



Hanen Learning Language and Loving It (LLLI)

Evaluation Report

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About the evaluator

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Executive summary

The project

Learning Language and Loving It™ – The Hanen Program® for Early Childhood Educators (Hanen LLLI) is a training programme for nursery staff to promote opportunities for social, language and literacy learning in Early Years (EY) settings. Through a series of group workshops, nursery staff learn about practical strategies that can be easily woven into everyday activities when interacting with children. Between workshops, nursery staff are encouraged to practise the strategies and take part in individual video reflection sessions to review, in collaboration with a Program Leader,¹ their interactions and use of the strategies with children.

In this project, the focus was on children aged 3–4 years and the staff in the 131 state-maintained nursery settings that supported them. The delivery of Hanen LLLI was coordinated and provided by Communicate SLT CIC, a speech and language therapy services and training organisation based in the North West of England, and this activity, along with the evaluation, was funded by the EEF and Department for Education as part of the Early Years Professional Development Funding Round.

The research took place between September 2019 and July 2021. Originally, the project was planned for the 2019/20 academic year as a randomised controlled efficacy trial, studying the impact of Hanen LLLI on children's language outcomes. Delivery of Hanen LLLI was scheduled across 31 weeks, including orientation meetings, eight training workshops (lasting 2.5 hours each), six individual video reflection sessions per participant, and a pre- and post-intervention video reflection session. However, due to Covid-19 disruptions, the trial was paused in March 2020 and resumed in the academic year 2020/21 with the remaining programme content delivered over an additional 30 weeks. Ongoing Covid-19 disruptions meant the training moved from in-person to online delivery, and the impact evaluation was cancelled in March 2021.

This report therefore focuses on findings from the implementation and process evaluation (IPE) carried out across the two years. This included interviews with nursery staff, Program Leaders and senior staff from nurseries in the control group, observations of workshops and video feedback sessions, a nursery staff survey and analysis of attendance data. A total of 1,908 pupils across 131 maintained nursery settings in West Yorkshire and the North West of England participated in baseline assessments in 2019. During 2020/21, 109 settings remained in the evaluation, with 105 nurseries sharing information for a total of 3,109 pupils.

Table 1: Key conclusions

Key conclusions
1. Due to Covid-19 the primary outcome for this evaluation (receptive vocabulary) was not collected, therefore there is no standardised measure of impact of the programme on language attainment reported and there is no security rating for this trial. Key conclusions are based on qualitative data from the implementation and process evaluation.
2. Most workshops and video reflection sessions were delivered as intended and were very well received by nursery staff, with nearly all those surveyed (98%) reporting they had had a positive experience of Hanen LLLI. Where Program Leaders deviated from delivery, this was usually in line with accepted adaptations. However, there was some variation across Program Leaders in the duration of workshop and video feedback sessions.
3. Nursery staff reported key benefits of program participation for their practice. All nursery staff surveyed had used Hanen LLLI strategies when interacting with children in their nursery. Nursery staff felt more confident implementing these over time and reported developing a greater awareness of the children's different conversational styles, making their teaching more responsive to individual children's needs.
4. Nursery staff noted that children benefited from exposure to Hanen LLLI-trained nursery staff. The majority of survey respondents agreed that children's exposure to Hanen-trained staff had increased the amount of high-quality child–staff interactions (88%), child-initiated interactions (86%) and the frequency of children's turn-taking interactions (86%).

¹ We are using the North American spelling of Program Leader throughout the report, as this is the term used by the Canadian-based company The Hanen Centre.

5. The shift from in-person to remote delivery following Covid-19 disruptions brought key successes and challenges. Program Leaders were positive about ongoing support for online delivery. Nursery staff reported that the quality of their videos for the video reflection sessions was higher with remote delivery, and better mirrored their usual practice. However, workshops were less successfully implemented online, with many of the practical workshop elements either removed or working less well than in-person.

Additional findings

Overall, experiences of the Hanen LLLI programme were very positive. Nearly all nursery staff who completed the survey (98%) had a positive overall experience. All staff who responded to the survey (n=42) had used Hanen LLLI strategies with children at their nursery. Staff reported greater confidence implementing strategies and awareness of the children's different conversational styles, which made their teaching more responsive to children's individual needs. Nursery staff thought the training had made them more reflective of their practice and improved peer-to-peer feedback at their setting.

Nursery staff reported that children had benefited from exposure to Hanen LLLI-trained staff. The majority of survey respondents agreed that exposure to the Hanen strategies had increased the numbers of high-quality interactions between children and nursery staff (88%) and their peers (83%), and of child-initiated interactions (86%). This applied especially to quieter or less sociable children, who benefited from staff giving them time to process and respond. Nursery staff also reported perceived increases in the length and/or complexity of children's utterances and believed their vocabulary expanded because of the programme. However, as the impact evaluation was cancelled due to Covid-19 we were unable to assess the impact of Hanen LLLI on children's receptive and expressive vocabulary in a robust way using standardised measures. As the survey was not completed by nurseries in the control condition, there are limits on the extent to which we can attribute the perceived outcomes to the intervention, as it is unclear if any changes are the result of Hanen LLLI or would have occurred irrespective of this.

Nursery staff suggested the programme could be improved further by making connections with their previous learning and referencing other early language programmes and strategies. Hanen LLLI strategies that could be applied to their everyday practice or were relevant to their settings' needs were most appealing to nursery staff. A view was that the training was especially suitable for less experienced staff.

Over the two years, 93 out of 216 (43.1%) nursery staff met the minimum course requirements (including adjusted requirements for newly joined staff). As nurseries signed up for a one-year programme, the number of settings involved over two years is related to some settings being unable to continue delivery for an additional year rather than a reflection of the intervention itself. Interviews with staff highlighted variation in the extent to which informal cascading of learning occurred. Whilst nurseries reported implementing Hanen LLLI strategies at their setting, high staff turnover meant the benefits of the programme could be lost when they left. A group of nurseries had regular and ongoing sessions to share learning from the Hanen LLLI training with the rest of their team, whilst others adopted a more informal model or did not do any cascading at all.

Overall, evidence from the IPE broadly supports the programme logic model. Deviations from the intended activities were mainly due to the implications of the Covid-19 pandemic and non-approved adaptations were limited. Program Leaders described strong adherence to the '4P' teaching cycle and consistency of information across training groups. Program Leaders also reported closely following the guidance around video feedback sessions, which observations by the evaluation team confirmed.

Whilst overall there was a high level of implementation fidelity, there was some variation in the duration of workshops and video feedback sessions. In particular, online workshops tended to be shorter than the prescribed 2.5 hours. Observations of workshops highlighted there was not always enough time for the 'practice' and 'personalise' elements of the '4P' teaching cycle. The duration of video feedback sessions ranged from 15 to 50 minutes and was most likely to deviate from the prescribed 30 minutes when the sessions were delivered in-person during the first year of delivery.

Two-thirds of survey respondents (63%) expressed a preference for a mixed-mode delivery model, whereby they would receive some of the training workshops in-person and some online. Similarly, over half of survey respondents (53%) expressed a preference for a mixed-mode delivery model for video reflection sessions, to allow for both in-person rapport and the benefits of online delivery.

Program Leaders and recipients of Hanen LLLI were concerned that video reflection sessions created additional stress for some nursery staff. Nurseries considered online delivery of video reflection sessions less intimidating and the videos were a better reflection of their practice. They liked that it allowed more time for reflection and felt it led to higher quality feedback. When delivering the workshops online, Program Leaders found tailoring the course to different levels of nursery staff experience more challenging. Practical elements, especially role-playing activities, were particularly difficult to deliver remotely.

Introduction

Background

Policy background

Early language skills are a crucial building block for children's development. Children naturally develop language skills at different rates, but some children fall behind at an early age. Depending on the measures used, only 73% of children were found to have reached the expected level across the Communication and Language and Literacy domains of the Early Years Foundation Stage (EYFS) Profile in 2019 (DfE, 2019a). Children from socially disadvantaged backgrounds (indicated by free school meals eligibility) are, on average, much more likely to experience delays and difficulties in their language development.

The importance of language skills is reflected in the revised EYFS Framework, which became statutory at the beginning of the academic year 2021/22.² Reforms to the EYFS Early Learning Goals (ELGs) were implemented in response to a review of Reception year in 2017, which recommended greater focus on spoken language and vocabulary development (Ofsted, 2017a).

A key determinant of language development is the amount and quality of language to which a young child is exposed. Given that over 95% of 3–4-year-olds participate in formal early education in England (DfE, 2018), EY nursery staff play an important role. Although Ofsted assessed the majority (96%) of EY settings as good or outstanding (Ofsted, 2020), the EY workforce is comprised predominantly of Level 3 qualified staff (below degree level) (DfE, 2019b) and recent research points to a downward trend in qualifications (EPI, 2020). It is likely, therefore, that the workforce would benefit from continuing professional development (CPD) targeted at language.

Existing evidence

A 2017 review of language interventions by Law *et al.* recommended further research on the effectiveness of training nursery staff to deliver programmes within EY settings. The review reported on three evaluations of Hanen LLLI. An efficacy trial by Girolametto *et al.* (2003), in which 16 US teachers of 3–5-year-olds were randomly assigned to receive training in Hanen LLLI, found that pupils engaged in shared reading and playdough activities used a greater number of utterances, multiword combinations, and peer-directed utterances. However, the number of different words did not differ by group. Cabell *et al.* (2011) reported on a randomised controlled trial (RCT) of a programme that trained 49 teachers of 3–5-year-old kindergarteners in the US in Hanen LLLI. The evaluation found no impact on spoken language outcomes, but that the treatment group outperformed the control group for expressive vocabulary. Piasta *et al.* (2012) reported on an RCT of a US programme based on Hanen LLLI in which 49 nursery staff received training. The authors found a positive difference in the total utterances, number of different words and mean length of utterance. Overall, the review found that Hanen LLLI was particularly promising with high effect sizes (albeit based on low security of findings) for the impact of professional development on nursery staff's conversational responsivity and children's linguistic productivity and complexity (Law *et al.*, 2017). The authors concluded that most language interventions focus on improving vocabulary, whereas Hanen LLLI recognised the importance of conversation and oral narrative.

A handful of Hanen training programmes have been run in the UK in the last few years, focusing mainly on a shortened version of Hanen LLLI, called Teacher Talk. Until now, no trials of Hanen LLLI had taken place in the UK. A small-scale pilot evaluation of Hanen LLLI conducted by NatCen Social Research for the Education Endowment Foundation (EEF) in the spring of 2019 explored evidence of promise, feasibility and readiness of trial. Overall, the pilot found the intervention to be attractive to EY settings and showed evidence of promise regarding changes to nursery staff's interactions with children.³ Based on observations of workshop and video feedback sessions and interviews with nursery managers, nursery staff, and speech and language therapists, the pilot found that delivery was largely as intended. However, there were some deviations, for instance in the duration of video feedback sessions (15 minutes instead of 30 minutes). Nursery staff were engaged, and attendance of the workshops and video feedback sessions was high. The

² <https://www.gov.uk/government/publications/early-years-foundation-stage-framework-2>

³ Information about the pilot can be found on the pilot project page [here](#).

average rate of attendance for workshops and video feedback sessions was 94% and 87% respectively; this was helped by a supportive senior leadership team that provided cover during intervention activities and the range of activities covered during workshop sessions. Program Leaders and nursery staff reported that the video feedback sessions, in particular, were key in boosting engagement, as nursery staff could see how they were progressing and where they could still improve. Nursery staff who believed they were already using strategies in line with Hanen LLLI did not feel that their daily practice had dramatically changed. In contrast, those who were not already using Hanen LLLI strategies perceived a more significant impact on their day-to-day practice, such as providing more opportunities for children to initiate conversations. Nursery staff also reported improvements in children's language and communication development, such as an increase in expressive vocabulary and listening skills. Improvements were perceived across all pupil groups.

The pilot was not powered to investigate impact on children's language and development, which this efficacy trial had intended to measure. As a result of Covid-19, the efficacy trial did not go ahead as planned. The trial was re-designed in autumn 2020 as a standalone IPE focused on delivery and perceived outcomes (see Evaluation objectives and Methods).

Integrated evaluation design

The impact evaluation of Hanen LLLI was originally designed as a two-arm cluster (setting-level) RCT to measure the impact of the intervention on the language attainment of 3–4-year-olds, and was planned to take place in 2019/20.⁴ The primary outcome of interest was receptive English language. This was measured by the British Picture Vocabulary Scale (BPVS) at baseline in September and October 2019.⁵ The impact evaluation was cancelled in March 2021 based on the risks and ethical challenges of continuing with the RCT in light of the Covid-19 pandemic, and its implications for programme implementation and data collection. These factors include:

- **Sample size and power:** the expected minimum detectable effect size (MDES) at the time the trial was cancelled was 0.23. This meant that the trial would have had lower power to detect impacts than originally planned, as well as a lower security rating.⁶ A key reason for this was higher than expected attrition for the trial due to Covid-19 disruption.
- **Outcome measurement:** there were perceived risks with outcome testing (a standardised language assessment). This included ethical concerns about sending external assessors to settings during the Covid-19 pandemic and concerns about burden for school staff. A hybrid model of external assessors and assessments conducted by EY staff was considered, but this also increased risks to the security of trial findings.
- **Fidelity:** a short survey conducted with treatment schools in February and March 2021 indicated that nursery attendance was markedly lower than usual, particularly in the first half-term of 2021. The delivery partner, evaluator and EEF shared concerns that the impact evaluation findings would not be reflective of Hanen LLLI in a typical academic year, which made the interpretation and generalisability of findings difficult.

A standalone IPE was carried out in various settings to assess delivery and perceived outcomes on nursery staff, nurseries and children (see Evaluation objectives).

Intervention

Learning, Language and Loving It™ – The Hanen Program® for Early Childhood Educators (Hanen LLLI) is a training programme for nursery staff to promote social, language and literacy learning in nurseries. It is a CPD programme designed to provide staff with practical strategies to enhance children's communication and language skills through specialised ways of interacting and communicating with them during normal daily routines. As mentioned, Hanen LLLI is uncommon in the UK context. Over the past two years, the few Hanen training programmes that have taken place primarily focused on the shortened version of Hanen LLLI called Teacher Talk.

⁴ More information can be found on the EEF project page [here](#).

⁵ <https://www.gi-assessment.co.uk/assessments/products/british-picture-vocabulary-scale/>

⁶ https://educationendowmentfoundation.org.uk/public/files/Evaluation/Carrying_out_a_Peer_Review/Classifying_the_security_of_EEF_findings_2019.pdf

Intervention delivery

Hanen LLLI was developed by The Hanen Centre,⁷ based in Canada. In this evaluation, the intervention was coordinated and delivered by Communicate SLT CIC, a provider of speech and language therapy services and training based in the North West of England. Communicate SLT are Hanen-certified trainers for some of the Hanen Programs, but are otherwise not affiliated in any way with The Hanen Centre.

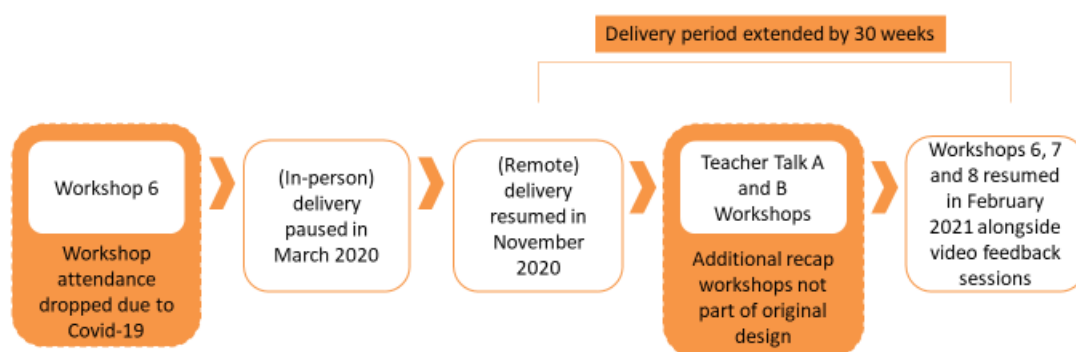
Mode of delivery

In the original 2019/20 trial plan, delivery of the intervention was scheduled across 31 weeks. This included orientation meetings with participants to explain the intervention and evaluation, an optional pre-workshop assignment for nursery staff to support discussions within the first workshop, eight training workshops lasting 2.5 hours each and six individual video feedback sessions per participant. It also included a pre-intervention (baseline) video of nursery staff recording their practice with children and one post-intervention video feedback session with nursery staff (see Table 2). Nursery staff received an end-of-programme certificate if they attended at least six training workshops (15 hours) and four video feedback sessions.

Hanen LLLI workshops

Due to the Covid-19 pandemic, EY settings closed to all but key worker and vulnerable children in March 2020. Delivery of the training was therefore paused in week 20 following a drop in attendance for workshop 6. The intervention was redesigned to include an additional delivery period of 30 weeks (see Figure 1), which meant delivery would take place during a total of 82 weeks across two years. Delivery resumed in November 2020 (eight months later) with the addition of Teacher Talk workshops. These were not part of the original model and were added to refresh the training content with previous participants and catch-up any new participants who had joined the nurseries in 2020. Hanen Teacher Talk A workshops were delivered online in November 2020. Hanen Teacher Talk B workshops were delivered online in January 2021. Each review workshop was broken down into three 2.5-hour weekly sessions covering different content. New participants were required to attend Hanen Teacher Talk A and B in order to continue with the remaining workshops and feedback sessions, whereas attendance for the 2019/20 cohort of nursery staff was strongly encouraged but voluntary (see Reach). Delivery of workshops 6, 7 and 8, as well as individual feedback sessions, resumed in February 2021 and moved online due to continuing pandemic-related social distancing measures. All participants were encouraged to participate in workshop 6, independent of whether they had already attended the workshop during the week of lockdown. Although participants were encouraged to attend virtual workshops with their original locality-based programme, they were able to join other virtual workshops, either when they were unable to attend their regular workshop or routinely to suit their capacity.

Figure 1: Hanen LLLI delivery post-March 2020



The Hanen LLLI training workshops took place at venues such as schools, hotels or conference centres across 12 geographical areas (see Dosage) before moving online. Each workshop (in-person and online) was co-delivered by two qualified and Hanen-certified speech and language therapists (SLTs) or Early Years consultants (EYCs). These SLTs

⁷ The Hanen Centre's mission is to enable parents and professionals to transform their daily interactions with young children to build the best possible lifelong social, language and literacy skills.

and EYCs, known as Program Leaders, are fully qualified in the UK and are certified LLLI trainers accredited to deliver the Hanen LLLI Program. The recommended number of nursery staff (e.g., teachers and teaching assistants) per group was 10–20 for in-person delivery and up to 25 for online delivery.

Informal cascading of learning from Hanen-trained nursery staff to other staff in the nursery was prescribed by the Hanen LLLI delivery model. Nursery staff were expected to convey the Hanen strategies to other staff members through sharing of learning in nursery.

