

Institution: University of Strathclyde		
Unit of Assessment: C23 - Education		
Title of case study: Closing the poverty attainment gap in education through changing policy and practice		
Period when the underpinning research was undertaken: 2013 - 2020		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s): Dr Edward Sosu Prof Sue Ellis	Role(s) (e.g. job title): Reader Professor	Period(s) employed by submitting HEI: 01/03/2013 – present 04/09/1989 – 30/09/2020
Period when the claimed impact occurred: 2014 – December 2020		
Is this case study continued from a case study submitted in 2014? No		
<p>1. Summary of the impact</p> <p>Research for the Joseph Rowntree Foundation on closing the attainment gap underpinned the Scottish Government's 2015 amendment to the Education (Scotland) Bill and subsequently the 2016 Act, which required Local Authorities to report on the extent of the poverty-related attainment gap and efforts to reduce it, a GBP750,000,000 Attainment Fund for schools, and a National Improvement Framework providing practitioner guidance. Evaluation of these policies have demonstrated a significant increase in pupil attainment and a reduction in the poverty-related attainment gap. Educators in Scotland, Ghana and Malawi have also adopted the recommendations from the research to improve pupil engagement and performance, reduce absenteeism and increase parental involvement.</p>		
<p>2. Underpinning research</p> <p>In 2013, Edward Sosu and Sue Ellis won a competitive research grant from the Joseph Rowntree Foundation to examine the nature of the attainment gap from early years to age 18 in Scottish schools, and to propose a 'viewpoint' on potential actions to close this gap. The research had three main strands: (1) Quantifying the attainment gap between pupils from different social backgrounds; (2) a critical analysis of the policy position on attainment; and (3) a systematic review of actions and instruments used in other locations to close the poverty attainment gap and their effectiveness.</p> <p>Sosu and Ellis examined the nature of the attainment gap across different stages of the education system, and its impact on later outcomes, using an analysis of secondary and administrative data [R1]. The findings showed that the gap between children from low-income and high-income households starts early and, in most cases, widens as children go through the education system, with S2 pupils (age 14) living in areas of low deprivation being more than twice as likely to be assessed as 'performing well' or 'very well' than those in areas of high deprivation. At the end of compulsory education (age 16), the data revealed a 300 point difference in average tariff score attained between students from the most and least deprived areas. This equates to about four A grades in Higher Level exams. This educational attainment difference had a significant impact on progression in education, staying-on rates, and labour market outcomes such as earnings after compulsory education. The researchers' report included recommendations for key stakeholders to focus on attainment profiles and closing the gap.</p> <p>Systematically analysing Scotland's contemporary policy and intervention responses to reduce the poverty attainment gap, Sosu and Ellis identified a range of policies which could theoretically close the gap [R1]. However, the advice provided to practitioners in these policies lacked specificity, and lacked a focus on closing the attainment gap. Additionally, there was little evidence of the impact of intervention programmes on the attainment of pupils from low-income households, even where this was the specific focus of a programme. The researchers therefore recommended that Scottish Government to make robust data available to all teachers, so that it can be used by schools for internal curriculum design, intervention and monitoring, and that Education Scotland provide examples of how national frameworks and strategies could be used in tandem with this knowledge to reduce the poverty-related attainment gap.</p>		

A systematic narrative review of effective policy and practice interventions was conducted to synthesise existing evidence about the most effective actions that schools and other stakeholders could take to reduce the attainment gap between richer and less advantaged pupils [R1]. Sosu and Ellis also identified several interventions with a positive impact on reducing the attainment gap. Using this evidence, specific actions were identified for each stakeholder group in order to help close the attainment gap, including recommendations for Scottish Government to establish a national knowledge bank to enable education professionals to attend to different kinds of evidence and understand the core principles that make a particular intervention successful, and for local authorities to promote high-quality professional development programmes with a focus on implementing interventions to raise attainment to close the poverty gap.

Sosu subsequently undertook research on: a) the nature of parental educational aspirations across different socioeconomic groups, demonstrating that contrary to widely held beliefs, parents from low-income households had higher educational aspirations for their children [R2]; b) theoretical mechanisms by which poverty leads to lower cognitive attainment and conduct problem trajectories in early childhood, discovering that poverty affects outcomes through family stress and investments [R3]; c) the influence of poverty on children's school experiences [R4]; and d) widening access to higher education for students from economically disadvantaged backgrounds, elucidating 'what works and why' [R5]. Sosu extended the research internationally, examining approaches to closing the inequality gap in educational attainment in Ghana and Malawi [R6]. Ongoing ESRC-funded research (2018–2021) examines the role of school absenteeism in explaining the poverty-related attainment gap.

