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Thank you for your email of 24 September 2019 to the Ministry of Education requesting the following information:

Please accept this as an Official Information Act request for Sarah Appleton's report

Your request has been considered under the Official Information Act 1982 (the Act).

I am releasing to you, in full, Synergia's report Oral Language and Literacy Initiative (OLLI) Process Evaluation, attached as **Appendix A**. Please note that the purpose of the OLLi Process Evaluation report was to support learning for the implementation teams following the first year of implementation. The report was also used to support fidelity and also assess relevance and efficiency of the model, and the appropriateness and feasibility of the measures and approach for the impact evaluation.

The evaluation focused on the second cohort of the implementation between July and December 2018. The first year of implementation was intended to be a time to learn and develop and fine tune the process before the next stage of delivery. This report is a summary of the lessons learnt during the first year of delivery and it offers suggestions for any required adjustments to the delivery of OLLi for the next stage. It provides formative feedback to support the delivery to the next cohorts and considerations for implementation of the outcomes evaluation.

Following the release of the report to the teams, actions have been taken to address all the recommendations in the report. The key recommendation and actions taken are included here as follows:

Recommendation 1

Reduce the administrative burden on Speech and Language Therapists (SLTs) to enable them to focus on the delivery of OLLi. This includes:

- a. Sitting the consent process with the outcome evaluation (*i.e., having someone other than SLTs collecting and collating evaluation consent forms, helping teachers gather data etc.*);
- b. Adopting online systems to support the completion of the outcome tools, which would reduce the need for SLTs to upload the results into the Case Management System.

Action taken:

An external research agency has been contracted to collect data and manage the consent process from 2019. As such, SLTs are no longer required to collect evaluation related information (e.g., consent forms, data).

Recommendation 2:

Ensure cover for SLTs if they are unwell or on annual leave, as the planned delivery of the cohorts means that if someone resigns or goes on extended leave, delivery would be put at risk. This is also important for reducing the potential for SLT burnout.

Action taken

By December 2018, 11 additional SLTs across 10 regions have been trained in the ABC and Beyond programme; in addition, two Practice and Implementation Advisors with SLT backgrounds have been trained in ABC and Beyond to provide back up support for fidelity monitors to address this need.

Recommendation 3.

Review the current approach to implementation with the SLTs and identify an approach that ensures that tiers 1 and 3 are more systematically implemented. Options suggested included:

- a. Reviewing the timing of the different tiers and developing a 'best practice' approach;
- b. Extending engagement with the Early Learning Services (ELS), although this is less feasible within the planned cohorts;
- c. Assessing the readiness of ELS to engage in tier 1 to support the SLTs in delivering this component of the work; and/or
- d. Better support kaiako to identify children for tier 3.

Action taken

By the end of January 2019 the project team had strengthened tier 1 and tier 3 guidelines to further develop SLTs' understanding of the work in these tiers and to encourage early identification of tier 3 children so that SLTs have enough time to provide support under this tier.

The strengthened tier 3 guidelines also provide better guidance for the SLTs to be able to better support kaiako to identify these children early in the cohort delivery.

Recommendation 4

Engage with regional service managers to clarify their role and supervision support for SLTs.

Action taken

OLLi was a new delivery approach, requiring regions to work in new ways. To address this, roles were discussed at the first day of the January 2018 OLLi hui, shared at the August 2018 hui, and redistributed in January 2019 for further discussion and amendments as required.

OLLi has also received additional capacity which is in some cases actively supporting OLLi SLTs (see recommendation #1).

At a May 2019 catch-up meeting with regional service managers, all managers present at the meeting said that they are clear about their roles in supporting their SLT. Nevertheless, the project team will continue to discuss with managers their roles and any need for support. Additional support to SLTs may be required in some regions and will be addressed with individuals on a case-by-case basis.

Recommendation 5

Ensure that sustainability of skills is part of the engagement with the ELS to ensure that practice changes are not lost when a kaiako leaves. Tier 1 is likely to be the critical tier at this stage.

Action taken

In principle, it was agreed in January 2019 that SLTs and the newly trained SLTs may continue to support ELS that have completed OLLi but not at the expense of the ELS in the current cohorts. It was agreed that the first responsibility is towards the current cohorts.

Please note, the Ministry now proactively publishes OIA responses on our website. As such, we may publish this response on our website after five working days. Your name and contact details will be removed.

Thank you again for your email. If you have further questions please feel free to contact our media team in the first instance at media.team@education.govt.nz. If you are unsatisfied with my response, you have the right to ask an Ombudsman to review it. You can do this by writing to info@ombudsman.parliament.nz or Office of the Ombudsman, PO Box 10152, Wellington 6143.

Yours sincerely



Katrina Casey
Deputy Secretary
Sector Enablement and Support

ORAL LANGUAGE AND LITERACY INITIATIVE (OLLI) PROCESS EVALUATION

A formative report for the Ministry of Education

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v1 18 December 2018

v2 updated 26 February 2019

www.synergia.co.nz



CONTENTS

ACKNOWLEDGEMENTS	3
1. EXECUTIVE SUMMARY	4
2. INTRODUCTION	5
3. THE ORAL LANGUAGE AND LITERACY INITIATIVE	7
4. EVALUATION APPROACH	13
5. SUMMARY OF FINDINGS	21
6. INPUTS	26
7. REACH AND ACCESS	31
8. DESIGN AND IMPLEMENTATION	37
9. CAPABILITY AND DEVELOPMENT	41
10. OUTCOME AND IMPACT EVALUATION	47
11. OVERVIEW AND KEY CONSIDERATIONS	52
12. APPENDIX 1: KAIKO SURVEY ANALYSIS	55
13. APPENDIX 2: MACARTHUR BATES ANALYSIS	64
14. APPENDIX 3: SDQ ANALYSIS	67



ACKNOWLEDGEMENTS

We would like to acknowledge the support and contributions from the people involved in the Oral Language and Literacy Initiative (OLLi) who agreed to take part in this evaluation.

We would like to thank the managers and kaiako from the early learning services who welcomed us to their centres and participated in interviews, focus groups and the online survey. The thoughts and insights you shared on your experience of OLLi have added great value to the findings of this evaluation.

We would also like to thank the Speech Language Therapists who have supported the evaluation team to engage with early learning services and shared their own experiences and insights on delivering a new initiative. Your contributions have been crucial to this evaluation.

Finally, we would like to acknowledge the support of the Ministry of Education, and particularly the Evidence, Data and Knowledge team, for commissioning the evaluation and supporting its implementation across all levels of navigating the system, supporting engagement, and providing review and feedback throughout the evaluation process.

EXECUTIVE SUMMARY

The Oral Language and Literacy initiative (OLLI): Process evaluation summary for cohort 2



The rationale for OLLi

- Research demonstrates that oral language and literacy skills have an impact on a child's future educational outcomes, and life trajectories.
- The Education Review Office found only 19% of early learning services were well focused on supporting oral language development.
- OLLI was funded as a Track 1 bid through the Treasury's Social Investment Fund.

What is OLLi?

- Eleven Speech language therapists working from eight regional offices provide an intervention to two cohorts of 12 early learning services each year.
- OLLI is designed to improve capability of early learning services and Kaiako through the Response to Intervention (RTI) model.

The RTI model

Tier 1 (universal)
Supporting systemic culture change for the entire early learning service that to create an environment that benefits all children.

Tier 2 (targeted)
ABC & Beyond training to 2 Kaiako to develop skills to develop language and literacy skills in children who may need more support.

Tier 3 (specialist)
SLTs work with Kaiako to provide tailored support to children with more specific needs.

The process evaluation

Evaluation aim: To conduct a formative process evaluation of OLLi alongside testing the tools and methods of the outcome evaluation. This phase focuses on cohort 2 alongside some insights from cohort 1.

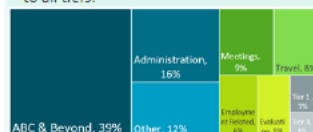
Mixed methods data integration of: OLLi administrative data, an online kaiako survey, key stakeholder interviews with SLTs, regional and national office staff, and staff from the early learning services (ELSs), including kaiako and managers.

A summary of findings relating to the core components of OLLi and its evaluation



Inputs

Based on cohort 2 delivery, SLT capacity is stretched across recruitment, three tiers of delivery, evaluation and administration support. This means that SLTs did not always have capacity to give enough time to all tiers.



The ABC & Beyond programme is very highly regarded. Early learning services consider it to be relevant across a range of contexts and teaching philosophies. Further work is needed to understand its relevance to non-English speaking contexts.

The SLTs were passionate about the focus on systemic change through tier 1; more training would develop their skills and confidence with this aspect of the model.



Reach and access

Quantitative data was only available for cohort 1. This data demonstrated good reach to the intended cohort.

Cohort 1: 111 centres Full cohort: 132

Barriers to access: releasing staff, staff turnover, time to share learning and large amount of content.

Enablers to access: Relevant topic, kaiako motivation, no direct costs, ongoing engagement to apply skills and SLT characteristics.

Tier 3
Identifying children for tier 3 could be improved. There is confusion over tier 3 children with tier 2 evaluation children and referrals for existing SLT services. Identification is also challenging within the 6 month timeframe.

Cohort 1: 85 T3 children Estimated for cohort: 222



Design and implementation

Early learning services are happy with the communication and engagement from SLTs. Opportunities for improvements include clarity on the outcome evaluation process for the ELSs and enhancing two-way communication from the national office.

✓✓ **Tier 1** is still developing. Services value the general support and advice provided by SLTs. However, there is still variation in delivery of activities across SLTs.

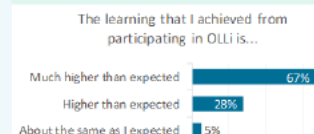
✓✓✓ **ABC & Beyond** has been implemented with fidelity and kaiako speak highly of this tier.

✓ **Tier 3** is still developing. At the time of evaluation site visits many services were not yet at this stage, although some reported difficulties in identifying children for this tier.



Capability and development

Developing a systemic change in culture is a long-term task but services are starting this process. SLTs are sharing templates and resources, facilitating meetings, and guiding kaiako to support this.



Consistent feedback from all kaiako speaks highly of the knowledge and skills they have gained from ABC & Beyond and particularly the opportunity to practice their skills with SLT support.

"We've practiced and learnt different strategies with the OLLi PD that by this time, we're confident with them. We've practiced them enough times to feel that it's not foreign." - Kaiako



Outcome evaluation

Nearly all kaiako preferred the MacArthur Bates measure, although there was variation in its use across parents and teachers.

"The MacArthur Bates, I think it could be a good tool. The issue I have is... every one of my teachers filled it out different." - SLT

The Strengths and Difficulties questionnaire was not valued by many kaiako, leading some not to use it.

All kaiako indicate that they are seeing changes in children's interest in reading and use of language already. They perceive that behavioural changes will take more than six months.

The MacArthur Bates indicated an improvement in literacy within the 6 months, although the sample size was small. Consistency of use and the completion of post-assessments will be crucial for the success of the outcome evaluation.

Summary across all components of OLLi

- OLLI is highly accepted and valued by ELSs and SLTs, particularly the focus on a holistic approach to support capability development and systemic culture change.
- Benefits have been reported in terms of early learning service culture, kaiako capability, and early benefits in oral language and literacy skills of children.
- The delivery of OLLi is in its early stages of implementation. There are some variations in the implementation of OLLi activities for pragmatic reasons, although components are being implemented with good fidelity. The main challenge to fidelity is the capacity for the SLTs to support all three tiers, the outcome evaluation and the administration of the initiative.

Key considerations

- Support SLT capacity with other resources enabling them to focus on delivery and fidelity.
- Ensure consistent support and supervision across the regions, supported by national level opportunities to build SLT capability for tier 1 and to share learning.
- Enhance two-way communication between the national and regional staff and SLTs.
- Consider engaging with previous cohorts to assess the sustainability of ELS level changes.
- Ensure a consistent and systematic approach to pre and post outcome data collection. This is currently the greatest risk to the outcome evaluation.

2. INTRODUCTION

The Ministry of Education (the Ministry) is piloting a new initiative with the aim of increasing the level of oral language and literacy of children growing up in New Zealand; the Oral Language and Literacy initiative (OLLi).

OLLi exists in a context of a growing awareness that more children are having difficulty with oral language and literacy and the impact that this can have on children's educational outcomes and longer-term trajectories of success. International evidence suggests that oral language delay affects up to 50% of children from low socio-economic backgrounds and these children will be more likely to have adverse educational outcomes (Bercow Report, 2008). Research has shown that children with oral language skills are more likely to experience success with literacy development, overall learning, social competence and wellbeing (Harrison et al., 2009; McCormack et al., 2011; Lindsay, Dockrell & Strand, 2007).

In New Zealand, a recent review by the Education Review Office¹ found that improvements in how children's oral language is supported and monitored are needed in many early learning services (ELS). The review found that only 19% of ELS studied were well focused on supporting oral language development, 50% had some focus, while 31% had limited or no focus on supporting oral language development.

Oral language and literacy development is an existing focus for the Ministry. The Ministry already provides an Early Intervention Service, Ongoing Resourcing Scheme and Communication Service which provides Speech Language Therapist (SLT) support to children and young adults aged 0-21 years, their parents, kaiako, ELS and schools. It is intended that OLLi will expand on this provision through building capability and capacity within ELS to support children's oral language and literacy development. Thus, it is envisioned that OLLi will support sustainable changes in the capability of kaiako and the centres' systems and processes, such as self-evaluation.

OLLi draws on existing research evidence and programmes to provide an evidence-based approach to increase the level of oral language and literacy of children growing up in New Zealand. This social investment approach targets support at the point where intervention will be most effective to deliver better life outcomes with a high return on investment.

2.1 Social Investment Funding

OLLi was funded as a Track 1 bid through the Treasury's Social Investment Fund. Feedback from the Social Investment Panel concluded that OLLi provided strong alignment with the principles of social investment. This included positive feedback from

¹ ERO. (2017). *Extending their language – expanding their world: Children's oral language (birth – eight years)*. Available from <http://www.ero.govt.nz/publications/extending-their-language-expanding-their-world/>

Treasury on the bid's assessment of the case for change, value for money, and implementation and effectiveness. Of note, the social investment approach requires a robust approach to evaluation and systematic measuring of the effectiveness of the initiative. To enable this, the Ministry is drawing on its own internal capability as well as commissioning key organisations to support the success of this work.

