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Khalifa Award for Education

Winner of the 2024 Khalifa International Award for Early Learning: Best Programs, Curricula, Teaching Methodologies and Practices **The Nuffield Early Language Intervention – Preschool**

Abstract

Oral language skills provide the foundation for formal education and are critical for children’s socio-emotional learning. Yet many children reach school with language skills that are insufficiently developed to enable them to benefit fully from their education. This is even more of an issue for children from disadvantaged backgrounds and/or those for whom English – the language of instruction in school - is not the language spoken in the home. Preschool, therefore, provides a valuable opportunity to intervene to improve children’s language skills before they reach school.

The Nuffield Early Language Intervention – Preschool (NELI Preschool) is a new oral language program for preschool children in the year before they enter formal schooling, which combines language enrichment for all children with additional targeted support for children with weak language skills. The program is designed around the principles of shared book reading and guided play. It improves vocabulary, develops narrative skills, encourages active listening and builds confidence in speaking. It also includes comprehensive preschool staff training and support and reliable screening of children’s language skills before and at the end of the program.

Robust research including 65 preschools in England taking part in a randomised control trial has shown that NELI Preschool significantly improves the language skills of children receiving it. These findings have important implications for improving educational attainment for young children, as NELI Preschool is designed to be deliverable at scale.



The Nuffield Early Language Intervention – Preschool

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NELI Preschool offers a new and innovative model for an effective preschool-based approach to supporting the early language development of all children in the year before they enter formal education (in UK this is children aged 3-4 years). NELI Preschool is a fully-scripted 20-week oral language enrichment program, built around the principles of shared book reading and guided play. Centred around 20 weekly books, the program contains a mix of traditional tales, contemporary stories, and non-fiction, introducing children to richer and more structured language than they would typically encounter in spoken language (Nation et al., 2022).

There are two complementary strands to NELI Preschool, whole class-based enrichment activities for all children in the preschool ('Enrichment') with additional targeted support in small group and individual sessions for children identified at the start of the program as having weak oral language skills ('Enrichment + Targeted'). This ensures that all children receive the benefit of the program. Whole class sessions are delivered every day for 15-20 minutes, typically by the preschool class teacher. These daily sessions are displayed on a screen or whiteboard and engage the children with the book of the week. The children receiving the additional targeted support also take part in three small group sessions (10 – 15 minutes each) and one individual session (10 minutes) each week to support their learning. These sessions are typically delivered by a preschool teaching assistant.



Within the program, shared reading and dialogical questioning introduce the stories to children. Each week a new book introduces carefully selected vocabulary items. Activities then target the development of vocabulary skills, teaching children the meaning of the words they don't know and extending understanding of those they do know. Sessions are scripted, but have in-built flexibility to adapt to the needs of the children in each class. Where children are more advanced, step-up activities are provided to extend their vocabulary further. Children who are receiving the 'Enrichment + Targeted' program also receive opportunities in small groups and individually to learn and consolidate newly taught vocabulary items.

Another major focus of NELI Preschool is on supporting children to produce language. The program builds children's narrative skills, using tailored scaffolding to guide them to use the special words in narrative contexts, retelling story elements in their own words. Activities across both 'Enrichment' and 'Targeted strands of the program lead children to produce increasingly integrated and coherent language of their own, while building their confidence in speaking, standing them in good stead for their formal education when they begin school. (Boudreau, 2008). NELI Preschool also focusses on developing children's active listening and attentional skills, modelling and motivating the development of good learning behaviour.

The NELI Preschool program also includes use of an oral language assessment app called LanguageScreen, which is used to screen all the children in the class before and at the end of the program. The App can be administered in around 10 minutes per assessment by any staff in the setting without prior training, as all scoring is automated. Results are age-standardised, providing settings both with a reliable way of selecting the children who would most benefit from the targeted sessions, as well as enabling them to evaluate the progress of children receiving the program.

Finally, NELI Preschool includes high-quality online practitioner training and support. The pre-delivery training course is comprehensive, developing staff skills by highlighting the critical role language development plays. Practitioners are then introduced to the techniques used for shared book reading and teaching in the program, as well as good practice in encouraging language production and active listening. They are also able to watch best practice videos that model how to deliver NELI Preschool and receive guidance from online mentors throughout. The training takes approximately 10 – 12 hours to complete, is self-paced, and broken into bite-sized steps so practitioners can complete the training at the times that best suit them, and do not have to complete it all in one go. Trainees also retain access to the course afterwards, enabling them to revisit aspects as they embark on program delivery. On successful completion of the course, participants receive a NELI Practitioner certificate and join an online Delivery Support Hub where they continue to receive mentoring, program tips and ideas, alongside peer-to-peer support as they deliver the program.

