

## ***Institute for Effective Education protocol to evaluate the Dyslexia Action programme to teach reading and spelling***

The Institute for Effective Education (IEE) proposes to conduct an impact evaluation of Dyslexia Acton's intervention programme for older pupils built around the computer-based Units of Sound. The impact evaluation will be an RCT of 50 secondary schools to assess the effects of the programme in raising the reading and spelling abilities of Year 7 pupils who struggle most with literacy and particularly in the areas of phonetic awareness and word and sentence-building.

### **Project Team**

**Bette Chambers, PhD.** Professor Bette Chambers is Director of the Institute for Effective Education at the University of York and part-time professor at the Center for Research and Reform in Education at Johns Hopkins University in Baltimore. Professor Chambers develops and evaluates effective practices in early childhood and literacy education and promotes the use of evidence-based practices. She has authored or co-authored numerous articles, books, and practical guides for teachers, including *Let's Cooperate* and *Two Million Children*.

**Mary Sheard, PhD.** Dr Mary Sheard is a Research Fellow at the Institute for Effective Education with interests in teacher learning and professional development; student learning with technology; and learning with representations. In addition to experience as a primary school teacher, Dr Sheard has worked as an advisory teacher, consultant, OFSTED inspector, and was the Chair of Governors for a primary school in challenging social and economic circumstances. Dr Sheard has conducted qualitative and quantitative research in the following areas: teacher learning for literacy instruction; student engagement in learning with technology in the secondary school, FE and HE sectors; the effectiveness of an early years intervention programme for supporting parental involvement in children's learning; the effectiveness of a social-emotional learning programme; and innovative practices in school governance.

**Louise Elliott.** Louise Elliott is the Data Manager at the Institute for Effective Education, where she manages all database organisation, data entry, cleaning and descriptive statistical analyses conducted in the research work.

### **Summary of the Impact Evaluation**

#### **Impact Evaluation Research Design**

The IEE will conduct an RCT to evaluate the impact of Units of Sound (UoS) on the reading ability of struggling readers in Year 7 in 50 secondary schools over two evaluation phases. Phase 1 will be from January 2013 to July 2013, and Phase 2 will be from September 2013 to July 2014. In each phase, approximately 20 struggling readers in each school will participate in the evaluation, with 10 randomly assigned to take part in the intervention.

## **Selection/recruitment**

In both Phase 1 and Phase 2, Dyslexia Action will recruit approximately 25 secondary schools in areas of multiple deprivation across England for a total of 50 schools. The IEE research team will randomly select on average 20 students from each school from those that achieved below Level 4 on the Key Stage 2 SATs in reading. The online (New Group Reading Test (NGRT)) will be administered to the selected students, who will then be randomly assigned by the IEE to either receive the intervention programme over the evaluation period for 18 weeks starting either in February 2013 (Phase 1) or in September 2013 (Phase 2), or to receive the programme as a delayed treatment at the end of the evaluation phase if they still need extra support.

The control group will provide ideal counterfactuals for the intervention group; all control schools will have volunteered to implement the programme and randomisation will ensure that the implementation and control students will be similar across all relevant factors. Year 7 students in the intervention and control groups will be post-tested in the Summer term 2013 in Phase 1 and in the Spring term 2014 in Phase 2, using the online NGRT (alternative form) and the online Single Word Spelling Test.

Ten of the 50 schools (selected from each geographic area, and representing a range of school demographics) will only engage in online training and support.

Two teachers or teaching assistants (usually special needs teachers and assistants) in each school will be identified to implement the intervention in each school with groups of approximately five students at a time.

## **Training**

Right after schools agree to participate, the software and hardware will be installed and activated for training to begin.

In all schools the designated teachers/teaching assistants will undertake the 10 hour initial online training in UoS. In 40 of the schools, the teachers will get 4 days of additional face-to-face training and support from Dyslexia Action (DA) Teachers/Trainers. Participating teachers/teaching assistants in the remaining ten schools will have additional online training and support. This will include webinars/ online training forum/etc.

## **Implementation**

Each intervention student will be required to participate in UoS at least 60 minutes each week. Schools will vary in how this time is allocated. However, it is recommended that students spend one 60-minute session with the teacher/teaching assistant present with a further 30-minute

session on another day. Sessions will be conducted in quiet/private work areas where students will feel comfortable to make (oral) responses without being overlooked/overheard by peers.

### **Parent Involvement**

Awareness-raising sessions for parents of intervention students will be offered during the evaluation period but will not be part of the IEE evaluation.

### **Measures**

#### ***New Group Reading Test (NGRT)***

At pre-test and post-test, we propose to use the NGRT (digital) which meets the EEF requirements that tests are:

- Highly correlated with Key Stage 2 results
- Discriminating and sensitive at the bottom end of the distribution
- Standardised using a nationally representative population.

