Engineering and Innovation Research Studentship 2024/2025

Project title:	**Inclusive design with children with spoken language difficulties**
Discipline	Design
Key words:	Inclusive design, participatory design, co-creation, belonging and mattering
Supervisory team:	Anne-Marie Bartlett, Rachael Luck
URL for lead supervisor's OU profile	Dr Anne-Marie Bartlett	OU people profiles (open.ac.uk) Dr Rachael Luck	OU people profiles (open.ac.uk)

Project Highlights:

- Aims to give voice to children with spoken language difficulties in the context of identity, self-efficacy, belonging and mattering
- Involves participatory research in education settings and play spaces to develop understanding of the needs and aspirations of children with spoken language difficulties
- Will examine the design of visual communication supports from a disability-inclusive perspective

Overview:

Fifty percent of children in some areas of the UK start school with delayed language development (see Figure 1). Such delays can contribute to difficulty in reading, writing, attention and socialisation. The proposed research seeks to develop understanding of the needs and aspirations of children with spoken language difficulties in the context of identity, self-efficacy, belonging and mattering, in a play and educational context.

The power struggles encountered by children in school-based research have been noted by Druin (2002) (1) and the difficulty young children can have verbalising their thoughts are recognised along with the existing power structures, biases and assumptions that exist between adults and children (2).

In the design process, concepts of 'having a voice' and 'being verbal' are heavily relied upon (5). However, the metaphor of 'voice' and the assumption that it is belongs to a rational and capable individual can contribute to the marginalisation of children (6). Moreover, focusing on voice privileges verbal communication over other forms, which risks excluding children and young people who communicate little or not at all through speech (4). Thorough this study, the process of designing visual communication supports and co-creating their use

with children with spoken language difficulties is used to cast light on their views and experiences as a matter of equity and social justice.
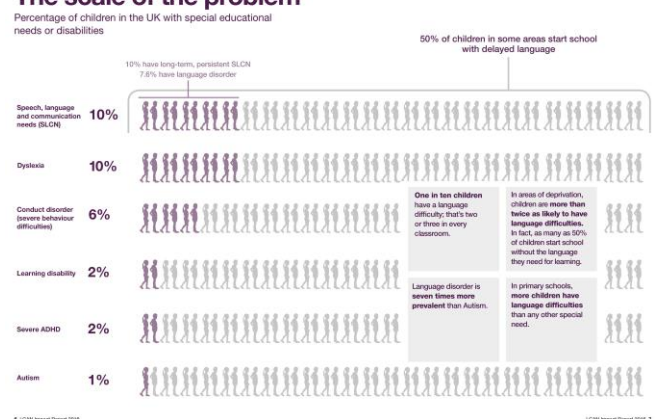

Figure 1. I Can Impact Report (2016) The Scale of the Problem Infographic: Percentage of Children in the UK with Special Educational Needs or Disabilities.

Methodology:

This project builds on existing research in codesign (2) including 'Co-Design Beyond Words', which merges codesign methods with practice-based methods from Speech and Language Therapy that are child-led, and interests based' (6). Participatory design approaches will be used to engage participants in the design of visual communication supports and the co-creation of their uses in schools and play spaces. The project adopts a disability-inclusive position, where disabled people are centred and their experiences in the world set the context for discussion.

References & Further reading:

1. Druin, A., (2002). The role of children in the design of new technology. Behaviour and Information Technology. 21(1), 1–25.
2. Holt, R. J., **Moore, A. -M.**, & Beckett, A. E. (2014). Together Through Play: Facilitating Inclusive Play through Participatory Design. Inclusive Designing (pp. 245-255). Springer International Publishing.
3. Luck, R. (2018). Inclusive design and making in practice: Bringing bodily experience into closer contact with making. *Design Studies*, *54*, 96-119.
4. Komulainen, S., (2007). The ambiguity of the child's "voice" in social research. Childhood. 14, 11–28.
5. Tisdall, E., Kay, M., Davis, J., Gallagher, M., (2009). Research with Children and Young People: Research Design. Methods and Analysis. London: Sage.
6. Wilson, C., Brereton, M., Ploderer, B., & Sitbon, L. (2019, May). Co-Design Beyond Words: 'Moments of Interaction'with Minimally-Verbal Children on the Autism Spectrum. In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems* (pp. 1-15).

Figure 1. I Can Impact Report (2016). The Scale of the Problem Infographic: Percentage of Children in the UK with Special Educational Needs or Disabilities.

Further details:

This research would be ideally suited to someone with a passion for disability-inclusion, with a background in inclusive design, graphic or product design, UX, speech and language therapy. Approximately 12% of the doctoral students directly registered at the Open University are disabled. A disabled applicant would be viewed positively for this research. The supervision team have experience in inclusive design through research funded by the ERC, ESRC, EPSRC, AHRC and the Leverhulme Trust. The student will be required to visit participating schools and play spaces in North West England for data collection. To discuss the project further please contact Dr Anne-Marie Bartlett | OU people profiles (open.ac.uk) via email at: anne-marie.bartlett@open.ac.uk

Applications should include:

- A 1000-word cover letter outlining why the project is of interest to you and how your skills match those required
- an academic CV containing contact details of three academic references
- an Open University application form, downloadable from: http://www.open.ac.uk/postgraduate/research-degrees/how-to-apply/mphil-and-phd-application-process
- IELTS test scores where English is an additional language

Applications should be sent to STEM-EI-PhD@open.ac.uk by 16.02.2024