



# Funding Opportunity for Development and Evaluation of Early Years Interventions

Friday 19 May 2017

Nuffield Foundation Wifi: **NuffieldPublic**  
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# **Nuffield Foundation's new call for development and evaluation of early years interventions**

Josh Hillman, Director of Education



## Plan for session

- Background and rationale for this call
- Criteria and expectations
- Framing the next three presentations

# Nuffield Foundation and EYEC

- Synthesised the findings of previous work
- Identified gaps and uncertainties in evidence
- Shaped agenda for new programme

## Early years education and childcare

Lessons from evidence and future priorities

Josh Hillman and Teresa Williams



## Insights for today

- Gaps in outcomes *between advantaged and disadvantaged* as soon as we are able to measure them, so early years fruitful for intervention
- Proportionately lower participation of disadvantaged children in EYP, despite early evidence they have *most to gain*, particularly through publicly maintained provision, where on average quality is higher
- Evidence to support general expansion of provision far from conclusive, but does suggest that immediate priority should be to use funding to improve *incentives for higher quality* provision
- The need to go beyond crude indicators of quality



## Partnership with Education Endowment Foundation

- Nuffield Foundation boosts support for development and early evaluation of promising early years interventions that currently have a limited evidence base
- Promising projects become strong candidates for large-scale RCTs through EEF funding
- Joint articulation of interface between our work, and careful calibration of our expectations for research at different stages



## Key criteria for Nuffield funding (I)

- Improving learning and learning outcomes
- Particularly for those from disadvantaged backgrounds
- Theoretical basis for why an approach likely to have impact
- Rationale in relation to existing interventions that tackle same issue
- Clear and appropriate research questions



## Key criteria for Nuffield funding (II)

- Feasibility in the real world
- Evaluation and expertise to deliver it
- Appetite and potential for approach to be trialed and delivered at scale
- Commitment to future independent evaluation of approach via an RCT
- Deliverable at reasonable cost





# Nuffield Early Language Intervention

**Charles Hulme & Maggie Snowling**

University of Oxford



# Outline of Talk

- Oral language: why intervene?
- Preparatory work
- Research
  - Research trials to date
  - Efficacy of the programme
- Reflection and Lessons learned
  - NELI – next steps and why
  - Embedding delivery in schools



# Oral language is important

## Teaching and Learning

Language is the medium of instruction

## Literacy

Builds on a foundation in oral language

## Numeracy

Arithmetic is a verbal skill Children need to understand the verbal problems they have to solve

## Social and emotional development

Children need to be able to communicate to make friends, to join in activities and to express their feelings

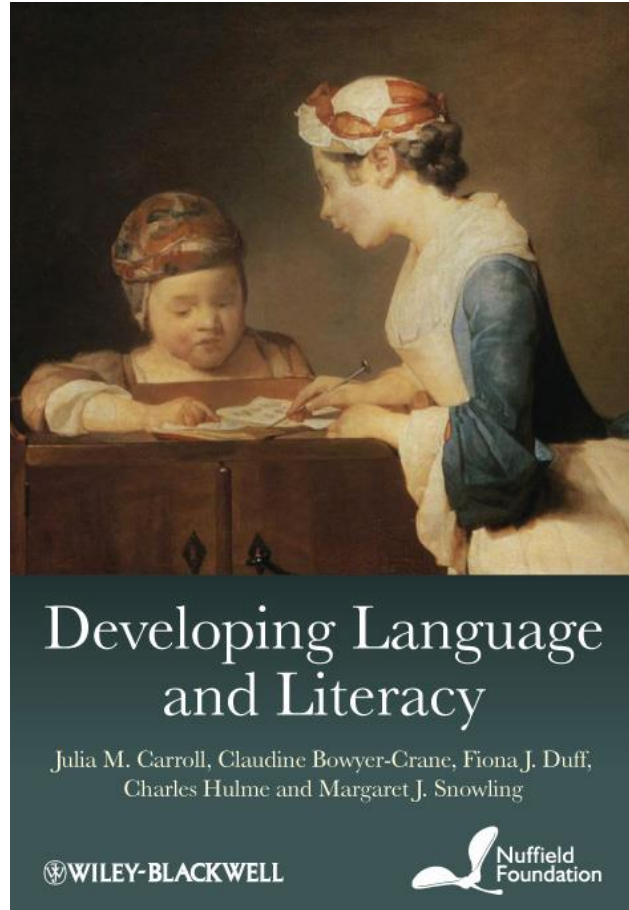
## Behaviour

Language (inner speech) is important for self-regulation



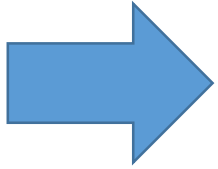
Interventions which target oral language skills have significant potential for improving educational outcomes and wellbeing

# Proof of Principle (2004)



- Randomised trial (RCT)
- Comparison of
  - Phonology programme (designed to promote early reading skills)
  - Oral Language programme (to promote listening, vocabulary and narrative production)
- 20 weeks daily intervention by trained TAs
  - 152 children (19 schools) aged 4;10 at outset
  - Randomised within schools

# Rationale and Questions



Strong theoretical and practical rationale for a school-based intervention programme to target oral language skills in the early school years

- How effective is oral language intervention (need baseline control)
- Why not start language intervention earlier in preschool?
- Can intervention be adapted to improve children's response to reading (phonics) instruction at school entry?
- Will intervention have longer term effects on reading comprehension skills?