The importance of supporting language development in the Early Years

The approach that NELI Preschool takes cultivates skills and knowledge that shape society for the better. It is widely recognised that language skills are the foundation of virtually all aspects of education, including literacy (Hjetland et al., 2020; Hulme et al., 2015) and numeracy development (Chow & Ekholm, 2019; Hornburg et al., 2018). They are also vital for psycho-social development (van Agt et al., 2011; Norbury et al., 2016). Furthermore, it is well established that there is a strong gradient relating social class to language skills; children from less affluent homes are much more likely to enter education with poorly developed language skills (Guo & Harris, 2000; Hart & Risley, 1995; Sampson et al., 2008; Sirin, 2005).

Language skills develop rapidly between the ages of three to six years and this makes preschool an excellent time to begin supporting language development, as well as working to narrow the gap between those with good and poor language skills, before the start of formal education. NELI Preschool aims to do both these things. The combination of whole group language enrichment and additional targeted support for those with weak language skills is designed to narrow the gap between children entering school with poor language and their peers while ensuring that all children receive the benefit of the program at this crucial point in their development.

Similarly, the program is aimed at both monolingual and English as an Additional Language (EAL) children. Evidence shows that EAL children benefit from early years oral language interventions as much as their monolingual peers (West et al., 2021), and the scaffolded support in NELI Preschool is well-suited to children learning English as a second, or further language (Bowles et al., 2017). NELI Preschool therefore has great potential for use internationally in English-speaking environments, while the model itself is adaptable for use in any language.

NELI Preschool also develops children's active listening skills, enabling them to focus for longer periods. This, in turn, supports their use of language for learning, as well as the development of pro-social behaviour suited to a classroom environment (Yew & Kearney, 2013; West et al., 2022).

The critical educational and societal issues that NELI Preschool addresses

Reducing Social Disadvantage. Oral language difficulties are estimated to affect between 7 – 14% of the population, and they are particularly common in socially disadvantaged groups. A classic study (Hart and Risley, 1995) showed that preschool children from advantaged backgrounds hear two to three times as many words per hour as children from low socio-economic backgrounds. Furthermore, the number of words children know at age 3 is a predictor of their educational attainment at 9-10 years. More recently studies have shown that children's broad measures of oral language at 3.5 years predict word-level reading in school, and more importantly, reading comprehension at 8-9 years of age (Hulme et al., 2015).

It is clear that children who enter school with poorly developed language are at high risk of educational failure and it is therefore imperative they receive intervention before they fail to learn. NELI Preschool aims to narrow the gap between children who have weak oral language skills and their peers and therefore reduce inequalities at the start of a child's formal education. Additionally, by immersing all children in such a language-rich environment at this crucial stage of their development, NELI Preschool helps all children have a head start on their formal education, thereby improving their future educational outcomes.

Combatting post-pandemic learning loss. We are still seeing a profound impact on the language skills of children who were born just before and into the Covid-19 pandemic. These children are just beginning to enter preschool or formal education, and research is showing that their language skills are an increasing concern for schools and educators (Tracey et al. 2022). A recent study by Speech and Language UK (2022) showed that an estimated 1.9 million children in the UK are behind with their talking and/or understanding of words – the highest ever recorded.

Deprived of many of the social interactions children older than them had received, many of these children are starting school unable to communicate. Without intervention, they are at risk of falling further behind during their academic career. By supporting both whole class vocabulary and narrative development and targeting additional support to those with more significant oral language weaknesses, NELI Preschool provides a program that will benefit all children.

Upskilling preschool staff. By training preschool staff on the fundamentals of oral language development, its importance in predicting future outcomes for children, and teaching them evidence-based strategies to support language development, NELI Preschool has the potential to upskill many thousands of staff in preschools to be more aware of the importance of language in their settings and more effective in aiding its development in all children. The program also identifies children with significant language weaknesses, in order to provide them with effective additional support to prevent them from falling further behind.

