Institution: University of Sussex

Unit of Assessment: UoA 4 Psychology

Title of case study: Changing policy and practice in teaching reading comprehension to children

1. Summary of the impact

Sussex research has led to changes in how children are taught reading comprehension across the UK and increasingly in South America. The 2013 Primary National Curriculum for English emphasises the acquisition of skills for reading comprehension. The *Independent Review of the Teaching of Early Reading*, which cites many of Oakhill's research papers, fed directly into the revised National Curriculum, English. The increasing emphasis on skills for reading comprehension led Whatmuff to develop 'inference training', a published training programme inspired by Oakhill's studies now used across the UK. Independently, a group of Educational Psychologists in Argentina developed a programme for primary age children, comprising a theoretical manual and work book that draws directly from Oakhill's research findings and is being implemented across South America.

2. Underpinning research

It has long been known that children can become competent word-readers without necessarily developing commensurate levels of reading-comprehension skill. Oakhill's research has identified the problems that children with 'specific comprehension difficulties' have with reading comprehension. Such children have average or good word-reading skills but, nevertheless, have substantial difficulties in understanding connected text. In research over the last 20 years, Oakhill has conducted numerous research studies that provide a much more detailed understanding of such children's problems, and the particular cognitive skills that they lack (in comparison to good comprehenders). These studies have identified specific areas of difficulty in poor comprehenders. In particular, they have been shown to have problems with inference-making [see Section 3, R2, R3], comprehension monitoring [R4] and understanding story structure [R1]. Each of these skills has been shown to be important in the prediction of reading comprehension, over and above the contributions of word-reading, verbal ability and vocabulary [R5]. More recently, Oakhill's work has focused on establishing which of these skills might be causally implicated in reading-comprehension development and comprehension success in the longer term. Converging evidence from studies using a 'comprehension-age-match' design [R7] and a longitudinal study [R6] has shown that the three main skill areas previously identified – inference and integration skills, understanding of text structure, and comprehension monitoring – are all likely to be causally implicated in the development of comprehension skill (and not simply by-products of good comprehension). Thus, such skills are excellent candidates for training to improve reading comprehension. Oakhill is currently involved in a three-year EU-funded research project, which has precisely this aim.

Oakhill has been at Sussex since 1995. Much of the underpinning research was conducted with Cain (now at Lancaster University) when she was a postdoctoral student on an ESRC grant (Oakhill PI). Bryant (Oxford) was a collaborator and Co-PI on the same grant.

The relevant research was funded by six grants from the ESRC, the EU and the British Academy, total value >£450k.

3. References to the research

R1 Cain, K. and Oakhill, J.V. (1996) 'The nature of the relationship between comprehension skill and the ability to tell a story', *British Journal of Developmental Psychology*, 14(2): 187–201.

R2 Cain, K. and Oakhill, J.V. (1999) 'Inference making and its relation to comprehension failure', *Reading and Writing*, 11(5–6): 489–503.

R3 Cain, K., Oakhill, J.V., Barnes, M.A. and Bryant, P.E. (2001) 'Comprehension skill, inference making ability and their relation to knowledge', *Memory and Cognition*, 29(6): 850–859.

R4 Oakhill, J.V., Hartt, J. and Samols, D. (2005) 'Comprehension monitoring and working memory in good and poor comprehenders', *Reading and Writing*, 18(7–9): 657–686.

R5 Oakhill, J.V., Cain, K. and Bryant, P.E. (2003) 'The dissociation of word reading and text comprehension: Evidence from component skills', *Language and Cognitive Processes*, 18(4): 443–468.

R6 Oakhill, J.V. and Cain, K.E. (2012) 'The precursors of reading ability in young readers: evidence from a four-year longitudinal study', *Scientific Studies of Reading*, 16(2): 91–121.

R1, R2, R3 and R4 demonstrated important differences between good and poor comprehenders in key contributory skills: understanding text structure [R1], inference-making [R2, R3] and comprehension monitoring [R4]. Key findings are from [R5] because, in that study, several key skills were investigated together with other cognitive skills and abilities, and it was demonstrated that these key skills make a significant contribution to reading comprehension, over and above abilities like vocabulary. Contemporaneously, the nature of the links between these skills and reading comprehension were being investigated with evidence from different designs: comprehension-age match [R7] and longitudinal [R6]. The longitudinal study, in particular, demonstrated that these skills contribute independently, directly or indirectly, to reading comprehension across time, thus suggesting that they can be targeted and developed in young children. It was these finding that inspired the revisions to the relevant sections of the National Curriculum. The findings from other studies [R2, R6, R7], which indicate that the skills are causally implicated in comprehension development, have important implications for training studies, and have inspired both *Inference Training* [R9] and *LEE Comprensivamente* [R10].

Other related research

R7 Cain, K., Oakhill, J.V. and Bryant, P.E. (2000) 'Investigating the causes of reading comprehension failure: the comprehension-age-match design', *Reading and Writing*, 12(1–2): 31–40.

