in the project benefited 18,770 pupils in three local authority areas: Renfrewshire, which includes Ferguslie Park, Scotland's most disadvantaged community (12,696 pupils); Clackmannanshire, a small authority battling rural poverty (4,067 pupils); and Govan, one of Glasgow's poorest districts (2,007 pupils). As outlined in the underpinning research [**R5**, **R6**], literacy measurably improved, with benefit to all social groups and prior attainment levels, the biggest improvements being seen in children from economically disadvantaged homes previously performing 'below average'. A 2019 Her Majesty's Inspectorate of Education (HMIE) report praised Renfrewshire's approach, stating:

'Renfrewshire's innovative approach to improving children's and young people's attainment in literacy is supported by extensive professional learning for staff. It successfully empowers schools to prioritise the elements which suit their own context and has had a very positive impact across the authority. This has led to raised attainment in reading and writing, and a narrowing of the gap between the least and most deprived groups... The approach has had a very positive effect on the ethos of schools and is now having a strong influence on other areas of the curriculum... This work has been recognised nationally as outstanding practice.' [**S1**]

Another 2019 evaluation analysed average literacy attainment in nine 'Attainment Challenge' authorities, with Renfrewshire ranking top, Clackmannanshire fourth, and both demonstrating the narrowest attainment gaps. Renfrewshire's 76% average attainment exceeded the 72.4% average in more advantaged populations, with Clackmannanshire's literacy average (72.1%) almost equalling it [**S2**]. Further HMIE reports for schools in Clackmannanshire and Renfrewshire highlight the benefits of working with Strathclyde: '*partnership work with Strathclyde University in relation to developing reading shows promising signs of raising attainment through children's engagement in reading*'; '*children are benefiting from the focus on reading within the school*

improvement plan with children extending their range of formal and informal reading and exposed to more challenging texts'. [S3]

Improving teacher practice, through enhanced teacher noticing, knowledge and attitudes

Within the evaluative research [R5, R6], teachers that the 3 Domains Tool helped them to recognise and use children's social/emotional, cultural and cognitive assets in rethinking their literacy instruction, and widened the evidence base for formative assessment, teaching, intervention and environment/curriculum design:

- *'Previously, I did not really think about how a child's experiences of the world made such a difference to their understanding of what they read.'*
- *'I hadn't thought about our identities as readers as a factor in learning to read before, [but it's] extremely important in terms of motivation and engagement. It's something I now discuss with the children.'*
- *'I am more aware of what [the children] think about: the purpose of literacy, how much they read, what's their experience of literacy outside school, do they read anything in their home language or do they listen to any stories at all.'*
- *'[Previously,] I may have been aware of children who didn't go to the library or some parents not getting so involved but I didn't do anything with that information.'*

An HMIE report noted that Clackmannan Primary's (Clackmannanshire: 30% poverty) approaches to raising literacy attainment *'led to visits from other schools' [S3b]*. At Fordbank (Renfrewshire: 53.37% poverty), teachers report that parents feel better skilled in supporting reading and this is increasing their children's enjoyment of reading [S3c]; while at St Fergus (Renfrewshire: 93.43% poverty): *'The school has benefited from resources and the philosophy promoted . . . staff [are aware of] the need to ensure equity and close any attainment gap.'* [S3d]

In March 2018, St Anthony's Primary (Renfrewshire) became the first Scottish school to win the UK Literacy Association's 'Literacy School of the Year' award, earning Westminster Parliament Early-Day Motion and Cabinet Secretary congratulations. The Cabinet Secretary for Education and Skills noted Strathclyde's influence on the school's literacy achievements and describing the approach as *'a very effective programme that meets the needs of learners, but also involves parents and strengthens professional practice' [S4]*. Chief Executive of the Scottish Care Inspectorate, confirmed the approach *'narrowed the literacy attainment gap associated with poverty in Renfrewshire' and that it 'encouraged teachers to think beyond an assessment of current skills and knowledge and to actively promote positive identities and home-school links, the ethos became more inclusive, proactive and kind' [S5]*. He concluded: *'It is very definitely an intervention that affected teachers, families and changed lives'*.