As staff become more confident in the approaches used within the NELI Preschool program, they are able to apply more of these methods throughout the school day, and so create language-rich environments in which all children can thrive. Furthermore, understanding how weak language skills can often present as other concerns, for example, poor behaviour, means that settings can intervene more quickly and set in place appropriate intervention. A child who is behaving badly because they are frustrated that they cannot express themselves is likely to benefit from a program such as NELI Preschool.

Building a supportive community of practice. A key, yet easily overlooked, part of the NELI Preschool program is the community that builds around those who deliver the program. This is both within each setting, between practitioners, SENCOs and senior leadership teams and also across preschool settings taking part in the program. The online training is highly interactive, promoting social learning at every step. Trainees communicate with peers as they learn, ask questions and add their comments and reflections. They are also mentored throughout the course by experts who are able to respond quickly to any queries.

Once the NELI Preschool training is complete, practitioners can access the online Delivery Support Hub. This area provides a forum throughout the program to discuss different approaches, ask NELI Preschool experts questions, and continue to connect with colleagues in other preschools who are delivering NELI Preschool. Weekly padlets on the Hub, each tied to the book and sessions of the week, enable practitioners to share their successes, alongside ideas for activities that expand the program into continuous provision.

This supportive community cannot be underestimated. It supports motivation and enthusiasm and ensures that those delivering the program feel a sense of empowerment. We hear from many settings that the practitioners delivering NELI Preschool feel a real sense of ownership of the program, striving constantly to improve their practice, delivering evermore effective teaching and scaffolded support for the children in their care.

Providing settings with reliable method to evaluate children's language skills. NELI Preschool is an enrichment program for all children, but it also serves to provide additional support to the children who need it the most. It is, therefore, critical to ensure the right children are allocated to receive it. Language difficulties can be hard to identify, particularly if they include weaknesses in receptive language. Preschools lack readily available tests of language skills. NELI Preschool places reliable, yet quick and easy-to-use, language screening directly in the hands of the preschool settings. LanguageScreen can be used by any member of staff in the preschool without prior training. It takes about 10 – 12 minutes per child to provide a highly reliable age-standardised language 'score' for that child. This means it is easy to screen a large number of children to gain an accurate picture of the language needs of the children in the preschool, as well as to evaluate the progress all children make by the end of delivery.

Embedding the development of language skills at the centre of Early Years provision. NELI Preschool works as a stand-alone intervention, alongside any existing preschool curriculum. However, it also lends itself to extension to activities during continuous provision. The books, vocabulary and activities have clear links to early educational goals, permitting teachers to expand the program into almost every other aspect of preschool life or even adopt NELI Preschool as the core of their curriculum.

The promise of the program for sparking language-rich provision beyond sessions further encourages staff motivation and team-working within and across settings.

Supporting a tiered approach to language support in the Early Years. NELI Preschool embraces a tiered approach to language support by putting the assessment and ongoing monitoring of children’s language development directly into educators’ hands. The LanguageScreen language assessment App provides age-standardized scores that enable practitioners to evaluate the progress children make. For the majority of children who make good progress in NELI Preschool this serves to motivate practitioners, senior leadership teams and care-givers alike, providing concrete evidence that efforts in delivering the program are making a measurable difference to children. Importantly, the screening at the end of the program also identifies the minority of children with more severe and long-lasting language difficulties. This provides early evidence for educators and speech and language professionals to allow them to provide these children with continued and/or more specialist support once they reach school.

The current evidence-base for NELI Preschool

A cluster randomised control trial evaluating the efficacy of the NELI Preschool program, funded by the Nuffield Foundation, took place in the UK during the academic year 2021-22 (West et al., 2024). This trial, funded by the Nuffield Foundation, found that NELI Preschool improves children’s language skills. Children receiving the whole class enrichment aspect of the program made significantly more progress in their language skills than the control group ($d = .26$).

Children identified by LanguageScreen as having the weakest oral language in the settings, receiving the additional targeted support also made more progress in their language skills than corresponding children in the control group ($d = .16$). These are substantive effect sizes in an educational context (Kraft, 2019). The Education Endowment Foundation (2018) interprets effect sizes in educational contexts, such that an effect size of $d=.26$ is the equivalent to 3 months additional progress in language development, while an effect size of $d= .16$ is the equivalent to two months additional progress.

