# Nuffield Early Language Intervention (20 weeks)

Reviews: January 2019; January 2021

Note on provider involvement: This provider has agreed to EIF's terms of reference, and the assessment has been conducted and published with the full cooperation of the programme provider.

**The Nuffield Early Language Intervention (NELI) (20 weeks) is an oral language programme. It is a targeted programme for children between the ages of 4 and 6. It is delivered in the first year of primary school (reception).**

The programme is targeted at children who show weakness in their oral language skills and are, therefore, at risk of experiencing difficulty in education.

The intervention is delivered by trained teaching assistants. Sessions focus on improving children's vocabulary, developing narrative skills, encouraging active listening and building confidence in independent speaking.

Evidence rating: **3+**

Cost rating: **2**

# EIF Programme Assessment

Nuffield Early Language Intervention (20 weeks) has evidence of a **short-term positive impact** on child outcomes from at least one rigorous evaluation.

## What does the evidence rating mean?

**Level 3** indicates **evidence of efficacy**. This means the programme can be described as evidence-based: it has evidence from at least one rigorously conducted RCT or QED demonstrating a statistically significant positive impact on at least one child outcome.

This programme does not receive a rating of 4 as it has not yet replicated its results in another rigorously conducted study, where at least one study indicates long-term impacts, and at least one uses measures independent of study participants.

## What does the plus mean?

The plus rating indicates that this programme has evidence from at least one level 3 study, along with evidence from other studies rated 2 or better.

Note that this guidebook page describes the 20-week version of the Nuffield Early Language Intervention that is delivered in the first year of primary school. There is another version of this programme, delivered in 30-weeks, that is delivered in both nursery and in the first year of primary school. This version can also be found on the guidebook with an EIF Strength of Evidence Level 3+.

# Cost rating

A rating of 2 indicates that a programme has a medium-low cost to set up and deliver, compared with other interventions reviewed by EIF. This is equivalent to an estimated unit cost of £100–£499.

Cost rating: **2**

# Child outcomes

According to the best available evidence for this programme's impact, it can achieve the following positive outcomes for children:

## Enhancing school achievement & employment

### Improved oral language

**Based on study 1**

Increase in oral language ability (measured using a composite of vocabulary, grammar, and listening scales)

Improvement index: **+8**

This means we would expect the average participant in the comparison group who did not receive the intervention (ie, someone for whom 50% of their peers have better outcomes and 50% have worse outcomes), to improve to the point where they would have better outcomes than 58% and worse outcomes than 42% of their peers, if they had received the intervention.

Immediately after the intervention

Increase in oral language ability (measured using a composite of vocabulary, grammar, and listening scales

Improvement index: **+8**

This means we would expect the average participant in the comparison group who did not receive the intervention (ie, someone for whom 50% of their peers have better outcomes and 50% have worse outcomes), to improve to the point where they would have better outcomes than 58% and worse outcomes than 42% of their peers, if they had received the intervention.

6 months later

**Based on study 2**

### Improved taught vocabulary

**Based on study 1**

3.22-point improvement on the picture naming task

Improvement index: **+35**

This means we would expect the average participant in the comparison group who did not receive the intervention (ie, someone for whom 50% of their peers have better outcomes and 50% have worse outcomes), to improve to the point where they would have better outcomes than 85% and worse outcomes than 15% of their peers, if they had received the intervention.

Immediately after the intervention

1.94-point improvement on the picture naming task

Improvement index: **+23**

This means we would expect the average participant in the comparison group who did not receive the intervention (ie, someone for whom 50% of their peers have better outcomes and 50% have worse outcomes), to improve to the point where they would have better outcomes than 73% and worse outcomes than 27% of their peers, if they had received the intervention.

6 months later

**Based on study 3**

**Based on study 1**

1.67-point improvement on the definition asking task

Improvement index: **+17**

This means we would expect the average participant in the comparison group who did not receive the intervention (ie, someone for whom 50% of their peers have better outcomes and 50% have worse outcomes), to improve to the point where they would have better outcomes than 67% and worse outcomes than 33% of their peers, if they had received the intervention.

Immediately after intervention

1.17-point improvement on the definition asking task

Improvement index: **+12**

This means we would expect the average participant in the comparison group who did not receive the intervention (ie, someone for whom 50% of their peers have better outcomes and 50% have worse outcomes), to improve to the point where they would have better outcomes than 62% and worse outcomes than 38% of their peers, if they had received the intervention.

