

Impact case study (REF3b)

<p>Institution: London South Bank University</p>
<p>Unit of Assessment: Psychology, Psychiatry and Neuroscience</p>
<p>Title of case study: Raised awareness and more effective interventions in Children with Speech Language Impairment.</p>
<p>1. Summary of the impact (indicative maximum 100 words)</p> <p>Research has produced an <i>Interim impact</i> on Speech and Language Therapists (SLTs) and Specialist Teachers who work with Children with Language difficulties. I-CAN, a major children’s communication charity, embraced the research findings and associated resources to support their involvement in a nationwide study on pupils at risk of fixed-term or permanent exclusion.</p> <p>Key findings from the study revealed that 90% of SLTs would change the way they would work; over 80% of pupils improved their confidence, behaviour and communication skills; 95% of parents reported an improvement in attendance; and fixed-term exclusions decreased by 21%.</p>
<p>2. Underpinning research (indicative maximum 500 words)</p> <p>This research project was funded by the ESRC and undertaken at LSBU by Lucy Henry (PI, Professor of Psychology, LSBU, 2000 to date), David Messer (Co-I, Professor of Education, Open University) and Dr Gillian Nash (Research Fellow, LSBU) between January 2008 and January 2010.</p> <p>This project investigated complex thinking abilities ('Executive Functioning', EF) in children with language disorders ('specific language impairment', SLI). SLI is a developmental disorder in which children show marked difficulties with many aspects of language, yet have far fewer problems with non-verbal tasks. Although SLI is common (around 6-7% of schoolchildren), it is relatively poorly understood in comparison to a related but less severe disorder, dyslexia. Executive functioning refers to the complex thinking and planning skills required for novel tasks - such tasks do not have well-learned or easy answers, so require us to generate new responses and monitor our performance. Although it was known that children with SLI had some difficulties with some aspects of EF, previous work had not undertaken a thorough investigation of these skills, or considered the potential role of language in EF tasks.</p> <p>The research methodology adopted involved administering a comprehensive range of measures of EF, either involving language or minimising the need for language, to children with SLI and to typical children of similar non-verbal ability and age. All EF tasks were designed to be as simple as possible and to measure relevant skills reliably within five domains of EF identified in previous literature. Standardised measures of verbal and non-verbal abilities, and extensive language tests confirmed group membership.</p> <p>Key findings from the research were:</p> <ol style="list-style-type: none"> 1. There were widespread difficulties with EF in children with SLI, across four of the five domains of EF (Working Memory, Inhibition, Fluency and Planning). This was true both for tasks that involved language and for tasks that minimised the need for language, suggesting that the difficulties were not simply related to language weaknesses. 2. Substantial numbers of children (between 49-80% depending upon the EF skill) with SLI showed EF difficulties, emphasising the clinical relevance of the findings. <p>Speech and language therapists, teachers and parents should be aware of these significant additional problems experienced by children with SLI, beyond their difficulties with language. EF skills are important for 'higher-order thinking' because they are vital for dealing with the novelty inherent in new learning. Interventions and remediation programmes suitable for individuals or groups of children with SLI in both mainstream and special education would be strengthened by considering potential EF weaknesses.</p> <p>In further research (2010-12), an intervention was developed to improve one of the key Executive</p>

Impact case study (REF3b)

Skills, that of Working Memory. A six-week intervention with primary school aged children produced significant improvements in working memory (up to 30 standardised points) that were maintained over a 6-month period. Improvements in reading comprehension were also found after one year. The intervention was both enjoyable and practical given its short duration (a 10 minute interview three times a week) and highly-interactive format, potentially making it more attractive to both children and teachers/professionals compared to COGMED (45 minutes each day for 5-6 weeks) the current market leader (3).

3. References to the research (indicative maximum of six references)

1. Henry, L.A., Messer, D.J. & Nash, G. (2012). Executive functioning in children with specific language impairment. *Journal of Child Psychology and Psychiatry*, 53:1, 37-45. Doi:10.1111/j.1469-7610.2011.02430.x
2. Henry, L.A., Messer, D.J. & Nash, G. (2012). Phonological and visual short-term memory in children with specific language impairment. *Journal of Cognitive Education and Psychology*, 11 (1), 45-56. Doi: 10.1891/1945-8959.11.1.45
3. Henry, L.A., Messer, D.J. & Nash, G. (2013). Testing for near and far transfer effects with a short, face-to-face adaptive working memory training intervention in typical children. *Infant and Child Development*. Published online: DOI: 10.1002/icd.1816

Grant details:

2008-2010 Executive functioning in children with specific language impairment. Awarded by the Economic and Social Research Council (Grant Reference: RES-062-23-0535, £222,103. PI: Lucy Henry (LSBU), Co-investigator David Messer (Open University)).