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

- R1 Sosu, E.M. & Ellis, S.** (2014). Closing the attainment gap between pupils from high and low income families in Scotland: A systematic review. A report commissioned by the Joseph Rowntree Foundation. Available from: <https://bit.ly/3qdOn9Y>
- R2 Sosu, E.M.** (2014). Predicting maternal aspirations for their children's education: The role of parental and child characteristics. *International Journal of Educational Research*, 67, 67–79. DOI: <https://doi.org/10.1016/j.ijer.2014.05.003>
- R3 Sosu, E.M. & Schmidt, P.** (2017). Economic deprivation and its effects on childhood conduct problems: The mediating role of family stress and investment factors. *Frontiers in Psychology*, 8, 1580. DOI: <https://doi.org/10.3389/fpsyg.2017.01580> [REF2]
- R4 Naven, L., Sosu, E.M., Hagan, J., & Spencer, S.** (2019). The influence of poverty on children's school experiences: Pupils' perspectives. *Journal of Poverty and Social Justice*, 27(3), 313–331. DOI: <https://doi.org/10.1332/175982719X15622547838659>
- R5 Sosu, E.M., Smith, L.N., Santoro, N., & McKendry, S.** (2018). Addressing socioeconomic inequality in access to university education: An analysis of synergies and tensions in Scottish policy. *Palgrave Communications*, 4(1), 1–8. DOI: <https://doi.org/10.1057/s41599-018-0206-5>
- R6 Sosu, E., Nyarko, N.Y., Fleischer-Djoleto, D., Mtika, P., Pimenta, S., Wilson, C., & Nyartsikor, M.** (2019). Closing the inequality gap in children's educational attainment in Ghana – A research brief. Glasgow: University of Strathclyde. DOI: <https://doi.org/10.17868/67641>

Notes on the quality of research: All referenced journal articles were peer-reviewed ahead of publication. The underpinning body of research was supported by GBP397,074 peer-reviewed funding, including:

- Sosu, E., & Ellis, S. Education and Poverty in Scotland – Viewpoint. Joseph Rowntree Foundation, 12/08/2013-26/09/2013, GBP4,814.
- Sosu, E., Ellis, S., Santoro, N. & McKendry, S. Widening access to Higher Education for students from economically disadvantaged households: 'What works' and why? Scottish Funding Council, 17/08/2015-17/08/2017, GBP116,314.
- Klein, M. & Sosu, E. Family background and educational attainment. ESRC, 01/06/2018-31/03/2022, GBP161,240.

4. Details of the impact

To ensure their recommendations were implemented widely, the researchers undertook extensive stakeholder, media and public engagement in Scotland, Ghana and Malawi from 2014. This included organising practitioner conferences and working with key policy makers in national and local government and charities. This strategy of engaging directly with media, practitioners and policymakers was successful in stimulating discussion about educational inequality and ultimately **informed parliamentary debates, legislative framework, and education policy** related to closing the attainment gap in Scotland, leading to **improvements in pupil attainment and a reduction in the poverty-related attainment gap** in primary schools in Scotland, and **enhanced professional practice** in local authorities, charities and schools in Scotland, Ghana and Malawi.

Informing parliamentary debates, legislative framework, and education policy related to closing the poverty-related attainment gap in Scotland

The Scottish Government announced significant policy initiatives in 2015 to reduce the educational attainment gap, citing evidence from **R1** as justification [**S1**]. As part of this, the Education (Scotland) Bill was introduced in March 2015 to ‘Promote equity of attainment for disadvantaged children and take steps towards narrowing the attainment gap’ [**S1**]. The Education and Culture Committee’s report on the Bill’s consultation highlighted Sosu and Ellis’ research for the Joseph Rowntree Foundation (JRF) [**R1**], stating that the research ‘concluded that “poverty was not mentioned at all” and considered that the Bill would therefore be useful “as it will put poverty clearly on the agenda”... [The research] considered the important message for local authorities to be that collecting data is about improving teaching and learning in their schools’ [**S1**]. The report also highlighted that ‘A number of organisations cited research undertaken by JRF, which argued that policy on tackling the attainment gap should be based on “what works” and that there was a need for far more effective evaluation of policy initiatives’. The research was frequently cited in Education and Culture Committee discussions on the Bill and in Scottish Parliamentary debates [**S1**].