# Nuffield Early Language Intervention (2007)

- 30-week programme for children consisting of 10 weeks in Nursery followed by 20 weeks of group and individual sessions in Reception
- Suitable for children with poor oral language skills at school entry
- For delivery by trained Teaching Assistants who were supported by the research team in fortnightly tutorials
- Waiting list control group
  - Note: who like the intervention group were receiving phonics instruction in mainstream classroom





## Efficacy of language intervention in the early years

Silke Fricke,<sup>1</sup> Claudine Bowyer-Crane,<sup>2</sup> Allyson J. Haley,<sup>3</sup> Charles Hulme,<sup>4</sup>  
and Margaret J. Snowling<sup>3</sup>

<sup>1</sup>Department of Human Communication Sciences, University of Sheffield, Sheffield; <sup>2</sup>Department of Psychology, Sociology and Politics, Sheffield Hallam University, Sheffield; <sup>3</sup>Department of Psychology, University of York, York;

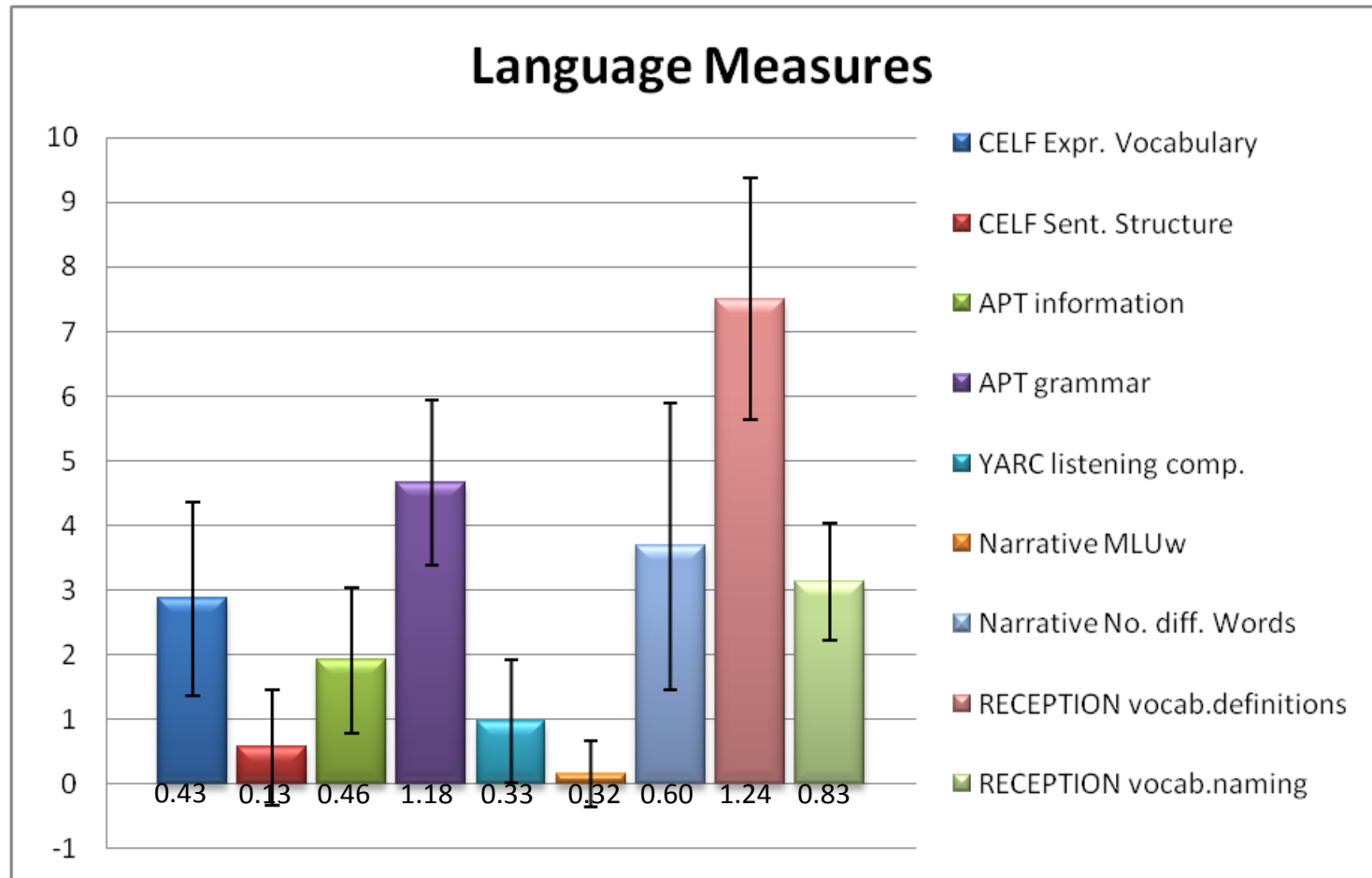
<sup>4</sup>Division of Psychology and Language Sciences, University College London, London, UK

**Background:** Oral language skills in the preschool and early school years are critical to educational success and provide the foundations for the later development of reading comprehension. **Methods:** In a randomized controlled trial, 180 children from 15 UK nursery schools ( $n = 12$  from each setting;  $M_{\text{age}} = 4;0$ ) were randomly allocated to receive a 30-week oral language intervention or to a waiting control group. Children in the intervention group received 30 weeks of oral language intervention,