6 months later

**Improved expressive grammar**

**Based on study 3**

## Improved early reading

**Based on study 2**

# Key programme characteristics

## Who is it for?

The best available evidence for this programme relates to the following age-groups:

- Primary school

## How is it delivered?

The best available evidence for this programme relates to implementation through these delivery models:

- Individual
- Group

## Where is it delivered?

The best available evidence for this programme relates to its implementation in these settings:

- Primary school

The programme may also be delivered in these settings:

- Primary school

## How is it targeted?

The best available evidence for this programme relates to its implementation as:

- Targeted indicated

## Where has it been implemented?

United Kingdom

## UK provision

This programme has been implemented in the UK.

## UK evaluation

This programme's best evidence includes evaluation conducted in the UK.

## Spotlight sets

EIF does not currently include this programme within any Spotlight set.

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# About the programme

## What happens during delivery?

### How is it delivered?

- Nuffield Early Language Intervention (20 weeks) is delivered by one trained teaching assistant in 100 sessions, comprising three 30-minute group sessions (to groups of 3–5 children) and two 15-minute individual sessions each week.

### What happens during the intervention?

- The mixture of small group and individual sessions focus on improving children's vocabulary, developing narrative skills, encouraging active listening and building confidence in independent speaking.

- In the second half of the programme, activities promoting phonological awareness and letter-sound knowledge are introduced.

- Children develop their vocabulary and language skills within a structured framework that follows established principles for teaching listening, vocabulary and narrative.

- Narrative work gives children the opportunity to practise taught vocabulary in connected speech and introduces them to key story elements and the sequencing of events while encouraging expressive language and grammatical competence.

## What are the implementation requirements?

### Who can deliver it?

- The practitioner who delivers this programme is a teaching assistant with NFQ-5 level qualifications.

**What are the training requirements?**

- Practitioners have two days of programme training. Booster training of practitioners is not required.

**How are the practitioners supervised?**

- Practitioner supervision is not required.

**What are the systems for maintaining fidelity?**

Programme fidelity is maintained through the following processes:

- Training manual
- Other printed material
- Face-to-face training.

**Is there a licensing requirement?**

There is no licence required to run this programme.

# How does it work? (Theory of Change)

**How does it work?**

- Oral language skills are a critical foundation for educational success as well as for wider psycho-social wellbeing.
- This targeted intervention improves the oral language skills of children entering school with poor language.
- In the short term, children improve both expressive and receptive language skills.
- In the longer term, lasting improvements in oral language places the children at lower risk of reading failure and enables them to benefit fully from their education.

**Intended outcomes**

Supporting children's mental health and wellbeing Enhancing school achievement & employment

## Contact details

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http://www.nuffieldfoundation.org/nuffield-earlylanguage-interventionhttps://services.elklan.co.uk/nelihttps://global.oup.com
https://www.youtube.com/watch?v=10q6WMFnmzohttps://www.youtube.com/watch?v=PTrCEaW52Jw

# About the evidence

Nuffield Early Language Intervention (20 weeks) has evidence from at least one rigorously conducted RCT along with evidence from an additional comparison group study.

Consequently, the programme receives a 3+ rating overall.

## Study 1

| | |
|---|---|
| **Citation:** | Fricke et al., 2017 and Sibieta, Kotecha, & Skipp, 2016 |
| **Design:** | RCT |
| **Country:** | United Kingdom |
| **Sample:** | 394 pupils with an average age of 3.8 years and standardised language scores in the low-average range. 49% were female and 29% were eligible for free school meals. |
| **Timing:** | Post-test; 6-month follow-up |

**Child outcomes:**

- Improved oral language

- Improved taught vocabulary

- Improved taught vocabulary

**Other outcomes:**

- None measured

**Study rating:** 3

Fricke, S., Burgoyne, K., Bowyer-Crane, C., Kyriacou, M., Zosimodou, A., Maxwell, L., Lervåg, A., Snowling, M.J., Hulme, C. (2017). The efficacy of early language intervention in mainstream school settings: a randomized control trial. *Journal of Child Psychology and Psychiatry,* 58:10, 1141–1151.
**Available at:** https://onlinelibrary.wiley.com/doi/abs/10.1111/jcpp.12737
Sibieta, L., Kotecha, M., & Skipp, A. (2016). *Nuffield Early Language Intervention: Evaluation Report and Executive Summary.* Education Endowment Foundation.
**Available at:**https://eric.ed.gov/?id=ED581138

**Study design and sample**

This study is a rigorously conducted RCT.