Synergia was commissioned to conduct the process evaluation of OLLi that is, to evaluate the implementation of OLLi including its inputs, reach, design and implementation. The process evaluation also provided a useful opportunity to gain an insight into the influence of OLLi on SLT and Kaiako capability development and to test the approach of delivery and data collection for the outcome evaluation.

2.2 Report structure

This report presents the process evaluation of OLLi as at December 2018. The evaluation focused on the second cohort of the implementation between July to December 2018. The first cohort of OLLi was implemented between January and June of the same year. The first year of implementation was intended to be a time to learn and develop and fine tune the delivery before the next stage of delivery. The next two years of OLLi will consist of two cycles of outcome evaluation to understand the contributions of the developed OLLi intervention on improving kaiako's capability to support young children's development of oral language and literacy skills and to uncover improvements in children's oral language and literacy skills as a result of the changes in kaiakos' knowledge and behaviour.

This report is a summary of the lessons learnt during the first year of delivery and it offers suggestions for any required adjustments to the delivery of OLLi for the next stage of delivery. It provides formative feedback to support the delivery to the next cohort and considerations for implementation of the outcomes evaluation.

Following this introduction, the evaluation approach and methods are presented followed by a summary of the key findings. The report is then structured around the themes of the evaluation questions within the evaluation framework: inputs, reach and access, design and implementation, capability and development, and the outcome and impact evaluation. Considerations for the future of OLLi are then presented after a brief recap of the key findings.

3. THE ORAL LANGUAGE AND LITERACY INITIATIVE

OLLi targets three and four year olds attending ELS in low socio-economic communities with high levels of risk factors predictive of poor future educational outcomes. OLLi is focused on ELS to provide the language support that children need when they need it. It is anticipated that OLLi will ensure that three and four year olds with oral language delays get timely and targeted support from early learning kaiako who have been trained and supported by the SLTs. The reasons for targeting three to four year olds are:

- Identifying children younger than three years with oral language delay can be difficult. Tests could return a large number of false positives or identify delays that the child can catch up without extra support. Identifying children older than four years misses the opportunity to support a good transition to school.
- Children with oral language delays at the time they start school are more likely to need behaviour and learning support interventions at school and are at an increased risk of adverse educational and other outcomes.
- Engaging with this age group provides an opportunity to support school readiness and a good transition to school.

OLLi is for kaiako-led early learning services and is currently for the English medium only, or bilingual services where SLTs and Kaiako provide services mostly in English. OLLi will be implemented until December 2020 with intervention and support delivered to participating ELS over 6 months (referred to as cohorts). There are 2 new cohorts of ELS, kaiako and children in every year of OLLi implementation and evaluation.

In building the capability and capacity of ELS, it is likely that all children in the ELS will benefit from universal improvements to culture and practice that better support oral language and literacy development. It is anticipated that as a result of OLLi fewer children will need more expensive specialist SLT support, reducing demand pressure on these specialist support services in the longer-term. This should also enable services to reach additional children in the future providing that the learning from OLLi is sustained within the ELS. It is also expected that some children with currently unidentified or unaided oral language needs will be identified and helped due to the additional capability developed through OLLi. This should further support the transition to school for all children attending these centres.

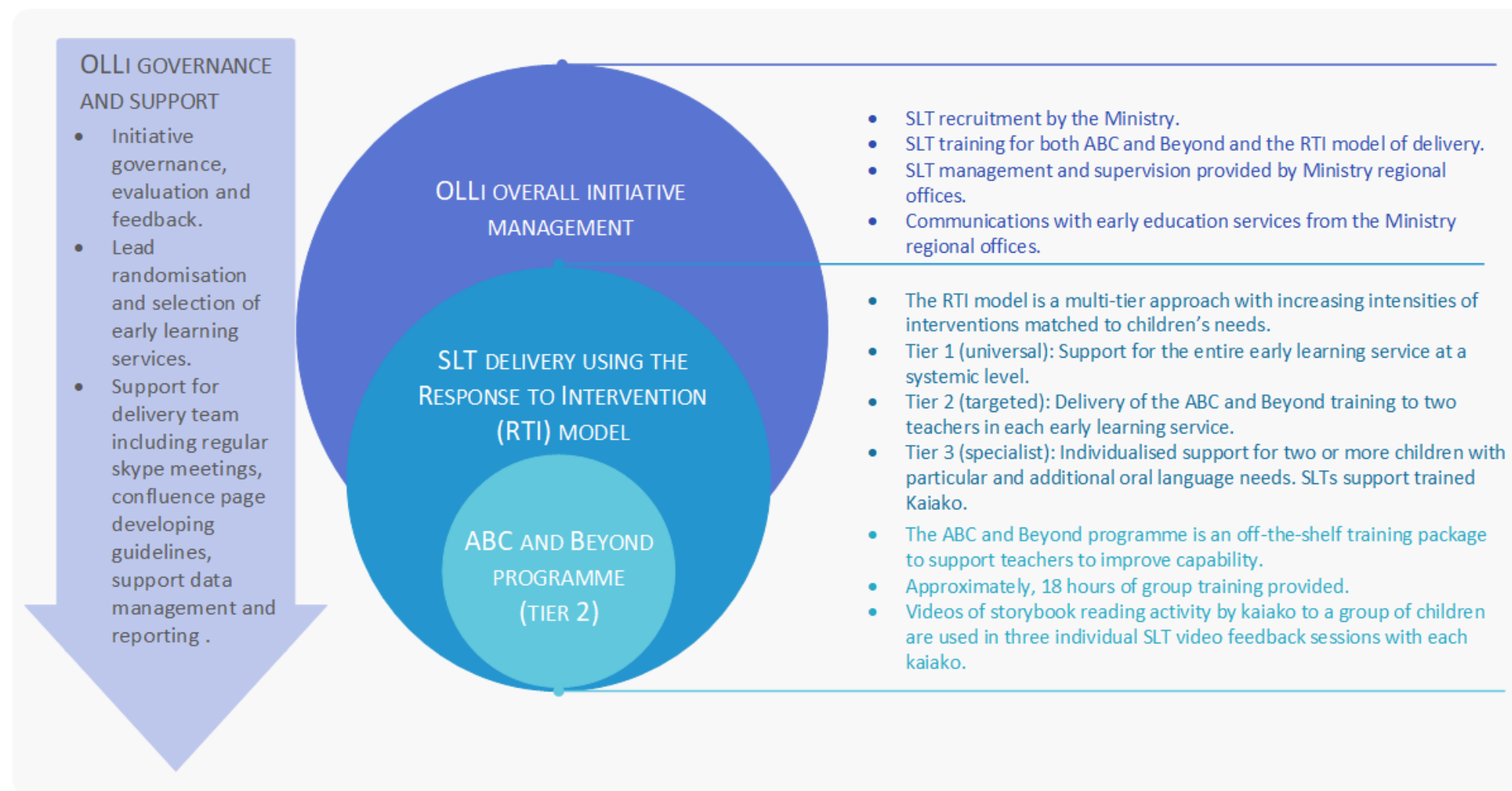
3.1 Design and implementation

The design of the OLLi implementation is comprised of different layers (Figure 1):

- **OLLi governance and support:** centralised functions, communications, and advice from the Ministry's National Office to support consistent implementation across regional offices. Provision of leadership, governance, evaluation and feedback to the teams implementing OLLi. Governance is supported by:
 - o The Sector Enablement and Support Programme Board,
 - o The Learning Support Investing for Social Wellbeing Initiatives Steering Group.

- **OLLi overall initiative management:**
 - o Ministry of Education National Office: The National Office has led the design and development of the overall process and outcome evaluation for OLLi. The National OLLi team is responsible for the general coordination of activities, processes and practice support including: provision of guidance, documentation and advice, recruitment of the fidelity monitors, systems set up for data input and reporting purposes, development of informed consent and other forms and the management of communication channels (such as developing information sheets for ELS and parents).
 - o Ministry of Education Regional Offices: employment of OLLi SLTs directly by the Ministry's regional offices who have regional oversight for the initiative. Regional offices are responsible for quality delivery including providing OLLi SLTs with professional development, supervision, ensuring data collection and input into the Case Management System (CMS), and adherence to OLLi guidelines and fidelity requirements.
 - The regional teams are led by the regional Directors of Education and supported by Managers Learning Support, Service Managers, Practice and Implementation Advisors under the Performance and Quality Leads.
- **Response to intervention (RTI) model delivery:** SLTs trained in the Hanen ABC and Beyond programme (an off the shelf training package) deliver a multi-tier 'package' of support to participating ELS; each ELS receives OLLi for a six-month period (further detail is provided in Section 3.1.1). This RTI model also includes the **ABC and Beyond programme** that is used to train two kaiako from each participating ELS as the second tier out of the three tiers in the RTI model.

Figure 1: Overall design of the OLLi implementation



3.1.1 Response to Intervention model

OLLI follows the principles of the Response to Intervention (RTI) model. The RTI is a multi-tier approach used to efficiently differentiate instruction for all children (Justice, 2006). The model incorporates increasing intensities of instruction offering specific, research-based interventions matched to children's needs.

The initiative is delivered to ELS by **11 specially trained Ministry SLTs** to specific **ELS in eight regions across New Zealand**. The SLTs have received training on the ABC and Beyond programme from the Hanen Centre. The SLTs work with selected ELS **at three complementary levels over a six-month period**:

- Tier 1 (universal). The SLT works with the entire ELS, at a **systemic level**, to ensure culture and teaching practices proactively support oral language development and literacy in all children. This includes making teaching and learning of oral language visible and deliberate with all children within the service.
- Tier 2 (targeted). The SLT provides the ABC and Beyond® training to **two selected early learning kaiako** in each service to build their capability to provide support to children's oral language development and literacy skills as part of their everyday teaching and through more focussed help for children who may need more support.
- Tier 3 (specialist). The **SLT works with kaiako to provide additional, tailored support to children** in the early learning service who may need more specific support with language. This tier also engages with parents, carers or whānau.

Specifically, at tier 1, the SLT works with the entire ELS at the system level. This includes facilitating centre's internal evaluation (self-review), and discussions with all kaiako regarding the opportunities to facilitate children's oral language and literacy development. While initial work has indicated approximately 16 hours in total per ELS, this level of input needs to be evaluated through the process evaluation to ensure it is fit for purpose. All ELS have different levels of capability and capacity to engage with tier 1. During the initial phase of the process evaluation, the SLTs perceived that many would not have 16 hours available for the whole ELS to engage with the SLT at this level.

At tier 2 (ABC and Beyond), the training for selected kaiako involves approximately 7 x 3.5 hours of group training and three individual video feedback sessions. Each SLT is expected to work with up to 24 kaiako (2 from each ELS). The training contains new and enriched content on facilitating vocabulary development, decontextualized language, story comprehension, print concepts, phonological awareness and letter-sound association.

Finally, at tier 3, the SLT works with the ABC and Beyond kaiako in training to provide support to a few children with particular and additional oral language needs. During the design phase, approximately 16 hours was allocated for this work for each ELS. In reality, the process evaluation indicates that the SLTs have appropriately allocated their time to respond to the different needs of children, with some naturally requiring more or less time than others.

It is important to note that the SLT's work with the kaiako during this phase will vary depending on the needs of the children. This can involve modelling and coaching with

kaiako to provide tailored support to children, and support for kaiako and parents with planning how and when to facilitate a child's oral language and literacy, in their everyday environments.

The three tiers strongly complement each other and have the potential to create a system shift that is sustainable and benefits a large number of children.

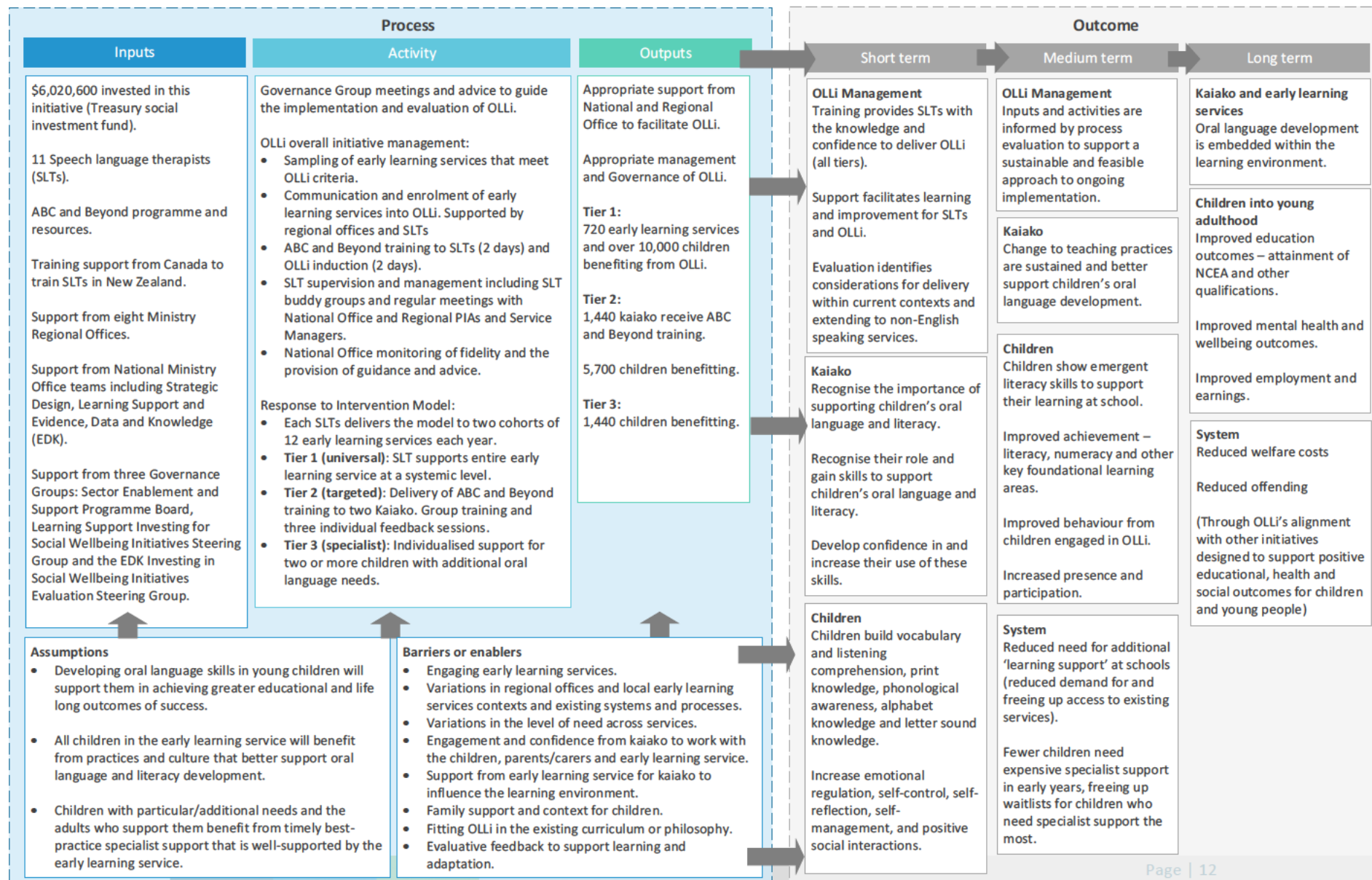
3.1.2 ABC and Beyond Programme

The ABC and Beyond programme, tier 2 of the RTI model, is an off-the-shelf package of practices developed in Canada. Research evidence shows that this programme is good practice for supporting children's oral language and emergent literacy development (Girolametto, Weitzman, and Greenberg, 2012). This training relies on strengthening the capability of early learning kaiakos and promoting change to the kaiako's practice to better support children's language development. The ABC and Beyond programme uses adult learning principles to support kaiakos to reflect on their practices and to make changes to enhance children's oral language development, within their everyday activities and routines.

