Submission of Evidence to the APPG on Oracy

II. Translation of Research to Practice

March 2021

Contributors:

Professor Charles Hulme FBA is Professor of Psychology and Education at the University of Oxford and a William Golding Senior Research Fellow at Brasenose College. He is an expert on randomized controlled trials in Education and he has worked to develop a series of evidence based oral language interventions. He has also developed a range of assessment materials including the York Assessment of Reading for Comprehension (2009), the Phonological Abilities Test (1997), Sound Linkage (2014) and The Test of Basic Arithmetic and Numeracy Skills (2015).

Professor Maggie Snowling CBE is President of St. John's College and Professor of Psychology, University of Oxford. She is also professionally qualified as a clinical psychologist. She served on Sir Jim Rose's Expert Advisory Group on provision for Dyslexia (2009), was advisor to the Phonics Screening Check (2011) and Reception Baseline Assessment (2019) in England.

The Importance of Language Intervention: Key Points

- Screening for language in the early years can be quick and reliable.
- Early oral language intervention is effective
- Oral language intervention in primary school can improve reading comprehension
- Theoretically motivated interventions can be adapted for delivery at scale
- Supplementing reading interventions with oral language work can be beneficial but may require more sustained work

Research Evidence

Drawing on our research findings (see Submission of Evidence – Basic Research Findings; Snowling & Hulme), we have developed methods for screening children's language and designed interventions to ameliorate poor language. The interventions target children in mainstream school settings and have been evaluated in robust controlled trials which include training programmes for those delivering the interventions.

Language Screening

If teachers are to identify children with language needs , they require a screening method that will be quick and easy to use. For this purpose, we have developed LanguageScreen, a Language App comprising assessments of three key oral language skills: vocabulary, grammar and listening comprehension. School staff (teachers and teaching assistants) used this App to screen during a controlled trial of language intervention[1]; the App is robust with high test–re-test reliability and a

[1] West, G., Snowling, M. J., Lervag, A., Buchanan-Worcester, E., Duta, M., Hall, A., McLachlan, H., & Hulme, C. (2021, in pres) Early language and intervention can be delivered successfully at scale: evidence from a cluster RCT. *Journal of Child Psychology & Psychiatry*

very high correlation with results from conventional individual standardized language tests. LanguageScreen is currently being used by primary schools throughout England (since December 2020).

Nuffield Early Language Intervention (NELI)

NELI is a 20-week educational programme suitable for children in Reception classes (aged 4 – 5), designed to improve the language skills of children with language learning weaknesses. Teaching assistants (TAs) receive training in the manualised intervention before it is delivered to ensure fidelity of implementation.

Following two research trials[2], NELI was evaluated by the Institute of Fiscal Studies (funded by Education Endowment Foundation (EEF)[3] (2012–13). This trial compared a 20- with a 30-week intervention. The 30-week intervention produced only slightly stronger effects. Following on from this trial, Oxford University Press (OUP) published the 20-week version with improvements as NELI-Reception (*NELI-R*)

In 2018, EEF funded a large effectiveness trial of NELI-R. This provided robust evidence for the effects of this 20-week version of the programme when delivered at scale. This trial involved 1156 pupils in 193 schools from 13 geographical regions (from Cornwall, to North Tyneside and North West England; 34% of pupils receiving NELI were eligible for Free School Meals). Evaluation by RAND Europe found pupils who took part made, on average, three months' more progress in language than similar children who did not receive the intervention and it was equally effective for boosting language skills of non-native speakers. The trial tested the programme in everyday conditions and the findings have a very high level of security. In summary, the programme produces an educationally significant improvement in children's language skills and a small effect on word reading skills[4]. Further analyses have shown that the programme also had positive effects on children's behaviour[5].

Together these findings provide strong evidence that a school-based language intervention programme (NELI) can produce meaningful improvements in children's language skills enabling a stronger foundation for learning. A Campbell Collaboration meta-analysis of 42 interventions[6] to improve language shows that *NELI*'s impact is among the highest for which there is evidence.