While findings related to self-regulation and behavioural adjustment are less clear cut, teacher feedback widely reported the children receiving NELI Preschool made improvements across many other aspects of school readiness too, from being able to attend to and participate in teacher-led activities to being better able to socialise with peers, with these improvements being attributed to the NELI Preschool program.

The trial involved 65 preschools, representing 7 geographical regions in England. All children aged 3-4 years, attending preschool 4 or more days (or half days) a week were considered eligible for the trial. In total 1,568 preschool children took part. Of these, 773 were boys and 543 had English as an additional language (EAL).

Preschools were randomly assigned either to deliver NELI Preschool or to a control group who delivered their usual curriculum. The language skills of children in both groups were assessed before and after the NELI Preschool delivery. Baseline LanguageScreen scores for all children identified the 6 children in each classroom with the weakest language skills.

In intervention group preschools these children were assigned to receive the additional targeted (group and individual sessions) strand of the program. Additionally, these children in both trial arms were tested with additional standardised assessments by the research team. In order to evaluate the 'Enrichment' only element of NELI Preschool as well, four randomly-selected remaining children in each class also received this additional in-depth testing.

Following intervention group practitioner training, delivery of NELI Preschool took place between January and July 2022. Observation visits to all schools delivering NELI Preschool were conducted in the Spring Term (March-April). At the end of delivery, all children were once again assessed with LanguageScreen and, for the children who had received them, the additional standardised assessments.

Analysis of this trial showed that NELI Preschool improved the language skills of the children who received it. An implementation process evaluation was also undertaken to assess program acceptability, feasibility and delivery fidelity. The process evaluation revealed the program was well-liked and well-adhered to, despite continuing challenging conditions for staff and children in preschools in the wake of the COVID-19 pandemic. Staff also felt well-prepared to deliver it.

These findings have important implications for improving educational attainment for young children, as NELI Preschool has been designed from the outset to be deliverable at scale. Reliable language screening conducted by settings ensures the right children receive the additional targeted support. Training and support for the program is asynchronous and completely online ensuring maximum flexibility for settings without compromising on content.

Comments from practitioners during the observations visits in the trial reflect these findings:

- *“Because everyone has had the training everyone can input which means that they all have some investment/sense of ownership.”*
- *“I love it – this is by far the best intervention I’ve done, because of the focus on special words and embedding them so the children can use them – I know how vital that is.”*
- *“The transition between whole class, group and individual sessions. The children have lots of opportunities to hear, understand and use vocabulary.”*
- *“The structure works in our classroom and across the setting. The intervention is a shared experience for children and staff alike. Language links are being made outside in the corridor, in the classrooms – everywhere!”*
- *“Their language has developed immensely throughout this program.”*

Following success of this trial, a formative evaluation of NELI Preschool delivery wholly within private, voluntary and independent preschool settings (PVI) was conducted in early 2024, with a large-scale effectiveness trial across 320 state-maintained and PVI preschools running in 2024/25.

Feasibility and Sustainability of the programme

NELI Preschool has been designed from the outset to be scalable taking learnings from the NELI Program which is used by over 11,000 primary schools in the UK. The LanguageScreen app is quick to administer, ensuring large numbers of children can be assessed, and the automated results mean that it is easy to ensure the right children receive the targeted aspect of NELI Preschool.

Staff training is asynchronous and completely online, analogous to that used in the UK's DfE-funded NELI rollout. Learners also have flexibility to complete their training in one go or in bite-size chunks depending on the time available to them, as the training system automatically picks up where they finished in their previous session.

The programme has been designed from the outset to fit within the culture and format of any preschool setting and to be practicable in terms of staffing and time. Acknowledging that the day is less structured in a preschool and that children may not attend for the whole day, the preschool can adapt the structure of NELI Preschool to fit their working and/or attendance patterns. For example, settings can concentrate the program within fewer days or repeat elements of it at different times of day. Strands can be led by the same practitioners each time or shared between all trained staff in the preschool.

Small group and individual sessions typically follow relevant class sessions in order to consolidate learning in children needing more support, but can equally be given to pre-teach vocabulary and introduce the stories to enable these children to take a more active role within the class.

The NELI Preschool program is now available as a fully-resourced published program. A soft commercial launch is taking place in January 2024, alongside ongoing research. It is manualised and supplied to settings as a combination of print and digital materials. This means it is entirely replicable and all that settings need to deliver the program is a tablet or smartphone from which to administer the assessment app and a monitor to display the Whole Group session digital materials.

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