This study involved random assignment of children to Nuffield Early Language Intervention (NELI) (20 weeks), a 30-week version of NELI and a waiting control group.

This study was conducted in the UK, with a sample of children who showed weakness in their oral language skills. The sample recruited had standardised language scores in the low-average range with a high proportion having clinically significant language difficulties. The average age of the full sample was 3.8 years, 49% were female and 29% were eligible for free school meals.

**Measures**

- **Oral language** was measured using a composite measure consisting of vocabulary, grammatical and listening comprehension tests (direct assessment). These included, for **vocabulary**: the Clinical Evaluation of Language Fundamentals (CELF) Expressive Vocabulary subtest, the Information Score from the Renfrew Action Picture Test (APT) and the British Picture Vocabulary Scale (BPVS); for **grammar**: the CELF Sentence Structure subtest and the APT Grammar Score; for **listening comprehension**, children were asked to listen to two short stories adapted from the York Assessment of Reading for Comprehension (YARC) and answer questions about them.
- **Taught vocabulary** was measured by using picture naming and asking children for definitions of words, based on a random selection of the vocabulary taught during the programmes (direct assessment).
- **Early literacy skills** were measured using the Letter-Sound Knowledge subtest from the YARC (direct assessment).
- **Word-level reading:** Word level reading accuracy was measured using the YARC Early Word Reading subtest (direct assessment).
- **Reading comprehension** was assessed using two beginner passages from the YARC Passage Reading test (direct assessment).

**Findings (for NELI 20 weeks)**

This study identified statistically significant positive impact on a number of child outcomes. This includes:
- Oral language (at post-test and at 6-month follow-up)
- Taught vocabulary (at post-test and at 6-month follow-up).

## Study 2

| | |
|---|---|
| **Citation:** | Dimova et al., 2020 |
| **Design:** | RCT |
| **Country:** | United Kingdom |
| **Sample:** | 1,156 children aged 4-5. 34% were eligible for free school meals. |
| **Timing:** | Post-test |

**Child outcomes:**

- Improved oral language

- Improved early reading

**Other outcomes:**

- None

**Study rating:**    3

Dimova, S., Ilie, S., Brown, E. R., Broeks, M., Culora, A., & Sutherland, A. (2020). The Nuffield Early Language Intervention: Evaluation Report.

**Available at:** https://educationendowmentfoundation.org.uk/projects-and-evaluation/projects/nuffield-early-language-interv

**Study design and sample**

This study is a rigorously conducted RCT.

It involved random assignment of children to an oral language group (the Nuffield Early Language Intervention) and a control group (business as usual and, as an incentive, financial compensation of £1,000). This study was conducted in the UK with a sample of children who were aged between 4 and 5.

**Measures**

- **Oral language** was measured using a composite measure consisting of vocabulary and grammatical tests (direct assessment). These included, for **vocabulary**: the Clinical Evaluation of Language Fundamentals (CELF) Expressive Vocabulary subtest and Recalling sentences subtest, and the Information Score from the Renfrew Action Picture Test (APT). For **grammar**, these included: the Grammar subtest from the Renfrew Action Picture Test (APT).
- **Early reading** was measured using the York Assessment of Reading for Comprehension (YARC) early word reading test.

**Findings**

This study identified statistically significant positive impact on a number of child outcomes. This includes:
- Improved oral language skills
- Improved early reading skills

## Study 3

| | |
|---|---|
| **Citation:** | Bowyer?Crane et al., 2008 |
| **Design:** | RCT |
| **Country:** | United Kingdom |
| **Sample:** | 160 children aged 4.09 years on average with poor oral language skills. |
| **Timing:** | Post-test; 6-month follow-up |

**Child outcomes:**

- Improved expressive grammar

- Improved taught vocabulary

**Other outcomes:**

- None measured

**Study rating:**    2

Bowyer?Crane, Claudine, et al. (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.

**Available at:** https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1469-7610.2007.01849.x

**Study design and sample**

This study is an RCT.

It involved random assignment of children to an oral language group (the Nuffield Early Language Intervention) and a Phonology with Reading programme group. This study was conducted in the UK with a sample of children who were aged 4.09 years on average and showed weakness in their oral language skills. 50% of the overall sample was female and 50% was male. 24% of the overall sample was eligible for free school meals.

