

Impact case study (REF3)

Institution: Coventry University		
Unit of Assessment: 4		
Title of case study: Improving Literacy Attainments for Young People Using Prosody, Morphology, and Phonology		
Period when the underpinning research was undertaken: 2005-2018		
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:
Professor Clare Wood	Professor of Psychology in Education	2005-2017
Professor Julia Carroll	Professor of Child Development and Education	2014 – Present
Dr Andrew Holliman	Senior Lecturer	2009-Present
Dr Helen Breadmore	Assistant Professor	2014-Present
Dr Janet Vousden	Assistant Professor	2010-19
Period when the claimed impact occurred: August 2013 – December 2020		
Is this case study continued from a case study submitted in 2014? Y/N No		

1. Summary of the impact (indicative maximum 100 words)

Poor literacy levels are a significant social, health and economic issue, costing the UK up to £2.4 billion per year (Every Child a Reader, 2009). Since 2005 Coventry University researchers have carried out work to address this issue, elucidating the role of the underlying linguistic skills of prosody, morphology, and phonology as a way to enhance literary development in children and young adults. Their work has influenced UK education policy and teaching provision for children at risk of literacy difficulties, and led directly to a commercial reading scheme which has been adopted in almost 2,000 schools in multiple countries.

2. Underpinning research (indicative maximum 500 words)

Coventry University literacy research, commissioned by a number of high-profile organisations, has focused on rigorous studies of the roles of metalinguistic skills in literacy, establishing best practices in reading interventions and evaluating existing initiatives for their effectiveness.

Between 2005 and 2018 Coventry University researchers Professor Clare Wood and Dr Andrew Holliman, together with colleagues, developed a programme of research focusing on the role of prosodic awareness in literacy development. Prosodic sensitivity is sensitivity to the patterns of sound variation across words and phrases. Changes of stress, timing or intonation can change the meaning of words or phrases: for example reCORD is a verb meaning to take note of something, while REcord is a noun denoting, for example, a high score or a vinyl disc.

From 2012-15 Dr Holliman led a project for the Nuffield Foundation (G1) testing speech rhythm sensitivity to identify literacy difficulties. Coventry University's research has demonstrated that prosodic sensitivity has both direct and indirect routes to literacy (R1, R2), and that interventions designed to enhance speech rhythm sensitivity might be incorporated into early reading instruction methods to support other emergent literacy skills. In parallel with this project, Wood, Holliman and Vousden won Leverhulme funding (G2) for a PhD studentship (2011-2014) to develop a speech rhythm intervention. This project successfully demonstrated, for the first time, that teaching prosodic sensitivity in the early years helps to improve literacy progress (R3).

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Between 2013 and 2015, Clare Wood and Janet Vousden led a trial of ABRACADABRA (G3), an online literacy programme composed of phonics, fluency and comprehension activities based around a series of age-appropriate texts. The trial was focused on the use of digital technology to improve outcomes for disadvantaged children. Their findings indicated that the programme showed similar levels of success whether or not interventions were ICT based, improving literacy progress by around 3 months on average, and around 5 months in the children with lower socio-economic status (R4).

In 2014, the literacy research team was enhanced by the appointment of Professor Julia Carroll and Dr Helen Breadmore. From 2014 to 2017, Prof Carroll and Dr Breadmore led a Nuffield Foundation funded investigation (G4) of the role of phonological and morphological awareness in children with literacy difficulties and history of ear infections. This project investigated how much children use information about the internal structure of words (morphology) to compensate for these difficulties. Results emphasised the significant overlap with children who have repeated ear infections in the preschool years and children who have literacy difficulties in the school years (R5). It also demonstrated that morphological awareness could be an effective tool to overcome phonological difficulties in reading and spelling, something which should be considered in SEN (special educational need) provision. (R6).

Working to develop, establish and evaluate the most effective real-world methods to enhance literacy development in children and young people, this research has resulted in a number of beneficial impacts at the level of policy and practice.