<p>Nursery (10 weeks)</p>	<ul style="list-style-type: none"> <li>• 3 x 15 min sessions per week</li> <li>• Group sessions (2-4 children)</li> <li>• <b>Narrative, vocabulary, listening</b></li> </ul>
<p>Reception 1 (10 weeks)</p>	<ul style="list-style-type: none"> <li>• 3 x 30 min group sessions</li> <li>• 2 x 15 min individual sessions</li> <li>• <b>Narrative, vocabulary, listening</b></li> </ul>
<p>Reception 2 (10 weeks)</p>	<ul style="list-style-type: none"> <li>• 3 x 30 min group sessions</li> <li>• 2 x 15 min individual sessions</li> <li>• <b>added letter sound knowledge and phonological awareness</b></li> </ul>



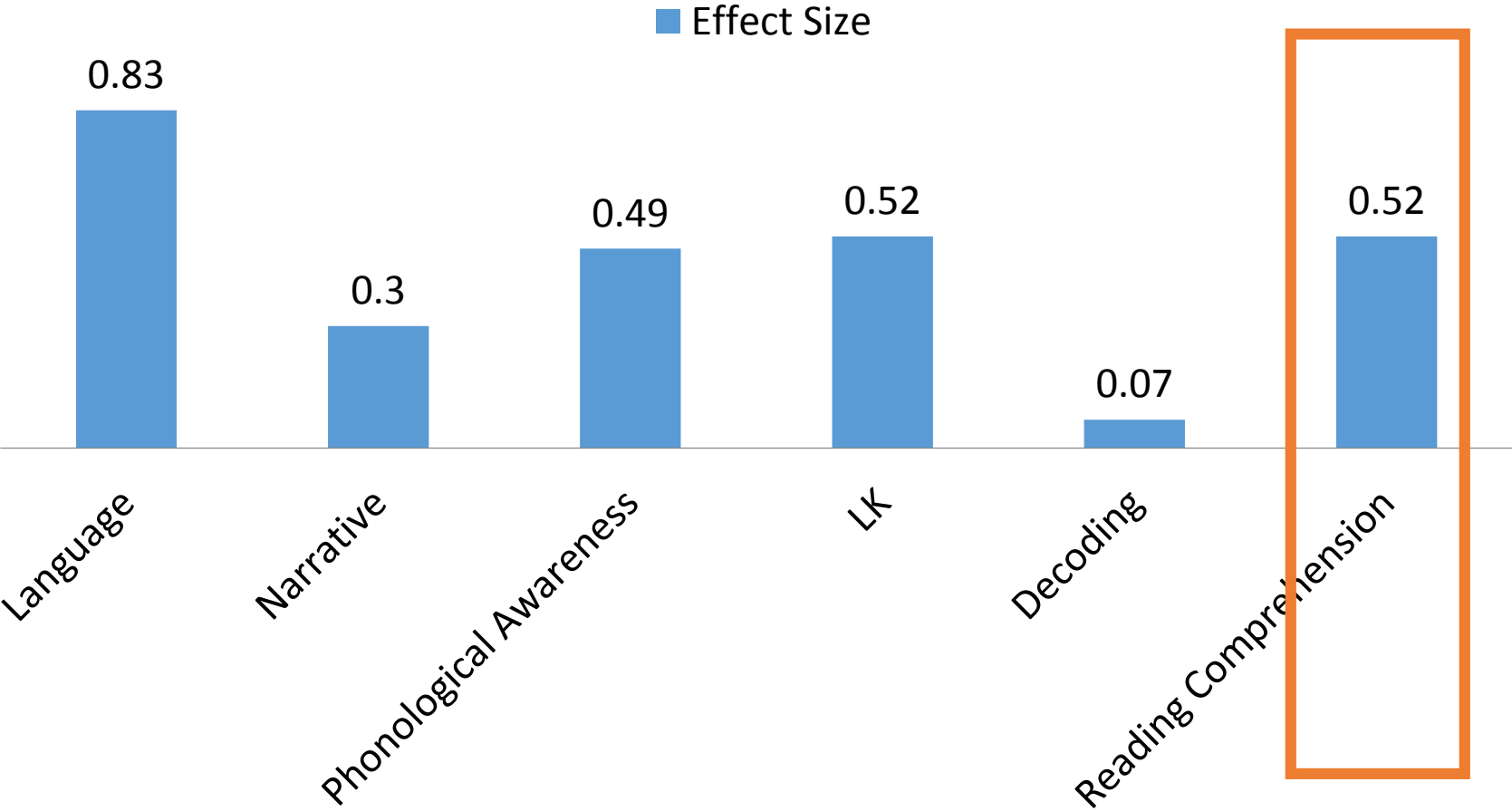
# Intervention effects on language (at post-test 1)