Video feedback sessions

The individual video feedback sessions were also led by Program Leaders and usually took place one-to-one in nursery staff's own nurseries. Guidance suggests that Program Leaders film a 5–8-minute video of the participant interacting with children in their nursery and deliver feedback immediately or shortly after filming. Like the workshops, Covid-19 restrictions resulted in these sessions being held online in the second year of delivery. Nursery staff recorded their own interactions and sent these to the Program Leader prior to receiving feedback via video call. In face-to-face and online delivery, video feedback sessions focused on guided reflection, with Program Leaders providing feedback on videotaped interactions between nursery staff and children. There were four video feedback sessions in the first year of delivery and three in the second year (the third session was added for nursery staff who were unable to complete all four in the first year, and for newly added participants).

Nursery staff who begun training in 2019/20 took part in a recorded interaction with children in their nurseries at the beginning of the programme. Those who joined the programme in 2020/21 did not have the opportunity to record a pre-intervention video. Nursery staff also took part in two additional, voluntary video feedback sessions at the end (see Intervention logic model). These post-video feedback sessions are not always included in a Hanen LLLI Program but were added as part of the extension to maximise learning for nursery staff. The original delivery timeline included one post-video feedback session; a second post-video feedback session was added as part of the revised delivery timeline to ensure that new participants had enough video review support. Post-video feedback sessions took place after the workshops were delivered and involved nursery staff videoing themselves and sending the recording to the Program Leader. The feedback was then discussed at a later point.

Workshop and video feedback session activities were prescribed by The Hanen Centre through slideshow presentations, the nursery staff handbook (which included suggested scripts), and nursery staff handouts (physical and digital). Non-specified adaptations of the course, training materials and handouts were discouraged. Program Leaders could use some professional judgement to ensure that the content would best fit the needs of the attendees by varying the type and age of children shown in examples and on how to ensure good group dynamics in larger or smaller groups. Minor accepted deviations were detailed in the course handbook for Program Leaders. These covered, for instance, changes to workshop slides, such as leaving out certain PowerPoint slides; or changes to workshop activities, including removing breakout room activities (see Adaptation).

Mandatory and optional sessions

Communicate SLT gathered attendance data for mandatory and optional sessions. Mandatory sessions for nursery staff participating from the start of delivery included:

- 1 orientation meeting
- 8 workshops
- 1 pre-intervention (baseline) video and 6 video feedback sessions.

Optional activities covered:

- pre-workshop assignment
- 2 review workshops (Teacher Talk A and B), each involving three separate sessions
- 1 additional video feedback session (7th video feedback session)
- 2 post-intervention video feedback sessions.

Mandatory sessions for newly added nursery staff in the second year included:

- 5 workshops (including Teacher Talk A and B, and workshops 6, 7 and 8)
- 3 video feedback sessions.

Optional activities covered:

- 2 post-intervention video feedback sessions.

In order to meet the minimum course requirements and receive an end-of-programme certificate, nursery staff who started Hanen in 2019/20 had to attend at least six workshops and four video feedback sessions. This requirement was adjusted for newly added nursery staff in 2020/21; these nursery staff had to attend all five workshops available to them (including at least 2 out of 3 sessions for each Teacher Talk A and B) and a minimum of three video feedback sessions. This could be one or more post-video feedback sessions.

Table 2: Mandatory and optional activities per participant type

Activity	Nursery staff who participated from the start	Nursery staff newly added in the second year
Orientation event	Mandatory	N/A
Pre-intervention video	Mandatory	N/A
Pre-workshop assignment	Optional	N/A
Workshop 1	Mandatory	N/A
Workshop 2	Mandatory	N/A
Workshop 3	Mandatory	N/A
Workshop 4	Mandatory	N/A
Workshop 5	Mandatory	N/A
Teacher Talk A	Optional	Mandatory
Teacher Talk B	Optional	Mandatory
Workshop 6	Mandatory	Mandatory
Workshop 7	Mandatory	Mandatory
Workshop 8	Mandatory	Mandatory
Video feedback session 1	Mandatory	N/A
Video feedback session 2	Mandatory	N/A
Video feedback session 3	Mandatory	N/A
Video feedback session 4	Mandatory	N/A
Video feedback session 5	Mandatory	Mandatory
Video feedback session 6	Mandatory	Mandatory
Video feedback session 7	Mandatory/Optional ^a	Mandatory
Post-intervention video	Optional	Mandatory/Optional ^a
Post-intervention video	Optional	Mandatory/Optional ^a

Note: ^aDepending on whether minimum requirement had already been met.

Intervention content

Program Leaders were expected to help facilitate the four broad aims of Hanen LLLI:

- **Education:** provide nursery staff with information on language, social and literacy development and on how best to promote these during everyday play activities, conversations and daily routines.
- **Application:** provide nursery staff with opportunities to practise and apply strategies and approaches which promote children's development, with feedback from the LLLI Program Leader.
- **Collaboration:** work together with nursery staff as they plan and implement individual programmes for children with specific needs.
- **Peer support:** give nursery staff the opportunity to share ideas, issues and concerns with their colleagues.

The structure of each workshop followed the '4P' teaching cycle described below. Program Leaders were instructed to follow this structure whilst delivering training.

1. **Prepare:** give nursery staff a reason for learning, by starting with asking them to think about what a particular topic means to them in order to tap into personal experience and interest. 'Prepare' activities include demonstrations, examples and sharing experiences.
2. **Present:** present facts and information to deepen or expand knowledge in ways that are interesting, interactive, relevant and enjoyable. 'Present' activities include mini-lectures, video examples and group discussions.
3. **Practise:** create opportunities for nursery staff to practise newly learned skills in a variety of hands-on ways with guidance and feedback. 'Practise' activities include role-play, video analysis and small-group activities.
4. **Personalise:** provide opportunities for nursery staff to apply and integrate information into their own situation and to generalise into a variety of situations. This involves completing elements of the video feedback session action plan.

During the programme, nursery staff learnt practical strategies for engaging with children to enhance their language development including, for example:

- 'OWL': observe, waiting and listening, rather than asking questions
- using a variety of words and modelling extended language
- providing opportunities for children to initiate conversation
- engaging 'reluctant' children in small groups
- tailoring language and approach to match children's styles and skills.

Table 3: Overview of workshops

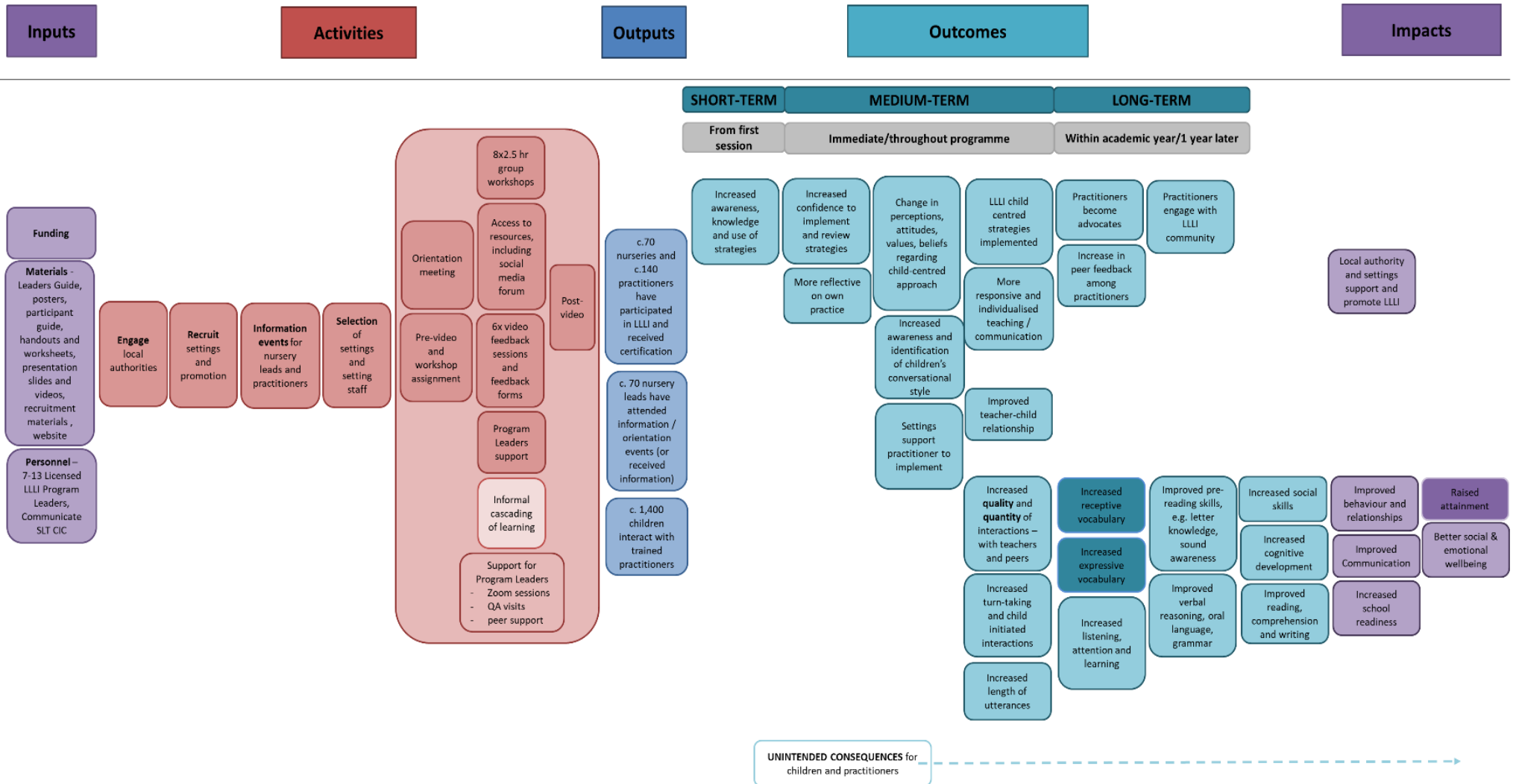
Workshop	Topics covered in session	Details of adaptation
1	Take a Closer Look at Communication: Roles teachers play, conversational styles and stages of language development.	–
2	Let the Child Lead: OWL (observe, wait and listen), be face-to-face, comment, imitate, interpret, and join in and play.	–
3	Taking Turns Together: Supporting turns in conversations, laying the foundation for conversations with discoverers and communicators, make social routines part of your day, using comments and questions to cue turns.	–
4	Encourage Interaction in Group Situations: Interact with every child in the group and SSCAN (Small groups are best, Set-up an appropriate activity, Carefully observe each child's level of participation and interaction, Adapt your response to each child's Needs).	–
5	Provide Information and Experience which Promote Language Learning: Adjust the way you talk, learning new words, expand on what the child says and extend the topic.	–
Teacher Talk A	<i>Part 1:</i> The importance of interaction and information, conversational styles, roles teachers play, stages of language development and follow the child's lead. <i>Part 2:</i> Imitate, interpret, comment, join in and play, and give a reason to communicate and then wait. <i>Part 3:</i> Take turns together, cue turns with social routines, cue turns in the conversation with questions and comments, and encourage interaction in groups.	Not an original feature of Hanen LLLI intervention. Session added to review previous learning. Three 2.5-hour sessions delivered online weekly.
Teacher Talk B	<i>Part 1:</i> Develop positive attitudes towards the use of print, familiarise children with books and select appropriate books and make book reading a time for interaction and conversation. <i>Part 2:</i> Books as tools for language and literacy development, match your language to the child's language stage, expand on what the child says and add new words, and help children understand the meaning. <i>Part 3:</i> Extend the topic, select the right books for extending the topic, make print talk, and encourage children to play with words.	Not an original feature of Hanen LLLI intervention. Session added to review previous learning. Three 2.5-hour sessions delivered online weekly.
6	Let Language Lead the Way to Literacy: Lay the foundations of literacy and make book reading a time for interaction and conversation.	Delivered online
7	Foster Peer Interaction: Foster peer interaction, make the best use of space and plan appropriate groupings and activities.	Delivered online
8	Wrap-up: Final video session action planning and reviewing Hanen LLLI strategies.	Delivered online

Intervention logic model

The Hanen LLLI logic model (see Figure 2) was designed in conjunction with Communicate SLT before the pilot evaluation in March 2019, and refined in July 2019. The logic model outlines the sequence of activities implemented by Program Leaders, nursery staff and settings. It sets out the intended impacts of the programme for local areas, settings and children; and the short- and medium-term outcomes for nursery staff, settings and children that are expected to lead to these impacts. No modifications were made to the logic model during the trial. Therefore, the logic model does not reflect changes to the intervention following the redesign (see Introduction for a summary of changes made).

Figure 2: Hanen LLLI logic model

Learning Language and Loving It™ - The Hanen Program® for Early Childhood Educators Logic Model



Evaluation objectives

The impact evaluation was originally designed to be conducted as a two-arm cluster (setting-level) randomised controlled efficacy trial of the effect of Hanen LLLI on the language attainment of 3–4-year-olds in nursery settings.⁸

The impact evaluation of Hanen LLLI aimed to answer the following research questions:

- *What is the impact of Hanen LLLI on the language attainment of 3–4-year-olds?*
- *Does the impact of Hanen LLLI differ by Early Years Pupil Premium (EYPP) status?*

Due to the impact of Covid-19, the RCT was cancelled (see Integrated evaluation design). The research questions from the IPE were rewritten to focus exclusively on how the intervention was put into practice before and during Covid-19, how it operated to achieve its expected outcomes (see Intervention logic model), and the factors that shaped these processes.⁹

The IPE aimed to answer the following research questions:

- *RQ1: How is Hanen LLLI delivered, and what are the facilitators and barriers to delivery?*
- *RQ2: What are the perceived benefits of the programme for nursery staff, nurseries and children?*
- *RQ3: What are the implications of Covid-19 for delivery and perceived impacts?*
- *RQ4: What can be learnt for future delivery of Hanen LLLI?*

The key dimensions of implementation that were assessed are: fidelity (including dosage, quality and adaptation), reach, responsiveness and usual practice (programme differentiation and monitoring and control).

Ethics and trial registration

Communicate SLT identified and recruited 147 settings in West Yorkshire and the North West of England for the Hanen LLLI trial in the spring of 2019. Recruitment took place in local authority areas with low social mobility index rankings and was based on strict eligibility criteria (see Methods). An incentive of £1,000 was offered to all control nurseries to participate in the trial. This original incentive was intended to mitigate the risk that recruited nurseries would opt out of the trial once assigned to the control group. A further incentive of £250 was offered to all control nurseries to continue with the extended evaluation with a new cohort of pupils in 2020/21. Following cancellation of outcome testing in March 2021, the incentive structure was amended in recognition that the task of control nurseries had significantly reduced. Control nurseries were offered an incentive of £250 at the end of delivery in recognition of completing evaluation activities in 2019/20, in addition to an extra payment of £250 at the start of the second evaluation year. This meant that control schools who completed the evaluation activities received a total payment of £500. Nurseries in the treatment group who withdrew from the programme but remained in the evaluation (non-compliers) received £250 as a thank you for completing evaluation activities.

NatCen's research information leaflet setting out the evaluation requirements was sent to nurseries at recruitment stage. Nurseries opted in by signing a Memorandum of Understanding (MoU) (see Appendices A–C).¹⁰ Treatment and control nurseries who wished to remain in the evaluation in the second year signed an addendum to the MoU at the beginning of the autumn term, 2020. Participating nurseries sent out a parent information leaflet to parents/carers of all eligible children in the autumn term 2019 before baseline testing. They repeated this in the autumn term 2020 for the new cohort of children that would have also been tested at endline in the summer term 2021. The addendum to the MoU and information leaflets for nurseries and parents explained the aims of the study, the research activities (including testing), data linkage to the National Pupil Database (NPD), and the transfer and storage of anonymised data to the EEF's archive (see Appendices D–F). Parents/carers were able to object to their child's data being used for the evaluation at any point before the start of analysis by contacting the nursery or NatCen.

⁸ The amended versions of the protocol can be found on the EEF website [here](#). The original protocol contains further information on the original aims and design of the trial and can be found [here](#).

⁹ RQ1 and RQ2 were taken over from the original IPE. A third research question was replaced by RQ3 and RQ4.

¹⁰ All the appendices can be found in a separate document of technical appendices published alongside the report.

Ethical approval for this study was obtained from NatCen’s Research Ethics Committee (REC) in advance of research activities in the autumn term of 2019. The NatCen REC reviewed the study design to confirm compliance with internal ethical standards. The NatCen REC also approved the changes to the design set out following the decision to extend the trial to two years.

The trial was registered with the International Standard Randomised Controlled Trial Number ISRCTN90151856.

Data protection

NatCen stored and handled all data securely and confidentially in line with the EU General Data Protection Regulation (GDPR). Only the research team and approved third parties listed in the privacy statement (e.g., transcription agency, SLTs conducting testing) had access to the data collected as part of the evaluation. School and pupil-level data was transferred to NatCen via a secure file transfer service. Reports and other publications which arise from this research will not identify any individual nursery, staff member or pupil. Nurseries or individual staff who no longer wished to take part in the evaluation could request to have their data deleted at any point prior to the submission of the draft report.

NatCen was the data controller and additionally processed data. The legal basis for processing the data following GDPR Article 6 was ‘legitimate interest’. NatCen processed the data for the legitimate purpose of conducting the evaluation of Hanen LLLI. No special category data was collected as part of the evaluation. NatCen issued a privacy notice to all concerned parties, which was also published on the study website (see Appendices G and H).

All data will be securely deleted from NatCen’s network six months after the end of the project. To enable longitudinal follow-up at EYFS/Key Stage 1, key pupil identifiers (name, surname, date of birth, Unique Pupil Number (UPN), school ID), including information about the cohort (cohort 2019/20 or 20/21), allocation (treatment or control) and baseline scores (for cohort 2019/20 only) were submitted by NatCen to the EEF archive. Personal identifiers will be removed and replaced by a meaningless identifier (so-called Pupil Matching Reference (PMR)) and uploaded to the Secure Research Service (SRS) hosted by the Office for National Statistics (ONS). The resulting dataset cannot be used to identify any individual pupil in the SRS.

Project team

The intervention was coordinated and delivered by Communicate SLT CIC, a speech and language therapy organisation based in the North West of England.

Table 4: Communicate SLT personnel

Delivery team		
Caroline Coyne	Director of HR and Operations	Project lead
Joanne Burr	Director of Finance and Business Development	Quality control
Lisa Chetter	Project manager	Project manager
Rhian Owen	Program Leader supervisor	Program Leader supervisor
Sally Wiseman	Program Leader	Speech and Language Therapist
Elizabeth Evans	Program Leader	Speech and Language Therapist
Kathryn Burkmar	Program Leader	Speech and Language Therapist
Jenny Kenrick	Program Leader	Speech and Language Therapist
Sue Paul	Program Leader	Speech and Language Therapist
Vicki Maughan	Program Leader	Speech and Language Therapist
Susanne Boden	Program Leader	Speech and Language Therapist
Adele Banton	Program Leader	Early Years Consultant
Ann Shellard	Program Leader	Early Years Consultant
Kathryn Barker	Program Leader	Early Years Consultant

The evaluation was led by NatCen’s Children and Families Team, who worked closely with impact evaluation experts in NatCen’s Evaluation Team.