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

R1. Holliman, A., Critten, S., Lawrence, T., Harrison, E., Wood, C., Hughes, D. (2014) 'Modeling the Relationship Between Prosodic Sensitivity and Early Literacy'. *Reading Research Quarterly* 49 (4), 469-82. doi: 10.1002/rrq.82 <https://doi.org/10.1002/rrq.82>

R2. Holliman, A.J., Wood, C., & Sheehy, K. (2010) 'Does speech rhythm sensitivity predict children's reading ability 1 year later?'. *Journal of Educational Psychology* 102(2), 356-366. <https://doi.org/10.1037/a0018049>

R3. Harrison, E., Wood, C., Holliman, A.J., Vousden, JI. (2018). 'The immediate and longer-term effectiveness of a speech-rhythm-based reading intervention for beginning readers'. *Journal of Research in Reading* 41 (1), 220-241. DOI:10.1111/1467-9817.12126 <https://doi.org/10.1111/1467-9817.12126>

R4. Johnson, H., McNally, S., Rolfe, H., Ruiz-Valenzuela, J., Savage, R., Vousden, J., Wood, C. (2019) 'Teaching Assistants, Computers and Classroom Management'. *Labour Economics* 58, 21-36. doi: <https://doi.org/10.1016/j.labeco.2019.02.006>

R5. Carroll, J. M., & Breadmore, H. L. (2018). 'Not all phonological awareness deficits are created equal: evidence from a comparison between children with Otitis Media and poor readers'. *Developmental Science* 21(3), e12588. <https://doi.org/10.1111/desc.12588>

R6. Breadmore, H. L., & Carroll, J. M. (2016). 'Morphological spelling in spite of phonological deficits: Evidence from children with dyslexia and Otitis Media'. *Applied Psycholinguistics* 37 (6), 1439-1460. <https://doi.org/10.1017/S0142716416000072>

G1. Holliman, A. (PI) (2012-15) 'Pre-school screening for literacy difficulties: A new test of speech rhythm sensitivity'. Nuffield Foundation. Total Funding: £46,484.15

G2. Wood, C. (PI), Holliman, A. (2011-2014) 'Evaluating the Potential of a Speech Rhythm-Based Reading Intervention'. Leverhulme Trust: Research Project Grant. Total grant: £75,761.

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G3. Wood, C. (PI), Breadmore, H. (2013-15) 'Abracadabra: Online Reading Support'. Education Endowment Foundation. Total grant: £643,467.

G4. Carroll, J. (PI), Breadmore, H. (2012-17) 'Morphological Processing in Children with Phonological Difficulties'. Nuffield Foundation. Total grant: £200,138.

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

Impacts from the research above have arisen in three key areas: the first through a commercial collaboration, and the second and third through commissioned evidence reviews and advisory roles which have directly informed educational policy and practice.

Informing Commercial Resources for Children's Reading

Based on their prosody research (R1-3), from 2015 Holliman, Wood and Vousden collaborated with educational publisher Rising Stars, now owned by Hodder Education, to develop a commercial reading scheme for 4-7 year olds which embeds research findings linking spoken language skills and literacy development (S1, S2). First published in 2016, the Reading Planet resource series highlights information about prosodic sensitivity during shared reading for teachers and parents, helping children become confident independent readers. CU research features prominently in promotional materials for Reading Planet, and testimonials indicate that schools have identified improved literacy attainment resulting from the scheme:

"Our Phonics pass rate improved by 11% to 83% and we saw a 10% increase in the KS1 Reading SATs results, with 15% increase in greater depth. Reading Planet is definitely one of the things that has helped impact our reading results." Teacher, Tranmoor Primary School, July 2019 (S1).

Reading Planet was the first reading scheme in the world to explicitly incorporate speech rhythm-related resources for parents, teachers and children, and expert practitioners have highlighted the impact of the research element:

'Reading Planet really redefines our understanding of how children learn to read... because it is supported by research you know that it's no quick-fix or publishing folly.' Primary Review Magazine (S1).

