

Impact case study (REF3)

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| Institution: University of Edinburgh | | |
| Unit of Assessment: Education (23) | | |
| Title of case study: Improving reading and challenging gender stereotypes in Scotland | | |
| Period when the underpinning research was undertaken: 2013 – 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: |
| Dr Sarah McGeown | Senior Lecturer in Developmental Psychology | January 2013 – present |
| Period when the claimed impact occurred: 1 January 2016 – 31 December 2020 | | |
| Is this case study continued from a case study submitted in 2014? No | | |
| 1. Summary of the impact | | |
| <p>Research led by McGeown at the University of Edinburgh on early reading instruction, reading motivation and sex differences has had a positive impact in the Scottish education sector in three critical ways. It has:</p> <ol style="list-style-type: none"> 1. Changed literacy practice by directly engaging teachers, head teachers, local authorities and national organisations in her research on early reading instruction and motivating children and adolescents to read. 2. Influenced national programmes by shaping their strategic work, programmes and resources to: enhance reading motivation and engagement and address gender imbalance. 3. Contributed to parliamentary debate to raise literacy attainment through research-informed reading instruction. | | |
| 2. Underpinning research | | |
| <p>Raising literacy attainment and closing the poverty-related attainment gap are key priorities of the Scottish Government, as seen in its 2019 National Improvement Framework and Improvement Plan. Good literacy skills support language development and academic achievement, and are associated with positive post-school economic, health and psychological outcomes. Furthermore, motivation to read and engagement in book reading activities are essential for children and adolescents to develop their literacy skills. Therefore, it is crucial to ensure children and adolescents experience optimal reading instruction and teaching practices to enhance their reading motivation and engagement.</p> <p>McGeown's research takes a psychological approach to reading development in childhood and adolescence, exploring multiple factors that influence motivation, engagement and attainment across primary and secondary school contexts. McGeown led this programme of research, collaborating with Medford and Johnston (University of Hull), Duncan (University of Dundee) and Warhurst (University of Winchester).</p> <p>McGeown's work on raising literacy attainment demonstrates that systematic synthetic phonics (an approach which teaches children to blend letter-sounds to read unfamiliar words) can specifically help to close the poverty-related attainment gap as it optimally supports the early reading skills of children with weak vocabularies (3.1). Furthermore, her research has demonstrated how hyperactive and inattentive behaviours hinder children's early literacy learning (3.2), and was the first to demonstrate the importance of children's</p> | | |

enjoyment of their initial reading instruction, as this is associated with positive reading attitudes, confidence and attainment (3.3).

McGeown's research also examines the relationship between primary (3.4) and secondary (3.5) school students' reading motivation, reading choices and reading skills. It was the first to show that children's reading motivation drives their reading choices (3.4) and also demonstrated other important predictors of reading choices, including reading skill and child characteristics (age, sex, socioeconomic status) (3.4). Furthermore, her work contributed to the limited evidence on adolescents' reading motivation, engagement and attainment, demonstrating that both motivation and fiction book reading (but not other text types) significantly predicted adolescents' reading comprehension skills, after taking into account word reading and fluency skills (3.5).

Finally, McGeown's innovative approach to study sex differences in education stresses that students' gender identity (i.e., their identification with traditional masculine and feminine traits) is a more useful construct than sex to understand individual differences in reading and in other academic subjects (3.6). Her research also emphasises the need to provide more support for boys in literacy-related education, as the motivation gap between boys and girls in literacy is much wider than in mathematics and science (3.6).

Research by McGeown has been shortlisted for the prestigious United Kingdom Literacy Association (UKLA) Wiley-Blackwell Research in Literacy Education Award (3.4). Her research has also featured in leading education magazines, including *Tes* (Jan, 2019), *Teaching Scotland* (Nov, 2018) and *Times Education Supplement Scotland* (Jan, 2015).

3. References to the research

3.1 McGeown, S. P., & Medford, E. (2014). Using method of instruction to predict the skills supporting initial reading development: insight from a synthetic phonics approach. *Reading and Writing: An Interdisciplinary Journal*, 27, 591-608.

<https://link.springer.com/article/10.1007/s11145-013-9460-5>

3.2 Medford, E., & McGeown, S. P. (2016). Social, emotional and behavioural influences on young children's pre-reading and word reading development. *Journal of Applied Developmental Psychology*, 43, 54-61. <https://doi.org/10.1016/j.appdev.2015.12.008>

3.3 McGeown, S. P. Johnston, R., Walker, J., Howason, K., Stockburn, A., & Dufton, P (2015). The relationship between young children's enjoyment of learning to read, reading attitudes, confidence and attainment. *Educational Research*, 57(4), 389-402.