Also had positive effect on Phonemic Awareness and Letter-Sound Knowledge



# Intervention effects at delayed post test (6 months later)



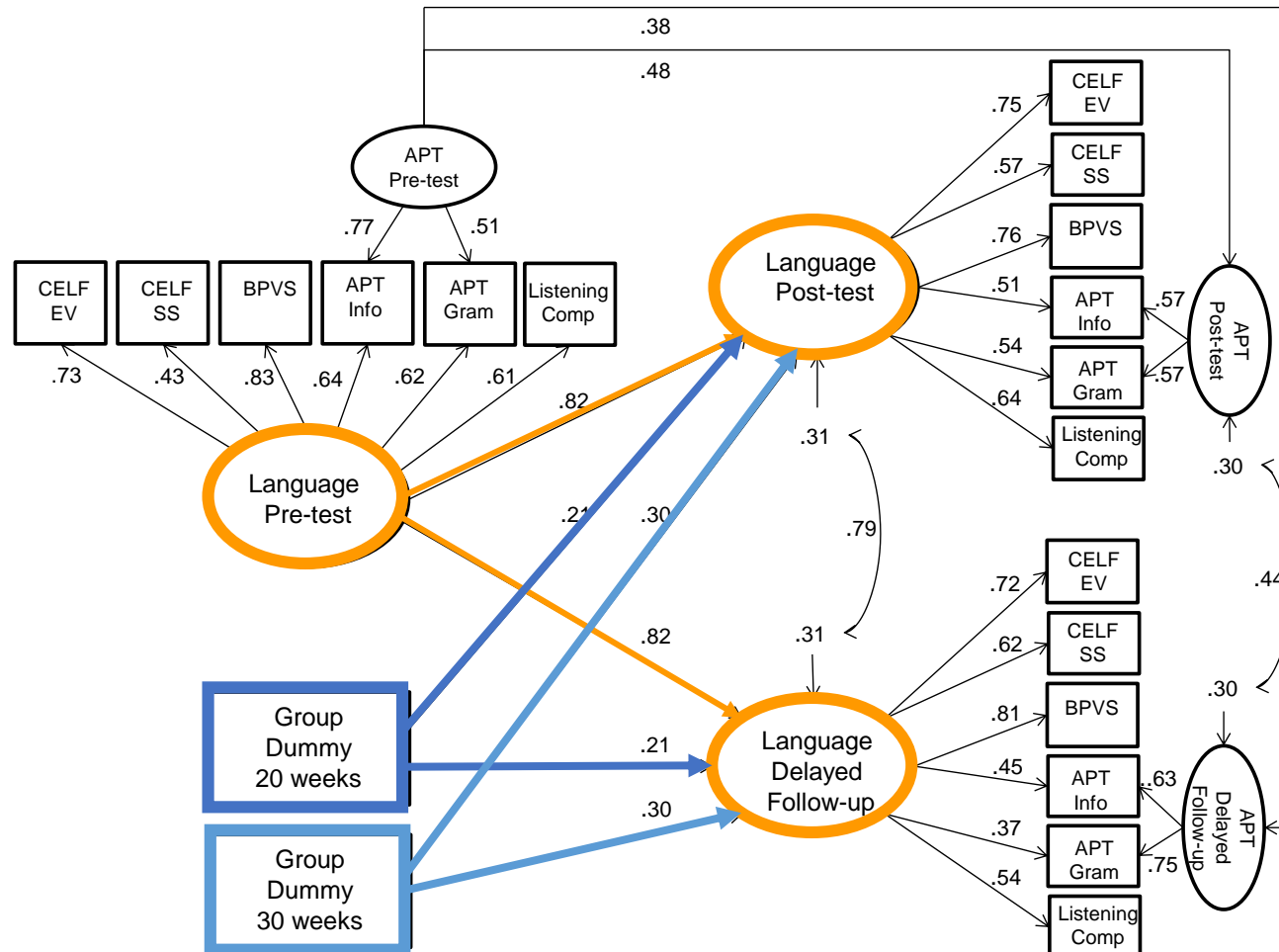
# Efficacy of NEELI programme (1)

- Randomised control trial:
  - Positive effects of 30-week intervention in Nursery and Reception classes with moderate to large effect sizes ( $d_s=.30-.83$ )
  - Supported by research team (training and telephone support)
  - Children who received the intervention had improved expressive language skills, including the use of vocabulary and grammar
  - Letter-sound knowledge and spelling also improved
  - Effectiveness of the programme sustained over time – after six months the children in the intervention group maintained progress and actually outperformed the waiting control group on reading comprehension

# Field Trial 1

- Wider field trial funded by Education Endowment Foundation :
  - To replicate and extend work of the original RCT with the research team ‘at arms length’
  - TAs trained by independent team with reduced training (from 4 to 2 days) and no tutorials.
  - Telephone/email support was offered on an ‘as required’ basis
  - RCT involving 34 schools and nurseries; randomized within schools
  - Independent evaluation of the trial

# Results: Effects on standardised measures of oral language (primary outcome)



$\chi^2 (145) = 178.582,$   
 $p = .030; RMSEA = .024$   
 $[90\% CI .008 - .035]; CFI = .890; TFI = .986$

# Nuffield Language Intervention – three RCTs to date

- [Bowyer-Crane et al., 2008 JCPP](#). 20-week reception class oral language programme, compared to a **reading and phonology** programme. **No untreated control group**. N's 76 per group. Average effect size on three key measures of generalization (Picture arrangement, Bus Story Sentence length, Action Picture Test grammar score) –  $d = .30$
- [Fricke et al., 2013 JCPP](#). 30-week nursery/reception class oral language programme, compared to **untreated control group**. N's 90 per group. Effect size on language latent variable  $d = .80$  end of programme;  $d = .83$  at 6-month delayed follow-up. Reading comprehension also improved substantially at delayed follow-up  $d = .52$ .
- [Fricke et al., 2017, JCPP](#). Scale-up trial **funded by EEF**. N = 130 per group. Effect size on language latent variable at end of programme –  $d = .30$  (30-week programme)  $d = .21$  (20-week programme). Effects maintained at 6-month follow-up. Smaller effects than hoped for. Evidence of reduced fidelity compared to Fricke et al., 2013.