Table 5: NatCen personnel

Children and families team		
Dr Lydia Marshall	Research Director	Principal Investigator. Overall study lead. Senior oversight of IPE
Dr Berenice Scandone	Research Director	Senior oversight, final report
Dr Jonah Bury	Research Director	Project Manager, IPE and testing
Migle Aleksejunaite	Senior Data Manager	Oversaw data cleaning and archiving
Harriet Read Emily Roberts Molly Mayer Helen Burrige Phoebe Averill Alina Fletcher	Researchers	Worked on all study stages and testing
Evaluation team		
Robert Wishart	Research Director	Lead on impact evaluation
Molly Scott	Senior Researcher	Worked on IPE analysis
Ben Stocker	Researcher	Worked on impact evaluation

Methods

Trial design

This evaluation was designed as a two-arm cluster (setting-level) randomised controlled efficacy trial, with an IPE running alongside. It was designed to measure the impact of Hanen LLLI on the language attainment of 3–4-year-olds in nursery settings in West Yorkshire and the North West of England. The primary outcome of interest was intended to be receptive English language as measured by the BPVS.¹¹ The secondary outcome was supposed to provide a further measure of receptive and expressive English Language as measured by the Renfrew Action Picture Test (RAPT).¹² Nurseries were assigned either to a treatment group with nursery staff receiving Hanen LLLI training, or to a control group continuing with a ‘business as usual’ approach to teaching and learning. A detailed description of the trial design and its rationale are included in the study protocol.¹³

As previously described, the impact evaluation of Hanen LLLI was cancelled in March 2021 based on the ethical and evaluation challenges of continuing the RCT during the Covid-19 pandemic (see Introduction). The IPE continued over the extended programme delivery period.

Participant selection

The intention was to recruit 140 nurseries in West Yorkshire and the North West of England to participate in the trial (with 17 pupils anticipated per nursery class, on average). Communicate SLT was responsible for identifying and recruiting nurseries in spring 2019, with NatCen advising on eligibility criteria and the requirements for research participation. Communicate SLT collected signed MoUs from all participating schools (see Appendix A). Communicate SLT aimed to over-recruit by 5% (n=147) in order to allow for any pre-baseline withdrawals over the summer holidays of 2019.

Setting-level eligibility

- Only school-based nurseries and maintained nursery schools were eligible to be part of the trial. This selection criterion was introduced to facilitate longitudinal tracking of pupils’ outcomes. All pupils in school-based nurseries and maintained nursery schools are allocated a UPN, whereas pupils attending a Private, Voluntary or Independent (PVI) setting are less likely to have one.
- Nurseries were recommended to sign up two-thirds of staff working with 3–4-year-olds to take part in Hanen LLLI. The minimum requirement was that at least 50% of eligible nursery staff, including a teacher, should be able to participate.
- No more than 50% of nursery staff in the nursery should have previously participated in a similar Hanen LLLI intervention named Teacher Talk, and none should have previously participated in Hanen LLLI.
- Nurseries should have had a minimum of fifteen 3–4-year-olds registered at the setting. However, given the large number of nurseries required for the trial in a specific geographical area, nurseries that only had twelve 3–4-year-olds were also considered.

Nursery staff eligibility

- Participating nursery staff should not have taken part in Teacher Talk.

In the summer of 2019 (pre-randomisation), nursery managers were asked to nominate nursery staff to take part in the programme if assigned to the treatment group. In 2020/21, nursery staff in treatment nurseries were asked to continue participating in the programme. Nursery managers were also asked to nominate additional nursery staff to make up for individual withdrawals. The same eligibility criteria were applied to newly added nursery staff.

All pupils in treatment nurseries were intended to receive teaching from Hanen-trained nursery staff. The extension to the delivery period because of Covid-19 meant that, in 2020/21, the original cohort of pupils progressed to Reception

¹¹ <https://www.gi-assessment.co.uk/media/2308/glassessment-ptm.pdf>

¹² <http://talkingpoint.org.uk/slts/assessment-children-slcx/expressive-language-assessments>

¹³ The most recent version of the protocol can be found [here](#). The first version of the protocol with more information about the original design of the trial and can be found [here](#).

year and a new cohort of 3–4-year-olds also received teaching from Hanen-trained nursery staff. Due to extension of training delivery into 2020/21, some pupils in the second cohort were taught by nursery staff who had already attended training in 2019/20 and embedded Hanen LLLI strategies in the classroom, whilst others were exposed to nursery staff who joined the programme in 2020/21 (see Introduction).

Sample size

Communicate SLT approached 861 settings and successfully recruited 147 settings in the spring of 2019. In August 2019, 73 settings were randomly allocated to the treatment group whilst 74 were assigned to the control group. Randomisation was conducted prior to baseline testing to facilitate training delivery. Allocation to treatment or control was not revealed to nurseries until after baseline testing. Settings which withdrew from the trial soon after baseline testing were therefore excluded from the intention-to-treat sample. Post-randomisation, 16 schools withdrew from the trial: 15 prior to baseline testing (seven treatment, eight control) and one treatment school during baseline testing. The intention-to-treat sample consisted of 65 treatment settings and 66 control settings (total settings n=131).

Table 6: Intention-to-treat sample characteristics

Setting location	Count (%)
Merseyside ^a	56 (42.7%)
Lancashire/Calderdale ^b	48 (36.6%)
Greater Manchester ^c	27 (20.6%)
Total	131
Estimated number of 3–4-year-olds registered with setting ^d	Count (%)
<25	25 (19.1%)
25–50	71 (54.2%)
>50	35 (26.7%)
Total	131

Notes: ^aComprising Liverpool North, St. Helens, Liverpool Central, Merseyside, Sefton. ^b Comprising Preston, Blackburn, Burnley, Calderdale.

^cComprising Manchester South, Manchester North East, Bolton/Bury (Manchester South and North East were combined in the second year due to nursery withdrawals). ^d Information correct as of July 2019.

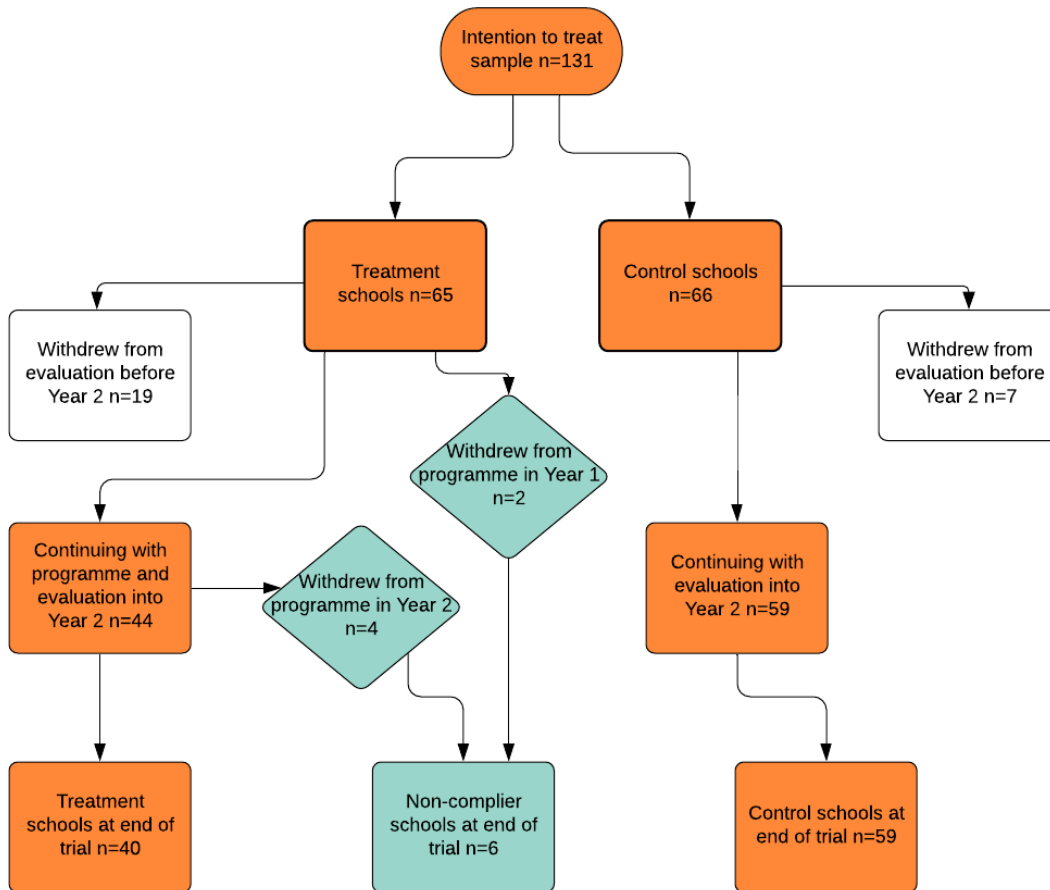
From the intention-to-treat sample, 22 nurseries withdrew from the evaluation (15 treatment, 7 control) (see Figure 3). One of these withdrawals occurred in 2019/20 prior to the outbreak of Covid-19. There were a further 21 withdrawals in 2020/21. Nurseries had originally signed up for a one-year delivery. Those that withdrew in 2020/21 either did not sign an amendment to the MoU to agree to a second year of delivery, or initially committed to delivery and withdrew in the early stages of the second year. Reasons for withdrawal are outlined in Table 7. A further four treatment nurseries withdrew from the programme but agreed to remain in the evaluation in 2020/21. These nurseries were categorised as 'non-compliers', along with the two in 2019/20.

Table 7: Reasons for withdrawal

Control	Count
Nursery uncontactable/no pupil data supplied	2
Nursery involved with another early language intervention	1
Staffing issues (e.g., inability to provide cover, illness)	2
Additional pressures due to Covid-19	1
No reason provided	1
Total	7
Treatment	Count
Nursery closure	1
Staffing issues (e.g., inability to provide cover, illness)	4
Additional pressures due to Covid-19	7
No reason provided	3
Total	15

In 2019/20 we randomly selected a maximum of 17 pupils per setting for baseline assessment. We successfully tested 1,908 pupils out of 2,137 across 131 schools. In 2020/21, we requested data on *all* 3–4-year-olds registered at the nurseries. Overall, there were 3,109 pupils listed across 105 nurseries, with an average of 30 3–4-year-olds registered at each nursery.¹⁴ We would have randomised up to 17 pupils per setting for endline testing in the summer of 2021; however, testing was cancelled in March 2021 due to the Covid-19 pandemic.

Figure 3: CONSORT flow diagram



Implementation and process evaluation (IPE)

Research methods

The IPE synthesised the data collected through three main research methods: observations, interviews, and a post-intervention survey. Most IPE research activities were conducted as originally planned, but timings had to be shifted due to partial school closures. Some additional observations and interviews were included as part of the extension to help understand how delivery had changed and the impacts of Covid-19 and the two-year delivery period. We did not complete a post-intervention survey with control schools, or surveys of treatment and control nursery managers as planned.¹⁵

Observations of Hanen LLLI workshops

¹⁴ Four nurseries participating in 2020/21 did not upload any pupil data, and so pupil numbers in these nurseries have been discounted.

¹⁵ The amended protocol can be found [here](#). Please see Appendix 3 and 4 in the protocol for a detailed overview of all the changes to the IPE design as a result of Covid-19 disruptions.

We conducted observations to gather information on Hanen LLLI delivery and nursery staff’s responsiveness. We observed three training workshops in 2019/20 and another two in 2020/21. This included a total of 10 observations: two of workshop 1, two of workshop 4, two of workshop 5, two of workshop 7, and two of workshop 8. We also observed the review workshops Teacher Talk A and B at the start of the 2020/21 school year. This included a total of four observations: two of Teacher Talk A and two of Teacher Talk B. Each review workshop was broken down into three weekly sessions covering different content. The workshops were selected so that observations would include all Program Leaders, the first and final workshops, the two review workshops, plus at least two more sessions throughout the course. We observed two sets of Program Leaders co-delivering each workshop in order to capture variation and adaptation.

Table 8: Workshops observed

Workshop	Observed (yes/no)	Sessions observed per workshop
1	Yes	2
2	No	–
3	No	–
4	Yes	2
5	Yes	2
Teacher Talk A	Yes	2
Teacher Talk B	Yes	2
6	No	–
7	Yes	2
8	Yes	2
Total	–	14

Observations of Hanen LLLI video feedback sessions

We observed eight video feedback sessions during the nursery site visits in the first year (2019/20). We also observed four post-video feedback sessions in the second year of delivery, which we observed remotely (see Introduction). Only nurseries who hadn’t been included for early implementation interviews were considered for site visits. We sampled settings to ensure a spread across the three main geographical regions and nursery size (as determined by the number of 3–4-year-olds registered at settings). To maximise engagement in the context of Covid-19 and limited school capacity, we sampled nurseries for post-video feedback session observations based on being previously observed. Nurseries were recruited via an invitation email and, in some cases, follow-up phone calls.

Interviews with nursery staff

We conducted interviews with senior staff at treatment nurseries to understand how nurseries participated in Hanen LLLI, barriers and facilitators to delivery, and perceived outcomes and impacts. We also conducted interviews with senior staff in control nurseries to understand usual practice approaches to language and communication development and how these compared with the strategies encouraged by the Hanen LLLI Program. In all cases, participants were recruited via an invitation email and, in some cases, follow-up phone calls.

- **Early implementation interviews** (n=10)¹⁶ were conducted with treatment nurseries in the autumn term 2019 to gather contextual information on the nursery and their practice, how they planned to support staff to attend workshops (including planning cover), and any intervention challenges anticipated. Interviews were conducted with senior members of staff (nursery teachers or managers) via telephone, and lasted approximately 30 minutes. We sampled settings to ensure a spread across the three main geographical regions and nursery size.
- **Redesign interviews** (n=6) with treatment nurseries in the autumn term 2020 explored the consequences of the revised delivery timetable for nurseries, including plans for resourcing. They also assessed the impacts of the Covid-19 partial school closures generally and any implications for engagement with the intervention. Interviews were

¹⁶ The most recent version of the protocol inaccurately states that 11 early implementation interviews were completed in the autumn term 2019. The correct number of completed early implementation interviews is 10.

conducted with senior members of staff (nursery teachers or managers) via telephone and lasted approximately 30 minutes. We sampled settings to include variation related to nursery size. We also aimed to include a group of settings which had previously taken part in qualitative research activities. Three of these interviews were conducted with nurseries which took part in early implementation interviews, to allow for longitudinal understanding of the impacts of the redesign.

- **Ongoing delivery interviews** (n=8) with treatment nurseries in the summer term 2021 explored how programme delivery had progressed, any cascading of Hanen LLLI principles to non-trained staff, and perceived outcomes and impacts on staff practice, the nursery environment and children. They also asked nursery staff and nurseries about their intention to continue implementing Hanen LLLI principles beyond the end of the trial, the implications of Covid-19 for delivery, and participants' experiences of the two modes (in-person and online). Interviews were conducted with senior members of staff (nursery teachers or managers) on Microsoft Teams and lasted approximately 45 minutes. We sampled to achieve a spread across the three main geographical regions and across nursery size.
- **Business as usual interviews** (n=9) with control nurseries gathered data on usual practice in nurseries, including engagement with any communication and language development interventions. Interviews were conducted with senior members of staff (nursery teachers or managers) on Microsoft Teams and lasted approximately 30 minutes. Three interviews were conducted in 2019/20. We included settings from across the three geographical areas and ensured variation in nursery size. Six more interviews were conducted in the summer term 2021, using the same sampling criteria alongside settings' previous involvement in qualitative activities. Interviews in the summer term 2021 included follow-up interviews with two out of the three nurseries interviewed the previous year, to allow for longitudinal monitoring of the control conditions, and better understand the implications of Covid-19 and partial school closures.

IPE site visits

To gain an in-depth understanding of how nursery staff and nurseries experienced and delivered the intervention, we conducted seven visits to treatment nurseries in the 2019/20 academic year. We sampled nurseries for site visits based on not having been interviewed at early implementation stage, and nursery size and location (see Observations of Hanen LLLI video feedback sessions). This was to limit the burden on settings and to achieve a broader sample. Nurseries were invited to take part via email. The site visits included:

- **Observation of video feedback session** (one per nursery) to understand the content of these sessions, nursery staff's responsiveness, and any barriers and facilitators to delivery.
- **Interview with senior staff member** (nursery teacher or manager – one per nursery) to understand barriers and facilitators to programme engagement and success, and perceived outcomes (positive and/or unintended) for staff practice, the nursery environment, and children's language and communication development.
- **Interview(s) with trained nursery staff** (one to two per nursery) to understand responsiveness to the intervention, barriers and facilitators to delivery, and perceived outcomes.

Interviews with Program Leaders

Eleven Program Leaders delivered Hanen LLLI in 2019/20 and ten Program Leaders continued in 2020/21. We interviewed six Program Leaders in the spring term 2020 to provide evidence on training and video feedback delivery, including any variations and perceived acceptability on programme outcomes and recommendations for improvements. These interviews lasted approximately 45 minutes and were conducted by telephone. We sent invitation emails to all eleven Program Leaders and arranged interviews on a 'first come first served' basis.

We conducted six further interviews with Program Leaders in 2020/21 to understand the implications of the redesign from their perspectives. Half of these interviews took place in the autumn term 2020 and half in the summer term 2021, after the end of delivery. These interviews helped us to understand how delivery had changed, challenges and opportunities raised by the two-year delivery, and perceived outcomes. In the autumn term 2020, we sampled Program Leaders based on not having been previously interviewed, and ensured that we interviewed at least one Program Leader from each of the three main geographical areas. We applied the same criteria to the interviews in the summer term 2021. Program Leaders were recruited through an invitation email at all stages.

Nursery staff survey in treatment condition

We conducted a short post-intervention web survey in the summer term 2021 of all nursery staff who had taken part in Hanen LLLI in 2020/21. Nursery staff were invited to take part in the post-intervention survey via an email sent by Communicate SLT. The survey gathered nursery staff feedback on the intervention, including engagement barriers and facilitators, and perceived outcomes for staff and children. We also asked participants about their views on the delivery mode (in-person and online) and their future engagement with Hanen LLLI.

All nursery staff who had been involved in 2020/21 delivery received a link to the survey (n=119). We received 42 successfully completed responses from nursery staff across a variety of roles, a response rate of 35% (see Table 9). The largest proportion of responses came from teachers, followed by teaching assistants and EYFS Leads.¹⁷ It is possible that teachers and more experienced nursery staff such as EYFS Leads are more likely to have encountered Hanen LLLI strategies during their professional training, which could have shaped their responses to the survey questions.