3.2 OLLi logic model

A programme logic model for OLLi that summaries the three tiers in terms of their intended inputs, processes and outcomes is provided on the following page (Figure 2).

Figure 2: OLLi logic model



4. EVALUATION APPROACH

The evaluation was a formative process evaluation of the initial implementation of OLLi at a sample of ELS. The process evaluation is designed such that following the work in 2018 it can be used as a monitoring framework in 2019 and 2020 to support a summative evaluation report in December 2020.

The evaluation draws on programme theory. Programme theory, frequently referred to as programme logic, theory of change or programme theory-driven evaluation science refers to the multiple ways in which causal models are developed to identify the causal chain between programme inputs and activities and intended outcomes^{2,3}. In programme theory evaluation, the causal model is then used to guide the evaluation⁴. For a process evaluation, the focus is placed on the inputs, activities and outputs of OLLi.

This has enabled the process evaluation to focus on:

- OLLi governance and support
- Overall management of the initiative
- Response to intervention model delivery
- The ABC & Beyond programme.

We anticipate, that the evidence gathered through the formative feedback can be used to provide insights to:

- Inform the ongoing development of the overall initiative, including specific feedback on tiers 1, 2 and 3;
- Inform the adaptation of the ABC and Beyond programme to the New Zealand context; and
- Test the feasibility and relevance of the outcome evaluation approach (i.e., relevance and feasibility of the data collection tools and methods).

² Funnell, S. (1997) 'Program Logic: An Adaptable Tool for Designing and Evaluating Programs', *Evaluation News and Comment* 6(1): 5–7.

³ Donaldson, S. (2005) 'Using Program Theory-Driven Evaluation Science to Crack the Da Vinci Code', in M. C. Alkin and C. A. Christie (eds) *Theorists' Models in Action*, New Directions in Evaluation, 106, pp. 65–84

⁴ Rogers, P., A. Petrosino, T. Hacsí and T. Huebner (2000) 'Program Theory Evaluation: Practice, Promise and Problems', in P. Rogers, A. Petrosino, T. Hacsí and T. Huebner (eds) *Program Theory Evaluation: Challenges and Opportunities*, pp. 5–13, New Directions in Evaluation series. San Francisco, CA: Jossey-Bass.

Evaluation aim, objectives and key questions

Evaluation aim:

To conduct a formative process evaluation of the Oral Language and Literacy Initiative (OLLI) piloted by 11 speech language therapists (SLTs) alongside the outcome evaluation.

Process evaluation objectives:

- To evaluate the inputs and capacity of OLLi, such as regional support, planned capacity etc.
- To evaluate the reach and access of OLLi.
- Evaluate the implementation of OLLi, including the three tiers and initiative management.
- Identify areas of strength and areas for improvement.
- Provide insight into adaptations that need to be made to increase the effectiveness across all three tiers in the New Zealand educational context.
- Identify key considerations for ongoing implementation.
- Test the feasibility and relevance of the outcome evaluation approach (i.e., relevance and feasibility of the data collection tools and methods).

Key evaluation questions: Inputs

- To what extent is the capacity for the initiative and capability of resources sufficient now, and in the future? E.g. regional support, SLT capacity.
- How well can the RTI model support children's oral language and literacy development?
- How well does the Hanen ABC and Beyond programme work in the New Zealand context? This includes Te Whāriki (early learning curriculum and principles of 'authentic assessment') and the cultural context.

Key evaluation questions: Reach and access

- What are the barriers and enablers to participating in the initiative for early learning services?
- How well is the identification of children working for tiers 2 and 3?
- How well could the current initiative enable access for all children in New Zealand, including Māori and Pasifika children?

Key evaluation questions: Outcome and impact evaluation

- Are the measures and approach appropriate for the different groups in this initiative for the longer term impact evaluation, and will they provide reliable evidence?
- Is six months adequate to expect change in outcomes with children?
- How could data collected in the IDI support the robust understanding of the long term impact of OLLi?

Key evaluation questions: Design and implementation

- To what extent have the communications and engagements supported delivery?
- Has the initiative been implemented according to plan, and if not, what has been adapted and why?
- What is the degree of implementation across SLTs?
- How well has the RTI model and activities that make up OLLi been delivered by the SLTs to early learning services?
- How well have the ABC and Beyond programme components been delivered by the SLTs to kaiako in the selected early learning services as prescribed by the ABC and Beyond Programme Leader's Guide?
- Has the content, amount and quality of the delivery of the ABC and Beyond programme been consistent across SLTs to teachers?

Key evaluation questions: Capability and development

- Which activities have supported early learning services to embed a systemic culture that better supports children's oral language and literacy development? How has the support provided by the SLTs contributed to these activities?
- How well has the ABC and Beyond programme strategies helped SLTs to provide specialised support to teachers to develop their knowledge and skills in identifying and supporting children with oral language delay?
- How well has the ABC and Beyond programme helped teachers to offer better support to children around their oral language and literacy development?
- How does the initiative support the sustainability and sharing of teachers' skills and knowledge?

Phase Methods	Formative process evaluation	Testing feasibility of the outcome evaluation	Monitoring process fidelity and contamination
	Administrative data Confluence page and meeting minutes Kaiako survey Key stakeholder interviews Site visits to early learning services across regions	Outcome tools use and data completion (Administrative data) Integrated with qualitative feedback from process evaluation IDI data discussion	Administrative data Confluence page and meeting minutes Kaiako survey Key stakeholder interviews Site visits to early learning services across regions

Evaluation design and implementation

The evaluation adopted a mixed methods approach drawing on quantitative insights through the kaiako survey and SLT entered CMS data, as well as qualitative insights through interviews with SLTs, kaiako, Service Managers and Regional and National staff.

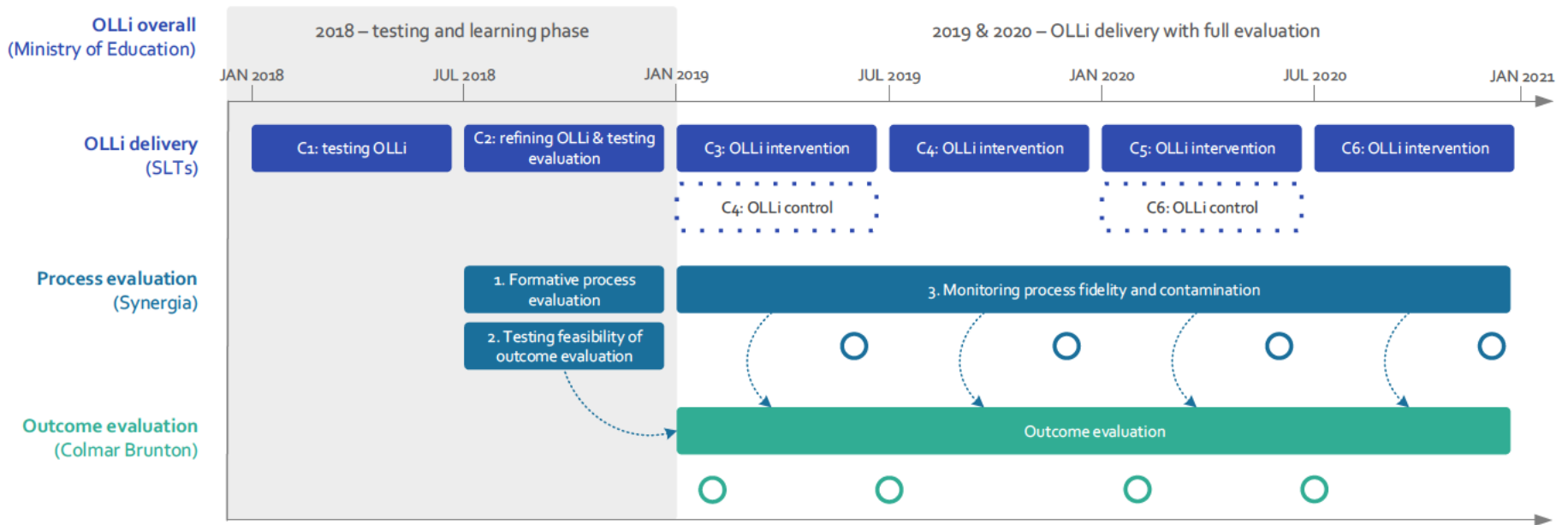
The evaluation approach for the process evaluation of OLLi has three key phases:

1. Formative process evaluation: To provide formative feedback to support the refinement/development of OLLi
2. Testing relevance and feasibility of the outcome evaluation approach: To test the feasibility and relevance of data collection tools and methods
3. Monitoring process fidelity and contamination: To monitor fidelity, initiative contamination, and key enablers and barriers to implementation once the outcome evaluation commences (Figure 3).

Phase 3 will be important for informing the Ministry's understanding of the level of change that is achieved in the outcome evaluation.

Of the three phases of the process evaluation listed above, this report relates to components 1 and 2. Component 3 will begin with the commencement of the outcome evaluation.

Figure 3: Phases of the OLLi evaluation timeline



4.3 Evaluation methods

The evaluation was developed on the understanding that it would be jointly implemented by SLTs, the EDK team, and Synergia. The evaluation has utilised the governance and support from the EDK, the support and connections of the SLTs while retaining its integrity with independent data collection and analysis.

The following data sources were included in the OLLi process evaluation:

- Administrative data
- Kaiako survey
- Site visits to a sample of ELSs
- Stakeholder interviews with Ministry Staff
- Outcome tools data.

4.3.1 Administrative data

Administrative data from Case Management System (CMS) was provided to Synergia on the 20th November 2018. This administrative data included:

- Goals set by ELS with SLTs
- Time recorded by SLTs across tiers 1 and 3 and travel time
- Number of ABC & Beyond workshop modules completed by SLTs
- Number of video storybook reading feedback exercises
- Workshop attendance by kaiako
- Number of children in tier 3.

The fidelity monitor's report for cohort 1 was also included in this evaluation.

4.3.2 Confluence page and meeting minutes

The confluence page is an online discussion forum for the network of SLTs involved in the delivery of OLLi and the OLLi programme team. The information from the confluence page was provided to the evaluation team as raw data and was thematically analysed by Synergia.

The confluence page was relevant for providing feedback on fidelity, contamination, and barriers and enablers to implementation. The discussions on confluence also provided an insight into the inputs relating to governance, management, and delivery.

The data on this page was analysed following permission from the SLTs. This data was thematically analysed using a general inductive approach with the key evaluation questions being used to guide this analysis⁵.

4.3.3 Kaiako survey

Kaiako Survey was designed by EDK, reviewed and updated by Synergia to engage all kaiako in the evaluation. The survey was designed to:

⁵ Thomas, D. (2006). A General Inductive Approach for Analyzing Qualitative Evaluation Data. *American Journal of Evaluation*, 27(2).

- Understand the influence of OLLi on kaiako's views on the importance of oral language development for children,
- Understand the role of kaiako in supporting the development of children's literacy skills, and
- Kaiako use of- and confidence in- their skills to support children.

The kaiako survey was disseminated as a link to an online survey. Email addresses were gathered by the SLTs and provided to Synergia to support this aspect of the evaluation. Unfortunately, not all SLTs were able to provide kaiako details to Synergia for dissemination of the survey.

Survey	Number of invitations sent	Response Rate
kaiako pre-survey	125 kaiako from 7 SLTs	67 (54%)
kaiako post-survey	147 kaiako from 8 SLTs	59 (40%)

4.3.4 Site visits to a sample of ELSs

Regional site visits were conducted to support the evaluation in engaging directly with early learning services staff. These provided important insights into their experience of OLLi in terms of the specific activities and the outputs and outcomes that it is seeking to achieve.

The selection of regions included in the site visits was decided in partnership between Synergia and the Ministry. This was informed by the administrative data collected, the initial kaiako survey, as well as general feedback provided by the SLTs and OLLi programme team on implementation and sites that would benefit from deeper exploration through the evaluation. The collaborative and data-informed approach to site selection aimed to provide maximum variation across the following criteria:

- Level of engagement in OLLi across the regions
- Rurality
- Size of population at early learning services
- Ethnicity of population at early learning services
- Level of need for support with oral language and literacy development across the regions.

In total, 13 ELSs were visited across four regions. This supported the evaluation to conduct interviews with 44 interviewees across service managers, kaiako, SLTs and regional offices staff⁶:

Region	ELS Manager	kaiako	SLT	Regional Office Staff
Auckland	2	5	3	6
Bay of Plenty	2	8	1	1

⁶ Note that some interviewees were both the ELS manager and kaiako on OLLi and have been identified in both roles.

Christchurch	3	6	1	2
Wellington	1	5	1	0
Total	8	24	6	9

4.3.5 Stakeholder interviews with Ministry staff

In addition to the stakeholders interviewed as part of the site visits, a further nine people from the Ministry were interviewed.