R8 Cain,K. and Oakhill, J.V. (2006) 'Profiles of children with specific reading comprehension difficulties', *British Journal of Educational Psychology*, 76(4): 683–696.

Other references

R9 Whatmuff, T. (2013) *Inference Training.* Leicester: Leicester City Council, Primary Strategy Team.

R10 Fonseca, L., Gottheil, B., Aldrey, A., Pujals, M., Lagomarsino, I., Lasala, E., Mendivelzúa, A., Molina, S., Pueyrredón, D., Buonsanti, L., Freire, L., Migliardo, G. and Barreyro, J.P. *et al*. (2011) *Programa LEE Comprensivamente*. Buenos Aires: PAIDOS.

All outputs can be supplied by the University on request.

4. Details of the impact

This research has had an impact in two main areas of practice. First, it has been used to justify a greater emphasis on skills for reading comprehension in the recent revisions of the National Curriculum, English [See Section 5, C2, C3]. These revisions were inspired by the *Independent Review of the Teaching of Early Reading* [C1], a government-commissioned independent review of the early teaching of reading in which Oakhill's research findings were cited. This review

emphasised the importance of teaching not only word-reading and phonics but also the particular skills needed for teachers to foster comprehension from the early stages of reading development. The *Independent Review* made a substantial number of references to Oakhill's research findings on children's reading-comprehension development and problems (6 citations of journal articles) and the recommendations of the review fed into the subsequent revision of the 2008 National Curriculum [C2]. Both that version, and the most recent – September 2013 – revision [C3], focused heavily on the findings of this research to make recommendations in the 'Programme of Study' (PoS) about the specific skills children need to be taught in order for them to develop good reading comprehension. Throughout the PoS, there are many references to the need to foster inference skills, text-structure understanding and the monitoring of comprehension. Oakhill was formally involved as a consultant to the National Curriculum (Primary English) team at the Department for Education in London, and also attended a meeting with Elizabeth Truss, Parliamentary Under-Secretary of State with responsibility for Education and Childcare in the Department for Education.

Second, the research very directly underpins two recent training programmes designed to foster and improve reading-comprehension skills in primary school children. Oakhill's research is fundamental to these two programmes: *Inference Training* [see Section 3, R9] and *Programa LEE Comprensivamente* – a training manual and teaching book devised and written by a group of Argentinian educational psychologists [R10]. The former builds on the work on inference-making in particular. There are currently about 40 accredited trainers, and the programme is in use in about 500 schools, though the usage is expected to rise substantially as demand is very high. The programme is used nationwide. The latter programme teaches the three skills mentioned above, which have been shown in Oakhill's research to be fundamental to reading comprehension in young children. About 550 teachers and other educational professionals have been trained in the use of the *LEE Comprensivamente* programme and it is estimated that about 2,200 children have used the programme since its inception in 2011. It is mainly used in Argentina, but usage is spreading across the Spanish-speaking countries in South America; it is currently in use in Uruguay and there is interest in using it nationwide in Chile. Currently, translation and publication rights are being negotiated in Brazil.

The impact of this work has recently been recognised by a peer-review panel of the British Psychological Society (Chair, Prof. Daryl O'Connor) [C8].

5. Sources to corroborate the impact

Re the National Curriculum

C1 *The Independent Review of the Teaching of Early Reading* (Rose 2006) makes several references to Oakhill's studies, and explicitly mentions the link to the forthcoming revision to the National Curriculum:
http://webarchive.nationalarchives.gov.uk/20100526143644/standards.dcsf.gov.uk/phonics/rosereview/

C2 National Curriculum (2008)
http://www.education.gov.uk/schools/teachingandlearning/curriculum/primary

C3 National Curriculum (2013)
https://www.gov.uk/government/publications/national-curriculum-in-england-english-programmes-of-study

List of those consulted during the development of the curriculum:

http://media.education.gov.uk/assets/files/pdf/l/lists%20of%20commentators%20-%20final.pdf

C4 Letter and supporting document from contact at the Department for Education who chaired the working group which produced the National Curriculum (Primary English 2013). These

documents demonstrate how the development of aspects of the National Curriculum were influenced by Oakhill's research findings.

C5 Letter and supporting document from contact at the Department for Education who was responsible for reading-related research and producing and revising drafts of the National Curriculum (Primary English 2013). These documents demonstrate how the development of aspects of the revised National Curriculum were influenced by Oakhill's research findings.

Re the training programmes

There are copies of the manuals of both training programmes, and several of the above research studies are referenced in them and referred to throughout. A pdf of the manual for *LEE Comprensivamente* is included.

C6 Letter from Tony Whatmuff to confirm the influence of Oakhill's research on the development of *Inference Training*.

C7 Letter from the authors of *LEE Comprensivamente* to confirm the influence of Oakhill's research on the development of this programme. Also, table from this group to document the extent of use of the programme both in Argentina and elsewhere in South America and Spain.

General

C8 Letter from Policy Advisor, BPS to confirm that Oakhill's research (as outlined above) has been selected as an example for the BPS Impact Portal.