The Scottish government also announced several policies aimed at closing the attainment gap, citing the research as their basis. Launching the Scottish Attainment Challenge Fund in 2015, the First Minister highlighted the research findings and noted that:

‘A report last year from the Joseph Rowntree Foundation calculated the difference in reading attainment between children from low-income and high-income households. By the age of 5, the gap was already 13 months. That’s one of the reasons that we have placed such an emphasis on the early years with a commitment over the next parliament to increase the provision of free childcare to 30 hours per week. And it’s also why primary school is so important. Over the last two months I’ve been to three different primary schools to launch three separate initiatives – each of which will have a significant impact on improving attainment.’
[**S3**]

This included a GBP100,000,000 Attainment Scotland Fund to help schools in the poorest areas to raise attainment in line with the schools funding recommendation [**S3**], which was subsequently increased to GBP750,000,000 [**S4**]. Following this, the Government announced the National Improvement Framework for schools (2016) which articulated the key direction for closing the attainment gap [**S4**] – drawing on the researchers’ recommendation to provide targeted practitioner advice, the importance of standardised attainment data, and the significance of parental involvement; and the ‘Blueprint for 2020’ action plan, which referenced the findings on parental engagement as a means of closing the gap [**S4**].

Improving pupil attainment and closing the poverty-related attainment gap in Scottish Primary Schools

The resulting Education (Scotland) Act 2016 highlighted a need to close the attainment gap and required local authorities to report on its extent within their areas and the steps taken to reduce it in line with the researchers’ recommendations [**S2**]. This affected the work of all 32 local authorities, 2,031 primary schools and 359 secondary schools in Scotland. Since 2018, Scottish Government has published annual evaluations of the Attainment Scotland Fund to assess progress towards the Government’s aim of closing the poverty-related attainment gap, using data from the National Improvement Framework and surveys of Headteachers and local authorities

[S5]. These evaluations confirm that local authorities have shifted focus to implement approaches that are supported by evidence of effectiveness and impact. The benefits for children of these Government policies and evidence-based approaches are made clear in the evaluation [S5]:

- 91% of Headteachers reported having seen an improvement in closing the poverty-attainment and/or health and wellbeing as a result of the new approaches;
- The percentage of primary school children in Scotland achieving the expected level in literacy has increased from 69.2% in 2016/17 to 72.3% in 2018/19, a 3.1 point increase, representing over 12,000 additional children. For the children in the most deprived areas of Scotland (bottom 20% SIMD), there has been a 3.8 percentage point increase from 59.3% to 63.1%. The percentage point difference between the most deprived and the least deprived areas has reduced from 22.1 to 20.7 in the same period.
- The percentage of primary school children in Scotland achieving the expected level in numeracy has increased from 76.4% in 2016/17 to 79.1% in 2018/19, a 2.7 point increase, representing over 10,000 additional children. For the children in the most deprived areas of Scotland (bottom 20% SIMD), there has been a 3 percentage point increase from 86.3% to 88.5%. The percentage point difference between the most deprived and the least deprived areas has reduced from 17.6 to 16.8 in the same period.

From these quoted figures it is clear that the Scottish Government policies aimed at closing the poverty-related attainment gap - the importance of which was highlighted by R1 – are resulting in raised pupil attainment and a narrower attainment gap.

Enhancing professional practice in local authorities, charities and schools in Scotland, Ghana and Malawi

Appointed to the National Improvement Framework Strategic Group and its Dashboard Design Group (looking at data use in schools), the researchers were able to influence Education Scotland's strategies for literacy/numeracy support and school inspection, and planning around child poverty. Consequently, schools and local authorities began adopting innovative approaches to inform teaching and learning, referencing the research as justification in their announcements: 'Glasgow Counts' aimed to equip teachers with the skills to help pupils '*develop a conceptual understanding of mathematics*'; Shetland Islands Council laid out a detailed plan for parental involvement, including classroom volunteering and learning at home; and a Glasgow primary school developed inclusion strategies that explicitly targeted children from disadvantaged households, inaugurating an extensive literacy programme that included Reading Ambassadors, book clubs and competitions [S6]. The researchers' influence included the education of children in care. In January 2018, they worked with NHS and Social Work colleagues – e.g. the Associate Director of Mental Health in Glasgow, and West Dunbartonshire NHS and Social Work staff – on supporting families in poverty to thrive. According to a West Dunbartonshire workshop evaluation survey, 84% of participants said they would '*definitely use what they had learned in their work with families*' [S7]. All Scottish universities with initial teacher education remits use the research in their curricula, with the JRF report forming core reading at Edinburgh, Stirling and Dundee universities [S8]. It is also a core part of Scotland's in-service training.