Ministry Staff	Number Interviewed
Speech and Language Therapist	2
Service Manager	1
Practice and Implementation Advisor	2
Fidelity Monitor	2
National Office Ministry Staff	2
Total	9

4.3.6 Testing the feasibility and relevance of the approach to the outcome evaluation

The process evaluation phase provided a valuable opportunity to test the feasibility of the outcome evaluation approach and relevance of data collection tools and methods. This involved:

- A review of the data on the completion of the various outcome tools being trialled through cohort two
- A pre and post analysis of the outcome data to identify their ability to support outcome tracking for OLLi
- Testing the validity of the kaiako survey
- Feedback from SLTs, National and Regional Ministry staff and other stakeholders engaged in the interviews, as relevant. This focused on the practical utility of the data collection tools, feasibility of data collection method, and whether six months of intervention is sufficient for achieving changes in outcomes for children.

4.4 Mixed methods data integration

The formative process evaluation was implemented through a mixed methods design. This enables multiple sources of evidence to contribute to the process evaluation. Each of these data sources was analysed using methods traditional associated with that data source. The qualitative data for example, was analysed using a general indicative approach, whereby the evaluation questions are used to guide the thematic analysis of

the data⁷. This ensures that the analysis is focused on addressing the evaluation questions, while also enabling other themes relevant to the focus of the evaluation to emerge. The CMS and survey data were analysed using descriptive statistics. The scores from the outcome measurement tools was analysed using descriptive and inferential statistics. The findings from various data sources have been integrated to address the key evaluation questions.

Many evaluations purport to adopt a mixed methods approach based on their inclusion of quantitative and qualitative data with little attention given to the mixing or integration of this data. Robust mixed methods design develops a systematic process to support the integration of quantitative and qualitative data. This supports evaluation in moving beyond the findings of individual data sources to provide a more comprehensive analysis of an intervention⁸. For this evaluation, this was achieved through integrating the thematic analysis with the insights from the quantitative data. The key evaluation questions were used as a framework to integrate this analysis.

4.5 Limitations

The following are noted as limitations to this evaluation:

- Incomplete administrative data collection
- Inability to engage with parents/carers to identify their views and experiences
- Potential selection bias in the ELS that engaged with the evaluation site visits
While ELS were selected in partnership with SLTs, there was an element of ELS being required to have the capacity to engage with the evaluation team
- The timing of site visits to ELS during the delivery of OLLi meant there was incomplete implementation of tier 3 support and this limited the ability of the evaluation to explore sustainability of learning and newly acquired practice.

⁷ Thomas, D. (2006). A General Inductive Approach for Analyzing Qualitative Evaluation Data. *American Journal of Evaluation*, 27(2).

⁸ Greene, J. (2007). *Mixed methods in Social Inquiry*. Jossey-Bass

5. SUMMARY OF FINDINGS

This section presents a summary of the key findings (Table 3) relating to each of the key areas of focus for the process evaluation: Inputs, reach and access, design and implementation, capability and development, and insights relevant to the outcome evaluation. To support this summary, we have identified the level of evidence from the mixed methods data integration (Table 1) and made a summary judgement for each of the areas of focus for the evaluation (Table 2). When relevant we have also identified the level of variation in the consistency of the findings or variations due to context (i.e., geographical location and the support available to SLTs).

Table 1: Levels of evidence rating and summary

Evidence rating	Summary of rating
High	Evidence is consistent across quantitative and qualitative data sources.
Medium	Evidence is consistent from multiple quantitative or qualitative data sources.
Low	Inconsistent evidence from one or more data source.
Insufficient evidence	Evidence unavailable or of insufficient quality to determine or inform performance rating.

Table 2: Performance rating rubric and summary judgement


















Performance rating	Summary judgement
 Excellent	Performance is clearly very strong or exemplary in relation to the component. Any gaps or weaknesses are not significant and are managed effectively.
 Good	Performance is generally strong in relation to the component. No significant gaps or weaknesses, and less significant gaps or weaknesses are mostly managed effectively.
 Adequate	Performance is inconsistent in relation to the component. Some gaps or weaknesses. Meets minimum expectations/ requirements.
 Poor	Performance is unacceptably weak or poor in relation to the component. Does not meet minimum expectations/requirements.

Table 3: Summary of evaluation findings

	LEVEL OF EVIDENCE	SUMMARY JUDGEMENT
Inputs		
Capacity of SLT resource to delivery OLLi and support the evaluation	MEDIUM Qualitative feedback consistent across SLT interviews and CMS data from one SLT. No robust quantitative data available across OLLi.	 POOR SLT capacity is stretched across recruitment, three tiers of delivery, evaluation and administration support. This means that SLTs did not always have capacity to give enough time to all tiers. This finding was consistent across all SLTs.
Hanen ABC & Beyond programme	HIGH Consistent qualitative and quantitative feedback (reported engagement and actual attendance).	 EXCELLENT Consistent positive feedback from ELS on relevance of the content and approach across a range of contexts, and the value of the delivery model for building capability.
SLT skills and characteristics	HIGH Qualitative data consistent across interviews and site visits, and quantitative data from fidelity monitors.	 EXCELLENT Consistent positive feedback from kaiako on the knowledge, teaching and facilitation skills of the SLTs.
Reach and access		
ELS participation	MEDIUM Qualitative data consistent from SLT, kaiako and ELS manager interviews. Quantitative data unavailable for cohort two.	 GOOD Indicators of good engagement and participation from the interviews. Quantitative data indicates that towards the end of OLLi cohort 1 had 84% of a full cohort at the start. Quantitative data was unavailable for cohort 2 at the time of this report, although the SLTs indicated that only a small number had dropped out. Challenges to ELSs participation were the timing and location of workshops, staff turnover, the limited time available to share learning, and the amount of new content within OLLi. Enablers were kaiako motivation, the skills and characteristics of the SLTs and the design and structure of OLLi.

Child identification	LOW Fidelity monitors' report for cohort 1. Incomplete data in CMS. Some qualitative feedback.	 POOR For cohort 1 fidelity monitoring data indicates 83 children were identified in tier 3. For cohort 2 CMS data at 20 November 2018 indicated 43 children identified (but more likely to be identified after this date). Feedback from a couple of SLTs suggested that it was particularly difficult for kaiako to identify appropriate children for tier 3. Identifying tier 2 children for the evaluation contributed to this confusion for the ELSs.
Design and implementation		
Communications and support at regional level and national level	MEDIUM Consistent theme in national and regional Ministry staff and SLT interviews.	 ADEQUATE WITH REGIONAL VARIATION High levels of variation across regional offices. Some SLTs were well supported while others were isolated and those providing support were sometimes unclear on their role. The challenge of national level communication for a project of this size was also identified by the SLTs and regional offices.
Communications and support for ELS and kaiako	MEDIUM Consistent theme in kaiako, ELS manager and SLT interviews and online survey.	 GOOD SLTs provided good support to the ELSs, used appropriate methods of communication and informed them of everything they needed to know. However, many ELS staff in the site visits admitted confusion with the communication of the consent process, assessment forms and when everything was required.
Delivery of tier 1 appropriate to needs of ELS	LOW Consistent theme in SLT, kaiako and ELS manager interviews. No robust quantitative data available.	 ADEQUATE WITH ELS AND REGIONAL VARIATION Delivery of tier 1 support is still developing and varies with the training of the SLT and the readiness of each individual ELS. In general, ELSs value the support and expert advice from SLTs but there is large variation in the delivery of tier 1 activities and subsequently, the ability to support culture shift within ELS. Further evidence on the activities happening is needed.
Fidelity of ABC & Beyond delivery (tier 2)	HIGH Consistency across fidelity monitors report, CMS data on workshops and stakeholder interviews.	 Excellent Fidelity monitors report good levels of fidelity to the ABC & Beyond programme. This finding is reinforced by data on delivery of workshops and SLT feedback about ABC & Beyond being more defined.
Delivery of tier 3	INSUFFICIENT EVIDENCE tier 3 was only beginning to be implemented at the time of site visits and ELS staff were generally unable to comment.	INSUFFICIENT EVIDENCE

Capability and development		
Activities to support a systematic culture that better supports children's oral language and literacy.	MEDIUM Consistent insights from the SLT, kaiako and ELS manager interviews and site visits with ELSs.	 GOOD ELS are utilising a range of activities to support systemic culture change. Systemic change has been supported by internal evaluation, changing the literacy environment in the ELSs with posters and other materials, and the sharing of kaiako skills with other staff. However, shifting culture involves changing "the way we do things here" and will be a long-term aim of OLLi.
Changes in kaiako capability	MEDIUM Consistent insights from the kaiako interviews, site visits with ELSs and the kaiako survey.	 EXCELLENT Kaiako consistently reported improvements in their capability to support language and literacy development, although the survey sample was small. This includes improvements in their attitudes, skills, practice and confidence. Kaiako could benefit from further support to help them identify children for tier 3.
Activities that support sustainability of kaiako skills and knowledge	INSUFFICIENT EVIDENCE Evaluation did not engage with cohort 1 ELSs and cohort 2 was too early in implementation for actions to support sustainability.	INSUFFICIENT EVIDENCE
Outcome and impact evaluation		
Appropriateness of outcome measures to collect reliable evidence	HIGH Completion rates of tools, initial analysis of results, and qualitative feedback from stakeholders and site visits.	 POOR The use of the Strengths and Difficulties Questionnaire (SDQ) and MacArthur-Bates (MB-3) tools does not consistently measure literacy across the children who will be involved in OLLi. Qualitative feedback indicates dissatisfaction with deficit focus of SDQ, kaiako completion of MB-3 is feasible but there is variation in its application. Tools have low completion rates, especially for post-assessments. SDQ does not demonstrate significant changes in pre-post matched analysis, while MB-3 (a measure of literacy) does demonstrate significant changes in pre-post matched analysis. Kaiako indicated a preference for the MB-3 measurement tool as they felt that it was the most relevant assessment of children's oral language and literacy. This tool also has a stronger focus on literacy. There were however, large variations in its implementation.

<p>Ability to identify change in children in six months</p>	<p>HIGH Completion rates of tools, initial analysis of results, and qualitative feedback from stakeholders and site visits.</p>	<p> GOOD The insights from the interviews and the MacArthur-Bates provide support for ability for the outcome evaluation to identify change in children within six months. To achieve this however, there will need to be a more systematic and consistent approach to completing post-assessments. Currently, there is wide variation across the ELs. A larger sample size would also be needed for increased confidence in the changes indicated during the process evaluation.</p>
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6. INPUTS

This section presents the evidence and insights that supports the overall judgements presented in the summary of findings for OLLi's inputs.

6.1 Capacity of SLT Resource

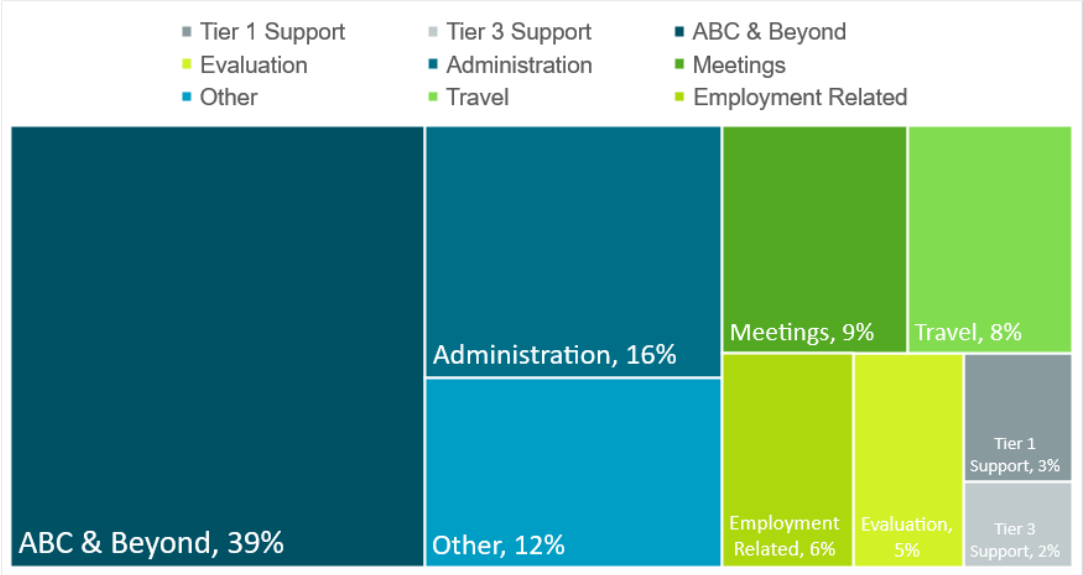
SLTs reported the work they did exceeded their capacity for their full-time equivalent role. In interviews, SLTs reported working 12-hour days on some occasions. This is based on the current delivery of OLLi where **a substantial amount of time has been spent by SLTs on administrative tasks supporting the evaluation in cohort 2** that do not require SLT expertise, for example managing the distribution and collection of information and consent forms. Further, in some regions, particularly in the Bay of Plenty, travel time is substantial and is likely to become substantial in other regions for future cohorts.

"I returned to the office last night at 8.45pm after running a full day workshop and then travelling an hour to do a tier 1 meeting" - SLT, Confluence Page

In a case study of one SLT's activities administration was the second highest demand on work hours (16%) after the implementation of ABC & Beyond (Figure 4). Administration tasks completed by SLTs include editing and uploading video-coaching videos to filenet, scanning, filing, and follow-up on consent forms, and preparation for ABC and Beyond workshops, including booking venues and organising catering.

"The number of forms that have been returned without last names, birthdates, or signatures (so I don't know which teacher is working with that child) is amazing! it's taking a heap of time to follow-up with the centres to work out this detail." - SLT, Confluence Page

Figure 4: Case study of *one* SLT’s activity from 1 August 2018 to 23 November 2018 (excluding 29 September – 14 October due to missing data over school holidays)⁹



ABC & Beyond is the largest component of the SLTs' workload. This finding is consistent with the interview feedback across SLTs. The case study illustrates approximately 39% of SLT time is spent on delivering the ABC & Beyond programme, including workshops and video coaching sessions (Figure 4)⁹. SLT feedback indicates that capacity required to deliver the ABC & Beyond workshops is relatively inflexible. This is because, assuming the number of workshop groups is consistent, the ABC & Beyond workshops and content are prescribed, and delivery time is the same regardless of the number of kaiako in each workshop.