4. Details of the impact (indicative maximum 750 words)

This case study is an example of an **Interim Impact** on Health and Welfare delivered through Practitioners (Speech and Language Therapists (SLTs) and Specialist Teachers) who work with Children with language difficulties.

The research findings were first taken up by I-CAN, the children's communication charity, in 2011, and supported their involvement in the Department of Education-funded study "Engage in Education" led by Catch22 (April 2011-April 2013) (1). The study involved a number of key stakeholders, including I-CAN, Rathbone, PPP and Dyslexia Action and embraced five sites nationally with approximately 30 young people at each site.

The project set out to improve the life chances and outcomes of young people likely to be excluded from schools by targeting relevant risk factors, including communication difficulties. I-CAN's Director of Outcomes and Information confirmed (2) that Prof Henry's research made a significant and material contribution towards the development of training and materials for children and young people with executive functioning difficulties.

Key outcomes from an I-CAN evaluation of the study (2013) included (3):

- 90% of staff said that they would change the way they would work with children due to the experiences/findings, particularly as a result of being able to identify hidden communication difficulties amongst young people. Individuals have commented:

"It's been amazing. I can't believe how much the young people have engaged in the communication sessions. They've done activities like debating and discussing topics that I'd never have thought they'd even try. It's changed the way I'll teach my sessions from now on" - a key worker in Manchester.

"As a practitioner I-CAN has introduced useful communication strategies which are now embedded in my own skillset and I can continue to use them when creating future group work plans for young people." – a teacher in Harlow.

- As a result of the study, 55% of young people felt that they were better communicators with

Impact case study (REF3b)

one individual saying: *“Before I’d have just got angry and walked out of the session but this time I said my point and got it across. It felt really good.”*

- The study specifically points out in its main findings that there was a particular improvement in remembering words, with 59% stating that this was the outcome *“most strongly related to materials produced by Prof Henry”* on working memory (2).
- 84% of learners increased their attainment, or stayed at the same level;
- Over 80% of learners reported that they had improved their confidence, behaviour, communication skills and attitudes towards teacher, attendance and school work;
- 95% of parents reported that their children’s attendance at school had improved either “a lot or quite a bit”;
- Fixed term exclusions had decreased by 21% as a result of the programme.

The report concluded: Most importantly, both staff and young people are able to recognise the link between focusing on communication skills, and an increase in engagement with learning.

“The role of the Communication Advisor (SLT) has been invaluable to my understanding of hidden communication needs. Having a balance of awareness training and continued workforce development through the Advisor attending caseload management meetings and learning walks with the staff has been very successful. This has reinforced how the strategies can be used in practice and allowed our team to develop unique ways of working to meet the individual needs of the young people with the guidance of the Advisor.”

Building on the positive outcomes of the study and to extend its reach, Prof Henry and I-CAN jointly organised a workshop on 17 May 2013 at LSBU on *“Executive Functioning in Children with Language Difficulties”* (4). The workshop was attended by SLT specialists from schools and other charitable organisations, such as Afasic, an organisation that supports parents and represents children and young people with language and communication needs. 95% of the attendees took away learning and teaching materials on executive functioning provided by Prof Henry and subsequently received a poster (5) for display at their place of work and highlighting key symptoms of executive functioning, e.g. poor memory for instructions and inattentive behaviour, and how these may be recognised and addressed.

Independent consultants contacted workshop attendees in June and July 2013 to see what activities had taken place and what outputs had occurred. Feedback (6) indicated that attendees found the materials and approach to be creditable and based upon sound science. They confirmed that they will impact on the way they address such issues. One attendee (7) had the opportunity to employ the approach before 31st July 2013. A speech and language specialist from Symbol UK trialled the materials on a 16-year old severely disadvantaged student. Although only a short duration, improvements were evident to the specialist. The student herself felt that there had been improvement and that she had gained in confidence as a result.

5. Sources to corroborate the impact (indicative maximum of 10 references)

1. <http://www.catch-22.org.uk/News/Detail/What-did-Engage-in-Education-achieve>
2. Contact: Director of Outcomes and Information, I-CAN.
3. I-CAN Communication Advisor input: Identifying and supporting hidden communication needs. Final Evaluation Report (2013). Contact: Director of Outcomes and Information, I-CAN.
4. Executive Functioning Workshop programme (17th May 2013) – available upon request from LSBU.
5. Executive Functioning Awareness Material sent to Workshop attendees – available upon request from LSBU.

Impact case study (REF3b)

6. Report of Independent Consultants (The Innovation Partnership, 2013). Contact: Managing Director, The Innovation Partnership. Report provides feedback on what workshop attendees have done since the workshop and their findings.
7. Independent Consultants Interview Report with Specialist Speech and Language Teacher at Symbol UK (2013). Contact: Managing Director, The Innovation Partnership.