<https://doi.org/10.1080/00131881.2015.1091234>

3.4 McGeown, S. P., Osborne, C., Warhurst, A., Norgate, R., & Duncan, L. G. (2015). Understanding children's reading activities: Reading motivation, skill and child characteristics as predictors. *Journal of Research in Reading*, 39, 109-125.

<https://doi.org/10.1111/1467-9817.12060>

3.5 McGeown, S. P., Duncan, L. G., Griffiths, Y., & Stothard, S. E. (2015). Exploring the relationship between adolescent's reading skills, reading motivation and reading habits. *Reading and Writing: An Interdisciplinary Journal*, 28, 545-569.

<https://doi.org/10.1007/s11145-014-9537-9>

3.6 McGeown, S. P. & Warhurst, A. (2019). Sex differences in education: Exploring children's gender identity. *Educational Psychology: An International Journal of Experimental Educational Psychology*, 40, 103-119. <https://doi.org/10.1080/01443410.2019.1640349>

4. Details of the impact

Research led by McGeown has had a positive impact on primary and secondary school students' reading motivation, engagement and attainment, and it has supported work to redress gender imbalances in Scottish education.

1. Changed literacy practice

Between 2016 and 2019, McGeown changed literacy teaching and raised students' literacy attainment by sharing her research with more than 250 teachers, head teachers and local authority literacy leads at professional learning sessions throughout Scotland [5.1]. An ESRC Impact Acceleration Account funded an evaluation of the impact of these sessions (survey with 75 teachers participating immediately after the sessions) and found statistically significant increases in teachers' knowledge and understanding of McGeown's research [5.2], which recommended: systematic synthetic phonics instruction for beginning readers, and promotion of positive reading attitudes and motivation throughout school. A 15-month follow up questionnaire demonstrated the long-term impact of these sessions. Teachers reported that they had changed their literacy practice, for example: one teacher *"adjusted my reading teaching in line with the research recommendations"* and another enacted changes which resulted in improvements in pupils' reading abilities: *"students have seen an increase in attainment data through a number of changes made"* [5.2].

The practice of school leaders and teachers across Scotland has benefitted from McGeown's research (3.1, 3.2, 3.3, 3.4, 3.5), via two invited webinars hosted by the General Teaching Council Scotland (124 teachers attended) [5.3A] and Education Scotland (86 Head Teachers/Local Authority Literacy Leads attended) [5.3B]. During the GTCS webinar, McGeown shared her research, which focused on the importance of systematic synthetic phonics instruction for beginning readers, to redress early educational inequalities. A post-webinar survey with over 80 teachers found that 85% reported that the research shared would impact their practice [5.3A]. During the Education Scotland webinar, McGeown shared her research, which focused on understanding and promoting children's and adolescents' motivation to read, to encourage greater independent reading. Attendees subsequently shared the YouTube recording from this webinar, resulting in approximately 450 views in the first eight weeks. A Senior Education Officer (Literacy) at Education Scotland stated: *"Dr McGeown's research on children's and adolescents' motivation to read is directly relevant to our national priorities in Scotland, more specifically, improving the literacy skills of children and young people"* [5.4]. She added: *"my own understanding of research in this area has developed considerably as a result of my collaboration with Dr McGeown, and this research knowledge will continue to underpin the work we do in Scottish schools to promote reading for pleasure"*.

McGeown's Scottish Universities Insight Institute funded knowledge exchange workshop series in 2017/18 also brought together policy makers, literacy leads, head teachers and teachers to draw on research to optimally tackle language and literacy issues in Scotland. During this series, McGeown shared her research on initial reading instruction (3.1, 3.2, 3.3) which supported Dundee City Council's approach to literacy teaching: *"[McGeown's research] added weight to... the decision Dundee's Children and Families Service made to adopt a city-wide approach to teaching reading using systematic synthetic phonics"* [5.5]. The Dundee City Council Education Support Officer further stated: *"connections with Dr McGeown and her research are invaluable in helping us improve literacy for children in Dundee."* According to Pupil Census data from 2019, over 10,600 primary school pupils are enrolled in Dundee City Council schools annually.

2. Influenced national programmes

Collaboration with the Scottish Book Trust (SBT) since 2017 has resulted in McGeown's reading motivation and engagement research (3.3, 3.4, 3.5) informing the design of

programmes which promote reading motivation and engagement among primary and secondary school pupils. For instance, *“insights from her work on the importance of intrinsic reading motivation and the relationship between reading motivation, reading choices and reading attainment have been instrumental in one of our leading programmes, the First Minister’s Reading Challenge (FMRC)”* [5.6]. The FMRC is delivered in approximately 75% of primary and 60% of secondary schools across Scotland, reaching approximately 250,000 pupils each year. SBT’s evaluation of the FMRC highlighted that approximately 82% of participating primary schools and 66% of participating secondary schools report that their pupils are reading more as a result of the programme. Furthermore, the Head of Research and Evaluation at SBT added: *McGeown’s research “has increased the validity and weight of our advocacy communications”* and concluded that *“our partnership with Dr McGeown has been instrumental in us having a greater impact on local authorities, learning professionals and, crucially, children and young people”* [5.6].