Table 9: Survey respondents' roles

Role	Successfully completed survey
Teaching assistant	12
Higher level teaching assistant (HLTA)	1
Learning support assistant (LSA)	2
Nursery nurse	4
Nursery manager	2
Teacher	18
EYFS lead	8
Senco	1
Senior teacher	1

Source: Nursery staff survey (n=42).

Analysis

Interviews were digitally audio-recorded with permission from participants, and professionally transcribed. We used Framework in NVivo 11, a systematic approach to qualitative data management, developed by NatCen, to chart (collate and summarise) transcribed data by theme and case (Ritchie *et al.* 2013). Using the themes covered in topic guides and new emerging themes, we assembled a matrix in which each row represented an individual interview and each column a theme and any related sub-themes. We then summarised the interview data in the matrix, including illustrative verbatim quotes where appropriate.

Analysis of workshop and video feedback sessions adopted a similar approach. We recorded workshop and video feedback sessions using pre-written observation proformas. We then created different analytical frameworks and a series of matrices in Microsoft Excel, each relating to a different thematic issue. The columns in each matrix represented the key sub-themes or topics and the rows represented individual workshop or video feedback sessions. We then 'transferred' the observation and video feedback session notes to the matrix.

Once all interviews, workshop and video feedback sessions were coded in the matrix, we analysed the data. This involved a phase of 'detection', which included studying the elements participants said about a given topic, listing these and then sorting them thematically. Once we had identified different themes in the data, we created higher level categories that worked as meaningful conceptual groupings for participants' views and experiences.

Survey data was analysed descriptively in terms of frequencies using SPSS.

Table 10: IPE methods overview

¹⁷ Nursery staff were able to select all roles that applied.

Research methods	Data collection methods	Participants/ data sources	Data analysis methods	Research questions addressed	Implementation/ logic model relevance
Qualitative	Observations (training workshops)	Nursery staff & Program Leaders/ Training workshops (14)	Thematic analysis	RQ1, RQ3, RQ4	Fidelity, quality, responsiveness, adaptation
Qualitative	Observations (video feedback sessions)	Nursery staff & Program Leaders/ Video feedback sessions (12)	Thematic analysis	RQ1, RQ3, RQ4	Fidelity, quality, responsiveness, adaptation
Qualitative	Interviews (early implementation)	Nursery staff (10)	Thematic analysis	RQ1, RQ4	Usual practice, responsiveness
Qualitative	Interviews (site visits)	Nursery staff (11)	Thematic analysis	RQ1, RQ2, RQ4	Reach, quality, responsiveness, perceived outcomes
Qualitative	Interviews (redesign)	Nursery staff (6)	Thematic analysis	RQ1, RQ3, RQ4	Responsiveness, adaptation, perceived outcomes
Qualitative	Interviews (ongoing delivery)	Nursery staff (8)	Thematic analysis	RQ1, RQ2, RQ3, RQ4	Quality, reach, responsiveness, perceived outcomes
Qualitative	Interviews (business as usual round 1)	Nursery staff (control) (3)	Thematic analysis	RQ3, RQ4	Usual practice
Qualitative	Interviews (business as usual round 2)	Nursery staff (control) (6)	Thematic analysis	RQ3, RQ4	Usual practice
Qualitative	Interviews (Program Leader round 1)	Program Leaders (6)	Thematic analysis	RQ1, RQ2, RQ4	Fidelity, adaptation, responsiveness, reach, perceived outcomes
Qualitative	Interviews (Program Leader round 2)	Program Leaders (3)	Thematic analysis	RQ1, RQ2, RQ3, RQ4	Fidelity, adaptation, responsiveness, reach, perceived outcomes
Qualitative	Interviews (Program Leader round 3)	Program Leaders (3)	Thematic analysis	RQ1, RQ2, RQ3, RQ4	Fidelity, adaptation, responsiveness, reach, perceived outcomes
Quantitative	Survey (post-intervention)	Nursery staff (42)	Descriptive statistics	RQ2, RQ3, RQ4	Responsiveness, reach, perceived outcomes
Quantitative	Attendance registers	Nursery staff, Communicate SLT	Descriptive statistics	RQ1, RQ3	Dosage, reach

Timeline

Table 11: Hanen LLLI evaluation timeline

Dates	Activity	Staff responsible / leading
Jan 2019–March 2019	Finalise recruitment materials	Communicate SLT
Mar 2019–Jun 2019	Recruit nurseries, sign MOUs Schools nominate staff to take part in Hanen LLLI	Communicate SLT
Jul 2019–Aug 2019	Randomisation	NatCen
Oct 2019	Baseline assessments Schools informed of randomisation (after testing)	NatCen
Nov 2019–May 2021	Intervention delivery	Communicate SLT
Nov 2019–May 2021	Workshop and video feedback session observations	NatCen
Dec 2019	Early implementation interviews	NatCen
Jan 2020–Mar 2020	Case study visits Interviews with Program Leaders (1 st round) Business as usual interviews (1 st round)	NatCen
Mar 2020–Oct 2020	PAUSED	
Nov 2020	Amended parent information leaflets handed out for extension into 2020/21 Pupil lists for new pupil cohort sent to NatCen	Nurseries NatCen
Nov 2020	Interviews with Program Leaders (2 nd round)	NatCen
Dec 2020	Redesign interviews (treatment nurseries)	NatCen
Apr 2021–May 2021	Ongoing delivery interviews Business as usual interviews (2 nd round)	NatCen
Jun 2021	Interviews with Program Leaders (3 rd round)	NatCen
Jun 2021–Jul 2021	Nursery staff survey (treatment nurseries)	NatCen
Jul 2021–Sep 2021	Analysis and reporting	NatCen
Sep 2021	First draft of the report submitted to the EEF	NatCen

Implementation and process evaluation (IPE) results

Fidelity

This section explores implementation fidelity or the extent to which Hanen LLLI was delivered as intended. It includes how much of the intervention was delivered (Dosage), the extent to which delivery adhered to the intended model (Adherence), and how well the intervention was delivered (Quality).

Dosage

RQ1: How is Hanen LLLI delivered, and what are the facilitators and barriers to delivery?

RQ3: What are the implications of Covid-19 for delivery and perceived impacts?

Orientation meeting

Communicate SLT hosted a total of 23 orientation meetings in November 2019. Eleven out of the 12 areas hosted orientation meetings. Merseyside did not deliver any orientation sessions due to low demand. Some areas hosted more than one session to accommodate nursery staff's preferred dates and times. Seven nursery staff who could not attend any of the orientation meetings were offered a one-on-one or small-group session with a Program Leader. There were no orientation meetings for newly added participants in the second year of delivery.

Pre-intervention video

All nursery staff in the first year of delivery were asked to complete a pre-intervention video (pre-video) and share it with their Program Leader (see Reach).

Workshops

In total, 100 workshops were delivered by Communicate SLT across the two delivery years (67 in the first and 33 in the second). Communicate SLT delivered at least eight workshops in all 12 areas (with Manchester South and North East being combined in the second year). In five of the 12 areas, workshop 6 was cancelled in the first year because of Covid-19 disruptions. These areas only ran workshop 6 in the second year. The other six areas (with Manchester North East and Manchester South combined) ran workshop 6 in the first *and* second year. Consequently, in these areas, a total of nine sessions were run across the two-year delivery of the programme.

Not all workshop sessions adhered to the stipulated 2.5 hours and some were shorter by as much as 30 minutes (see Adherence).

Review workshops

Review workshops Teacher Talk A and B were delivered at the start of the second year across each of the 11 areas (with Manchester South and North East combined). There were three 2.5-hour sessions as part of Teacher Talk A and three 2.5-hour sessions as part of Teacher Talk B. New participants who joined in 2020/21 were required to attend at least two out of three sessions for both Teacher Talk A and B, as well as workshops 6, 7 and 8. Review workshops were optional for continuing participants.

Video feedback sessions

Nursery staff were asked to complete six video feedback sessions with Program Leaders over the two-year delivery period. This included four mandatory sessions in the first year and two in the second. An additional video feedback session was offered at the beginning of 2020/21 delivery to new participants and those unable to complete the four video feedback sessions in the first year due to Covid-19. This was optional for participants who had completed six mandatory sessions, meaning some participants completed seven video feedback sessions before the end of workshops (see Reach). Participants who were newly added in the second year were required to attend at least three video feedback sessions (including any post-video feedback sessions).

Post-video feedback sessions

Two optional post-video feedback sessions were offered to all participants after completion of the final workshop (see Introduction).

Adherence

This section explored the extent to which delivery adhered to the intended model.

RQ1: How is Hanen LLLI delivered, and what are the facilitators and barriers to delivery?

RQ3: What are the implications of Covid-19 for delivery and perceived impacts?

Training workshops

'4P' teaching cycle

The workshops largely adhered to the '4P' teaching cycle (of prepare, present, practise, and personalise) prescribed by the Hanen LLLI Leaders Guide (see Introduction). Program Leaders explained this was achieved through using session guides and providing consistent information to nursery staff. Program Leaders understood the requirement to deliver Hanen LLLI consistently across groups, and described following the prescribed guidance closely. Observations of in-person workshops supported Program Leaders' reflections on adhering to prescribed workshop delivery, although observation of online delivery showed more variation (see Session structure and duration). Where Program Leaders made small, non-approved deviations from the guidance (such as using non-approved methods to mix nursery staff groups) they did not regard this as undermining the '4P' teaching cycle, the workshop aims or the 'Hanen approach'.

Number of participants

Observed workshops varied in size. The smallest workshop we observed had only four participants in attendance, and the largest had 15. Observed workshop groups tended to be smaller than the recommended 10–20 participants. No groups went above the maximum recommended size. In-person workshops followed the guidance on group size more closely than online workshops. This could be explained by the increased flexibility around session choice during remote delivery (see Reach).

Materials

Program Leaders believed the pre-written Hanen LLLI materials (i.e., PowerPoint slides and accompanying scripts) encouraged adherence because they were well-designed in terms of format and content. They reported that the clear scripts enabled consistent delivery of content and proved especially useful at the beginning of delivery to help 'ease Program Leaders in'.

The workshops are always quite well scripted. There are always things that you have to say, you have to talk about certain strategies ... so you know what it is that you're expected to deliver (Program Leader 4, Wave 3 interview).

Session-specific materials for nursery staff were used more consistently and in line with the guidance during in-person workshops. Observations found that these materials were made available and regularly referred to during in-person workshops. In contrast, during remote delivery, Program Leaders did not consistently check whether nursery staff had materials available or refer to the workbooks as per the guidance. Nursery staff occasionally did not have materials available during online sessions (e.g., playdough, story books, Hanen LLLI workbooks). Therefore, activities did not always happen as intended, since this aspect was difficult to rectify remotely.

Session structure and timings

There was evidence of variation regarding session structure and timings across workshops, particularly during remote delivery. Program Leaders thought the structure and timing of sessions could be challenging. They believed the content was too detailed to cover within the recommended 2.5 hours. This was reflected in observations of in-person and remote workshops, where Program Leaders rushed delivery or skipped slides.

I think that when we were delivering and when we were looking at the time frames and the amount of material ... it could feel very pressured, and you were aware ... I think the structure was quite a lot to manage really (Program Leader 1, Wave 3 interview).

The shortening of some sessions to 2 hours or 2 hours 15 minutes meant there was even less time for content and activities. It is possible that Program Leaders shortened workshops for pragmatic reasons, for instance because attendees had other commitments, especially during evening presentations. There was also a view among Program Leaders that some content could be skipped if nursery staff appeared to have a good grasp of the Hanen LLLI strategies already.

Workshop observations showed that Program Leaders did not always leave enough time for the 'practice' and 'personalise' elements of the '4P' teaching cycle. Examples included participants being asked to fill out their action plan in their own time. Interviews and workshop observations found that Program Leaders who seemed rushed left out sections from the script, did not play certain videos, omitted practical activities, or limited time for discussion (see Quality). This was most apparent during remote sessions.

There have been a couple of sessions ... where ... you realise actually, I've not got that much time, but I still feel as if I've got quite a bit of information to get through. So you might then ... speed up quite a bit because there is so much information ... and you're not sure it's gone in (Program Leader 4, Wave 3 interview).

Where Program Leaders did not strictly adhere to the prescribed session structure, they believed it was mainly the further detail and exploration of the content that was left out, rather than blocks of content or whole strategies.

Training and ongoing support

Program Leaders reflected on how their pre-delivery training and ongoing support promoted the importance of consistent delivery and adherence to the guidance. Regular ongoing support meetings organised by the Program Leader supervisor ensured Program Leaders across all the geographical areas received the same information.

[Program Leader supervisor] supports us week in, week out, if we've got any questions, and she ensures that the information she's giving us is consistent, so that we're all delivering the same information consistently to all the participants (Program Leader 5, Wave 1 interview).

Video feedback sessions

Training

Program Leaders described adhering closely to the guidance around video feedback sessions. However, they suggested that guidance was not clear enough and that training could have been more detailed. They thought the training should have made more use of the Hanen website resources on how to conduct video feedback sessions.

I think the video feedback was something that maybe I didn't have as much of a sense of what it would be like and what I needed to take into account. I've got more of a sense of how training workshops work, because I've done those before, but I think with the video feedback, having more information would have been helpful (Program Leader 6, Wave 1 interview).

Session structure and duration

Program Leaders followed the guidance around reviewing action plans, giving nursery staff a focus as they watched the videos, helping them summarise the feedback discussion, and identifying strategies with them. However, none of the observed Program Leaders discussed nursery staff's learning stages with them, although the reason was unclear. A group of Program Leaders also deviated from the prescribed structure for introducing feedback sessions. Program Leaders did not always decide on the goal of feedback with nursery staff before playing the video, or ask them for their overall impressions. Additionally, there was variation in nursery staff being given time to fill out their action plans at the end of the session, partly due to time constraints.

Video feedback sessions did not consistently follow the prescribed 30 minutes, but ranged from 15 to 50 minutes. Where sessions ran short, this tended to be because of staffing issues at settings, although some sessions were shorter for no

clear reason. Where sessions overran, Program Leaders required additional preparation time or discussed multiple strategies in one session. Online sessions tended to adhere more closely to the required 30 minutes (see Quality). There were no clear differences in session duration between larger and smaller settings or different regions.

Feedback approach

Video feedback observations found that Program Leaders were not always neutral in their feedback as per the guidance. They tended to positively reinforce and affirm behaviours nursery staff displayed rather than providing balance and encouraging open reflection. Program Leaders acknowledged the difficulty in finding the right balance between reflection and encouragement, especially with nursery staff who had found the process intimidating or were reluctant to offer their own reflections.

Sometimes using the Hanen process can feel quite challenging towards a participant. Even though you know it's not, it can feel quite challenging when you're just asking them lots of questions when they are telling you they want an answer rather than another question (Program Leader 7, Wave 1 interview).

On the other hand, nursery staff described how positive feedback boosted their confidence and encouraged engagement in an otherwise nerve-wracking activity (see Responsiveness).

Informal cascading of learning

Informal cascading of learning from Hanen-trained nursery staff to other staff in the nursery was prescribed by the Hanen LLLI delivery model. Interviews with nursery staff highlighted variation in the extent to which this occurred (see Responsiveness). A group of nurseries had regular and ongoing cascading sessions whilst others adopted a more informal model, although this did not appear to vary by setting size. Throughout the Covid-19 pandemic, formal or informal conversations between staff members about Hanen LLLI strategies were deemed less of a priority than focusing on immediate issues.

Quality

RQ1: How is Hanen LLLI delivered, and what are the facilitators and barriers to delivery?

RQ3: What are the implications of Covid-19 for delivery and perceived impacts?

RQ4: What can be learnt for future delivery of Hanen LLLI?

Workshops

Training and ongoing support for Program Leaders

Program Leaders reported that the programme training prepared them for in-person delivery. They thought the training was relevant, as it focused on how best to support nursery staff in learning how to use Hanen LLLI strategies. They liked that it was practical and skills based.

It was really good training ... because the focus of it was on supporting adults to learn, rather than so much on the content ... I have familiarity with a lot of the content already (Program Leader 6, Wave 1 interview).

While expected to familiarise themselves with the Hanen course content in their own time, Program Leaders found this manageable.

The trainers were considered to be knowledgeable, passionate about the subject and engaging. This was especially important as training happened across four consecutive days.

Program Leaders felt the training conveyed the importance of consistent delivery and following the guidance, which helped ensure adherence to the implementation model and quality of delivery (see Fidelity).

Ongoing support through regular contact with the Program Leader supervisor and peer support also enhanced the quality of delivery (see Intervention logic model). Program Leaders found support from the Program Leader supervisor

useful in offering direction, answering questions about delivery and troubleshooting issues. They also enjoyed having a space to discuss emerging issues with other Program Leaders.

Program Leaders suggested ongoing support for in-person delivery could have been improved through regular in-person meetings with other Program Leaders and the Program Leader supervisor. They found debriefing about workshop sessions via WhatsApp insufficient, as the material was too complex to discuss through this medium. Program Leaders would have liked a physical space to meet with the wider delivery team.

[N]ot having that office base to be able to then just have that informal group supervision, group reflection on things, that's been one of the more challenging things (Program Leader 6, Wave 1 interview).

Program Leaders were positive about ongoing support for online delivery. This involved regular contact with the supervisor and other Program Leaders over WhatsApp. Small-group support up-skilled less technologically experienced Program Leaders and gave them confidence to deliver online.

Delivery

Delivery of content

Nursery staff reported that the workshops were delivered to a high standard and delivery was clear, engaging and accessible (see Responsiveness). They thought that Program Leaders unpacked and explained difficult concepts well and they felt able to approach them about any questions. This was reflected in positive working relationships with Program Leaders and the provision of opportunities to extend learning through discussion and further questioning. Workshop observations confirmed that Program Leaders consistently used good communication techniques such as use of plain English and (non-)verbal listening cues to facilitate delivery. They described Hanen LLLI strategies clearly and accessibly and used their own relevant examples to enrich descriptions.

Nursery staff valued Program Leaders' experience and good working knowledge of the Hanen LLLI strategies. They thought this promoted the quality of delivery. It meant Program Leaders were well placed to facilitate discussions, respond to questions and support nursery staff from different professional backgrounds and experience levels.

It really does feel like a working group rather than just sitting in a training session. It does feel like you've got access to all that expert knowledge that you don't usually get access to and everyone's working together to bounce ideas around (Nursery staff 1, site visit interview).

Program Leaders agreed that their own professional experience helped them use examples to explain Hanen LLLI strategies and deliver a high-quality programme. Previous experience of delivering similar interventions gave them confidence to make the delivery style more personal.

Workshop observations found some variation in quality across groups. More experienced and confident Program Leaders personalised the delivery script more than less experienced or less confident colleagues. This made their approach appear more natural, dynamic and authoritative. Nursery staff also preferred it when Program Leaders made the script their own, and believed it made delivery less robotic.

There was also variation in how Program Leaders facilitated nursery staff's discussion of strategies. Some were more adept at promoting interaction and reflection on nursery staff's responses to questions. However, a group of senior nursery staff suggested that Program Leaders were too reluctant to call out 'incorrect' examples of good practice shared by participants. They were concerned that this meant less experienced nursery staff received a skewed impression of how to implement certain strategies.