As a result of its documented successes, Strathclyde's 3 Domains Tool is used in teacher training programmes internationally to enhance teacher practice. The tool is used in Nottingham University's Primary PGCE for its formative assessment assignment (approx. 50 Primary PGCE and 25–40 Teach Direct student teachers/year), and at Salem State University (USA) in its literacy methods course (approx. 40 early childhood and elementary student teachers/year) [S6]. The University of Sydney uses R6 as a 'core reference' with undergraduate Education students (approx. 100 per annum) and intends to incorporate it into more courses as redesigns occur, with their Dean of Education stating that *'I see the relevance of the model for all our professional experience units across programmes from Early childhood to Secondary teaching' [S6]*. It also informed teacher knowledge models in UCL's MEd 'Literacy Development' module (35 teachers/year); Nottingham University's intervention with 23 local schools Ofsted-rated as 'requires improvement'; Curtin University's (Australia) literacy intervention teaching; and the European Literacy Policy Network (23 EU member countries) [S6].

Informing national policies relating to literacy programmes and assessments

The Scottish government has an advisory role in curriculum policy. In 2017, Deputy First Minister and the Cabinet Secretary for Education and Skills, noted the objective ‘*to ensure a deeper connection between research and practice*’, identified the Strathclyde literacy research model as exemplary [S7]. To benefit from Ellis’ expertise, various government groups sought her contributions to Scotland’s Education Research Strategy, the First Minister’s Reading Challenge Advisory Group, and the Scottish Government Education Leaders’ Forum. She was appointed independent chairperson of the P1 Practitioner Forum, whose recommendations prompted the Minister to change P1 assessments and associated staff training [S8]. Ellis also gave evidence to the 2019 Education and Skills Committee Inquiry into Scottish National Standardised Assessments. The Committee’s detailed meeting notes emphasised the Strathclyde research focus on teachers not programmes; on contextualising assessment data with social data on culture and identity; and Ellis’ argument that teacher training ‘*is most effective when it is in the classroom setting and relating to children they are teaching*’ [S9a]. The resulting Committee recommendations cited Ellis’ view of the need to ensure a balanced, whole-system, low-stakes, contextualised use of standardised assessments [S9b]. As a result of the Committee’s recommendations and the recommendations made by the P1 Practitioner Forum, Scottish Government committed to a National Standardised Assessment Improvement Activity Plan in August 2019 [S10a]. This included the action to ‘*develop a practical framework and Code of Practice on the purpose and use of national standardised assessment data*’ and ‘*improve and enhance national standardised assessment guidance and support materials.*’ [S10a] To address this, since August 2019 all new training materials for standardised assessment data include a ‘Purpose and Use Statement’, which clarifies that ‘*National standardised assessment data should be used as part of a range of evidence... National standardised assessments do not replace or undermine teachers’ own judgements... nor should information from the assessments be used in isolation to form judgements about a child’s progress, to group children or to predict future achievement*’ [S10b].

5. Sources to corroborate the impact

- S1 Education Scotland, ‘Renfrewshire Council: Inspection of local authorities, 19/02/19’, Inspection Report, February 2019. <https://bit.ly/3oavhQg>
- S2 Scottish Government, Evaluation of Attainment Scotland Fund, 2019. <https://bit.ly/39x4KIT>
- S3 Collated HMIE Primary School Reports.
 - a. Todholm Primary (May 2019)
 - b. Clackmannan Primary (January 2019)
 - c. Fordbank Primary (August 2017)
 - d. St Fergus Primary (August 2018)
- S4 Letter from Deputy First Minister and Cabinet Secretary for Education and Skills, Scottish Government, to St Anthony’s Primary School, dated 6 March 2018.
- S5 Corroborating statement from Chief Executive, Scottish Care Inspectorate, dated 12 June 2020.
- S6 Collated sources related to inclusion of the model within teacher training.
- S7 Prof. Margaret Clark, ‘Scotland’s developing literacy policies: One response to PISA’, Education Journal, 311 (July 2017), p. 24.
- S8 Scottish Government Response to the ‘P1 Practitioner Forum Report’ 11 June 2019
- S9 Collated papers from the Scottish Parliament Education and Skills Committee
 - a. Minutes of the meeting, 20 February 2019.
 - b. Scottish Parliament Education and Skills Committee Report on Scottish National Standardised Assessments, 3rd Report, 23 April 2019. <https://bit.ly/3brqCGd>
- S10 Collated Scottish Government August 2019 publications relating to standardised assessments
 - a. National Standardised Assessment Improvement Activity Plan. <https://bit.ly/3bqQBMT>
 - b. Purpose and Use of National Standardised Assessments in Scotland <https://bit.ly/37lkGfh>