

## Learning About Neurodiversity at School (LEANS)

**POLICY BRIEFING:** Scottish Government Education Research Seminar Series, 29/11/2023

**PRESENTERS:** Dr Alyssa Alcorn, Dr Sarah McGeown

**Summary:** Inclusion, wellbeing and equality are embedded within the Scottish education system, with the Curriculum for Excellence and GIRFEC providing legislative frameworks to ensure all children and young people are, and feel, included. To date however, the focus of this policy has been on developing school staff (e.g., school leaders, teachers) knowledge and pedagogical expertise to respond appropriately to students' needs, adapting learning and teaching approaches as required.

LEANS provides a complementary approach to support inclusion, wellbeing and equality, by supporting and improving children's understanding of diversity, within the context of *neurodiversity*. This term describes the variation in brains and information processing that underpins much of the variation in pupils' needs and experiences.<sup>1</sup> In focusing on neurodiversity, LEANS places children at the heart of education, increasing their awareness and understanding, and aiming to promote inclusive attitudes and actions within primary schools, reducing the likelihood of negative school experiences and/or outcomes for neurodivergent children.

The results from the LEANS evaluation demonstrated that the programme can be delivered feasibly within primary school classrooms, and using existing school resources. Participation resulted in increases in children's neurodiversity knowledge, and more demonstration of inclusive attitudes and intended actions towards others, with a low risk of harms for neurodivergent children.<sup>2</sup>

This project has implications for Scottish education policy and practice as it contributes to our collective efforts to improve inclusion, wellbeing and equality, contributing to the four capacities for all children, and improving the school experiences and outcomes of neurodivergent children.



<sup>1</sup> For a freely accessible resource that introduces neurodiversity terms and concepts, we recommend Dr Nick Walker's work: <https://neuroqueer.com/neurodiversity-terms-and-definitions/>

<sup>2</sup> View a pre-print report of the full statistical results here: <https://osf.io/fhc2k/>

**Project team:** This collaborative project has been carried out by researchers at the University of Edinburgh: Professor Sue Fletcher-Watson and Dr Alyssa Alcorn (both Clinical Brain Sciences) and Dr Sarah McGeown (Moray House School of Education and Sport) in collaboration with external partners Dr Dinah Aitken (Salvesen Mindroom Centre, an Edinburgh based neurodiversity charity), Fergus Murray (an Edinburgh-based teacher, writer and community organiser), Liam J. J. Peacock (a neurodivergent young person) and Professor Will Mandy (Psychology and Language Sciences, UCL).

**Background:**

- Approximately 15-20% of children in mainstream schools require additional support for learning and the majority of these could be described as neurodivergent (i.e., have ADHD, autism, dyslexia, dyspraxia, DLD, etc).
- Neurodivergent children are at increased risk of negative school experiences and/or outcomes compared to peers without these differences (e.g., increased risk of bullying, victimisation, lower classroom participation, poorer quality peer-relationships, lower mental health, school exclusion, etc).
- LEANS uses the neurodiversity framework to increase children's awareness and understanding of the diverse ways in which we all think, learn, communicate and experience the world. In doing so, it aims to create positive attitudes towards difference, and create primary school classrooms where children are considerate and supportive of each other.
- LEANS is directly relevant to the values and policy commitment within Scottish education towards inclusion, wellbeing and equality, underpinned by the Curriculum for Excellence and GIRFEC, and provides a complementary approach to achieving this vision.

**Methodology:** LEANS is a free, teacher-delivered curriculum that introduced neurodiversity concepts to children aged 8-11, using a mixture of hands-on activities, story content, videos and more. Its comprehensive Teacher Handbook supports teachers to prepare and deliver LEANS without the prior neurodiversity expertise, or the need for additional training/resources.

LEANS was co-created by a neurodiverse team composed of researchers (from Psychology, Education and Brain Sciences), and educators from across the UK and ROI. This work is currently limited by the small dataset used in the evaluation and the team are currently applying for funding a larger-scale evaluation.

**Key findings:**

- LEANS has been delivered and evaluated in four Scottish primary schools, with full datasets from 62 children to conduct statistical analysis.
- Following completion of LEANS, children scored significantly above chance in their knowledge of neurodiversity and importantly also showed a significant increase in positive attitudes about neurodiversity and differences, and indicated more positive, accepting intended actions at school. Importantly, 1-1 interviews with neurodivergent children indicated a low risk of harms (a key consideration during programme development).
- Teacher feedback suggest that the programme is acceptable and feasible to deliver.
- This research aligns with current policy priorities related to inclusion, wellbeing and equality. It can support with the Scottish Government's vision for achieving equity, and aligns with key priorities of the National Improvement Framework, for example, improving wellbeing.

### Recommendations/ policy implications:

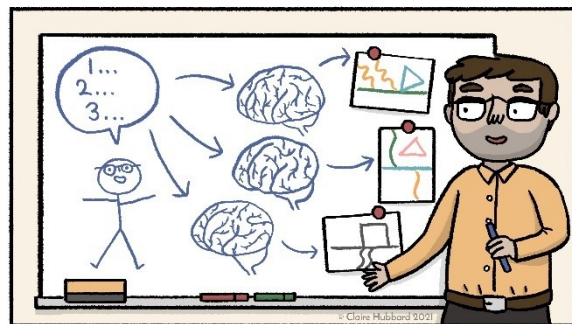
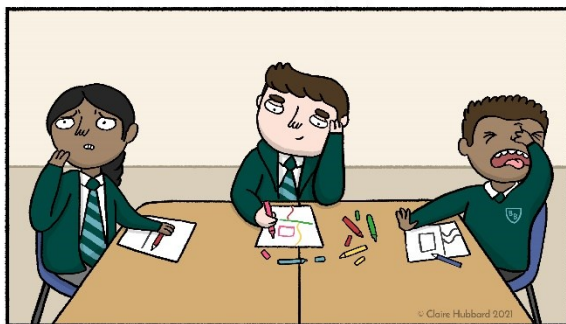
- **In the short to mid-term**, the concept of neurodiversity could become embedded within Scottish education policy – increasing policy-makers, educators and children's awareness of this concept. There is currently limited, often inaccurate understanding of neurodiversity and neurodivergence and how these relate to categories like additional support needs.
- **In the long-term**, following, and dependent upon the results from a larger-scale programme evaluation, reference to LEANS could be included within Scottish University-led Initial Teacher Education programmes and shared by the new Centre for Teaching Excellence to support its use within Scottish schools.
- **These recommendations are feasible**, as they require no financial commitment, although they do require a time commitment. The recommendations would also require further communication with the LEANS project team.

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### Links to further reading:

- **LEANS project website**: Download the LEANS resources for free. Find summary information, talks/popular articles, and additional details about project funding, credits, and contact. <https://salvesen-research.ed.ac.uk/leans>
- **LEANS evaluation reporting**: A pre-print of the evaluation report with full statistical results (currently under review) is available here: <https://osf.io/fhc2k/>



*Images from the LEANS stories in Unit 2, about different experiences and information processing in the classroom. Images © Claire Hubbard, 2021*