McGeown’s research on children’s gender identity and boys’ poor literacy engagement has also *“considerably shaped”* the work and focus of Education Scotland’s Improving Gender Balance & Equalities (IGBE) scheme [5.7], which works across all of Scotland’s 2,500 primary and secondary schools, reaching approximately 692,000 pupils each year. IGBE previously focused predominantly on girls. McGeown’s research on sex differences in education, particularly exploring gender identity and boys’ poor literacy engagement (3.6) shifted its focus to also *“understand how gender stereotypes can have a negative impact on boys”*. IGBE have *“worked closely with Dr McGeown and embedded her research into our resources for teachers”*. The IGBE Education Officer reported that: *“[McGeown’s] research highlighting the importance of understanding students’ gender identity, rather than their sex, is particularly helpful to challenge conventional thinking about distinct differences between boys and girls”*. Furthermore, *“her research highlighting the issue of boys’ lack of engagement in literacy considerably shaped our work across Scottish schools, which now also focuses on understanding how gender stereotypes can have a negative impact on boys”* [5.7]. IGBE’s evaluation of their programme and resources suggests this work is having a positive impact on raising teachers’ awareness, understanding and practice around gender imbalance. For example, 84% of teachers reported that IGBE had influenced how they work with young people around gender stereotypes. Furthermore, 95% felt they would share their IGBE learning with colleagues.

3. Contributed to parliamentary debate

McGeown’s research (3.1) has underpinned parliamentary debate on approaches to raise literacy attainment across Scotland. Petitioner Anne Glennie drew extensively on McGeown’s research in her petition to the Scottish Parliament to improve literacy standards in schools. The petitioner writes: *“[McGeown has] been instrumental in providing evidence and scientific support... with ministers finding her research particularly compelling which demonstrated the short and long term benefits of synthetic phonics as opposed to the more eclectic approaches that are currently being used in Scotland”* [5.8].

McGeown debated the petition in Parliament in November 2017 [5.9A]. When sharing her research on how current approaches to reading instruction in Scotland can disproportionately benefit children from more advantaged backgrounds, Convener MSP Johann Lamont, stated: *“I’m very struck by the evidence that we now have a strategy for teaching children to learn reading which enhances the opportunities for those who are already advantaged... I just find that very compelling.”* McGeown has also been involved in ongoing written discussions and debate with the Deputy First Minister and Cabinet Secretary for Education and Skills; McGeown contributed 5 of the 15 written submissions [5.9B]. McGeown was invited to attend further debate of this petition in Parliament with the Education and Skills Committee in March 2020 although it was postponed due to the pandemic [5.9C].

5. Sources to corroborate the impact

- 5.1 Feedback from 20 professional learning sessions with teachers and head teachers
- 5.2 Evaluation of McGeown's professional learning sessions (ESRC IAA funded) examining changes in teachers' knowledge and understanding resulting from the sessions and perceived impact on practice (quantitative and qualitative results). Actual impact on practice measured 15 months later (qualitative insights)
- 5.3 Details of invited webinars
- A) General Teaching Council Scotland webinar details and evaluation (December 2018), available at: <https://www.gtcs.org.uk/News/news/gtcs-webinar-recording-the-science-of-reading.aspx>
- B) Education Scotland webinar (September 2020), available at: <https://www.youtube.com/watch?v=hkRoGuj5ZM&feature=youtu.be>
- 5.4 Testimonial from Senior Education Officer (Literacy), Education Scotland
- 5.5 Testimonial from Education Support Officer, Literacy, Dundee City Council
- 5.6 Testimonial from Head of Research and Evaluation, Scottish Book Trust
- 5.7 Testimonial from Education Officer, Improving Gender Balance and Equalities, Education Scotland
- 5.8 Testimonial from petitioner outlining the contribution of McGeown's research and evidence for the petition for research-informed reading instruction in Scotland
- 5.9 Scottish Parliament Petition PE01668 "Improving literacy standards in schools through research-informed reading instruction"
- A) Video of parliamentary debate, available at: <https://www.youtube.com/watch?v=4mzcilZH4bA>
- B) Oral and written documentation by McGeown and others (e.g., petitioner, Deputy First Minister and Cabinet Secretary for Education and Skills), available at: <http://www.parliament.scot/GettingInvolved/Petitions/readinginstruction>
- C) Scottish Parliament Education & Skills Committee agenda (March 2020, postponed due to COVID-19) outlining McGeown's contributions to the debate thus far