Program Leaders found tailoring the course content to accommodate various levels of nursery staff experience challenging following the switch to remote delivery and a new cohort. They believed in-person delivery made it easier to be aware of and support the individuals' different needs. This was because in-person delivery was more personal, adaptable and more conducive to having individual discussions (see Responsiveness).

Format

The format of the course was less successfully implemented online. Whilst the lecture-style content was delivered well, many of the practical elements were either dropped or worked less well (see Adherence). Additionally, some Program Leaders found online delivery challenging, given the requirement to switch between screen sharing, gallery view and breakout rooms, and to deal with any screen, audio or connectivity issues. Workshop observations found that the management of these different functions was not always smooth and could distract from delivery.

Co-delivery

Delivering the workshop in pairs meant that Program Leaders alternated between leading sections and being in a supporting role. Program Leaders viewed this positively. They believed it created a balance in session delivery and enhanced quality through:

- **Extra support:** mutual support between Program Leaders helped bolster confidence, especially with online delivery
- **Complementary expertise:** where this happened, it was beneficial to have both an SLT and EYC present to cover different areas of the programme and build on each other's learning points. This also increased learning opportunities for nursery staff.

Workshop observations found that some co-delivery pairings were more effective than others. The most successful pairs collaborated well, communicated naturally during sessions, and built on each other's contributions. The least successful pairs were separate in their delivery and did not act as a unit. In such instances, one of the pair remained passive and did not contribute whilst the other was leading.

Timings

Program Leaders' management of session timings varied. Rushed delivery made it difficult for nursery staff to follow along and affected the quality of teaching (see Fidelity). However, Program Leaders were skilled at ensuring that nursery staff had understood the content and were engaged. This was done most effectively when Program Leaders asked specific nursery staff directly to answer questions, rather than posing open questions to everyone.

Video feedback sessions

Delivery of feedback

Video feedback observations found that Program Leaders consistently used good communication techniques when delivering feedback, including use of plain English, follow-up probes, and verbal and non-verbal listening cues. Nursery staff also thought the quality of Program Leaders' communication was high. Feedback was constructive, thoughtful, personalised and easy to understand. Nursery staff felt well equipped to implement Hanen LLLI strategies more effectively following feedback sessions (see Perceived outcomes).

Delivery mode

Program Leaders observed that attending the nursery setting enhanced the quality of the feedback sessions as it helped them understand the context and encouraged rapport. On the other hand, Program Leaders and nursery staff thought remote delivery benefitted from the increased time for reflection before the feedback session. This allowed Program Leaders to watch and reflect on the videos, note down strengths and development points, and better plan the discussion. It also gave nursery staff the chance to reflect on the video before the session and identify relevant points for discussion. This made the 30-minute slot for remote video feedback sessions more productive and less rushed.

Obviously, last year, they were having to have the video and then talk about it pretty much straightaway. I think when you haven't even had a chance to watch it through yourself, you haven't formulated your ideas about what you would do next time. Then I think it helps talking it through when you already have got your ideas (Nursery staff 10, ongoing delivery interview).

Nursery staff reported that with remote delivery the videos were of higher quality and a better reflection of their usual practice. There was more flexibility around the timing of filming, and nursery staff and nursery children felt more comfortable and natural without the Program Leader present (see Adaptation).

Adaptation

This section outlines the key adaptations Program Leaders made to the Hanen Program and the factors underpinning them. The focus of this section is on those adaptations approved by the Hanen Centre (see Fidelity for discussion of non-approved adaptations).

RQ1: How is Hanen LLLI delivered, and what are the facilitators and barriers to delivery?

RQ3: What are the implications of Covid-19 for delivery and perceived impacts?

Workshops

Delivery format and script

Program Leaders' deviations from the proposed Hanen LLLI delivery approach and script were driven by:

- **Experience:** experienced Program Leaders used the script only sporadically. They felt able to convey the teachings more effectively through their own words and less formal language. Program Leaders were clear that delivery style was individual and adaptable as long as the content and format of sessions remained the same across groups.
- **Preferences and needs:** co-delivery was shaped by Program Leaders' preferences and their groups' needs. For instance, the proportion of time Program Leaders spent leading delivery and the number of times they switched roles varied across workshop sessions and groups.
- **Understanding and engagement:** Program Leaders made small adaptations to in-person delivery to encourage nursery staff engagement and enhance understanding. Examples included using the flipchart more than suggested in the session guide, using additional drawings, and writing out the transcript of one of the videos to highlight relevant points during the group discussion.

Content and activities

Program Leaders' adaptations to activities and content were shaped by:

- **Time and delivery mode:** Program Leaders limited or left out certain role-play activities when short of time. Observations highlighted that Program Leaders found role-playing activities particularly difficult to encourage through remote delivery. In some instances, nursery staff discussed the topic instead of role-playing, or Program Leaders demonstrated the role-play instead of nursery staff, to ensure learning happened.
- **Relevance:** Program Leaders tailored PowerPoint slides to reflect the age range of children at treatment settings (see Introduction). This included removing pictures and activities involving toddlers and babies and replacing these with older children with more developed language skills. PowerPoints also included optional slides, which Program Leaders could use depending on session timings.

Duration of activities

Program Leaders made minor adjustments to the time spent on different workshop activities without affecting the overall session structure (see Adherence for discussion of non-approved changes to session duration). Decision-making around adjustments rested on three factors:

- **Level of experience:** Program Leaders with more experienced nursery staff moved through the 'OWLing' strategy (see Introduction) more quickly than others. This gave them more time to focus on interactive activities and discussions, and extending knowledge.
- **Level of understanding:** the length of time spent on different topics tended to vary based on nursery staff's level of comprehension. Where nursery staff took longer to understand a concept, there was flexibility to re-watch and discuss videos.

- **Context:** workshop observations showed variation across groups in the length of breaks and whether breaks were included at all. Workshop observations found that Program Leaders utilised breaks less frequently during remote delivery.

Video feedback sessions

Program Leaders wanted to offer nursery staff flexibility in how they watched the video during sessions. They considered this important because of nursery staff's reluctance about the process. Program Leaders described giving nursery staff the choice of whether to play the videos in one go or in segments. They reported skipping over content if the participant appeared or expressed being uncomfortable, and returning to it later in the session. The video feedback observations echoed this, finding variation in how Program Leaders played back the video and delivered feedback. Whilst some Program Leaders focused on the whole video, others limited themselves to specific sections.

Program Leaders thought that the length of time between the video being recorded and the feedback session being held was an adaptable element of the programme. Program Leaders felt this was true for both in-person and remote delivery. They cited examples of in-person video feedback sessions being conducted several days after the video was recorded, instead of immediately afterwards as planned. Delaying feedback in this way helped relieve pressure on staff in nurseries, as nursery staff had shorter periods of time away from nursery responsibilities. It also helped address nursery staff's own feelings of anxiety around the video feedback sessions, as they had more time to reflect on the video. Both Program Leaders and nursery staff reported that the delay in provision of feedback was a positive feature of remote delivery. They also acknowledged that it could be helpful for in-person delivery, where requested by nursery staff.

Reach

This section explores the rate and scope of nursery staff's participation in mandatory and optional Hanen LLLI activities. It also addresses barriers and facilitators to attendance.

RQ1: How is Hanen LLLI delivered, and what are the facilitators and barriers to delivery?

RQ3: What are the implications of Covid-19 for delivery and perceived impacts?

RQ4: What can be learnt for future delivery of Hanen LLLI?

Communicate SLT gathered attendance data for mandatory and optional sessions. Mandatory sessions for nursery staff participating from the start of delivery included:

- 1 orientation meeting
- 8 workshops
- 1 pre-intervention (baseline) video and 6 video feedback sessions.

Optional activities covered:

- Pre-workshop assignment
- 2 review workshops (Teacher Talk A and B), each involving three separate sessions
- 1 additional video feedback session (7th video feedback session)
- 2 post-intervention video feedback sessions.

Mandatory sessions for newly added nursery staff in the second year included:

- 5 workshops (including Teacher Talk A and B, workshops 6, 7 and 8)
- 3 video feedback sessions.

Optional activities covered:

- 2 post-intervention video feedback sessions.

Two hundred and sixteen nursery staff attended at least one mandatory session of one activity (i.e., orientation meeting; workshops; video feedback sessions) across the two-year delivery period (2019/20 and 2020/21).

One hundred and seventy-four nursery staff attended at least one session of one activity in the first year of delivery (2019/20). Ninety-five nursery staff (55%) withdrew before the start of the second year (2020/21). This was either because their nursery had dropped out of the programme or for individual reasons, including:

- changing role or taking on extra responsibilities within the nursery/school
- leaving the nursery
- maternity leave
- long-term sick leave
- additional pressures due to the Covid-19 pandemic.

One hundred and twenty-one nursery staff participated in programme activities in 2020/21. This included 79 nursery staff who participated over the two years and 42 new participants from treatment nurseries who joined in 2020/21.

Mandatory activities

Orientation meeting

The mandatory elements of Hanen LLLI began with an orientation meeting (see Intervention logic model). Of 174 nursery staff participating in 2019/20, 149 (85.6%) attended this event. This included seven (4%) attending a catch-up version, either one-on-one with a Program Leader or in a small group. Twelve (6.9%) nursery staff attended the orientation event but then no further activities.

Workshops

Nursery staff who started in the first year were required to attend at least six training workshops (15 hours) in order to satisfy the requirements of the course and receive an end-of-programme certificate (provided they also attended at least four video feedback sessions; see Introduction). Nursery staff who were newly added in the second year were required to attend five training workshops (minimum two out of three sessions for both Teacher Talk A and B, plus workshops 6, 7 and 8; as well as at least three video feedback sessions). Sixty-nine nominated leads/teachers and 105 additional staff members/non-teachers participated in the first year of delivery. Thirty-seven (53.6%) nominated leads/teachers attended six or more mandatory workshops, compared with 51 (48.6%) additional staff members/non-teachers.

Of the 42 new participants who joined in the second year of delivery, 15 (35.7%) attended all five workshops available to them. There were 12 nominated leads/teachers and 30 additional staff members/non-teachers who were newly added in the second year. Four (33.3%) nominated leads/teachers and 11 (36.7%) additional staff members/non-teachers attended all five workshops.

Across the two-year delivery period, 106 out of 216 nursery staff (49.1%) attended six or more workshops, and just under a fifth of nursery staff (19%) attended all eight (see Table 12).

Table 12: Proportion of nursery staff attending number of workshops

Number of workshops attended ^a	Proportion of nursery staff who withdrew before second year (n=95)	Proportion of nursery staff who participated in first and second year (n=79)	Proportion of nursery staff who were newly added in second year (n=42)	Total proportion of nursery staff (n=216)
0	12 (12.6%)	0 (0%)	2 (4.8%)	14 (6.5%)
1 or more	83 (87.4%)	79 (100%)	40 (95.2%)	202 (93.5%)
2 or more	80 (84.2%)	79 (100%)	34 (81%)	193 (89.4%)
3 or more	75 (78.9%)	79 (100%)	31 (73.8%)	185 (85.6%)
4 or more	73 (76.8%)	79 (100%)	26 (61.9%)	178 (82.4%)
5 or more	60 (63.2%)	79 (100%)	15 (35.7%)	154 (71.3%)
6 or more	39 (41.1%)	67 (84.8%)	N/A ^b	106 (49.1%)
7 or more	N/A ^c	58 (73.4%)	N/A	58 (26.9%)
8 or more ^d	N/A	41 (51.9%)	N/A	41 (19%)

Notes: ^aTeacher Talk A and B were counted as one workshop each for newly added participants in the second year, but were discounted for continuing participants. ^bNursery staff who were newly added in the second year were only able to attend a maximum of five workshops.

^cNursery staff who withdrew before the second year were only able to attend a maximum of six workshops. ^d Some nursery staff attended a total of nine workshops due to workshop 6 being repeated. Source: Attendance data.

Pre-intervention video

Of those attending at least one activity in the first year, 159 (91.4%) nursery staff completed the pre-intervention video (see Introduction and Intervention logic model). Pre-intervention videos were not offered to new participants, so they were removed from this analysis.

Video feedback sessions

The Hanen LLLI programme includes a total of six video feedback sessions, excluding post-video feedback sessions (see Intervention logic model). Because of the extension to the programme, four of the video feedback sessions happened in the first year of delivery and two in the second year. However, Communicate SLT ran an extra, seventh session in the second year (2020/21) for participants who were unable to complete four in the first year, and for new participants. Attendance at the extra session was mandatory for continuing participants who had not completed all the required sessions in the first year because of Covid-19. It was optional for continuing participants who had (see Optional activities).

Nursery staff who attended in the first year of delivery were expected to attend at least four video feedback sessions in order to receive an end-of-programme certificate. Of those who took part in the first year, 117 (67.2%) attended at least four sessions over the two-year delivery period, with attendance being very similar for nominated leads/teachers and non-teaching staff. The proportion of nominated leads/teachers attending four or more video feedback sessions was 46/69 (66.7%), compared to 71/105 (67.6%) for additional staff members/non-teachers.

Nursery staff who were newly added in the second year of delivery were expected to attend at least three video feedback sessions (which *could* include post-video feedback sessions) in order to receive an end-of-programme certificate. Of the new participants, 28 (66.7%) attended at least three (post-)video feedback sessions.

Across the two-year delivery period, 144 out of 216 nursery staff (66.6%) attended four or more video feedback sessions.¹⁸ Just over a fifth of participants (20.4%) attended at least six video feedback sessions (see Table 13).

Table 13: Proportion of nursery staff attending number of mandatory video feedback session

Number of mandatory video feedback sessions ^a	Proportion of nursery staff who withdrew before second year (n=95)	Proportion of nursery staff who participated in first and second year (n=79)	Proportion of nursery staff who were newly added in second year (n=42)	Total proportion of nursery staff attended (n=216)
0	18 (18.9%)	0 (0%)	9 (21.5%)	27 (12.5%)
1 or more	77 (81.1%)	0 (0%)	33 (78.6%)	189 (87.5%)
2 or more	73 (76.8%)	0 (0%)	31 (73.8%)	183 (84.7%)
3 or more	67 (70.5%)	79 (100%)	28 (66.7%)	174 (80.5%)
4 or more	43 (45.3%)	74 (93.7%)	27 (64.3%)	144 (66.6%)
5 or more	0 (0%)	55 (69.6%)	10 (23.8%)	65 (30%)
6 or more ^b	0 (0%)	44 (55.7%)	0 (0%)	44 (20.4%)

Notes: ^aPost-video feedback sessions counted for new participants to the programme in the second year. ^bSome continuing nursery staff took part in an optional, seventh video feedback session. Source: Attendance data.

Meeting attendance requirements

To satisfy the requirements of the course and receive an end-of-programme certificate, participants who participated from the start were required to attend at least 15 hours of workshops, equalling six in total, and at least four video feedback sessions. Participants who joined in the second year were required to attend at least five workshops (including Teacher Talk A and B) and at least three video feedback sessions (which could include post-video feedback sessions).

¹⁸ Post-video feedback sessions included for new participants in the second year only.

Of 216 participants who took part in at least one mandatory Hanen LLLI activity over the course of the two-year delivery period, 93 (43.1%) met the minimum requirements of the course (including the adjusted requirements for newly added participants in the second year). Of 95 participants who withdrew before the start of the second year, 13 (13.7%) still managed to meet the course requirements and were eligible for a certificate. It must be noted though that not all participants were offered six workshops in the first year of delivery due to Covid-19 disruptions. Of 79 continuing participants, 65 (82.3%) attended at least six workshops and four video feedback sessions. Of 42 newly added participants in the second year, 15 (35.7%) satisfied attendance requirements.

Table 14: Proportion of nursery staff who met attendance requirements per nursery staff group

Nursery staff group	Proportion of nursery staff who met attendance requirements
Nursery staff who withdrew before the second year	13/95 (13.7%)
Nursery staff who participated in the first and second year	65/79 (82.3%)
Nursery staff who were newly added in the second year	15/42 (35.7%)
Total	93/216 (43.1%)

Source: Attendance data.

The proportion of nursery staff who met attendance requirements across the three broad regions is displayed in Table 15. The overall proportion of nursery staff who met attendance requirements was highest in the Greater Manchester region, with 19/41 (46.3%) meeting the minimum conditions (adjusted for newly added participants). Attendance was second highest in Lancashire/Calderdale, with 37/84 (44%) meeting the minimum conditions. This was followed by Merseyside, where 37/91 (40.7%) met the minimum requirements.

Table 15: Proportion of nursery staff who met attendance requirements per region

Region	Proportion of nursery staff who met attendance requirements
Merseyside	37/91 (40.7%)
Greater Manchester	19/41 (46.3%)
Lancashire/Calderdale	37/84 (44%)
Total	93/216 (43.1%)

Source: Attendance data.

Optional activities

Pre-workshop assignment

Communicate SLT did not gather data on whether nursery staff completed the pre-workshop assignment, as it was viewed as an informal tool to facilitate discussion in the first workshop.

Review workshops

Review workshops Teacher Talk A and B were optional for nursery staff who had attended the programme in 2019/20. Despite this, as many as 72 (91.1%) continuing participants attended two or more out of the three sessions of Teacher Talk A. This figure decreased to 53 (67.1%) having attended two or more out of the three sessions of Teacher Talk B. One reason for the drop in attendance might be the view that the content tended to be familiar to the first cohort of participants (see Responsiveness).

Video feedback sessions

As described, the seventh video feedback session was optional for those who had already completed six mandatory sessions. Of 79 continuing participants, 25 (31.6%) attended all seven video feedback sessions, including the optional extra.

There were two optional post-video feedback sessions after the final workshop (optional for continuing participants). Of 79 continuing participants, 37 (46.8%) attended neither session, 16 (20.3%) attended one session, and 26 (32.9%) attended both sessions.

Barriers and facilitators to programme participation

Staffing

Slightly fewer than one in three (29%) respondents to the nursery staff survey reported having trouble finding cover to attend workshops and video feedback sessions. Observations showed that video feedback sessions were often cut short because of a lack of cover in nurseries. In some instances, nursery staff were asked to return to the classroom before the end of workshop and video sessions.

Nursery staff explained that nurseries with capacity to provide cover internally were more able to facilitate participation. This was easier for larger settings given the higher number of staff available. Settings where a lot of children were absent (e.g., due to Covid-19) could also provide internal cover more easily because of generous staff–pupil ratios.

Location of activities

Interviewed nursery staff enjoyed being able to access online workshops quickly and without having to plan for travel. This was particularly useful for nursery staff without access to a car.¹⁹ However, remote delivery required nursery staff to find a suitable space from which to participate. Nursery staff working in busy nurseries struggled to find appropriate locations and some had to access sessions from cupboards or noisy classrooms. This meant that they were more likely to attend workshops late, leave early, or not attend at all.