**Measures**

Phonological measures
- Phoneme awareness was measured using the initial phoneme detection component of the Sound Isolation Task (direct assessment).
- Phoneme Completion was measured using the Phonological Abilities Test (direct assessment).
- Children's ability to segment and blend words was measured using Phoneme Blending, Segmentation and Deletion tasks from the Test of Phonological Awareness (direct assessment).

Language measures
- Expressive grammar was assessed using The Action Picture Test (direct assessment).
- Narrative skill was measured using The Bus Story test (direct assessment).
- Specific (taught) vocabulary was measured by assessing knowledge of words taught directly in the oral language programme (NELI), using a combination of picture naming and questions requiring one-word answers (direct assessment). Note that this outcome demonstrates that the programme taught the words it was designed to teach. However, we do not know whether this was enough to improve overall vocabulary as a general measure of vocabulary was not administered.

- Listening comprehension was assessed using recordings of stories taken from the Neale Analysis of Reading Ability II (direct assessment).

Literacy measures
- Letter identification was measured by asking children to identify by sound the letters in the English alphabet (direct assessment).
- Single word reading ability was measured using the Early Word Recognition Test, and the British Ability Scales II Word Reading scale for children scoring about a certain threshold (direct assessment).
- Reading comprehension was measured by asking children to read two short stories: the Level 1 passage taken from Form 1 of the NARA II, and Passage 1, Form 1 from the Gray Oral Reading Tests 4 (direct assessment).
- Prose reading accuracy was measured using the reading comprehension test (direct assessment).
- Nonword Reading was measured using the Graded Nonword Reading Test (a measure of decoding) (direct assessment).
- Spelling was measured by presenting children with five words as pictures to be named and spelled (direct assessment).

Behavioural measure
- Behaviour was measured using the Strengths and Difficulties Questionnaire (teacher / teaching assistant report).

**Findings**

This study identified statistically significant positive impact on a number of child outcomes.
The oral language (NELI) group performed significantly better than the Phonology with Reading group on the following outcomes:
- Specific (taught) vocabulary at post-test and follow up
- Expressive grammar at post-test and follow up (however, this result was no longer significant at post-test when social class was controlled for)

The Phonology with Reading group performed significantly better than the oral language group on the following outcomes:
- Phoneme blending, segmentation, deletion at post-test
- Letter identification at post-test and follow-up
- Prose reading accuracy at post-test
- Nonword reading at follow-up
- Spelling at post-test and follow-up.

The conclusions that can be drawn from this study are limited by methodological issues pertaining to unequivalent groups at baseline and a lack of clarity in terms of equivalence between groups after attrition, hence why a higher rating is not achieved.


# Other studies


The following studies were identified for this programme but did not count towards the programme's overall evidence rating. A programme receives the same rating as its most robust study or studies.


Haley, A., Hulme, C., Bowyer-Crane, C., Snowling, M. J., Fricke, S. (2017). Oral language skills intervention in pre-school - a cautionary tale. International Journal of language & communication disorders, 52: 71–79 - **This reference refers to a randomised control trial, conducted in the UK.**

# Guidebook

The EIF Guidebook provides information about early intervention programmes that have at least preliminary evidence of achieving positive outcomes for children. It provides information based on EIF's assessment of the strength of evidence for a programme's effectiveness, and on detail about programmes shared with us by those who design, run and deliver them.

The Guidebook serves an important starting point for commissioners to find out more about effective early interventions, and for programme providers to find out more about what good evidence of impact looks like and how it can be captured. As just one of our key resources for commissioners and practitioners, the Guidebook is an essential part of EIF's work to support the development of and investment in effective early intervention programmes.

Our assessment of the evidence for a programme's effectiveness can inform and support certain parts of a commissioning decision, but it is not a substitute for professional judgment. Evidence about what has worked in the past offers no guarantee that an approach will work in all circumstances. Crucially, the Guidebook is not a market comparison website: ratings and other information should not be interpreted as a specific recommendation, kite mark or endorsement for any programme.

How to read the Guidebook

EIF evidence standards

About the EIF Guidebook

## EIF

The Early Intervention Foundation (EIF) is an independent charity and a member of the What Works network. We support the use of effective early intervention for children, young people and their families: identifying signals of risk, and responding with effective interventions to improve outcomes, reduce hardship and save the public money in the long term.

We work by generating evidence and knowledge of what works in our field, putting this information in the hands of commissioners, practitioners and policymakers, and supporting the adoption of the evidence in local areas and relevant sectors.

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