# Teachers & TAs: Feedback

It gave the children and the Teaching Assistant a great opportunity to develop language that could be taken back to class. Children showed more confidence after completing the intervention.

Children looked forward to being withdrawn and got excited about the activities. It allowed quieter children the opportunity to speak up in a smaller setting.

The TA learned a great deal about speech and language and how to support children with S & L needs.

I do feel it was a good use of the Teaching Assistant's time as early language is extremely important, especially in the EYFS Curriculum.

It helped the staff and children to focus fully on the specific task and skills to be learnt.

Excellent use of time due to quality of materials and obvious progress made by the children.

It was very well organised and I felt informed at all times. It was a very positive experience and the resources will be useful for future work with the children.

A small group was appropriate as it gave the children plenty of opportunities to express themselves.



NUFFIELD  
EARLY  
LANGUAGE  
INTERVENTION

# **Reflections and lessons learned**

# Developing a Proposal: Advantages

- Experience in robust evaluation of reading interventions
- Protocol for the training and support of teaching assistants (TAs) and format of delivery
- Strong engagement of local schools
- Support from LA consultants in language and literacy, specialist teacher and speech and language therapist
- Collaborative team developed content and piloted sessions



# Developing a Proposal: Challenges

- Ethical issues
- Recruitment
- Delivery
  - Training and support of teaching assistants
  - Role of the teacher
- Implementation
  - Fitting the sessions into the school timetable / ethos
  - Space constraints
  - Restricts availability of TA for other activities
- Ensuring fidelity
  - Avoiding 'leakage/contamination'
- Cultural context

# Future Development of NELI

## Critical Appraisal

### Content and Presentation

- manuals are not easy to use and preparation takes a lot of time
- some activities not contextually appropriate – need adjusting for children with more limited experiences
- nursery programme – some activities not engaging for younger children (2D; insufficient ‘action’)

### Organisation

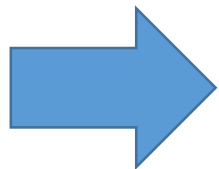
- 30 week version incorporating nursery part difficult to implement (changes in staffing etc)

### Screening and selection

- Teachers require an easy tool to identify children for the programme – and to demonstrate progress

# Nursery Programme

- Limited in intensity (10 weeks - 3 x 15 minute group sessions)
- RCT of current nursery programme alone, delivered in preschool settings, showed specific effects of the training (on vocabulary) and marginal effects on listening but little generalization
  - *Haley, Hulme, Bowyer-Crane, Snowling & Fricke (2017)*
- Too short? Too difficult to implement? Too difficult for children to access?



Develop improved version of Nursery Programme

Progress to roll out a 20-week Reception Programme

# Next Steps

- Professional re-packaging of the NELI Reception programme in collaboration with commercial educational publisher
- EEF effectiveness trial (from September 2017):
  - Cluster randomised trial
  - Roll-out in 200–250 schools in 8 regions (half receive intervention)
  - Delivered by third party provider
  - Independent evaluation
- Improved training for TA and teacher in each setting
- Web-based support during delivery (four webinars and on-line Q&As) ensuring fidelity
- Development of a protocol for teacher-use to screen and assess language (Language App)

# Conclusions

RCTs evaluating the *Nuffield Early Language Intervention* to date show that:

- **Oral language work** can be **successfully delivered in school** settings by trained TAs
- Robust evidence that **vocabulary and narrative skills show sizable improvements**
- Improvements in oral language benefit **literacy development** especially **reading comprehension**
- This may not be “rocket science” **BUT**
  - Materials need to be of high quality
  - The quality of training and support for TAs is critical
  - Short interventions may have specific effects but little generalization

# Remaining challenges

- Making clear the policy statement that oral language is the foundation of literacy and more broadly education success
- Embedded language in the curriculum from the early years on
  - In the UK and in developing education systems



**CAMPAIGN TO RAISE AWARENESS OF  
LANGUAGE LEARNING IMPAIRMENTS**

<http://www.youtube.com/rallicampaign>

# The team

- Professor Maggie Snowling, University of Oxford
- Professor Charles Hulme, University of Oxford
- Dr Silke Fricke, University of Sheffield
- Dr Claudine Bowyer-Crane, University of York
- Allyson Haley, University of New Brunswick

in collaboration with Nuffield Foundation and  
Education Endowment Foundation

- Denise Cripps, St John's College, University of Oxford – Project Manager

# The Esmée Fairbairn Sutton Trust Parental Engagement Fund

*Laura Barbour*

*Programme Manager Sutton Trust*

*Fiona Jelley*

*Department of Education University of Oxford*



- Address inequality in children's early attainment
- Develop effective parental engagement practice in UK Early Years
- Five organisations supported by the Dept of Education University of Oxford
- Build capacity of organisations to demonstrate impact in a rigorous way.
- Support UK organisations to develop delivery.