As a direct result of the findings from the study, the English government, in 2020, provided funds to roll-out the NELI intervention to the lowest 25% of English schools in terms of disadvantage[7]. The rationale was to enable catch-up for children whose educational progress has been affected by absence from school during the Covid-19 pandemic. As of 19 March 2021, 6570 schools with 228333

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[2] Fricke, S., Bowyer-Crane, C., Haley, A. J., Hulme, C., & Snowling, M. J. (2013). Efficacy of language intervention in the early years. *Journal of Child Psychology and Psychiatry*, *54*(3), 280-290; Bowyer-Crane, C., Snowling, M. J., Duff, F. J., Fieldsend, E., Carroll, J. M., Miles, J., ... & Hulme, C. (2008). Improving early language and literacy skills: Differential effects of an oral language versus a phonology with reading intervention. *Journal of Child Psychology and Psychiatry*, *49*(4), 422-432.

[3] Fricke, S., Burgoyne, K., Bowyer-Crane, C., Kyriacou, M., Zosimidou, A., Maxwell, L., ... & Hulme, C. (2017). The efficacy of early language intervention in mainstream school settings: a randomized controlled trial. *Journal of Child Psychology and Psychiatry*, *58*(10), 1141-1151.

[4] https://educationendowmentfoundation.org.uk/projects-and-evaluation/projects/nuffield-early-language-intervention-1/.

[5] West, Lervag, Snowling, Worcester & Hulme; Submitted paper

[6] https://www.campbellcollaboration.org/better-evidence/linguistic-training-effect-on-language-and-reading-comprehension.html

[7] https://www.gov.uk/government/news/early-years-support-package-to-help-close-covid-language-gap and https://www.gov.uk/guidance/coronavirus-covid-19-catch-up-premium.

children have registered for screening, and 137400 children had been screened using the LanguageScreen App

Reading for Meaning

A significant minority of children with language difficulties master the early stages of reading well but have difficulty in reading for meaning. Such children have been described as 'poor comprehenders'[8]. In a randomized controlled trial, we examined the efficacy of three interventions designed to improve reading comprehension in 9-10 year-old poor comprehenders[9]. These were: text-comprehension (TC) training, oral-language (OL) training, and an approach which combined text and oral language training (COM).

The oral-language training comprised four components: vocabulary, figurative language, spoken narrative and reciprocal teaching working exclusively with spoken language (not with printed materials). Vocabulary training used the multiple-contextual approach, encouraging children to use new words in relevant and familiar contexts. In reciprocal teaching, children listened to a passage and completed an activity utilizing the key skill including clarification, questioning, and summarization. Children also explored figurative language (idioms, jokes, similes, metaphors etc). and completed spoken narrative activities. The combined approach used all of these components but in combination with text comprehension activities.

For present purposes, the important findings came from the oral language (OL) and the combined (COM) approaches. However, all three interventions led to gains in reading comprehension relative to an untreated control group. Importantly, 11 months later at follow-up, the TC and COM groups had maintained their gains and critically, the group which had received oral language training only (OL) made greater gains than the other groups did between the end of the intervention and follow-up. Furthermore, data modelling demonstrated improvements in expressive vocabulary were mediators of the improved reading comprehension of the OL and COM groups.

In short, oral language intervention can ameliorated reading comprehension difficulties.

EEF are currently funding an efficacy trial using an adapted version of this programme[10], REACH (Dr Paula Clarke, University of Leeds) https://educationendowmentfoundation.org.uk/projects-and-evaluation/projects/reach-primary/?utm_source=site&utm_medium=search&utm_campaign=site_search&search_term=REACH.