"A lot of time spent with Centres is around the ABC program because usually that takes up so much time and because it's prescriptive it's not like there's any bits you can be like, I'll just leave that out so we have more time for this" - SLT

The amount of time that SLTs allocated to tier 1 and tier 3 was influenced by the amount of time they have available outside of other competing priorities. **SLTs reported that their capacity for implementing all tiers of the OLLi model is challenged by the amount of content to be covered in ABC & Beyond.** On the confluence page, a number of SLTs expressed concern about being able to deliver all three tiers of the programme. For example, one SLT voiced that due to the high capacity required of them for ABC &

⁹ It is important to note that this is a case example for one of the SLTs, and as the interviews highlight there is variation in the delivery of the different tiers across the SLTs. Therefore, this data may not be reflective of the general trend across all the SLTs. The evaluation did seek to use administrative data from the CMS. This data source had significant gaps and was excluded from the evaluation as it lacked the level of robustness needed for inclusion in the evaluation.

Beyond and the number of centres that they are working with, they were not always able to spend as much time on tier 1 and 3.

"I feel 12 is not a manageable number [of ELS] to have time to have success with tiers 1 and 3. I thought ABC this time would be easier and it is but still very time consuming." - SLT, Confluence Page

Furthermore, the implementation of OLLi activities with ELSs must fit with the availability of the kaiako and ELS staff. In relation to the ABC & Beyond workshops, this has resulted in some SLTs conducting whole day (9 hour) workshops or half day workshops outside of their usual working hours. For example, one SLT conducted workshops in the evening from 4pm-7.30pm. The workshops delivery time needed to fit with the availability and readiness of the kaiako, which meant that **SLTs were required to have flexibility around their work hours**. It was suggested that **this would be more feasible if the level of administration was reduced**, enabling SLTs to focus on the RTI model:

"I think getting us some admin time will give us time to actually do the speech therapy side. It will give us more time to support the centres with tier 1. It will give us more time to do assessments with tier 3 and to support the centres to work out who those tier three kids are. I always feel like I'm racing leaving centres" - SLT

Overall, a more feasible approach to efficient use of SLT capacity to systematically implement all three tiers of OLLi is required. We understand that a number of activities have already been implemented or planned to support the capacity of SLTs, including:

- **Providing the lists of ELS for recruitment early to enable SLTs to improve their planning** for recruitment and delivery. For example, they can ensure that the ABC & Beyond workshop group sizes are engaging 5-6 centres each to make travel worthwhile and to enhance group dynamic where kaiako can interact comfortably with others.
- Shifting the evaluation support work from the SLTs to the external outcome evaluators which begins with cohort 3.
- Additional involvement of the regional offices to support the administration activities that are consuming a large amount of SLTs' time. This would enable SLTs to focus on the delivery of OLLi.

6.2 Value of the Response to Intervention model

Currently there is **insufficient evidence to make strong conclusions on the ability of the RTI model to support children's oral language and literacy development**. However, initial feedback from SLTs supports the use of an intervention model that focuses on a holistic approach to building capability within ELS. In previous roles working with individual children, many SLTs had identified the need to work with the wider ELS in order to support sustainable improvements in children's language and literacy development. **The goals of the RTI model was a key motivator for many SLTs delivering OLLi, as OLLi has provided an opportunity for them to work differently and in a way that they perceived as being valuable** to improving language and literacy for all children.

SLT and kaiako interviews have revealed **some challenges in implementing the multiple tier approach within the OLLi timeframes**. SLTs report challenges in implementing all three tiers at the same time. SLTs have responded to these challenges by spreading the tiers across the cohort timeframe. The SLTs appear to be consistent in aiming to start with tier 1 and leaving tier 3 until after kaiako have learnt more about supporting children's language development through ABC & Beyond. However, **there is a potential risk that some SLTs may provide more tier 1 support than others** while other SLTs may provide more tier 3 support. This warrants consideration for ongoing future implementation, as the varying levels of implementation may influence the outcomes and sustainability of the changes achieved at different ELSs.

"Personally, I tried to get my tier 1's all underway before starting tier 2, but am panicking a bit that I've neglected tier 3 – SLT, Confluence Page

Overall, SLT and Kaiako responses demonstrate that **ABC & Beyond is the most easily communicated and understood tier of the RTI model**. ABC & Beyond is considered to be the easiest to communicate as it is a prescribed programme with clearly defined activities, requirements and learning outcomes. In comparison, tiers 1 and 3 are more flexible as they are intended to be responsive to the needs of each ELS. It was noted that it could be challenging to differentiate between each tier, for SLTs and for kaiako. There are also concerns about overwhelming the kaiako with content as there is a lot to learn within the ABC & Beyond workshops alone.

"I think at this stage they're saying, 'yes we're keen' and that's all I'm asking for because trying to communicate that OLLi is much more than just these workshops as well... I think that doesn't get through so much, and so they're like; 'when is the timing?', 'there's no teacher release', 'can we actually make this work?'" - SLT

Additionally, **SLTs report mixed experiences with the implementation of tier 1**. Some ELS have adopted the intended aims of tier 1 with ease as it fits within existing internal evaluation processes or builds on an existing focus on language and literacy. However, **some ELS have struggled to fully implement tier 1 due to limited foundational structures and processes within ELS to support internal evaluation**. For example, one ELS had changed manager four times within the last three years and struggled to adapt to the priorities of each successive manager as a result. In these struggling ELSs, a successful outcome from implementation of tier 1 was often to make progress in self-reflection and ongoing improvement programmes within their centre.

"...what I've learned is their internal evaluations are often about physical things. So, they'll have an internal evaluation around playground, or they'll have an internal evaluation around recycling or sustainability, or they'll have an internal evaluation around safety. And for most of them this is the first time they've had an internal evaluation around something that actually requires their ability to teach." - SLT

The variation between ELS and their existing capacity to engage in internal evaluation found during the process evaluation highlights the value of tier 1 in supporting systemic

change. It might be that understanding what success looks like here warrants some consideration for the evaluation and may need to focus on a value-added approach as opposed to a generic level of change across all ELSs.

The **implementation of tier 3 was linked to the capability of kaiako in being able to understand the criteria for tier 3 and identify children with additional oral language and literacy needs.** This will be expanded on in the 'Reach and Access' section of this report.

6.3 Hanen ABC & Beyond programme

SLT, kaiako, and service managers all speak highly of the ABC & Beyond programme in interviews. **ELS, across a range of early childhood learning contexts and teaching philosophies, consider the programme to be relevant.** One ELS had previously participated in another programme aimed at improving oral language and literacy and perceived the Hanen ABC & Beyond programme as much more relevant to their needs.

"100% better. The other one, you couldn't even use it in your centre. You had to leave the children and do it. But this one, it just fits into the centre... It's like you have the beginning, you have the middle, the end, and then there's extra support as well. It wasn't just an initiative where they gave you all the stuff and that's it" - Manager

Even those ELS that considered themselves to be strong in the support of language and literacy development gained value from the workshops. Some of this value was from learning new things while many also highlighted the value of reinforcing the good things that they were already doing. Although some kaiako considered that there was a large amount of content to cover in the ABC & Beyond workshops, they found all of it valuable and wouldn't want to leave any of it out.

The **video coaching component of the ABC & Beyond programme was identified as a highly valuable component of the programme.** Many kaiako commented on initially being nervous about being videoed as part of the programme. However, a number of kaiako also identified the video coaching as the most valuable part of OLLi for their learning as they were able to identify their own strengths and weaknesses and focus on the areas that were most relevant to their own practice.

"The most valuable... after the videotapes, just getting that personal feedback and her talking to us about the areas we need to work on... At first, I was like 'oh my gosh, we're going to be videotaped. That's scary'." - Kaiako

In terms of the suitability of the ABC & Beyond programme to the New Zealand context, it was considered to have **a good fit within the ELS that it was reaching.** However, some of the kaiako noted the potential value of this type of initiative for kohanga reo and NEST services as well. It was acknowledged that this would require connecting with and working with people with the right expertise to understand more about the fit of this type of initiative within these contexts, and the adaptations and/or design changes or different approach that might be needed.

7. REACH AND ACCESS

7.1 Barriers to early learning service participation

The most commonly identified barrier to ELS participation in OLLi was the capacity of an ELS to provide staffing cover for kaiako to attend the ABC & Beyond workshops. ELS managers, kaiako, SLTs and service managers all identified the challenge of **providing staffing cover for workshops as a key barrier to participation**. In one centre, the two kaiako went to different workshop groups which made it easier to find cover for one kaiako at a time.

There were a number of contextual factors which influenced the ability of an ELS to have sufficient resource to release kaiako for the workshops. These factors included the size and values of the owner of the centre and the role of the centre manager:

- In general, **smaller centres would experience greater staffing barriers** than larger centres as they had a smaller pool of staff to draw from for support.

"We're busy here and we can't afford to lose two staff in one afternoon, we only have four staff." – ELS manager

- Centres owned by educators or non-profit organisations, with goals of high quality education over profits, often had higher existing ratios of kaiakos to children which allowed greater flexibility in releasing kaiakos for workshops.
- In centres **where the manger was also a kaiako able to provide on the floor support** there was an increased flexibility to be able to cover for kaiako attending the workshops.

Some ELS managers commented that other professional developments provided funding for relief cover. Relief cover would remove the financial barriers of covering for kaiako time. However, there is still the challenge of finding relievers in regions where there is a limited availability of kaiakos that can provide cover.

7.1.1 Timing and location of workshops

The timing and location of the ABC & Beyond workshops influence the ability of an ELS to participate. **Due to work and family commitments it is not feasible for many kaiako to travel for long distances**. It should also be noted that there is a greater likelihood that the kaiakos in the ELS in low socio-economic areas will have limited personal resources to travel. For example, one kaiako had to commute a long distance between home and the kaiako's ELS using public transport meaning distance would have been a particular challenge to this kaiako's attendance if the workshop location had not been down the road from their ELS.

"Lucky enough we're just across the road from there. Would it have been further, I would have probably double thought about it." – ELS manager

The kaiako interviewed noted that the SLTs were generally good at accommodating kaiako availability. Some ABC & Beyond workshops have been run as half days, either in the morning or evening, while others have been run as full day workshops.

7.1.2 Staff turnover and absence

The design of ABC & Beyond makes it difficult for kaiako to fully benefit if they miss a workshop. The ABC and Beyond modules build on each other, thus if a kaiako misses a module at the beginning of the programme they will struggle to learn and implement strategies that are taught later on, even if another kaiako shares what was taught in the session that the kaiako missed.

"Now this one centre has one teacher partially trained and another teacher who has done just the workshop 1. Between them they've done the whole thing, but that doesn't really help" - SLT

The SLTs indicated that even if kaiako share the learning among themselves, it is not as effective as attending the workshop in person. SLTs have different strategies for supporting kaiako who have missed workshops. Some SLTs record the workshop and some provide an individual catch up session. Although this is most effective for supporting kaiako learning, it is a less efficient use of limited SLT's time. **Developing strategies to support kaiako learning when workshops are missed warrants exploration.** The recording and dissemination of the workshop is a useful starting place.

Missing a workshop may be due to leave or illness but can also be due to staff turnover part way through the programme. As OLLi delivery is focused at an ELS level if there is a change in kaiako part way through due to resignation or serious illness etc, then this kaiako won't be able to continue. The interviews indicated that there is a **high level of staff turnover in many areas; this provides a barrier to ongoing participation in OLLi.**

"A centre has been identified in the initial cohort as being eligible. Then staff have left part way through so somebody has stepped in and carried that through, then somebody else has left. So, actually what you've got is a centre that's been identified as having OLLi with no staff in there that have had the whole program." - Service Manager

7.1.3 Time available to share learning

There is variability in the extent to which ELS are set up to share what the kaiako learnt with the rest of the ELS staff. Some centres have dedicated meeting time (i.e., team meetings or another time that was allocated to sharing learning and updates) available which can support the communication and transfer of learning from kaiako to other staff. For example, one centre had weekly staff development meetings at which the kaiako were expected to share their learnings. However, some ELS did not have allocated time for kaiako to share what they had learnt with the wider team. In these ELS, some of the kaiako would talk about how they were educating other kaiako through role modelling and demonstrating their new techniques while working together.

7.1.4 Amount of new content

The large amount of content to be covered in the programme was identified as a barrier to engagement by kaiako. There was a perception that the workshops provided a lot of information. For this reason, many kaiako preferred half-day workshops instead of whole-day workshops. Moreover, some kaiako commented that programme that was spread out over a longer time would give them more time to take in all the new information.

7.2 Enablers to early learning service participation

For many ELS, **OLLI's focus on oral language and literacy development was a key enabler** to their participation because of OLLi's relevance to the ELS' existing educational priorities; OLLi supported the ELS' goals rather than adding other goals. In many cases, the ELS had already identified a need to improve oral language and literacy of the children in their centres and they felt that OLLi had 'come at the right time' or that OLLi could provide them with the necessary support to take action on the identified need.

"The owner of the centre had been focusing a lot on literacy learning. Before [SLT] came, we had been discussing about how our children are lacking behind in literacy... So, [SLT] had come at the right time." - Kaiako

7.2.1 Motivation of kaiako

Several kaiako expressed their **personal interest and motivation** to extend their professional development in the area of language and literacy development. This was an enabler for many ELS to participate as they had kaiako who were willing to commit to a substantial programme of professional development over an extended period of time. In some ELS this personal motivation was essential as kaiako were not paid for professional development conducted in their own time.

The motivation of kaiako to learn and promote oral language and literacy development has also supported involvement of the whole centre in some ELS. Kaiako trained in the ABC and Beyond often became champions for oral language and literacy teaching and learning within their ELS. They would lead the internal evaluation activities and share the strategies that they learnt with the rest of the teaching staff. **The motivation and leadership demonstrated by kaiako would bring the rest of the staff along with them in the participation of OLLi.**

7.2.2 Positive feedback from other early learning services

A small number of ELS managers reported hearing positive feedback from other ELS as being a positive influence on their decision to participate in OLLi. Hearing about the experience of other ELS helped them to understand what was involved in participation and what they could expect to gain. For example, one manager commented that they had decided not to participate in the first cohort as they believed they already had strong skills in oral language and literacy development but after hearing feedback from other ELS decided that they would still benefit from participation in OLLi.

"There was a team under the same association who had said no to the first cohort because they felt they were doing everything right. Then X said 'well, Y went and said it was the best PD they've ever done and they've really lifted their oral language'. That team goes, oh well, maybe we should do it." - SLT

7.2.3 Design and structure of OLLi

ELS managers commonly indicated that OLLi being a free programme contributed to their decision to participate. Financial considerations were often important and while there was still a cost to the centre of staff time for the workshops, **being a free**

programme made it more attractive than other professional development opportunities that came with a price.