We don't have a great deal of spaces that can be used, so I'm, at the moment, in, well, a glorified cupboard (Nursery staff 7, re-design interview).

Others mentioned that their time was better protected when attending in-person workshops. Physically leaving the nursery meant they were less likely to be called back to work. Workshop observations confirmed that nursery staff were more inclined to leave workshops early (e.g., to help with transition periods such as lunchtime) when delivered remotely.

There was broad agreement among interviewed nursery staff that remote delivery of video feedback sessions helped participation. In contrast, in-person delivery of video feedback sessions could be a barrier. For instance, a participant noted that a colleague had refused to join the programme because of the prospect of in-person video feedback sessions.

Session timings

Nursery staff and Program Leaders described how online delivery made attendance more flexible. Nursery staff could choose to attend a different location's workshop session if they were unable to attend their own. The availability of different session options meant there was less pressure on nurseries to release staff simultaneously for Hanen LLLI training.

We were able to mop up all difficulties people might have had in attendance, and we did keep pretty good attendance levels (Program Leader 3, Wave 3 interview).

Whilst evening sessions freed nurseries from sourcing cover, they could be challenging for nursery staff to attend after a full day's work. Nursery staff were concerned about working beyond their contracted hours. Senior nursery staff reported well-being concerns around evening workshops and explained that evening sessions were unsuitable for those with caring responsibilities.

I think one of the sessions was 5:00 to 6:00 and another was 6:00 to 7:00, and it's too much to ask of somebody that's already worked a seven-hour, eight-hour day (Nursery staff 7, ongoing delivery interview).

Covid-19

Nearly two thirds (64%) of nursery staff surveyed considered Covid-19 to be a barrier for programme participation. For example, nurseries reported being unable to hire agency staff to provide cover due to social distancing requirements. This caused nursery staff to miss entire workshop or video feedback sessions in the second year of delivery. Other

¹⁹ Nursery staff reported not being aware of the financial support available to nurseries to support with travel costs.

settings missed video feedback sessions because nursery staff deemed it inappropriate to record a video when they only had very small numbers of children at the setting. There were no differences in the reported barriers to programme participation between treatment settings interviewed at two timepoints (before and during Covid-19) and those interviewed only once.

Responsiveness

This section discusses nursery staff's and Program Leaders' views about the attractiveness of Hanen LLLI and nursery staff's engagement with the programme content and activities.

RQ1: How is Hanen LLLI delivered, and what are the facilitators and barriers to delivery?

Attractiveness of the intervention

Initial appeal of the Hanen Program

Managers in treatment and control settings were drawn to Hanen LLLI for several reasons:

- **Focus:** the whole-class focus was perceived to benefit all children.
- **Evidence-based:** having an established evidence base and being delivered by experts was viewed as an indication of quality.
- **Duration:** allowing multiple staff members to attend over a longer period was perceived to be more impactful than one-off CPD training.
- **Improvement:** equipping their workforce with better awareness of language and communication was considered to help improve practice.

Attractiveness of Hanen LLLI workshops

Networking

Nursery staff appreciated the opportunity to network and share best practice with colleagues. During in-person delivery, this was facilitated by the room layout (e.g., use of round tables) and mixing nursery staff from different settings for small-group activities. Participants explained they tended to have limited opportunities to work with and learn from other settings.

[[I]]t's good because you get to know what other people do and share ideas. Obviously, we all do things one way here, but it's nice to hear what other people do (Nursery staff 6, site visit interview).

Other nursery staff found it more useful when they sat with colleagues from their own setting, as they could discuss how to apply strategies to specific children.

Content and strategies

Nursery staff reported that the topics covered in the workshops were thorough and met their expectations. This was most true for less experienced staff, who liked that basic content was covered in the early sessions as it provided a useful reminder and grounded later sessions. For more experienced nursery staff, the course content was helpful in solidifying, embedding, and putting a name to strategies already being used at their settings.

Hanen LLLI strategies that could be applied to their everyday practice or were relevant to their settings' needs were most appealing to nursery staff. They noted that 'OWL' had made an immediate difference in their setting, specifically for children with special educational needs and disabilities (SEND) (see Perceived outcomes). They also liked strategies that helped them manage small groups and encourage peer interaction.

Nursery staff regarded some content as less pertinent for their setting. A view was that the training applied less to maintained nurseries with well-established and effective approaches to language and communication. A group of experienced nursery staff noted that the content was more suitable for inexperienced staff, as more seasoned nursery staff already considered the Hanen LLLI strategies to be best practice.

Everybody else would call them good practice. I don't think we'd specifically refer to them as Hanen strategies (Nursery staff 7, ongoing delivery interview).

Workshop observations and Program Leader interviews revealed some nursery staff's reluctance to engage with Hanen LLLI theory. This could happen where settings had followed 'good practice' that contrasted with Hanen LLLI strategies. For example, a participant was initially reluctant to use 'OWL' because they had been encouraged by their setting to ask children questions.

For us to say limit your questions and use more comments and then to 'OWL' ... it didn't fit very well with them at first (Program Leader 2, Wave 1 interview).

Furthermore, nursery staff explained that some of the workshop content (e.g., Canadian approach to literacy) or terminology (e.g., stages of language development between 'pre-schooler' and 'kindergarten' children) was unsuitable for a UK-based audience. Program Leaders noted that they had to be clear about how theory tied into the UK context by renaming the terminology or by giving examples relevant to UK-based nursery staff.

Nursery staff believed that the programme did not sufficiently account for other language and communication interventions which settings had previously used. They perceived the content to be too 'Hanen focused'. Nursery staff suggested the programme could be improved through making connections with their previous learning by referencing and acknowledging other early language strategies and interventions.

Had it been Hanen in a wider context, I think it would have resonated with people a little bit more ... There's a bit of a disconnect [with] other things that are happening city-wide (Nursery staff 7, ongoing delivery interview).

Materials

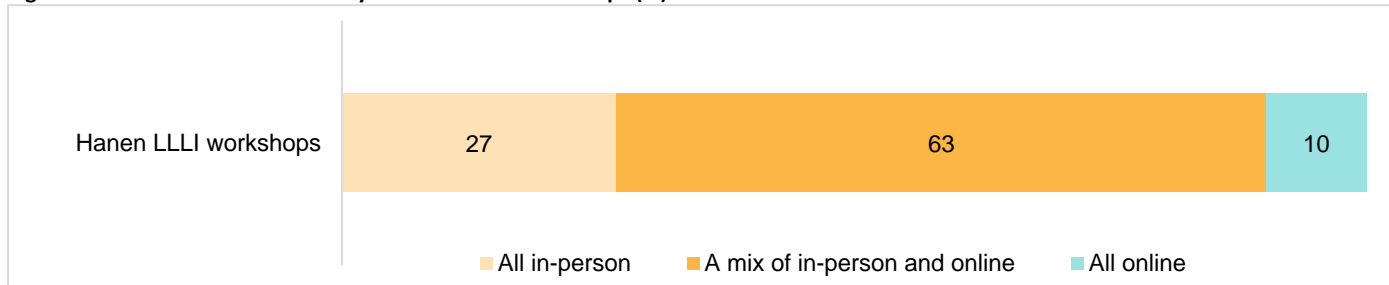
Program Leaders and nursery staff found the Hanen LLLI workshop materials helpful. They thought the Hanen LLLI nursery staff handbook was clearly structured and enabled nursery staff to use it during sessions and to prepare for the next session. Program Leaders equally found the Leaders Guide useful because the session script helped them know what to cover in each session.

Nursery staff had mixed views about the Hanen LLLI videos shown during the workshops. They found the examples relevant, because they included strategies applied in practice and showed their effect on children's language and communication. However, nursery staff and Program Leaders felt the examples were outdated. The video content did not account for the emphasis on phonics or emergence of outdoor learning in the UK context. In contrast, nursery staff were more positive about the 'Video Star' shown at the beginning of each workshop. These showed workshop attendees using the Hanen LLLI strategies in their setting and appeared more meaningful and relatable.

Mode of delivery

The nursery staff survey showed that nearly two-thirds of respondents (63%) expressed a preference for a mixed mode of workshop delivery. Only one in ten respondents preferred remote delivery (see Figure 4). Nursery staff found it easier to speak with the Program Leaders and were less distracted when workshops were delivered in-person. In addition, the online format made it more difficult to network with other settings and nursery staff encountered technical difficulties (e.g., WIFI connectivity and faulty equipment). However, nursery staff liked the chatbox function, as it allowed them to ask questions in a less intimidating way.

Figure 4: Preferred mode of delivery for Hanen LLLI workshops (%)



Source: Nursery staff survey (n=41). Excludes respondents who selected a 'Don't know' response.

Attractiveness of video feedback sessions

Feedback

Nursery staff highlighted that the Program Leaders were positive in their feedback and tended to point out where they had done things well. This boosted nursery staff's confidence.

Sometimes, even if you're a bit like, 'Oh, I'm not sure', she would point things out, 'But look, you did this really well with this', so that gives you that added confidence (Nursery staff 5, site visit interview).

The sessions provided opportunities for reflection which in turn increased nursery staff's awareness of their own practice (see Perceived outcomes). They also reported developing a greater awareness of children's responses to interactions. For example, they noticed missed opportunities where children showed non-verbal signs that they wanted to interact.

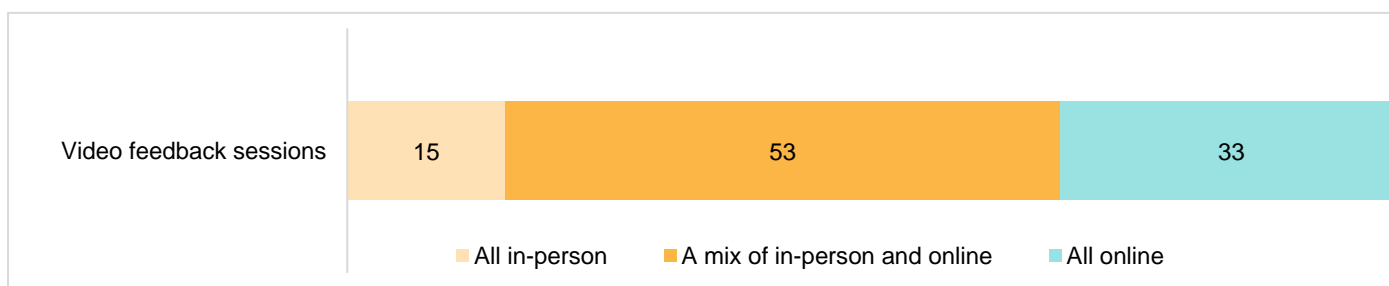
What's special about Hanen is that they have this opportunity to really apply their learning, and to have, what, an hour, to sit around and talk about what's been going on and to really pick it all apart, I think they really value that (Program Leader 1, Wave 3 interview).

However, nursery staff's discomfort about the video feedback sessions was a challenge for delivery. They were concerned about potential criticisms of their performance and self-conscious about being filmed. Nursery staff and Program Leaders reported that the sessions caused too much stress on some participants. This led some to opt-out of the programme entirely and suggest that sessions should be optional (see Barriers and facilitators to programme participation). This perception shifted in the second year of delivery when the sessions moved online. Nursery staff felt more comfortable when filming themselves or having a colleague film them rather than the Program Leader.

Mode of delivery

Slightly more than half of nursery staff survey respondents (53%) expressed a preference for mixed-mode delivery of video feedback sessions. Entirely in-person delivery was the least preferred mode (15%) (see Figure 5).²⁰ Staff felt in-person delivery helped build rapport but could also be intimidating. They liked that online delivery provided more time for self-reflection between filming and receiving feedback, and allowed a fairer reflection of their practice (see Quality).

Figure 5: Preferred mode of delivery for Hanen LLLI video feedback sessions (%)



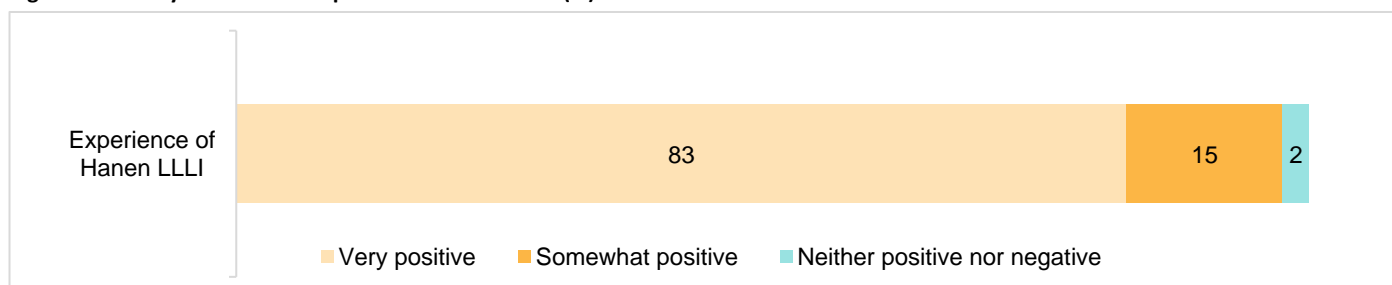
²⁰ Percentages do not add up to 100% due to rounding.

Source: Nursery staff survey (n=41). Excludes respondents who selected a 'Don't know' response.

Overall views of the programme

Nearly all nursery staff surveyed (98%) had a positive overall experience of Hanen LLLI (see Figure 6). This reflects the views outlined above and highlights that despite some of the less attractive features described by nursery staff, the overall views of the programme were highly positive.

Figure 6: Nursery staff overall experience of Hanen LLLI (%)²¹



Source: Nursery staff survey (n=40). Excludes respondents who selected a 'Don't know' response.

Engagement with the programme

Engagement with Hanen LLLI workshops

Observations and Program Leader interviews highlighted that nursery staff engaged considerably in workshops and group discussions. This was mostly the case with interactive activities or topics which included lively discussions and frequent notetaking (e.g., 'Small groups are best' and 'Make new words sparkle'). Participants engaged the least with role-play, both in-person but especially online (see Adherence).

Observations and Program Leader interviews indicated that there were minimal differences in engagement between the old and new cohort of nursery staff. New nursery staff contributed to discussions but tended to be more reserved during role-play activities, possibly as they had joined during remote delivery and had not built relationships with other attendees in-person.

Observations and interviews with Program Leaders and nursery staff identified several factors which helped and hindered engagement, including:

- **Variation in activities:** this helped break up the workshops and keep participants focused. In contrast, nursery staff were less engaged in workshops with a lot of content and fewer interactive activities.
- **Similarity of settings:** engagement was greatest when nursery staff worked in similar nurseries (e.g., settings with a similar cohort composition or those from the same local area).

[Y]ou could just see how engaged they were ... seeing people who ... worked in environments that they could recognise (Program Leader 1, Wave 3 interview).

- **Relevance of content:** nursery staff were more likely to disengage where they deemed the content to be less relevant. For example, senior staff appeared less engaged because they did not have daily contact with children.
- **Mode of delivery:** Program Leaders found it more difficult to engage nursery staff online. It was harder to judge the level of understanding of quieter nursery staff, especially if they were new. This is because Program Leaders were less comfortable putting nursery staff on the spot during virtual group discussions, leading to fewer and less high-quality interactions. Program Leaders explained the online mode also made it more challenging to engage nursery staff in role-play activities. This was complicated by the breakout room function, as it was harder to know if nursery staff were completing the assigned activity.
- **Group size:** smaller group sizes enabled every attendee to contribute, and encouraged open discussion of the challenges they faced.

²¹ No respondents selected options 'Somewhat negative' or 'Very negative'.

- **Timing of sessions:** nursery staff disengaged where there was no opportunity for a break, or because the session was scheduled after the working day.
- **Capacity:** nursery staff found it harder to engage during busy periods at their setting, resulting in a loss of enthusiasm for the programme.
- **Environment:** attendees were less distracted when workshops were delivered in-person. When nursery staff took part at home or in their setting there were greater demands on their time, such as personal childcare or the demands of their role.

Engagement with video feedback sessions

Observations showed a good level of nursery staff's engagement with the video feedback sessions. Nursery staff confidently explained their activity and strategies to the Program Leaders and responded to follow-up questions. When given the opportunity, nursery staff tended to agree to have their videos shown at the next workshop.

Observations and interviews with Program Leaders and nursery staff identified three key factors which helped and hindered engagement, including:

- **Senior leadership support:** in one example, a participant had Hanen LLLI strategies included as part of their appraisal and their bonus depended on meeting those targets.
- **Mode of delivery:** nursery staff found it was less intimidating to engage with video feedback sessions remotely. This also allowed them to film videos at a time that better fitted their schedule, as opposed to scheduling the Program Leader to visit their setting.
- **Quiet space:** not all settings had a private room or space free from distraction. In some settings, other staff members or children were present when nursery staff received feedback. There were observable benefits for those who had a quiet room which prevented disruption.

Cascading of learning

A key component of the Hanen LLLI Program is the informal cascading of learning (see Intervention logic model and Fidelity). Of the nursery staff surveyed, around three in four participants (76%) had shared Hanen LLLI strategies with colleagues.

Nurseries adopted different approaches to cascading learning. One group of nurseries shared learning formally, which included feeding back during regular staff meetings, implementing an internal 'video feedback session' approach, or sharing resources and demonstrating strategies during learning sessions with nursery and school staff. Others adopted a more informal approach characterised by sporadic conversations with staff about the training.

Interviews with nursery staff identified key factors which helped or hindered cascading in their setting:

- **Learning culture:** staff's positive attitudes to learning and openness to improve their practice ensured that learning trickled down to participants' colleagues. This was helped where a positive learning culture was driven by senior leadership who ensured that Hanen LLLI was a key agenda item during staff meetings.
- **Ease of understanding:** cascading was easier where staff already had a base knowledge of the strategies or where nursery staff delivered the content in manageable chunks rather than overwhelm colleagues with too much information.
- **Covid-19:** high staff absence due to burst 'bubbles', cancelled staff meetings and competing agenda items at staff meetings hindered plans to share learning with colleagues.

Perceived outcomes

This section explores the perceived outcomes of the programme for Hanen-trained nursery staff, their settings and children who were exposed to Hanen LLLI strategies.

RQ2: What are the perceived benefits of the programme for nursery staff, nurseries and children?

Perceived outcomes for nursery staff

Increased use of strategies

All nursery staff surveyed had used Hanen LLLI strategies when interacting with children in their nursery and 36% used them when planning lessons. In the interviews, nursery staff highlighted 'OWL', 'follow the children's lead', and extending vocabulary as the most frequently used strategies. Nursery managers wanted to implement a whole-setting approach through cascading learning. This ensured that strategies were being used consistently by all staff.

However, high staff turnover meant that the benefits of the programme could be lost when nursery staff left their setting. Program Leaders expressed the view that the programme needed to be attended by the same nursery staff throughout to increase the likelihood of strategies being used at the setting.

Increased confidence

Nursery staff reported that they gained greater confidence to implement Hanen LLLI strategies over the course of the programme. This applied especially to nursery staff with less experience. For more established nursery staff, the programme reinforced their confidence in their current practice.