Both the pre-test and the post-tests will be effectively blinded as the tests are in digital form and will be marked electronically. For this reason, there are no plans to invigilate.

#### ***Single Word Spelling Test***

As an additional post-test measure, we intend to use the Single Word Spelling Test (digital), which produces students' results by standardised age scores, spelling ages, percentile ranks, and analysis by word level against national scores.

#### ***Units of Sound Screening Measure***

The Units of Sound Placement Test will be administered to the students in the intervention groups in each school at the start of programme implementation to assess their current level of reading ability on the UoS programme. That data will be sent to the IEE and will be used as additional data for the programme evaluation.

### **Procedure**

#### ***Group Assignment***

The IEE will analyse the KS2 SAT reading levels and if there are more than 20 students who score below a cut-off point to be determined, the IEE will randomly select 20 pupils who will be pre-tested and randomly assign to either the intervention or control condition.

### ***Units of Sound Progress Data***

The Programme Co-ordinator from each school will send (either by post or fax) to Mary Sheard a printout of the progress report for each student in the intervention group on a regular basis. This data will be used to help quantify each child's dosage.

### **Analysis Plan**

The independent variable for the impact analyses will be participation or not in the intervention. The dependent variable will be the students' scores on the NGRT (digital) and the Single Word Spelling Test (digital) at post-test with the pre-test score as a co-variate. At post-test, the NGRT (digital) will be the primary outcome and the Single Word Spelling Test (digital) will be the secondary outcome. The analyses will use an intent-to-treat-design, meaning that even if pupils drop out for any reason, they will be retained in the main analyses.

A subgroup analysis will be conducted on Free School Meals eligibility.

Additional analysis will be conducted to determine the differential effects for online only vs online plus face-to-face training and support. Also analyses will be conducted to determine differential effects for students of different ability levels and for different levels of implementation fidelity and level of teacher education and experience.

### **Process Evaluation**

A light-touch process evaluation will be conducted to examine implementation fidelity, teacher and student perceptions, and contextual factors and attempt to correlate those factors with student achievement.

Online teacher and student surveys will be completed towards the end of the evaluation, and a small number of telephone interviews will be conducted with a DA teacher-coach in each local authority represented in the study.

The data from these surveys and interviews will be used to measure implementation of fidelity.

Information on possible alternative provision for students in the control group will be obtained from the schools and used alongside the student test outcomes to determine the effectiveness of the UoS programme.

### **Ethics, Data Management, Protection and Confidentiality**

Ethical approval for this study will be sought through the Ethics Committee of the Department of Education, University of York.

Data will be managed in accordance with the Data Protection Act (1998), and will be communicated electronically in a secure manner using encryption.




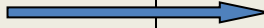


The trial database will be securely held and maintained on the University's research data protection server, which is regularly backed up. It will hold non-identifiable data. Confidentiality will be maintained and no one outside the trial team will have access to the database. Data will be checked for missing data and/or double entries. All outputs will be anonymised so that no schools or students will be identifiable in the report or dissemination of results.





### Potential Risks

<i>Nature of risk</i>	<i>Risk</i>	<i>Comments</i>
Attrition	Low	Dyslexia Action has established positive relationships with schools, as long as schools don't find the programme implantation over-burdensome.
Low implementation fidelity	Medium	The programme is designed to be used for 1.5 hours per week, which could be subject to disruption due to other priorities in school. Also the level of education and experience of the teachers/teaching assistants might affect implementation fidelity.
Time slippage: recruitment	Medium	Depends on schools being recruited in a timely fashion and then providing all student names so they can be tested and randomised prior to the implementation start dates in both evaluation phases.
Time slippage: assessments	Low	Co-operation and flexibility from schools vital to guarantee access over a limited testing period. However, the IEE has extensive previous experience of negotiation and co-ordination with schools to manage assessments within the identified timeframe.



## Project Timeline

	PHASE 1					PHASE 2				
Months from start	Pre	1-2 Jan-Feb	3-4 Mar- April	5-6 June-July	7-8 Aug-Sept	9-10 Oct-Nov	11-12 Dec-Jan	13-14 Feb-Mar	15-16 April-May	
Activity										
Finalise research design										
Recruit schools and eligible students										
Select and randomly assign students to condition		By January 30				By Sept 6				
Training to teachers and TAs		On-line completed by February 4 2013								
Pre-test (New Group Reading Test)		Completed between January 28 and February 1, 2013				By Sept 13				
Programme implementation		Starts February 4		Ends July 5		Starts September 16		Ends February 14		
Trace data (Regular reports)										
Post-tests (New Group Reading Test;				Completed between July 8 and July 19				Completed between February 24		

Single Word Spelling Test)									and March 7	
Analyse data										
Write report										
Deliver report					August 30					May 30