The **availability of OLLi to non-registered kaiakos** who were also working at ELS also enabled some ELS to participate. When programmes are limited to only registered kaiakos it is more difficult to support the development of ELS' non-registered staff who also play a valuable role in providing the care within the ELS.

Kaiako also shared a preference for professional development that was structured as an ongoing programme of support rather than one-off workshops. Kaiako found the structure of OLLi to be more conducive to learning as they had time to practice the strategies, get feedback, and reflect on their progress for each module.

"The timing is good, I like having the multiple workshops over a period of time, so you get time to put things into practice." - Kaiako

7.2.4 Characteristics of the Speech Language Therapists

The individual characteristics of the SLTs were routinely identified by kaiako as enablers to their participation in OLLi. Kaiako positively reflected on the SLTs. They noted their level of commitment to working with the ELS, such as providing support around the existing commitments of the ELS and being easily available if they had any questions.

The characteristics of the SLTs also supported the engagement and learning of kaiako in workshops that covered a lot of content. In particular, **SLTs were perceived as being highly knowledgeable and skilled in teaching and facilitating.**

"She's got good experience and good knowledge... She made us think further the whole time". - Kaiako

7.3 Identification of children for tiers 2 and 3

In many ELSs there were challenges in the identification of children for evaluation of tier 2 and delivery of tier 3. Specific challenges included:

- Confusion over the differentiation of the children for different tiers (i.e., 2 & 3)
- Confusion over differentiation from existing support services for tier 3 children
- Difficulty in identifying children who fit the age criteria for tier 2, and
- Difficulty in identifying children with additional oral language and literacy needs for tier 3.

7.3.1 Confusion between separate tiers and services

SLTs reported challenges in communicating and separating the different tiers of OLLi – specifically 2 & 3 - and also communicating the different purposes for which they want kaiakos to identify individual children in these tiers. **Kaiako experience confusion in interpreting the difference between tier 2 children for whom evaluation measures are being collected, and tier 3 children who require additional language and literacy support.** Some kaiako confuse these as being the same children, while others may later want to identify one of the tier 2 evaluation children as requiring additional support.

"Centres are also confused now as to Evaluation child vs tier 3 child – takes a lot of explanation!" - SLT, Confluence Page

An additional challenge for kaiako identifying tier 3 children is the confusion between individual OLLi services and existing individual support services provided through the Ministry of Education.

7.3.2 Identifying tier 2 children

In some ELSs there were no/there were very few available children who fit the age criteria for tier 2. In particular, in **some ELSs kaiakos who were in the ABC & Beyond programme did not have in their group children as young as three and a half years old**. This sometimes resulted in ELSs choosing their four youngest children.

"I've have quite a few that can't do this either because they are too small or because they are so large the teachers coming to ABC only teach 4-year-olds." - SLT, Confluence Page

7.3.3 Identifying tier 3 children

Identifying children for tier 3 is potentially one of the most difficult elements of OLLi for the kaiako. **Kaiako struggle to understand what additional language and literacy needs look like in children**. The individual support provided as part of tier 3 of OLLi is more narrowly defined than the range of issues for which individual speech language support may be provided. SLTs found that in many cases kaiako identified children with speech sounds development issues, or other issues such as autism. Having some (English) oral language is a required criterion for tier 3 support.

"My teachers at this time do not have a good idea of tier 3 (reinforces what I found in cohort 1) - they are talking about children with speech sound errors, even though I'm talking language. Even when I indicate this, one followed my comment with, 'yes, so this will be perfect that you can help us with this child (who struggles to say 'spider')." - SLT, Confluence Page

SLTs all tended to introduce the identification of tier 3 children after the ABC & Beyond programme was well underway. One SLT noted that to identify children for tier 3, kaiako needed to know the ABC & Beyond strategies and be able to identify additional language and literacy needs. They felt that ABC & Beyond did not teach identification skills to support kaiako with identifying children for tier 3 support. While many SLTs were providing additional advice and information to kaiako to address this, **the lack of formal training on identification of children for tier 3 represents a gap in the delivery of OLLi**.

7.4 Feedback on enabling access for all children across New Zealand, including Māori and Pasifika

Feedback from kaiako indicates that the **strategies learnt in OLLi are appropriate to support language and literacy development for all children across English speaking ELS**. The strategies learnt across the three tiers allow kaiakos to support language and literacy

development in children of all developmental levels. There is a general sense, however, that kaiako feel most confident in supporting children through tier 2 strategies and less confident in supporting children who require greater literacy and language development in tier 3.

Kaiako also believe that the strategies they learn in ABC & Beyond would be transferable to non-English speaking learning contexts. In particular, the kaiako reading techniques were identified as those that could be easily applied to developing reading skills in languages other than English.

"I personally don't have the te reo skills to sparkle te reo... but it would be really interesting for immersion schools even, or Kōhanga reo, and Samoan, and Tongan, they would use it so beautifully." - kaiako

There was a perception among ELS staff that the greatest level of need for OLLi support strategies was in Kōhanga reo and NEST ELs. However, kaiako did note that the delivery of OLLi to support the learning of these strategies would likely need adapting for non-English speaking ELS. It was suggested that the Ministry should be engaging directly with Kōhanga reo and NEST services to explore the most appropriate way to support these services to develop their oral language and literacy skills in way that is responsive to their contexts and needs. We understand that the Ministry has already started discussions with these sectors about how they can work together to support oral language and literacy development.

8. DESIGN AND IMPLEMENTATION

This section explores the design and implementation of OLLi in terms of communications to support OLLi, a summary of implementation and any adaptations to intended delivery, the design and implementation of the RTI model and the level of fidelity to ABC and Beyond.

8.1 Communications to support the delivery of OLLi

8.1.1 Communication and engagement with Early Learning Services

Overall, kaiako and ELS managers have given positive feedback about the communication of OLLi with ELSs. Kaiako in particular identified SLT communication as a strength of the programme and believe that SLTs have done well to keep all key ELS staff involved in communication.

"She's very positive and affirming. She doesn't make you feel like you're doing something wrong." - kaiako

"She's making it really alive and interactive." - kaiako

It appears that the level of ELS engagement is often limited by the capacity of the ELS to engage with OLLi and not by the method of communication. In saying that, SLTs have found that certain communication methods enhance the process more than others. For example, one SLT expressed that combining an in-person information session of OLLi with the use of a team-made video on 'why teams should do this' was the most useful recruitment method.

There is also a general perception that it is easier to communicate about ABC and Beyond than it is to communicate about tier 1 and tier 3. This is a recurring theme with ABC and Beyond being the most understood and talked about component of the model.

Although the communication from SLTs was well received, kaiako felt that the communication of the timeframes and requirements for the numerous consent and evaluation forms, and tier 3 identification could have been better. There is a lot of information to share and SLTs indicated concerns about overwhelming kaiako with the amount of information at the first workshop. However, kaiako recommended a summary of the OLLi requirements would have supported them to review what was required of them. For example, one of the ideas for improvement was provision of a 'checklist' for when all the forms needed to be returned and children identified.

8.1.2 Communication within the Ministry

There is a wide range of stakeholders across the Ministry who are involved or have an interest in OLLi. Communicating the right information to the right people at the right time and ensuring the messages are received is a substantial and challenging role. Improving this messaging and communication at a national level is an area that would benefit from more consideration.

While SLTs have access to support from their regional offices, the national office, and their SLT peers, many also expressed a feeling of isolation or a feeling that they were not being listened to.

"I think that there's been a few times we've kind of felt not understood or listened to and I mean, it actually is quite hard out there." - SLT

"And then I got less and less feedback from my manager... I don't have a lot of communication with the person so I don't feel that support. I don't feel like there's a co-driver." – SLT

In some instances, improving communication with SLTs may simply mean acknowledging their questions in a timely manner, even if the answer will take longer to determine.

The structure of the Ministry means that communication with regional offices is also important to provide clarity of OLLi to the regional managers from which the SLTs deliver OLLi. Increased clarity of OLLi is required for some roles. In particular, regional service managers do not have a clear and consistent understanding of OLLi, the work that the SLTs are required to do, and what support they may be able to provide for the SLTs.

8.2 Implementation and adaptations

The overall initiative has been implemented as intended, although here have been some pragmatic decisions or adaptations made:

- **Number of ELSs in each cohort:** Some SLTs had cohorts of less than 12 as they were unable to recruit this many within the timeframe. A suggestion by SLTs to mitigate this in future cohorts is to contact centres earlier. One SLT noted that it would be best to engage ELSs early, especially for those who are to be involved in the first half of the year, as the ELS would have greater ability to factor OLLi into their yearly plan. The Fidelity Monitor's report on cohort 1 indicated that OLLi was delivered to 111 ELSs, which represents 84% of a full cohort.

"For me, I would prefer to contact the centres around October and no later than mid-November, as from then they are very focused on winding up for the year and things get even busier for them." - SLT, Confluence Page

- **Changes to recruitment criteria and timeframes:** As fewer ELS were eligible and willing to participate in OLLi than expected the eligibility requirements have been extended to include ELSs in deprivation index 5 to 10 (previously 8 to 10).

Lists of eligible ELSs will also be provided to the regional offices earlier. This increased timeframe is intended to enable increased recruitment of a full cohort.

- **Variations in the logistics of delivering tier 2:** ABC and Beyond workshops were delivered as intended, although SLTs have adopted different approaches to running ABC and Beyond workshops to suit the needs of their kaiako. This has resulted in inconsistent delivery logistics across ABC and Beyond workshops. For example, some SLTs have run multiple workshops to respond to differing geography or have run half day, full day, or evening workshops depending on the availability of kaiako. Feedback from SLTs and kaiako indicates that half days are preferred. In addition, SLTs have responded differently in supporting kaiako who have missed workshops with some SLTs running catch-up sessions while others providing videos for the kaiako to review in their own time.

Furthermore, due to the confusion around the criteria of the evaluation children, some SLTs have accepted children outside the age criteria for tier 2.

"I have clearly stated several times and written down the age for our tier 2 data children, however I have still received some forms back for 4-year olds. I am just having to let them slip through this time (because it has been hard enough getting these forms back and also with the amount of chasing to get the forms 'complete' - with DOB and surnames etc)." - SLT, Confluence Page

- **Variation in emerging tier 1 support:** Delivery of tier 1 support is still developing and varies by the training of the SLT and the readiness of each individual ELS. In general, ELSs value the support and expert advice from SLTs but there is large variation in the delivery of tier 1 activities and their ability to support culture shift.

SLTs also commented that the amount of time spent on tier 1 specific activities with each ELS was much less than the 16 hours that was initially estimated per ELS. SLTs were limited by their own capacity but also viewed that ELSs did not have 16 hours available to engage with the SLT for tier 1. However, the data entered into CMS is not of sufficient quality to provide evidence on how much capacity has been dedicated to tier 1 activities.

- **Variation in tier 3 process:** tier 3 support is still developing with many ELSs not at this stage at the time of evaluation site visits. The implementation of tier 3 has been challenged by the need to have an understanding of the ABC & Beyond strategies to be able to identify children that need additional support to benefit from these strategies.

"tier 3 is really hard for teachers to identify children at the very beginning of the cohort. It doesn't really gel together that well. And I don't I don't really know how to make it work." - SLT

SLTs have had different responses to this challenge with some SLTs have provided ELS with a deadline to identify children while other SLTs have accepted late tier 3 entries or children who do not strictly meet the tier 3 criteria but require additional help in oral language and literacy.

8.3 Design and implementation of the Response to Intervention model

OLLI is intended to follow the principles of the RTI model and, the RTI model has largely been driven by the more defined ABC and Beyond component. Refinement of the model implementation is necessary in order to best deliver the three tiers in a comprehensive package.

The RTI model is intended to be implemented sequentially. While SLTs have started the tiers sequentially, they have at times been implementing all tiers simultaneously due to time constraints. In addition, SLTs do not have sufficient time to complete everything and therefore have to make trade-off in certain areas. This usually impacts on the provision of tier 1 and tier 3 support. Despite SLTs reporting that they are often working more than their regular work hours the challenge of implementing the RTI model remains.

8.4 Fidelity to the ABC & Beyond programme

Feedback indicates that SLTs are delivering the ABC & Beyond programme as intended and to a high level of quality. Kaiako have provided positive feedback about the delivery of ABC and Beyond, including the video resources used, the teaching ability and skills of SLTs, and the consistency of workshop content. This finding is further supported by fidelity monitor's feedback that indicates SLTs are engaging well with ABC and Beyond and delivering it competently and as prescribed.

Feedback from the fidelity monitor's report on delivery of **cohort 1** indicated a good level of fidelity to ABC & Beyond:

- All SLTs ran full programmes of ABC & Beyond consisting of seven modules.
- All SLTs ran each module in two separate groups for the workshop size to remain within the Hanen recommended group size. It should be noted that in cohort two, one SLT ran the modules in only one group and found this helpful in freeing up some of their capacity for other activities. This will not always be possible and it will depend on the spread of ELS locations.
- Kaiako had an overall 88% participation rate for the ABC & Beyond programme (Table 4).

Table 4: Kaiako participation in ABC & Beyond workshops for cohort 1

Number of participants expected at all workshops	Number of participants who attended workshops	Percentage of kaiako attendance at workshops	Range of participant numbers at workshops
1456	1275	88%	3-14

The fidelity monitors commented that the SLTs were working with high fidelity in workshop delivery. Based on the 30-minute videos of SLTs presenting a workshop the fidelity monitors coded seven key facilitation behaviours which relate to effective workshop delivery (Table 5). Two expected behaviours (SLTs referencing the evaluation of previous workshops and the SLTs work at small group times) were typically not coded as they weren't included in the 30-minute edited videos and SLT self-reflection indicated that some behaviours they believed they used were not captured in the videos. The fidelity report indicates that the average rating was 4.45 and is considered high fidelity.

Table 5: ABC & Beyond workshop fidelity by SLTs in cohort 1

Number of SLT videos coded	Total number of key facilitation behaviours	Total number of key facilitation behaviours Present	Average score of key facilitation behaviours key (out of 7)	Key facilitation behaviours range of individual scores
9	63 possible total	40	4.45 (64%)	3 – 6

9. CAPABILITY AND DEVELOPMENT

This aspect of the evaluation focused on the role of OLLI in embedding systemic culture change, changes in kaiako capability, and the sustainability of any changes.