Two conferences in Ghana (75 attendees) and Malawi (45 attendees) in April 2019 disseminated the research to teachers, pupils, directors of education, district level public officials, media, academics and charities, resulting in significant changes in teaching practice and improved engagement between parents and leadership, with noticeable educational benefits. Teachers and Headteachers reported being influenced by the conference to think of ways to motivate teachers, pupils and parents, variously introducing tools such as videos and IT to the classroom, delivering materials in different ways, differentiating lessons, offering extra tuition, using materials creatively where resources were lacking, and moving away from 'chalk and talk' towards greater interactivity [S9]. One school adopted a more flexible admissions policy and saw increased enrolment. Several teachers mentioned greater community involvement in schools in the form of volunteering and donating, and friendlier pupil-teacher relationships as teachers evinced more caring attitudes. Others reported resulting benefits included improved pupil engagement and performance, reduced absenteeism, and parental involvement in the form of donating items, making decisions or

suggestions, and showing an interest in their children's learning [S9]. One teacher highlighted how the research had influence the way they involve parents in education: *'I also called for a PTA meeting, explained the benefits of education to them and since that time, when we ask them to provide anything for their wards, even if he will not get all, he will try his or her possible best to get something for them'* [S9]. Another teacher added *'you will see some parents coming to the teachers and asking what the children's performance is and those things. I think it's helping us a lot. And anything concerning the school, they just come and ask master what about this, let's do it this way, think through this program, its helping us a lot in the school'* [S9].

Another attendee reported that an element of play had been introduced to the classroom as a method of closing the inequality gap, making pupils more engaged: *'it's really helped a lot because when we came, we realized that, at least teaching shouldn't be just like that. We should look for another way round; a way to let the kids enjoy the lesson. So it was like during lesson time, we are playing and we are learning. So the kids love coming to school'* [S9]. A District Assembly member (Ghana) said that their community school had been enrolled in a school meals programme: *'after the conference that I had a discussion with the Municipal Chief Executive about the poverty situation in our community and that the only way we can help some of the schools will be to get some of these schools enrolled on the programme... as we speak now we have about eighteen to twenty schools that are on the programme'* [S9].

5. Sources to corroborate the impact

- S1** Collated Scottish Government announcements and meeting papers citing the underpinning research.
- Scottish Parliament news item, 'Bridging the gap – school attainment to be focus for education committee', 12 January 2015. <https://bit.ly/3mzk7Ej>
 - Education (Scotland) Bill – Call for Evidence. <https://bit.ly/39yratf>
 - Education and Culture Committee, 'Stage 1 Report on the Education (Scotland) Bill', 10 September 2015. <https://bit.ly/3mwfrPC>
 - Education and Culture Committee meeting paperwork, 31 March 2015.
 - Education and Culture Committee meeting paperwork, 9 June 2015.
 - Official Report, Meeting of the Parliament 22 September 2015. <https://bit.ly/39AjDdi>
- S2** Education (Scotland) Act 2016.
- S3** First Minister's speech on Scottish Attainment Challenge, 9 February 2015. <https://bit.ly/36sZJ1V>
- S4** Collated announcements relating to attainment initiatives.
- Scottish Government. Pupil attainment: closing the gap. <https://bit.ly/3qfaa1b>
 - Scottish Government. National Improvement Framework. <https://bit.ly/36zM61j>
 - Scottish Government, 'A Blueprint for 2020: The Expansion of Early Learning and Childcare in Scotland. Quality Action Plan, 2017'. <https://bit.ly/33yZr7U>
- S5** Scottish Government. *Attainment Scotland Fund Evaluation*. 8 October 2020. <https://bit.ly/3sid3OK>
- S6** Collated announcement relating to initiatives taken by Councils and Schools.
- Glasgow City Council, 'Glasgow Counts (GC): Evaluation of a numeracy intervention and its effectiveness on closing the attainment gap' <https://bit.ly/3mJA0s5>
 - Shetland Islands Council: Children's Services, 'Strategy for Parental Involvement and Parental Engagement', May 2018. <https://bit.ly/37vs9YD>
 - Scottish Book Trust. 'Bankhead Primary's journey to a positive reading culture'. <https://bit.ly/3qgybVH>
- S7** West Dunbartonshire Children and Families Team evaluation report, received 1 February 2018.
- S8** Collated reading lists
- University of Edinburgh, MEd Leadership and Learning Course Descriptor.
 - University of Edinburgh, Undergraduate Course: Teaching for Social Justice.
 - University of Stirling, Examining Professional Practices Recommended Readings.
 - University of Dundee, Bibliography for ED31011 – Health and Wellbeing.
- S9** Post-conference interview transcripts and evaluations from Scotland, Ghana and Malawi.