Transfer of learning and 'dosage' effects

Given evidence of the critical importance of oral language for literacy, and growing interest in narrowing the 'word gap' , professionals will be tempted to supplement interventions for poor readers (poor decoders) with vocabulary instruction. This is a strategy that we have investigated in an intervention designed for children at risk of dyslexia[11] and an intervention for children with Down

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[8] Snowling, M. & Hulme, C. 2012 Annual Research Review: The nature and classification of reading disorders–a commentary on proposals for DSM-5. *Journal of Child Psychology and Psychiatry*, *53*(5), 593-607

[9] Clarke, PJ., Snowling, MJ., Truelove, E. & Hulme, C. (2010) Ameliorating children's reading comprehension difficulties: A randomised controlled trial. *Psychological Science, 21,* 1106-1116

[10] Clarke, P.J., Paul, S-A., Smith, G., Snowling, M., & Hulme, C. (2017) Reading intervention for poor readers at the transition to secondary school. *Scientific Studies of Reading* http://dx.doi.org/10.1080/10888438.2017.1318393

[11] Duff, F. J. Hulme, C., Grainger, K., Hardwick, S., Miles, J. & Snowling, MJ (2014) Effectiveness of a combined reading and language intervention for children at-risk of dyslexia. *Journal of Child Psychology & Psychiatry*, *55*(11), 1234–1243, DOI: 10.1111/jcpp.12257

syndrome[12], both evaluated using RCTs. In each study, we found modest improvements in reading and in vocabulary, but only for vocabulary items that were directly targeted. There was no generalization. Tentatively we offer two cautions predicated on evidence that language intervention has different effects from reading intervention[13] : (i) reducing the time for each component risks diluting the effects of intervention (ii) activities to promote vocabulary should include activities to encourage generalisation.

Implications for Professional Development and Learning

Implementing evidence-based interventions in mainstream schools whilst ensuring fidelity of delivery presents challenges. It is our view that robust training, and support during delivery is critical[14].

We have recently worked with charities led by speech and language therapists to deliver training in our RCTs. However, the pandemic has underlined the growing need for on-line training. To deliver the intervention some 19438 teachers/TAs will have been trained by the Oxford Team using the FutureLearn online training platform https://www.futurelearn.com/.

Impact of language Intervention

We include in this last section, some resources and testimonials regarding the use of NELI in schools.

Oxford Impact Film on University webpage contains testimonials from teachers about NELI https://www.ox.ac.uk/research/research-impact/impact-films?wssl=1; testimonial from a school where *NELI* is used: https://educationendowmentfoundation.org.uk/projects-and-evaluation/projects/nuffield-early-language-intervention-1/

Users of the Language programme include participants in the Stoke Speaks Out (https://www.stokespeaks.org/Contact). The local authority's evaluation can be found at https://aa59102a-888c-4e07-8c12-aa2fb811a2c2.filesusr.com/ugd/eda5ca_760ce227b77240b4aaad329e9067fdf6.pdf?index=true (p14 onwards). Contact: Janet Cooper, Speech Language Therapist

Conflict of Interest statement:

Charles Hulme and Margaret Snowling are Directors or OxEd and Assessment a University of Oxford spin-out company founded to distribute LanguageScreen as a commercial product. The Nuffield Early Language Intervention programme is published by Oxford University Press, copyright of the programme is held by the Nuffield Foundation and the authors of the programme receive no royalties from sales.

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[12] Burgoyne, K., Duff, F., Clarke, P.J., Buckley, S., Snowling, M.J. & Hulme, C. (2012) Efficacy of a reading and language intervention for children with Down syndrome: a randomized controlled trial *Journal of Child Psychology & Psychiatry, 53,* 1044-1053 doi: 10.1111/j.1469-7610.2012.02557.x

[13] Bowyer-Crane, C., Snowling, M. J., Duff, F. J., Fieldsend, E., Carroll, J. M., Miles, J., ... & Hulme, C. (2008). Improving early language and literacy skills: Differential effects of an oral language versus a phonology with reading intervention. *Journal of Child Psychology and Psychiatry*, *49*(4), 422-432.

[14] Carroll, J.M., Bowyer-Crane, C., Duff, F., Hulme, C., & Snowling, MJ. (2011) Developing Language and Literacy: Effective intervention for language and literacy in the early years. Oxford: Wiley-Blackwell; Clarke, P.J., Truelove, E., Hulme, C., & Snowling, M.J. (2013) Developing Reading Comprehension. Oxford: Wiley-Blackwell.