- The Sutton Trust founded in 1997 by Sir Peter Lampl
- Tackling inequality from birth
- Socially driven attainment gap before start of school <sup>1,2,3</sup>
- Focus on engaging parents <sup>4,5,6,7</sup>

1 The Social Mobility Summit: Report of the Summit held at the Royal Society. London 21-22 May 2012 <http://www.suttontrust.com/wp-content/uploads/2012/09/st-social-mobility-report.pdf>

2 Bradbury, Corak, Waldfogel, and Washbrook, *Too Many Children Left Behind* (Russell Sage Foundation, 2015),

3 E Washbrook, 'Early Environments and Child Outcomes: An Analysis Commission for the Independent Review on Poverty and Life Chances', (University of Bristol Centre for Market and Public Organisation, 2010)

4. The Social Mobility Summit: Report of the Summit held at the Royal Society. London 21-22 May 2012 <http://www.suttontrust.com/wp-content/uploads/2012/09/st-social-mobility-report.pdf>

5. K. Sylva, Melhuish, E., Sammons, P., Siraj-Blatchford, I., and Taggart, B., 'The Effective Provision of Pre-School Education (Eppe) Project: Final Report'

6. Joseph Rowntree report Attitudes, Aspiration and Behaviour

7. The Sutton Trust / Education Endowment Foundation's Teaching and Learning Toolkit

- “There is no good quality evidence that parental involvement interventions result in improved educational outcomes”<sup>1</sup>  
Gorard
- The evidence base for programmes available in the UK is not yet mature – EIF<sup>2</sup>
- Lack of evidence does not mean there is no impact
- Building the evidence base
- Focusing on UK delivery
- Linking with EEF

<sup>1</sup> Do parental involvement interventions increase attainment? Gorard & See Nuffield

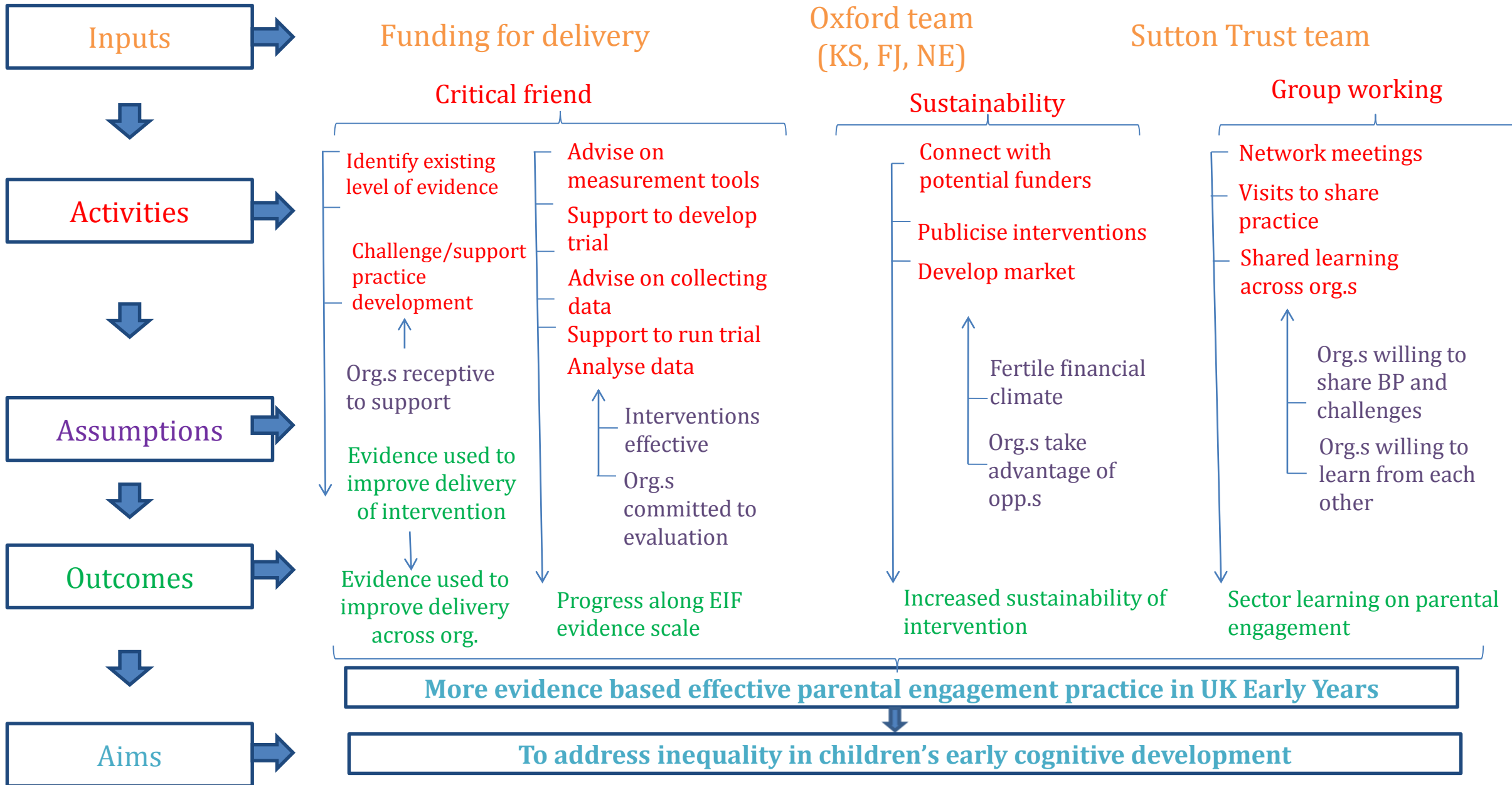
<sup>2</sup> FOUNDATIONS FOR LIFE – Early Intervention Foundation 2016

- Innovation found at grass roots
- Valuing the process of developing the evidence
- Building evidence of programme impact has a number of stages and takes time.
- A vital part of this journey can be learning from “disappointing” evaluation results and adapting in response.
- Challenging assumptions can be the source of breakthroughs and greater innovation.