9.1 Embedding a systemic culture

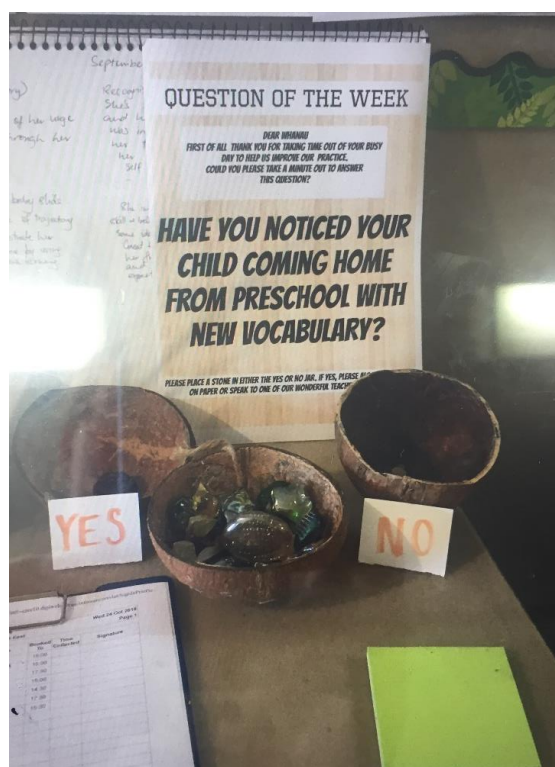
The key aim of tier 1 is to develop a systemic culture shift to support a focus on language and literacy development in each ELS. ELS are utilising a range of activities to shift their culture with support from OLLI SLTs. SLTs have often focused on the process of internal evaluation to support ELS in reflecting on their current practice and identifying areas for improvements and the strategies they will implement to create this change. However, shifting culture involves changing “the way we do things here” and will be a long-term aim. The evaluation has provided a valuable insight into some of the system level changes as a result of OLLI.

9.1.1 Internal evaluation

Early in the delivery of OLLi, SLTs have been engaging with ELS to support them to improve the centre-wide culture to be more supportive of oral language and literacy development. Acknowledging that all ELS have different contexts, are at different levels of capability, and have different goals, this tier 1 work is intended to be driven by the needs of the individual ELS. **SLTs have encouraged and supported ELS to undertake their own internal evaluation of their ELS' oral language and literacy work.** This support has usually included: the provision of templates where an ELS did not have an existing internal evaluation process, facilitating meetings with staff across the whole ELS with the objective of progressing the internal evaluation, and in some cases, supporting kaiako with the process of interpreting feedback and converting it into an implementation plan for the ELS.

The process of internal evaluation includes gathering parent/whānau/carer feedback related to their child's oral language and literacy. Some ELS were gathering feedback at the time of evaluation site visits. For example, one centre had gathered feedback from parents/whānau/carers on whether they had noticed their children acquiring new vocabulary (Figure 5). The internal evaluation has helped to increase the visibility of the oral language and literacy development in the ELS, both to other staff members and to whānau.

Figure 5: Example of ELS gathering parent feedback as part of their internal evaluation



All ELSs were still in the process of conducting their internal evaluations at the time of the site visits. The internal evaluation s intended to be a part of OLLi that is sustained within the ELS beyond their participation in the cohort.

9.1.2 Using the physical environment

Most of the ELS that we visited have made changes to the physical learning environment to increase awareness of oral language and literacy development as a key priority. One ELS created an educational board summarising the OLLi strategies as a way to share them with other staff members (Figure 6). Another ELS had begun displaying weekly new words on the teaching board as a learning strategy for their children.

development is the incorporation of 'sparkle words' during story time. Additionally, kaiako find great value in implementing the simplest ABC & Beyond strategies. These simple strategies allow kaiako to not feel pressured to finish a book if the child does not want to and it includes having children sit in front of the kaiako during story time which allows kaiako to monitor children's engagement.

"We see such a difference with having children in front of you and seeing eye to eye... you can pick up on the ones that are not so involved and draw them in." - Kaiako

Kaiako also saw the improvements in their own practice across the different shared reading video session for the video coaching.

"I said, 'gosh, if the researchers look at my first one and my last one, they'll think it's amazing because the first one was just a nightmare and the last one I felt really good about. I think it's just because we've practiced and learnt different strategies with the OLLi PD that by this time, we're confident with them. We've practice them enough times to feel that it's not foreign" – Kaiako

9.2.1

Changes in kaiako's confidence and practice

The matched-pairs analysis of the 26 kaiako's answers in the online survey identified improvements in their practice and confidence in supporting oral language and literacy. We acknowledge however, that this sample size is very small. The changes identified in the survey however, align to the findings from our interviews and site visits.

We report on the analysis of only those items that have been retained for the outcomes evaluation following Rasch analysis¹⁰. The matched-pairs analysis demonstrated an absolute increase of 6% for the retained items relating to practice that supports oral language and literacy development for children and an absolute increase of 11% for the retained items relating to confidence when implementing this practice. The survey also indicated a decrease of 9% for oral literacy as a priority at their ECE.

More detail on the analysis of the survey can be found in Appendix 1, including analysis of individual questions and aggregate analysis of all responses.

¹⁰ A Rasch analysis was conducted by the OLLi evaluation team to assess the validity of a tool developed for the purposes of the OLLi evaluation. As a result, a number of items were removed and the shorter version of tool is now used to explore kaiako's practice, confidence and perceptions in regard to oral language and literacy in their ECE.

Table 6: Changes identified in pre-post kaiako survey, matched pairs only (n=26)

Domain	Pre	Post	Change
Attitudes & Beliefs	84.8%	88.8%	4%
Context & culture	81.3%	86.1%	5%
Practice	76.7%	80.6%	4%
Confidence	77.8%	87.6%	10%
Oral literacy in your ECE is a priority	89.4%	80.8%	-9%
Retained Practice items	76.9%	82.9%	6%
Retained Confidence items	77.1%	87.7%	11%

9.2.2 Value of ABC & Beyond in supporting capability development

ABC & Beyond teaching strategies have helped SLTs provide specialised support to kaiako to develop their knowledge and skills. Both SLTs and kaiako viewed the individual video coaching as one of the most valuable SLT teaching strategies as this provides one-on-one support for kaiako to put taught strategies into practice. One SLT noted that the video coaching sessions provided her with the opportunity to sit down with a kaiako who found the ABC & Beyond strategies particularly challenging and work through how the kaiako could better implement them.

ABC & Beyond strategies are less helpful in supporting kaiako to identify children with oral language delay and additional needs.

“ABC & Beyond itself, it doesn’t go into identification of language difficulties or anything like that. So that’s the kind of information that even after having done [ABC & Beyond] that’s the main question: Do you have children who would not be able to access this or who wouldn’t respond? There’s all that kind of information [that they still need]. That I kind of feel responsible for communicating to all these centres about typical language development, and I hear that they want to know that stuff as well, but I haven’t quite found the right opportunities to get it through.” - SLT

9.3 Sustainability of skills and knowledge

Most interviewed kaiako, SLTs and some ELS managers have shown concern for the sustainability of OLLi strategies upon the conclusion of the programme. One SLT suggested that continued support of tier 1 beyond six months would be a useful way to uphold all three tiers.

“After I leave they may forget. I don’t know what to do about that, and I think that’s where if the tier 1 stuff can continue longer than just cut off at six months. It’ll help give that extra time for them to get that in place” - SLT

Of the components of the initiative, tier 1 is likely to be the most useful in sustaining a focus on oral language and literacy development. This work is intended to go beyond the delivery of each cohort and provide ELS with the necessary tools to continue to

improve their practice. Given the identified challenges, such as high staff turnover, **creating a culture that prioritises the importance of oral language and literacy development and embedding strategies to support this focus will be crucial for ensuring that the learning and ELS-level changes are sustained.**

At the time of the site visits, there was limited evidence on how well culture has been shifted and new strategies sustained. **Exploring sustainability will need to be better captured in the future evaluation activities**, perhaps through re-visiting ELS and/or re-surveying kaiakos some time (e.g., 6 months) after the end of OLLi.

10. OUTCOME AND IMPACT EVALUATION

This aspect of the evaluation was designed to explore the appropriateness of the outcome measures, the feasibility of the outcome evaluation approach, the ability to measure change in children's oral language and literacy skills within 6 months and the possibility to draw on the Integrated Data Infrastructure (IDI) to explore the longer-term impacts of OLLi.

10.1 Appropriateness of measures for evaluation

Kaiako felt that the MacArthur-Bates measurement tool, measuring children's oral language and early literacy, was relevant for assessment of children's oral language and literacy development. As part of assessing the feasibility of data collection approach MacArthur-Bates test was administered by kaiakos and parents and Strengths and Difficulties Questionnaire (SDQ), a brief emotional and behavioural screening questionnaire, was administered only by kaiakos. Some kaiakos did not think that SDQ was a good tool to use.

In terms of administering assessment tools, one SLT noted that some parents do not have the necessary literacy skills to administer the assessment. **Issues have been also raised regarding the administration of the MacArthur-Bates vocabulary subtest.** One SLT observed a difference in how parents and kaiako administered this subtest.

"Some are asking the young person to repeat the words, some are probing for the words, and others noting words they heard over different periods of time." - SLT, Confluence Page

SLTs also express concern for the validity of MacArthur-Bates when administered by parents and kaiako without SLT supervision, although there is unlikely to be capacity to achieve this given the amount of work that SLTs are already doing.

"Of note, whenever I have used the MacArthur-Bates with families (the other forms, not this one that we are using), I've always sat with the parent to at least get them started..." - SLT, Confluence Page

Overall, while it takes time to administer the evaluation tools, it was feasible for kaiako to complete the evaluation forms for two children each. Furthermore, the lengthy process of obtaining consent forms was not perceived to be an issue by kaiako as they are used to the process of gaining consent from parents and generally have existing relationships in place. The main thing that they require is greater clarity on the completion of the different consent forms and by when.

"It's not a standardised form. There's no really clear instructions on how to use it. So, every one of us 11 speech therapists is going to give slightly different instructions.... I think it probably needs to come from one person giving the same information to all the centres. And those forms don't have to be hand delivered from us." - SLT

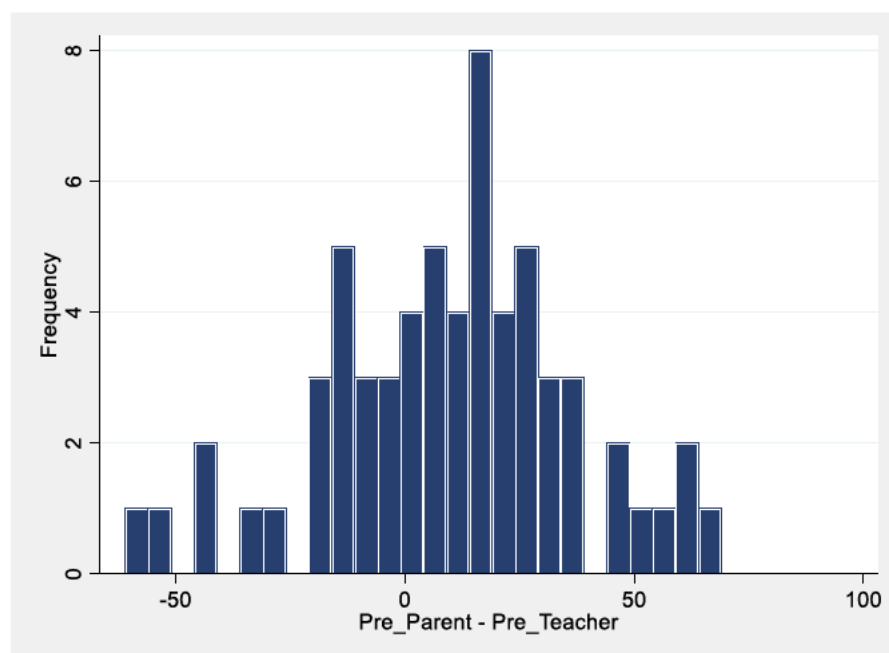
The **completeness of data may be a concern where kaiakos and parents are relied upon for data collection** using assessment tools. Parents and kaiakos collected more pre-assessments than post-assessments. Moreover, more kaiakos than parents collected assessments (Table 7, Table 10). There were only 4 children with pre- and post-assessment scores collected by both parents and kaiakos.

Table 7: Number of MacArthur Bates Assessments collected

MB-3 data	Pre-assessment	Post-assessment	Total
Parent collected	88	20	108
Kaiako collected	103	33	136
Total	191	53	244

Importantly, administration of the MacArthur-Bates pre-intervention evaluation tool [MB-3] by **parents and kaiako yielded different results for each individual child** (Figure 7). In some cases parents scored a child's test higher than the kaiako and in other cases kaiakos scored a child's test higher; mean difference between parents' and kaiakos' marking was 9.0 points ($p = 0.01$; 95% confidence interval of 2.2 to 15.8)¹¹.

Figure 7: Distribution of individual parent vs kaiako differences for pre-assessment scores (n=63)



¹¹ As there were only 4 children with pre- and post-assessment scores collected by both parents and kaiakos we have not been able to explore whether the changes in MB-3 between parents and kaiakos is comparable.

10.2 Achieving change within six months

Kaiako provided qualitative evidence indicating that **the ABC & Beyond strategies were achieving changes in children's oral language and literacy development within the six-month cohort timeframe.**

"You can hear it already happening out in that time when staff are reading stories... for instance one story had 'budge' the other day, and the staff member said "I wonder what budge means?" and already they were starting to come up with words for what budge might mean." - Manager/Kaiako

The results from the MacArthur Bates pre-post assessments also indicate changes in the oral language and literacy of children within the timeframe of delivering an OLLi cohort, although we acknowledge that caution is needed with such a small sample size. Because of the small number (26) of matching pre and post assessment scores collected there is a risk of bias influencing the results and the one needs to be cautious when interpreting the results. Where pre-post data was available, the changes between the pre and post scores indicated statistically significant improvements in oral language and literacy for the assessments (Table 8 &

Table 9). Further analysis and the p-values are provided in Appendix 2.

Table 8: Paired t-test for kaiako collected matched pairs

Variable	Count (n)	Mean	Std Err	Std Dev	95% Conf Int	
Kaiako_Pre	26	47.5	6.0	30.8	35.1	59.9
Kaiako_Post	26	66.2	7.7	39.4	50.3	82.0
Difference	26	18.7	4.5	22.8	9.4	27.9

Table 9: Paired t-test for parent collected matched pairs

Variable	Count (n)	Mean	Std Err	Std Dev	95% Conf Int	
Parent_Pre	9	63.6	11.2	33.7	37.6	89.5
Parent_Post	9	90.4	12.0	36.1	62.7	118.2
Difference	9	26.9	9.3	27.8	5.5	48.3

While some kaiako provided initial feedback that they have seen changes in children's behaviour as a result of OLLi strategies, there is an overall perception that behavioural change will become more after six months.