Over 550 fiction and non-fiction books (and interactive e-books) now embed the research, including a parallel set released by Hodder Education for 7-11 year old children. Reading Planet is now used by over 1,900 schools, reaching an estimated 200,000 children in the UK, increasing by approximately 95,000 per year [S2]. Initial international sales have resulted in over 500,000 export copies sold to date, with Australia the major export market (S2).

Tackling Literacy Attainment Inequalities in Schools

The government-funded Education Endowment Foundation (EEF), mandated to improve evidence-based practice in schools, have commissioned CU to carry out a number of activities to improve literacy attainment in schools. In 2018 this included a review highlighting the important roles for prosody, phonology and morphology for children acquiring literacy, which set out recommendations to help those falling behind. This was used as the basis for nationally distributed teacher guidance, and with over 61,000 unique page views and 23,910 downloads it is amongst the most popular materials on the EEF website (S3). The review is used in training for secondary school teachers, with the Director of Literacy for a multi-academy trust describing it as 'a powerful tool', which she regularly utilises in training and in 'the development of new materials and resources' (S4).

Improving Support for Children with SEN

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In 2017 CU researchers were commissioned to carry out a review for the Department for Education (DfE) on effective interventions for children with special educational needs (SEN) [S5]. Drawing on research carried out by the CU team [R4, R5], the wide-ranging review drove significant updates on guidance which underpinned the design of the new Early Career Framework [S6], the national guidance on career development for newly qualified teachers launched in September 2020, affecting over 28,000 new teachers each year.

Based on the review, the DfE worked with CU to create a user-focussed resource for schools, teachers and other practitioners, using it as a key means 'to improve how schools and colleges support children and young people' (S5). As an example of use, following publication an academies trust representing 58 schools utilised the 'seven key features' of promising SEN support outlined in the resource as a 'framework for structuring discussions with SENCOs', before embedding them into an online academies trust 'SEND Toolkit' providing practical 'guidance, resources and training for staff'. They were also incorporated into a 'SEND Self Audit Tool' used throughout the trust to gauge provision and determine effective 'SEND Development Plans' (S7).

The review also influenced national policy discussions. In June 2018 it was used by the National Deaf Children's society to underpin their calls for dedicated support for children with hearing impairments (S8, p.2). In February 2018 at a parliamentary debate on SEN outcomes the UK Under-Secretary of State for Education affirmed that the SEND resource provided 'evidence on effective approaches' for teaching staff, and that a governmental programme was being embedded to 'further support the embedding of good SEND practice in schools' (S9).

The influence on national policy with respect to SEND continues: in 2020 Prof Carroll was commissioned to provide a research overview on specific learning difficulties (including dyslexia, dyscalculia and dyspraxia) for the Council of Science and Technology (CST), who advise the Prime Minister on science and technology issues [S10]. This led directly to a letter from the CST to the Prime Minister making six recommendations for change.

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

S1. Collated documents from Rising Stars Website.

S2. Testimonial. Senior Publisher, Rising Stars (Hodder Education).

S3. Collated reports, Education Endowment Foundation.

S4. Testimonial. Director of Literacy, Co-Director of Aspirer Research School, Aspire Educational Trust.

S5. Collated SEN Resources produced for UK Department of Education.

S6. Collated documents, 'Early Career Framework' Resource, Department of Education.

S7. Testimonial. Independent Educational Psychologist and SEND Consultant for the Academies Enterprise Trust.

S8. Document. National Deaf Children's Society response to Labour National Policy Forum consultation on Early Years, Education and Skills (June 2018).

S9. Hansard. Parliamentary Under-Secretary of State for Education, Speech, 'Autism: Educational Outcomes'. (Pp.5-6, Hansard Column 1470)

S10: Collated documents. Council for Science and Technology. Specific Learning Difficulties Report (July 2020).