- Existing UK intervention engaging parents in their child's learning
- A persistent curiosity regarding the impact of their work and a desire to develop delivery
- Willingness to engage fully with evaluation process
- A suite of different interventions



# Sutton Trust Parental Engagement Fund



- *Identify effective parental engagement practices benefiting children and families to share across the sector.*
- *Trialled and Developed a new model of support – connecting evaluation with delivery.*

An example from the Parental Engagement Fund:

**EasyPeasy**





- An app that sends **game ideas** combined with **child development info** to parents of young children (2-6 year olds)
- Designed to improve early child development and ‘school readiness’ through encouraging **positive parent-child interaction** and **supporting play and learning** at home
- Parents are assigned to small groups – ‘**Pods**’ – which are overseen by a practitioner in a setting (virtual and face-to-face)

- EasyPeasy had **‘proof of concept’** and some **early feasibility testing**
  - Shared with parents during development stage to gauge interest and acceptability
  - Piloted in a school setting
- ...and **‘evidence of promise’**
  - Content underpinned by evidence
  - Small-scale pilot demonstrating promising effects on parents’ engagement in play

- Keen to carry out robust trial because of **promising** feasibility work and an **appetite to roll out**
- Interested in investigating effects on **parents** (parenting self-efficacy) and **children** (school readiness skills)
- Co-designed and carried out **two randomised controlled trials** in two local authorities (both involving 8 children's centres)

- **Defining the intervention:** how often, no. of weeks, target age range
- **Designing the trials:** finer detail of RCTs – individual vs. cluster, randomisation, intention-to-treat, control group offer, making changes along the way
- **Measurement:** what and when to measure
- **Data collection** can be hard!
- Understanding **study limitations** and important caveats

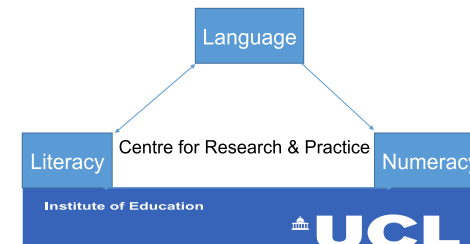
- Can take time to **establish relationship**
- **Understanding of ‘evaluation’**
- **Defining** the intervention/programme/approach
- **What an RCT entails** (and addressing related concerns)
- Importance of **measurement** selection and timing
- **Managing expectations** – of what the data can (and cannot) tell us, trial limitations
- **Preparation for next stage** – making clear what would be expected

- Jelley, F., Sylva, K., & Karemaker, A. (2016). *EasyPeasy parenting app: findings from an efficacy trial on parent engagement and school readiness skills*. London: The Sutton Trust. [available on Sutton Trust website]
- <http://www.suttontrust.com/programmes/parental-engagement-fund/>
- <http://www.easypeasyapp.com/>
- [laura.barbour@suttontrust.com](mailto:laura.barbour@suttontrust.com)
- [fiona.jelley@education.ox.ac.uk](mailto:fiona.jelley@education.ox.ac.uk)