[Hanen] empowered us ... When you're discussing practice and you're seeing common themes to what you're trying to do and what they suggest is the right thing, that connectiveness made me feel better (Nursery staff 4, ongoing delivery interview).

Increased self-reflection

Hanen LLLI helped nursery staff to be more reflective of their own practice, which they attributed to the video feedback sessions. They also felt more aware of their role (e.g., 'entertainer', 'director', 'helper' or 'timekeeper'), which provided a lens through which to understand their practice.

We've discussed the roles that we play as teachers with children, like the helper role and the entertainer role, and it's made staff think about which role they come into and how they can use other roles as well in their practice (Nursery staff 8, site visit interview).

Changes in perceptions and attitudes regarding child-centred approach

The training changed the way nursery staff perceived children's language and communication. In one example, a participant changed their expectations around the words that children understood and began introducing them to more complex vocabulary. In another example, a participant realised that the goal of reading was about creating opportunities for interaction rather than completing the book.

Increased awareness of conversational styles

Nursery staff gained a greater awareness of the children's different conversational styles. This changed the way they viewed children in the setting. In one example, a participant would have previously labelled children as 'quiet' but now perceived them to have a 'reluctant' or 'own agenda' conversational style.²²

²² 'Reluctant' communicators find it easier to respond to others than to initiate an interaction and tend to be less involved in group activities and interactions. 'Own agenda' communicators spend a lot of time playing alone and appear less interested in interaction with adults and peers.

A child that we'd have possibly just labelled as a quiet child before. We're now talking about them in terms of, 'Oh, they're a reluctant talker', or 'They're an own agenda child' ... I think our own language has developed and changed (Nursery staff 11, ongoing delivery interview).

Increase in responsive teaching

More than nine in ten nursery staff surveyed (95%) agreed that Hanen LLLI training improved their ability to support children's language and communication. Similarly, nearly all nursery staff surveyed (98%) agreed that they had better recognition of children's language development stage after attending the Hanen Program. Nursery staff found that this helped them to identify and use appropriate strategies for individual children and therefore to better recognise children's non-verbal communications that would have previously been missed.

[B]ecause they're using those strategies of observing and waiting and listening, they're seeing communication they wouldn't have seen previously and recognising it for what it is, even if it's non-verbal (Program Leader 1, Wave 3 interview).

Improved teacher-child relationship

Seventy-nine per cent of nursery staff surveyed agreed that Hanen LLLI training improved their relationship with children in their setting. This was facilitated by using specific Hanen LLLI strategies such as allowing space for children to lead activities.

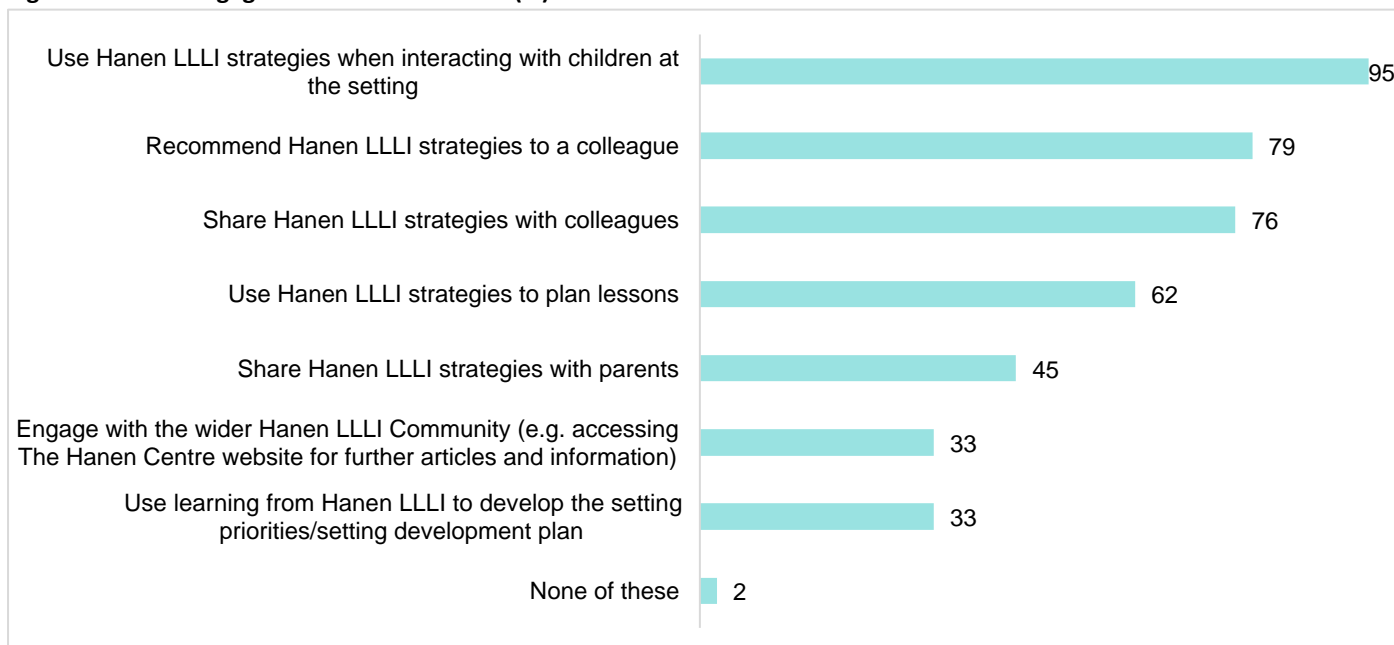
It's obvious then to the child that you're taking more interest in what they're doing, and I find the relationships are building with that (Nursery staff 9, site visit interview).

Increase in peer feedback

Nearly nine in ten (88%) survey respondents agreed that there had been increased engagement in peer-to-peer feedback in their setting as a result of the programme. Nursery staff reported being better at supporting each other's practice. For example, a group of nurseries implemented peer-to-peer feedback through internal video feedback sessions, where non-Hanen trained nursery staff were being filmed and Hanen-trained colleagues provided feedback.

Hanen LLLI advocacy

Figure 7: Future engagement with Hanen LLLI (%)



Source: Nursery staff survey (n=42).

Nearly all survey respondents (95%) reported that they would continue using Hanen LLLI strategies when interacting with children in their setting, and a majority planned to share strategies with colleagues (76%) and parents (45%) (see Figure 7). Nursery staff were eager to continue using Hanen LLLI at their nursery and requested further learning and development from Program Leaders to continue their learning. In a group of settings, there were plans to either continue the programme as in-house training or have different staff participate in future Hanen LLLI delivery.

Furthermore, around four in five survey respondents (79%) said they would recommend Hanen LLLI strategies to a colleague. This is mirrored by interview findings, where nursery staff reported recommending the programme to other colleagues, especially those new to the role.

Far fewer nursery staff reported that they intended to engage with the wider Hanen community (33%) or use learning to develop setting priorities and development plans (33%). This suggests that advocacy of Hanen is limited to easily actionable tasks that require less commitment.

Perceived outcomes of the programme for setting

In-setting support

Staff reported creating more opportunities for children to communicate during the day. This included having dedicated time for discussions during 'snack time' by nursery staff joining children at their table.

The physical environment was also adapted to facilitate conversation. Nursery staff reported regularly changing play equipment (e.g., playdough and sand) to keep the children engaged. Others discussed using Hanen posters in classroom displays as a reminder to use strategies or rearranging their furniture to facilitate small-group activities. However, Covid-19 restrictions posed some challenges as play equipment was no longer allowed, limiting opportunities for communication during play.

Where nurseries made no changes to their setting, this was either because the setting layout was already in line with recommendations, or because changes had already been made using other intervention recommendations.

Perceived outcomes of the programme for children

Increased quality and quantity of interactions

A high proportion of surveyed nursery staff agreed that exposure to Hanen LLLI strategies had increased the number of high-quality interactions of children with nursery staff (88%), and with their peers (83%). Overall, nursery staff perceived children to be more socially skilled and better at building relationships with peers. Program Leaders also saw improvements in children who appeared in multiple video feedback videos. For example, a child initially would not speak to their peers and only began interacting with them after being exposed to the 'peer interaction' strategies.

Where nursery staff were unable to comment on the perceived outcomes of Hanen LLLI, it was because there were other language and communication tools being used (e.g., Wellcomm screening tool) in parallel with Hanen LLLI or because of a lack of assessment data. Others reported that there were no additional benefits to children because the setting had already been using many of the strategies.

Increased child-initiated interactions and turn-taking

The wide majority (86%) of survey respondents agreed that children's exposure to Hanen-trained nursery staff had increased child-initiated interactions with nursery staff. Nursery staff noted that children who had been less talkative at the start of the academic year particularly benefited from staff giving them time to process and respond.

It's like they're being heard. Sometimes you can become in a setting quite unaware of the really quiet children ... I think it's helped us focus on those reluctant talkers and why they're reluctant and what we can do to facilitate them to talk more (Nursery staff 2, ongoing delivery interview).

Furthermore, nursery staff agreed that they had seen an increase in the frequency of children's turn-taking interactions as a result of the programme (86%). Nursery staff noted that children were increasingly waiting for a response from their peers before responding. Particularly 'louder' children tended to be less dominant as a result.

Increased length and complexity of utterances

Eighty-six per cent of nursery staff surveyed agreed that children's length and/or complexity of utterances increased because of nursery staff's involvement with Hanen LLLI. Across both cohorts of children, nursery staff mentioned observing an improvement in the children's ability to construct full sentences. Parents had also reported to them that their children's use of sentences had become more complex in the home environment.

Prior to Hanen last year, [the child] was saying maybe one word ... whereas now, [they are] putting four, five words together (Nursery staff 6, ongoing delivery interview).

Settings which gathered internal progress tracking data found signs of improvement in children who were either 'later sentence users'²³ or those identified as having below expected levels of language communication. Nursery staff attributed this to Hanen LLLI.

Increased vocabulary

Nursery staff believed children's vocabulary expanded because of the programme. In particular, 'later sentence users' and children with English as an Additional Language (EAL) benefited from the strategies on extending language. A Program Leader recalled an example where a participant decided to introduce a complex word that they would have previously thought to be too advanced. When the word was used in the context of a story, one of the children unexpectedly used it in a sentence appropriately.

Differences between cohorts

Nursery staff and Program Leaders emphasised key differences between the first and second cohort of pupils when discussing perceived outcomes. The extended delivery period meant that nursery staff who continued with the programme in the second year had greater knowledge of Hanen LLLI strategies when the second cohort started at the setting. They therefore believed the second cohort had the advantage of benefiting from nursery staff who had nearly completed the programme.

Nursery staff also noted that because of partial setting closures, the first cohort of children would have moved into Reception without receiving the necessary language and communication support. Program Leaders believed limited opportunities to communicate with peers during school closures also meant that this cohort would likely begin school with poorer language and communication skills.

Unintended consequences

Positive and negative unintended consequences of Hanen LLLI included:

- **Nursery staff's relationships:** nursery staff built stronger relationships with colleagues from other settings at the workshops. They also developed more effective relationships with language and communication professionals, as the training equipped them with the ability to speak the professionals' language.

There [are] often meetings with ed-psychs and so on ... [where] I talk like a teacher and they talk like an ed-psych or a speech and language therapist. What we've been able to do now is bridge a bit of a gap communication-wise, so I understand more how to speak to those people (Nursery staff 4, ongoing delivery interview).

- **Workload:** working outside of usual hours and planning for workshops and video feedback sessions created an additional burden for some staff.
- **Staff stress:** pressure related to video feedback sessions exacerbated already high levels of stress among some nursery staff and affected their overall well-being.
- **Classroom routine:** staff absence from the classroom and moving children to different locations for filming was unsettling for some children.

²³ Nursery-aged children who are able to form complex sentences of four or more words.

Usual practice

This section explores the provision of language and communication interventions and activities in treatment and control group nurseries prior to and during the delivery of Hanen LLLI. It also covers the impact of Covid-19 on treatment and control group settings, children and parents.

Usual approaches to language and communication

The main motivations for using interventions or activities were to improve children's language and general development. Interventions and activities adopted as part of usual practice fell under five key approaches:

- **Ability assessments:** interventions assessing children's language and communication abilities. Assessments helped nursery staff to plan appropriate activities for the child's ability or make referrals to Speech and Language Therapists. Examples included 'Derbyshire Language Assessment', 'Tales Toolkit' and 'Wellcomm'.
- **Parental engagement:** settings ran workshops for parents to implement language and communication strategies in the home environment. Parents were supplied with activities from 'ClassDojo', books and rhymes to use with children at home.
- **Play-based activities:** staff encouraged peer communication during social activities, such as circle time. Some settings used nursery rhymes, musical experiences (e.g., 'Tatty Bumpkin' and 'Harmony'), dance and films, as a means of developing language and listening skills. Activities such as storytelling were also a popular means for communication development (e.g., 'Let's Talk!'). Other strategies involved using visual cues or activities which promoted spoken language (e.g., The Nuffield Early Language Intervention). Mirroring Hanen LLLI recommendations, schools tended to select activities which the children found most engaging.
- **Staff communication techniques:** setting staff used non-verbal communication techniques to demonstrate interest or convey meaning (e.g., Makaton signing). Like Hanen LLLI strategies, staff modelled new vocabulary using stories or by expanding on what the child said. Programmes such as 'Early Talk Boost' also trained staff in modelling language.
- **Activities with an academic focus:** these included guided reading and writing, daily phonics work and introducing new vocabulary around curriculum topics or through a 'word of the week'.

Interventions were either delivered daily or two to three times per week. They were usually delivered by a trained member of staff, although some interventions required external individuals to deliver activities on site. Children either took part in the intervention and/or activities by themselves or as a group. Children were targeted for interventions and/or activities largely based on their language abilities, general development, or because of specific characteristics (e.g., SEND, EAL).

Treatment and control settings had well-established interventions (see Usual approaches to language and communication) in place prior to the Hanen LLLI trial. Interviewed nursery managers from control settings did not report that any new interventions or activities were introduced as a result of their allocation to the control group.

Overall, nurseries found their existing strategies to be effective. Intervention control settings deemed most successful were those that supported children by monitoring their development, or informed staff about the language stage children needed to be at. Where interventions were less successful, it was because they were not well suited to individual children and their needs.

Some control settings were reluctant to take part in Hanen LLLI in the future. Staff believed they had already received good levels of training in language and communication and thought Hanen LLLI strategies were like their usual approach. Similar to the views of treatment settings, control nurseries recommended that Hanen LLLI would be better suited for nurseries with under-developed curricula and inexperienced staff. Settings which expressed interest in future involvement believed that Hanen LLLI could help staff learn new strategies and appreciated that strategies needed to consider differences between children.

Impact of Covid-19

Impacts on settings

During partial school closures, settings were unable to teach or assess pupil's development. Consequently, treatment and control settings had to increase their use of interventions and re-teach children basic skills once settings had reopened. Some nurseries were able to post activities online for children to do with their parents, although a group of children were unable to access technology at home. There were no differences in the reported impact of Covid-19 on treatment and control settings interviewed at two timepoints (before and during Covid-19) and those interviewed once.

Control settings found there were limited opportunities to engage in CPD training or hold professional dialogue with colleagues during partial school closures.

They've been working on their own with the children, rather than all the children being together and dipping in and out, and really developing the continuous provision and the learning, and that professional dialogue, when you're in the space together. So that's been a little bit isolating for some of the staff, and they've found that quite a challenge (Nursery staff 3, business as usual interview).

Impacts on children

Nursery staff in treatment and control settings reported that children's language and communication progress had stagnated or declined. In some cases, children became increasingly non-verbal, which nursery staff attributed to poor nursery attendance during the 2019/20 academic year and limited exposure to home learning.

Nursery staff in treatment and control settings thought Covid-19 had impacted children's confidence due to limited contact with peers. Settings also saw an increase in children's emotional outbursts, and children becoming increasingly distressed and shy.

However, there were some children who were eager to return to the setting to socialise with their friends. They were happier and quickly developed their language and communication skills upon returning to the classroom. Some settings reported that the children had an increased positive attitude to learning, as they enjoyed the lessons and being reunited with their peers.

Impacts on parents

In treatment and control settings, parents had reduced engagement with the setting because face-to-face contact was prohibited. Settings were unable to do home visits where they would usually get to know families. This limited their ability to build strong relationships with parents.

Settings found that parents suffered increased stress and pressure with children being at home, and struggled to balance work, childcare and home learning. As a result, many parents found it hard to meet their children's needs. To mitigate this, nurseries sent resource packs to homes and parents were encouraged to contact teachers remotely.

Conclusion

Table 16: Key conclusions

Key conclusions
1. Due to Covid-19 the primary outcome for this evaluation (receptive vocabulary) was not collected, therefore there is no standardised measure of impact of the programme on language attainment reported and there is no security rating for this trial. Key conclusions are based on qualitative data from the implementation and process evaluation.
2. Most workshops and video reflection sessions were delivered as intended and were very well received by nursery staff, with nearly all those surveyed (98%) reporting they had had a positive experience of Hanen LLLI. Where Program Leaders deviated from delivery, this was usually in line with accepted adaptations. However, there was some variation across Program Leaders in the duration of workshop and video feedback sessions.
3. Nursery staff reported key benefits of program participation for their practice. All nursery staff surveyed had used Hanen LLLI strategies when interacting with children in their nursery. Nursery staff felt more confident implementing these over time and reported developing a greater awareness of the children's different conversational styles, making their teaching more responsive to individual children's needs.
4. Nursery staff noted that children benefited from exposure to Hanen LLLI-trained nursery staff. The majority of survey respondents agreed that children's exposure to Hanen-trained staff had increased the amount of high-quality child-staff interactions (88%), child-initiated interactions (86%) and the frequency of children's turn-taking interactions (86%).
5. The shift from in-person to remote delivery following Covid-19 disruptions brought key successes and challenges. Program Leaders were positive about ongoing support for online delivery. Nursery staff reported that the quality of their videos for the video reflection sessions was higher with remote delivery, and better mirrored their usual practice. However, workshops were less successfully implemented online, with many of the practical workshop elements either removed or working less well than in-person.

Implementation and process evaluation (IPE) findings

Evidence to support the logic model

Overall, evidence from the IPE broadly supports the programme logic model. There were some deviations from the intended activities and outputs, mainly due to the implications of the Covid-19 pandemic (e.g., partial closures of settings, social distancing measures). The delivery of Hanen LLLI was generally in line with the prescribed guidance and non-approved adaptations were limited. The IPE found evidence for several logic model outcomes. Table 17 summarises the relative strength of evidence and data collection tools used to assess this. Areas of the logic model with particularly strong or weak evidence and additional considerations for developers are discussed below. As the impact evaluation was cancelled, we were unable to assess the impact of Hanen LLLI on children's receptive and expressive vocabulary in a robust way.