# CONCEPTUALISING ASSESSMENT FOR INTERVENTIONS IN THE EARLY YEARS (under 6)

Anna Llauro, Jane Hurry, Richard Cowan & Eirini Flouri

Julie Dockrell  
Professor of Psychology  
Special Needs



# Plan of presentation

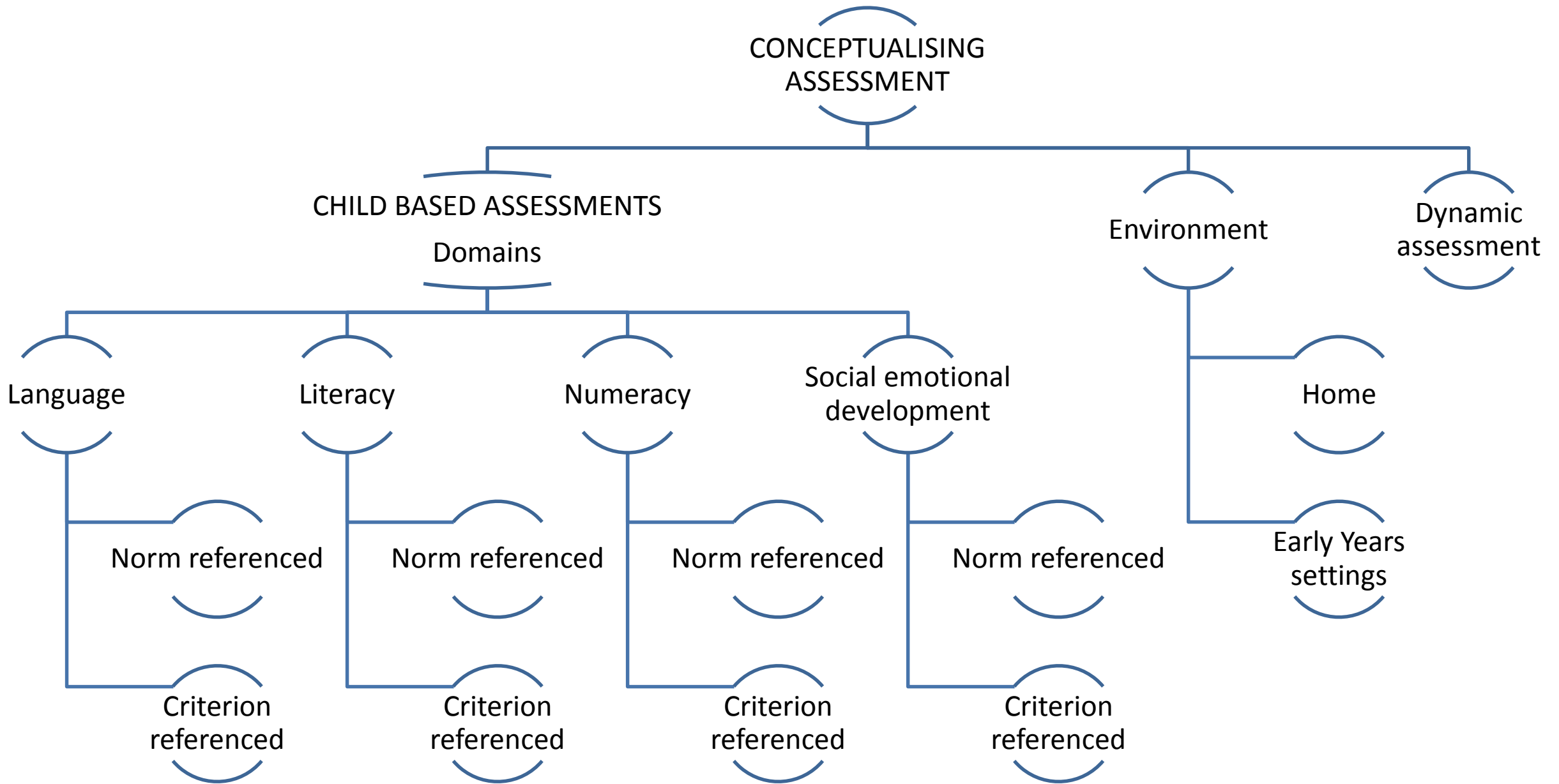
Domains and approaches to assessment

Methodology

Domain descriptions and measures

Key questions in choosing a measure





Guided by

- research experts,
- critical review of current measures
- review of measures in published studies

Key features identified for each domain

A searchable data base of measures which met the inclusionary criteria (UK norm-referenced OR criterion referenced for child based, psychometrically sound for all)

# LANGUAGE

- Domain
  - Vocabulary
  - Grammar
  - Social communication
- What we found
  - 33 tests
  - 16 had UK norms
  - Mainly assessing vocabulary and grammar
  - Limited assessments of social communication (checklists completed by parent or practitioner)

	Letter Knowledge	Phonological Awareness	Decoding (word and non-word)	Conventions of Print	Spelling
Literacy					
CTOPP		✓			
CTOPPP		✓			
DIBELS	✓	✓	✓		
ELSA	✓	✓		✓	
ERDA		✓			
Observation Survey (OS)	✓	✓	✓	✓	✓
PhAB		✓	✓		
PALS	✓	✓			✓ (name writing)
PIPA	✓	✓			
TERA	✓			✓	
TOPEL	✓	✓		✓	
WIAT_II			✓		✓
YARC	✓	✓	✓		
Omnibus					
EARLI	✓	✓			
Brigance					
ELS		✓		✓	
WRAT-4			✓		✓

	Counting	Transcoding	Comparing numerical magnitude	Simple arithmetic	
Numeracy					
Keymath-3	✓			✓	
PNI	✓	✓			
Preschool numeracy	✓	✓	✓	✓	
Omnibus					
EARLI	✓	✓			
Brigance	✓	✓		✓	
BAS III (Early Number Concepts and Number Skills)	✓	✓	✓	✓	
ELS	✓	✓			

- Domain **SOCIAL & EMOTIONAL SKILLS**
  - Social Competence
  - Emotional Competence
  - Behaviour problems
  - Self-regulation
- What we found
  - 28 assessments, completed either by parents or teachers
  - 4 met the study criteria, all well-known and widely-used: ASQ-3; HBQ; SDQ; SCQ

# LEARNING ENVIRONMENT

- Domain
  - Home Learning Environment
    - All domains
    - Literacy
    - Numeracy
  - Early Years Settings
    - All domains
    - Language & Literacy
- What we found
  - 8 met the study criteria, involving observation, checklist and/or questionnaire
  - 4 on Home Learning Environment
  - 4 on Early Years Settings

Do measures reflect target of intervention?

Is the measure appropriate for target population?

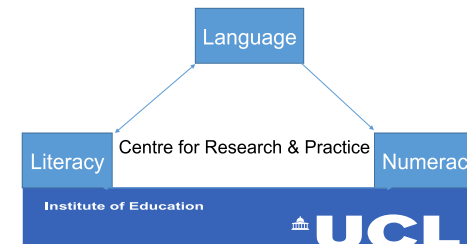
Are criteria developmentally appropriate?

Does test have minimum psychometric properties?

Does administration require special considerations?



Thank you for your time and  
attention





# Questions and Answers regarding Call for Proposals

## Panel:

**Josh Hillman**, Director of Education and Opportunity, Nuffield Foundation

**Ruth Maisey**, Programme Head (Education), Nuffield Foundation

**Matt Van Poortvliet**, Grants Manager, Education Endowment



# Next Steps

**Josh Hillman**

Director of Education and Opportunity, Nuffield Foundation



**We now welcome you to join us  
in the Dining Room  
for a Networking lunch**

Thank you for attending today's seminar.