Table 17: Logic model evidence

Participant	Measurement tool	Outcome	Level of evidence
Nursery staff	Attendance data	Orientation meeting	Strong
		Pre-video and workshop assignment	Moderate (workshop assignments were not recorded)
		8 × 2.5 group workshops	Strong
	Early implementation interviews, site visit interviews, ongoing delivery interviews	Access to resources, including social media forum	Strong
	Attendance data	6 × feedback sessions and feedback forms	Strong
	Early implementation interviews, site visit interviews, ongoing delivery interviews	Program Leaders' support	Strong

	Nursery staff survey, early implementation interviews, site visit interviews, ongoing delivery interviews	Informal cascading of learning	Mixed
Program Leaders	Program Leader interviews	Support for Program Leaders (zoom sessions, QA visits, peer support)	Strong
Nursery staff	Attendance data	70 nurseries and 140 nursery staff have participated in LLLI and received certification	Moderate
		c.70 nursery leads have attended information/orientation events (or received information)	Strong
Children	Not measured	c.1400 children interact with trained nursery staff	N/A
Nursery staff	Nursery staff survey, ongoing delivery interviews, site visit interviews, Program Leader interviews	Increased awareness, knowledge and use of strategies	Strong
	Ongoing delivery interviews, site visit interviews	Increased confidence to implement and review strategies	Strong
	Ongoing delivery interviews, site visit interviews, Program Leader interviews	More reflective on own practice	Strong
		Change in perceptions, attitudes, values, beliefs regarding child-centred approach	Strong
		Increased awareness and identification of children's conversational styles	Strong
	Early implementation interviews, ongoing delivery interviews, site visit interviews	Settings support nursery staff member to implement	Mixed
	Nursery staff survey, ongoing delivery interviews, site visit interviews, Program Leader interviews	LLLI child-centred strategies implemented	Strong
		More responsive and individualised teaching and communication	Strong
	Nursery staff survey, ongoing delivery interviews, site visit interviews	Improved teacher-child relationship	Strong
	Nursery staff survey, ongoing delivery interviews, site visit interviews	Nursery staff become advocates	Mixed
		Increase in peer feedback among nursery staff	Strong
		Nursery staff engage with LLLI community	Mixed
	Children	Nursery staff survey, ongoing delivery interviews, site visit interviews, Program Leader interviews	Increased quality and quantity of interactions – with teachers and peers
Nursery staff survey, ongoing delivery interviews, site visit interviews		Increased turn-taking and child-initiated interactions	Strong
		Increased length of utterances	Strong
Ongoing delivery interviews, site visit interviews, Program Leader interviews		Increased receptive vocabulary	Strong
		Increased expressive vocabulary	Strong
Ongoing delivery interviews, site visit interviews		Increased listening, attention and learning	Weak (outcome was not probed for specifically in interviews)
		Improved pre-reading skills	Weak (outcome was not probed for specifically in interviews)

	Improved verbal reasoning, oral language, grammar	Weak (outcome was not probed for specifically in interviews)
	Increased social skills	Weak (outcome was not probed for specifically in interviews)
	Increased cognitive development	Weak (outcome was not probed for specifically in interviews)
	Improved reading, comprehension and writing	Weak (outcome was not probed for specifically in interviews)

Areas of the logic model with strong evidence

- All the intended activities were delivered, although some were adapted due to Covid-19. Delivery was originally planned to take place in-person over one academic year. Due to Covid-19, delivery was extended over a two-year period and took place online in the second year. To enable nursery staff who joined the programme in 2020/21 to ‘catch-up’, two revision workshops (with 3 sessions each) and an additional video feedback session were included.
- Recruitment of settings and nursery staff was successful, with 147 settings recruited at the start of the trial²⁴ (compared to 140 as intended) and 216 participants taking part in at least one activity over the two-year delivery period. Over the two years, 93 nursery staff out of 216 (43.1%) across 44 settings met the course requirements to attend at least six workshops and four video feedback sessions and were therefore eligible for an end-of-programme certificate. It is important to note that nurseries signed up for a one-year programme. The overall number of settings involved over two years is therefore related to some settings being unable to continue delivery for an additional year rather than a reflection of the intervention itself.
- The delivery of Hanen LLLI was generally in line with the prescribed guidance. Program Leaders described strong adherence to the ‘4P’ model and consistency of information across groups, facilitated by the session guides and materials. They noted the training and support received and stressed the importance of adherence. Program Leaders also reported closely following the guidance around video feedback sessions.
- Observations confirmed the content of workshop and video feedback sessions generally reflected the Hanen LLLI guidance. Findings suggest that, overall, there was a high level of implementation fidelity. However, there was some variation in the duration of workshops and video feedback sessions. Online workshops, in particular, tended to be shorter than the prescribed 2.5 hours. Workshop observations also highlighted there was not always sufficient time for the ‘practise’ and ‘personalise’ elements of the ‘4P’ teaching cycle.
- Nursery staff valued Program Leaders’ experience and good working knowledge of the Hanen LLLI strategies and thought delivery was clear, engaging and accessible. Video feedback sessions made use of good feedback techniques, such as the use of plain English, follow-up probes, and verbal and non-verbal listening cues.
- Evidence supports several short- and medium-term outcomes for nursery staff set out in the logic model. All nursery staff surveyed had used Hanen LLLI strategies with children at their nursery. Nursery staff reported greater confidence implementing strategies and awareness of the children’s different conversational styles, which made their teaching more responsive to children’s individual needs. Nursery staff thought the training had made them more reflective of their practice and improved peer-to-peer feedback at their setting.
- Nursery staff perceived that children benefited from exposure to Hanen LLLI-trained nursery staff. The wide majority of survey respondents agreed that exposure to the Hanen strategies had increased the number of children’s high-quality interactions with nursery staff (88%) and their peers (83%), and of child-initiated interactions (86%). This applied especially to quieter or less confident children, who were perceived to benefit

²⁴ One hundred and thirty-one in the intention-to-treat sample

from staff giving them time to process and respond. Nursery staff also reported increases in the length and/or complexity of children's utterances, and believed their vocabulary expanded because of the programme.

Areas of the logic model with mixed or weak evidence

- Whilst nursery staff reported implementing Hanen LLLI strategies at their setting, high staff turnover meant the benefits of the programme could be lost when nursery staff left.
- Hanen LLLI strategies that could be applied to their everyday practice or were relevant to their settings' needs were most appealing to nursery staff, whilst other content was considered less pertinent. A view was that the training applied less to settings already adopting effective approaches to language and communication and was more suitable for less experienced staff.
- Interviews with nursery staff highlighted variation in the extent to which informal cascading of learning occurred. A group of nurseries had regular and ongoing cascading sessions whilst others adopted a more informal model or did not do any cascading at all.
- Few nursery staff reported they intended to engage with the wider Hanen community (33% of those surveyed) or use learning to develop setting priorities and development plans (33%). This suggests advocacy of Hanen is limited to easily actionable tasks that require less commitment.
- There were no references in nursery staff interviews to the long-term outcomes for children set out in the logic model. However, these outcomes were not assessed in the nursery staff survey nor specifically probed for in the interviews. Therefore, there is limited availability of evidence rather than evidence contradicting the outcomes.
- Nursery staff believed that partial school closures and existing social distancing measures due to Covid-19 had a negative effect on some of the long-term outcomes expected for children. They reported that children's language and communication progress had stagnated or declined. They thought children's confidence had been impaired by limited contact with peers, and noted an increase in children's emotional outbursts.

Additional considerations for the developers

- The extension to the delivery period because of Covid-19 led to variation in children's exposure to Hanen LLLI strategies. Whilst some pupils were taught by nursery staff who had already attended the training in 2019/20 and embedded the strategies at their setting, others were exposed to participants new to the programme. Where future programmes have two participant cohorts with staggered starting dates, there might be value in Program Leaders pairing experienced with less experienced participants to provide informal support outside of workshops.
- Whilst fidelity of implementation was generally high, there was some variation in the duration of workshops and video feedback sessions. Workshops could be as short as 2 hours, which mostly happened with online delivery. Workshop observations showed there was not always enough time for the 'practise' and 'personalise' elements of the '4P' teaching cycle. The duration of video feedback sessions ranged from 15 to 50 minutes. This was most likely to deviate from the prescribed guidance when the sessions were delivered in-person.
- Delivering workshops online created some challenges. Program Leaders found tailoring the course to different levels of nursery staff experience more challenging online. Practical elements, especially role-playing activities, were particularly difficult to deliver remotely. Two-thirds of nursery staff survey respondents (63%) expressed a preference for a mixed mode of workshop delivery. To harness the benefits of each delivery mode, it is worth considering combining online and in-person delivery for a future roll-out of Hanen LLLI.
- Program Leaders and nursery staff were concerned that video feedback sessions created additional stress for some nursery staff. Nursery staff considered online delivery less intimidating and a better reflection of practice. They liked that it allowed more time for reflection and higher quality feedback. Over half of survey respondents (53%) expressed a preference for a mixed mode of delivery of video feedback sessions to allow for both in-person rapport and the benefits of online delivery.

- Whilst Program Leaders described adhering closely to the guidance around the video feedback sessions, observations showed some elements were missed. Program Leaders suggested training on session delivery could have been more detailed, including making more use of the Hanen website resources.
- The findings indicate that taking part in Hanen LLLI may create additional workload for nursery staff. This included planning for and taking part in workshops and video feedback sessions. There were concerns that evening sessions meant nursery staff worked beyond their contracted hours.
- The findings suggest variation in the extent to which informal cascading of learning occurred. Some nurseries had regular and ongoing cascading sessions whilst others adopted a more informal model or did not do any sharing of learning at all with colleagues who did not attend the training. There might be value in supporting participants on how best to share learning from the workshops with their settings.
- Overall experiences of the programme were very positive. Nearly all nursery staff surveyed (98%) had a positive overall experience. However, nursery staff suggested the programme could be improved by making connections with their previous learning and referencing other early language strategies. Nursery staff and Program Leaders also indicated the Hanen LLLI videos shown during the workshops included outdated examples and did not account for new developments in EY practice in the UK.
- Information from nursery staff suggested there were additional positive outcomes not included in the logic model. This includes stronger relationships with colleagues from other settings built during the workshops, and more effective relationships with language and communication professionals in nursery staff's daily practice.

Interpretation

The findings from the Hanen LLLI IPE suggest the programme was largely delivered as intended, except for adaptations to the delivery timeline and mode due to Covid-19 (see above). This is in line with existing evidence from the Hanen LLLI pilot study. Both studies found high levels of adherence to the prescribed guidance and similar deviations in sessions' duration and content (e.g., less time spent on completing action plans at the end of the workshops than specified, variation in the duration of video feedback sessions). There is consistent indication that positive reinforcement was hard to avoid in the video feedback sessions.

The IPE and the pilot found similar facilitators to adherence and high-quality delivery. These included Program Leaders feeling well prepared due to the relevant training and detailed guidance materials. Program Leaders also reported finding it useful to visit the nurseries to understand the context and personalise the sessions. Nursery staff appreciated Program Leaders' experience and working knowledge of Hanen LLLI strategies and thought this improved delivery.

Barriers to successful delivery were also similar. In both studies, Program Leaders mentioned feeling 'rushed' to deliver the workshop content in the prescribed 2.5 hours and especially if sessions were shortened (which happened more often with online delivery). Nursery staff in the pilot study and this evaluation highlighted challenges securing time and space for the video feedback sessions. Online delivery of video feedback sessions meant this was less of a challenge. On the other hand, remote delivery of workshops made it more difficult for nursery staff to find a quiet space to attend the sessions. Online workshops also made it more difficult for Program Leaders to tailor content to different levels of nursery staff experience and engage them in practical activities.

There were clear differences in attendance between the IPE and the pilot. Unlike the pilot, where the average rate of nursery staff attendance for workshop sessions was 94% and video feedback sessions 87%, only 43.1% of nursery staff in the IPE met attendance requirements (see Table 13). These differences can be explained by settings having originally signed up to a one-year programme and Covid-19 disruption posing a challenge to programme participation. High attendance rates during the pilot demonstrate that attendance requirements could be met by nursery staff in the context of 'normal' delivery.

Like the pilot, this IPE found buy-in and support to attend from nursery managers (including finding cover) was key to nursery staff's engagement. Both studies indicated engagement was facilitated by having a range of activities and alignment between the programme content and the needs of nursery staff and nurseries. In contrast, misalignment between nursery staff needs and programme offer undermined engagement, particularly where nursery staff felt the

programme was covering what they already knew. Evidence from the two studies also suggests that the videos used in the workshops were dated and not tailored to the UK context, and so were felt to be less relevant.

Nursery staff reported similar outcomes for themselves and for children across the two studies. They mentioned implementing Hanen LLLI strategies with children at their setting and feeling confident in using them due to the training. Whilst nursery staff who believed they already used strategies in line with Hanen LLLI did not think their daily practice had dramatically changed, those who had not perceived a more significant impact. Still, both groups agreed the training had improved their awareness of their interactions with children and use of the strategies. There is evidence in both studies of cascading of learning with colleagues and parents (e.g., sharing resources, explaining and demonstrating strategies). Nursery staff observed improvements to children's language and development, including expressive and receptive vocabulary, listening and attention. However, they also pointed to the need for more robust evidence on the impact of Hanen LLLI specifically (e.g., as opposed to natural development or other initiatives implemented).

This trial was originally designed to test the impact of Hanen LLLI on children's language skills. However, the impact evaluation was cancelled due to the Covid-19 pandemic and its implications for programme implementation and data collection. Therefore, we were unable to assess the impact of Hanen LLLI on children.

Limitations and lessons learned

Limitations to the evaluation include:

- **Low survey response:** response to the nursery staff survey was particularly low. Only 42 out of 119 participants completed the survey, and so the findings need to be treated with caution. For example, less engaged nursery staff may be less likely to have completed the survey and so positive experiences of the programme may be overrepresented.
- **Selection bias:** observations of video feedback sessions are likely to be affected by bias, since we gained permission from the nursery staff to observe. This means observations may have included those settings, and nursery staff more comfortable and confident with being observed and more engaged with the programme. Similarly, it is likely that nursery staff at settings severely impacted by Covid-19 were not sufficiently included in the interview sample due to competing priorities. For instance, to maximise engagement in the context of Covid-19 and limited school capacity, we sampled nurseries for post-video feedback session observations based on being previously observed. It can be assumed that data collection activities in the second year of delivery included largely engaged and resourceful nurseries, providing a selective picture not reflective of the overall nursery population.
- **Extended delivery timeline:** the inclusion of two cohorts of nursery staff (one joining in 2019/20 and one in 2020/21) and changes to the delivery mode mean that participants' views of the overall delivery might have been based on two different delivery approaches. For example, those who joined in 2020/21 did not attend any in-person sessions, whilst not everyone who joined in 2019/20 attended the review workshops. Where possible, the findings reflect on the differences between delivery approaches.
- **Effects of Covid-19 on attendance:** Covid-19 disruptions mean the findings on nursery staff attendance should not be seen to reflect participation to the programme in 'normal' circumstances.
- **Contamination:** other early language interventions were delivered in treatment nurseries at the same time as Hanen LLLI and we do not have detailed evidence on how these interacted with Hanen or influenced perceived outcomes around language development.
- **Cancellation of the impact evaluation:** the impact evaluation was cancelled due to Covid-19 and we were therefore unable to assess the impact of Hanen LLLI on language development in a robust way. The findings are based on nursery staff's perceptions about children's improvements in language development rather than based on standardised measures of language development at baseline and endline as originally planned. The lack of a control condition means there are limits on the extent to which we can attribute the perceived outcomes to the intervention; it is unclear if any changes in children's language development reported by nursery staff are the result of Hanen LLLI or would have occurred irrespective of the implementation of the intervention.

The Hanen LLLI IPE provided fruitful learning for future evaluations of the programme:

- Interviewing nursery staff who withdrew from Hanen LLLI (either because of individual reasons or because their setting withdrew) may help to better understand reasons for participants dropping out of the programme.
- Paired interviews with Program Leaders co-delivering workshops could provide a more detailed and holistic picture of delivery, including decision-making and challenges.
- Communicating the difference between evaluator and developer effectively to participating settings is important, as these were often confused, which may affect some of the findings.
- Nursery staff's preference for mixed-mode delivery, including both online and in-person elements, suggests it may be worthwhile (if feasible) to conduct a three-arm trial.

The baseline assessment in September and October 2019, with the BPVS as an outcome measure, also provided learning for a future trial:

- Recruitment of qualified speech and language therapists should ideally begin at least five months ahead of the trial to ensure enough speech and language therapists can be recruited. Posting job descriptions on industry-specific websites and using the developer to spread the word are fruitful recruitment pathways to pursue. Evaluators should also consider drawing up an alternative plan should recruitment prove challenging. This might include using students from local universities as assessors, provided they receive adequate training.
- Briefings for assessors should be led by speech and language therapists with experience of carrying out the assessment in nursery settings. They should also allow enough time for practical demonstrations, specifically to account for those with less experience of using the BPVS or other measures.
- BPVS is feasible to administer in settings. Nearly 90% of children (1,908/2,137) in the first cohort were assessed at baseline. Reasons why children were ineligible included being long-term absent, moving nursery; or teachers deciding the assessment was inappropriate for specific children (e.g., because of SEND). To ensure the maximum number of children are assessed at each setting, assessors are advised to visit the same setting at three different timepoints during the assessment period.
- Assessors reported that children enjoyed the assessments. To maximise children's enjoyment, assessors should spend some time before the test to create a friendly atmosphere. They are also advised to frame the assessment in child-friendly terms (e.g., referring to the test as 'looking at pictures' rather than using the word 'test').

Future research and publications

Further research is needed to improve understanding of cascading, including different approaches to sharing learning and how this benefits the settings/non-attendees. This may involve conducting interviews, focus groups or a survey with non-attendees.

The findings from the Hanen LLLI IPE and pilot study suggest the programme may be more suited and effective for less experienced nursery staff. This would be worth assessing through research exploring how nursery staff characteristics, including experience and working arrangements, affected delivery and perceived outcomes.

The impact on children's language development should be measured in a robust way using an RCT with a standardised measure as outcome. Examples include outcomes originally planned for the trial: BPVS as a primary measure and Renfrew Action Picture Test as a secondary measure. A multiple-armed RCT with two different delivery approaches, one in-person and an alternative 'hybrid' model, could explore differences in impact across the three groups (control/in-person treatment/hybrid treatment). The findings from this evaluation indicate it may be fruitful to build on the learning resulting from the shift to remote delivery due to Covid-19 and incorporate online elements in future delivery. A three-arm trial could inform decision-making around future Hanen LLLI approaches.

To enable longitudinal follow-up at EYFS/Key Stage 1, key pupil identifiers (name, surname, date of birth, UPN, school ID), including information about the cohort (cohort 2019/20 or 2020/21), allocation (treatment or control) and baseline

scores (for cohort 2019/20 only) were submitted by NatCen to the EEF archive. Only pseudonymised data will be archived (thus, no direct identifiers) to prevent identification. The archived data will also enable other research teams to calculate intracluster correlations (ICCs).

There are not expected to be further publications resulting from this evaluation.

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