Initial changes that have been witnessed by kaiako tend to be related to children's prosocial skills. For example, kaiako report that **children have become better at waiting for their turn to talk in groups or that children have become more interested in story time.**

"They have a 3 yearold who has been very reluctant to say anything, to the point where they didn't know if he had much language at all... After three sessions of the course (about 8 weeks) he is now using lots of single words, some phrases, is talking to other children, and even talked in a group time in front of 30 children. Teachers report he is

more confident, loves to come, no longer separation issues, always brings a book to this teacher to have time with her.” - SLT, Confluence Page

10.3 IDI data and understanding longer term impacts

The outcome evaluation will compare treatment to a control group in order to attribute changes in outcomes to OLLi. We understand that this will enable comparisons across key outcome measures, such as the MacArthur Bates and/or other measures adopted by the Ministry to support the evaluation.

Understanding the longer-term impact of OLLi would require engagement with the control and intervention group over a more sustained period of time. This could be achieved through an analysis of key data sets in the IDI. When engaging in this analysis, it is important to be mindful that children’s educational achievements are impacted on by the skills and ability of the child, as well as the kaiako and the education of their parents, with maternal education and literacy being particularly important¹².

The OLLi logic model identifies key outcome areas to be explored through data sets included in the IDI:

Outcome	Data source
Improvements in literacy at school	B4 School Check PAT tests
Reduced need for additional learning support	Referrals and wait lists for learning support at schools
Improvements behaviour and social participation	Length of time in school Stand down days Exclusions and expulsions
Improvements in educational outcomes	NCEA results
Improved employment and earnings	Employment status Average income
Reduced welfare costs and offending	Level of benefit Police and justice system data. To support this analysis, the level of offending or involvement with Police would need to be defined.

While each of the proposed analyses are feasible through the IDI, it important to recognise the system level impacts and supports needed to support people in achieving positive outcomes, both educational, health and otherwise. Our current systems and

¹² Hattie, J. (2008). Visible learning: A synthesis of over 800 meta-analyses relating to achievement (1st ed.). London: Routledge.

processes, such as access to services and supports are not equitable. This means that specific groups of people in New Zealand, notably Māori and Pasifika experience greater inequities in terms of health and educational outcomes. These factors would need to be accounted for in any analysis and more specifically in determining the contribution of OLLi to the longer-term outcomes identified in the logic model.

We would recommend that the analysis focuses on the B4SchoolCheck and wait lists and referrals to learning support services and PAT tests. This would provide the most credible insight into the longer-term impacts of OLLi within a timeframe that can provide the Ministry with confidence on the sustainable value of OLLi for children engaged.

We would also suggest that longer term impacts should be explored through engaging with the ELS involved in OLLi to see if the cultural shifts and teaching practices have been sustained, as this will support the systemic changes that are needed, rather than only exploring the sustainability of outcomes for specific cohorts of children.

11. OVERVIEW AND KEY CONSIDERATIONS

The process evaluation to date has provided timely insight into the implementation of OLLi and its evaluation. This formative feedback will be important for ensuring that the implementation of OLLi is consistent across the different tiers and will support the outcomes for the children, kaiako and ELS taking part in the intervention.

Overall, the SLTs and ELSs highly value OLLi and its contribution to supporting oral language and literacy development. Changes in capability were described for the kaiako, children and ELSs engaged in OLLi.

In comparison to other one-off models of professional development, the delivery format of OLLi was valued for supporting kaiako to apply their learning with the support of the SLT. This was largely related to the ABC & Beyond programme.

When reviewing the findings from the process evaluation, it is important to remember that OLLi is still in its early stages of implementation and some variations and adaptations to delivery are to be expected. Variations in implementation tended to relate to the capacity of the SLTs to support delivery across the RTI model and supporting the evaluation, the different availability and needs of the ELSs and kaiako, and the confidence and experience of the SLTs to deliver Tier 1.

In general, Tier 1 was more challenging for some ELSs and SLTs than the other two tiers. Regardless, indications of ELS' supporting systemic changes are seen in some ELSs making changes to the centre's environment demonstrating the prioritisation of oral language and literacy across the service.

The evaluation data provided a more limited insight into the achievements of Tier 3. In terms of process, it has identified the challenges kaiako experienced identifying children for this tier. The limited capacity for the SLTs to support this process also impacted on the implementation of Tier 3.

The supervision and support of the SLTs could be enhanced in some areas, as this varied across the regions. This could be supported by clarifying the roles of the regional office staff and building on the national opportunities to share learning and training for the SLTs. They are particularly keen to learn from others adopting this type of approach, and the opportunity to build their skills for supporting tier 1.

In cohort two, the kaiako and SLTs supported the evaluation through the distributing and collecting signed consent forms and data collection. Consent forms and processes to support the evaluation were noted as a challenge by the SLTs and the kaiako. A more streamlined process to support the set up and implementation of the evaluation would be beneficial and less confusing for those involved. The key considerations section that follows presents some ideas to support this.

The outcome evaluation approach was feasible in terms of the selection of the MacArthur Bates tool. However, variation in MacArthur Bates tool administration will impact on the results of the outcome evaluation. Moreover, SDQ was considered to be less relevant by some kaiako and it was not used. The administration of both tools by the

kaiako was also feasible. However, the burden of the evaluation on the kaiako and SLTs will challenge a systematic approach to data collection. There was particular variation in the collection of post or follow-up data. This must be addressed to support the feasibility of the outcome evaluation approach and expected changes within the six-month timeframe for each cohort.

11.1 Key considerations

The evaluation identified the following considerations:

Managing delivery within existing capacity

- Reducing the administrative burden on SLTs to enable them to work at the top of their scope and focus on the delivery of OLLi. This could be supported by:
 - o Sifting the consent process with the outcome evaluation
 - o Adopting online systems to support the completion of the outcome tools, which reduce the need for SLTs to upload them into the CMS.
- Ensure cover for SLTs if they are unwell or on annual leave, as the planned delivery of the cohorts means that if someone resigns or goes on extended leave delivery would be put at risk. This is also important for reducing the potential for SLT burnout.

Reviewing and/or adapting delivery of the RTI model

- Review the current approach to implementation with the SLTs and identify an approach that ensures that tiers 1 and 3 are more systematically implemented. Options suggested included:
 - o Reviewing the timing of the different tiers and develop a 'best practice' approach
 - o Extending SLT's engagement with the ELs beyond the duration of a cohort; this is less feasible within the planned cohorts
 - o Assessing the readiness of ELs to engage in tier 1 to support the SLTs in delivering this component of the work
 - o Better support kaiako to identify children for tier 3
- Use case studies from earlier cohorts to support other ELs in understanding what is involved in tiers 1 and 3.

Sharing successes to support recruitment

- Use the positive findings from this evaluation and the experiences of the ELs to support the recruitment of other services. Case studies could be useful here.

Professional development and supervision for SLTs

- Engage with regional service managers to clarify their role and the supervision supports for SLTs.
- Continue to build on national opportunities to share learning and support across the SLTs. Focusing on tier 1 initially would be beneficial.

Enhancing communication

- Challenges with communication across a national programme were identified. Potential solutions included:
 - o Maximising opportunities for two-way communication to ensure that SLTs feel heard and responded to
 - o Sharing updates that activities/actions are happening, even if they are not complete yet
 - o Clarifying communication processes with some regional offices.

Enhancing and understanding sustainability

- Consider re-engaging with a sample of ELS to identify the sustainability of the changes in cultural and teaching practices
- Ensure that sustainability of skills is part of the engagement with the ELSs to ensure that the changes are not lost when a kaiako leaves. 1 is likely to be the critical tier at this stage.

Evaluation design and implementation

In terms of the evaluation, this process evaluation had highlighted the value of:

- Reducing the burden of the consent process i.e. greater clarity through a flow chart or check list
- Clarifying with SLTs and ELS the approach to implementing any data collection tools to ensure consistency
- Re-engaging with Cohort 1 or 2 ELSs to evaluate sustainability of outcomes
- Capturing local adaptations during the process evaluation to ensure that these inform the outcome evaluation
- Consider options for engaging parents/carers in the evaluation, as this was explored through this evaluation but was not achieved. The services suggested an opportunistic approach however, this did not eventuate in the engagement of any parents/whānau/carers. Synergia and the OLLi project team will be exploring other options with the SLTs for cohorts 3 and 4.

12. APPENDIX 1: KAIAKO SURVEY ANALYSIS

Kaiako participating in cohort 2 of OLLi were sent a link to the online survey at the start of OLLi. The survey asked a series of questions to establish a baseline dataset, although it should be noted that most kaiako had already attended the first ABC & Beyond workshop by the time they had responded to the survey. The baseline explored the attitudes and beliefs of kaiako related to oral language and literacy in ECE, as well as establishing the current context and culture of centres as they begin their work with OLLi. The survey also asked a set of questions related to kaiako behaviour when interacting with children at their centre, and their confidence when practicing these behaviours.

Respondents were asked the same questions in a post-intervention survey, which was sent after their completion of ABC & Beyond. The post survey also included additional questions seeking formative feedback for the process evaluation.

The following table identifies the response rates:

Survey	Number of invitations sent	Response Rate
kaiako pre-survey	125 kaiako from 7 SLTs	67 (54%)
kaiako post-survey	147 kaiako from 8 SLTs	59 (40%)

The analysis of the survey responses involved converting these categorical responses into a numerical proportion of the highest response as follows:

- Strongly disagree/Never = 0.00
- Disagree/Few opportunities = 0.25
- Neither agree nor disagree/Some opportunities = 0.50
- Agree/Most opportunities = 0.75
- Strongly agree/Every opportunity I had = 1

These proportional scores were then averaged across all the pre-survey responses and compared with the post-survey average for the aggregate analysis. For the individual analysis, the same process was carried out with matched pairs, for only the individuals who completed both the pre- and post-survey (n=26). The numbers on the graphs below are the result of this analysis.

When reviewing these findings, it is important to be mindful of the small sample sizes. Due to the small sample, we present matched pairs and aggregated data to provide further insights into the available data.

Pre-post survey questions

Figure 8: Matched pre-post comparison of kaiako rating their agreement with the following statements (n=26)

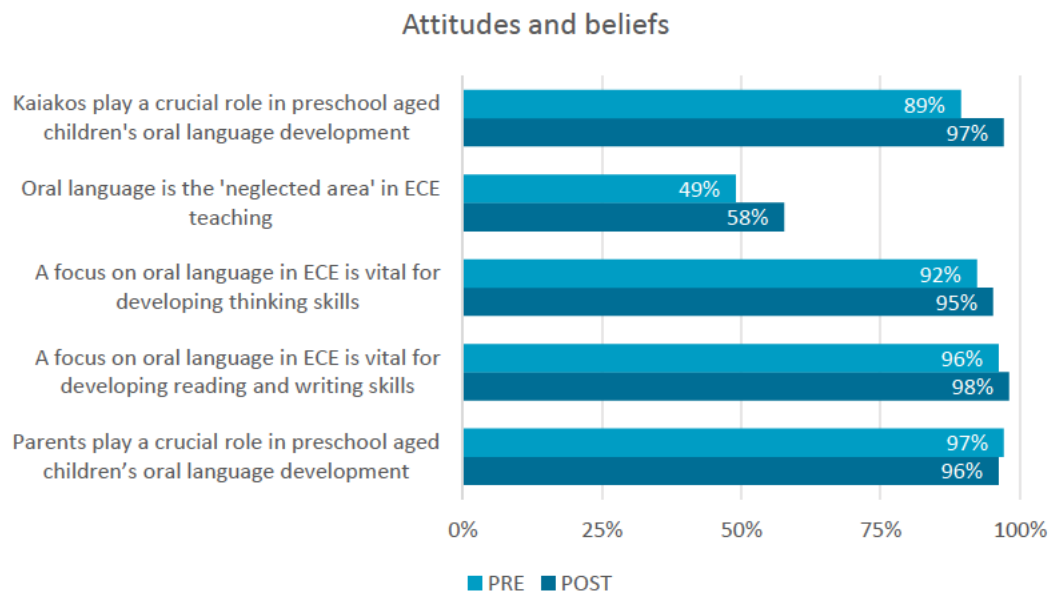


Figure 9: Aggregate pre-post comparison of kaiako rating their agreement with the following statements

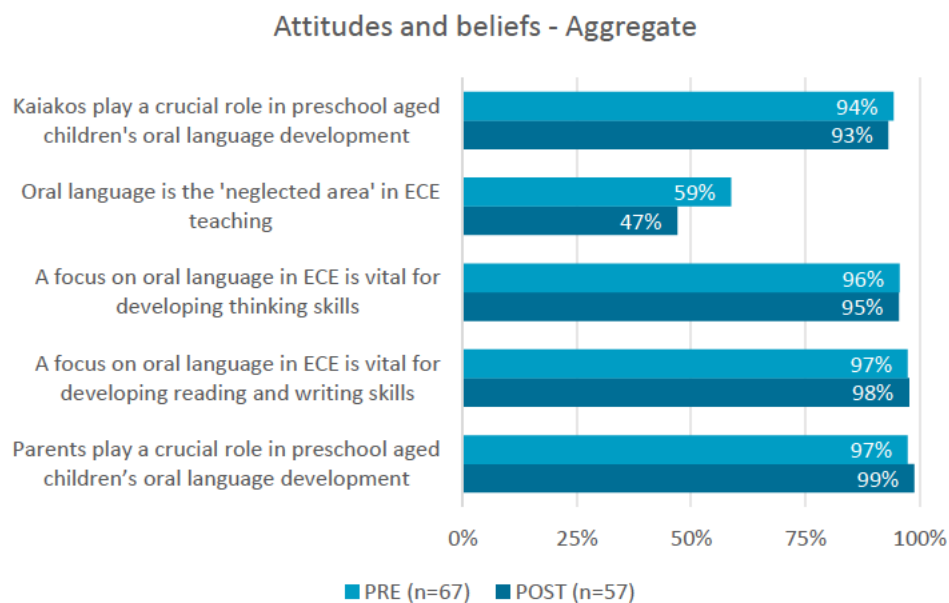


Figure 10: Pre-Post comparison of kaiako rating their agreement with the following statements (n=26)

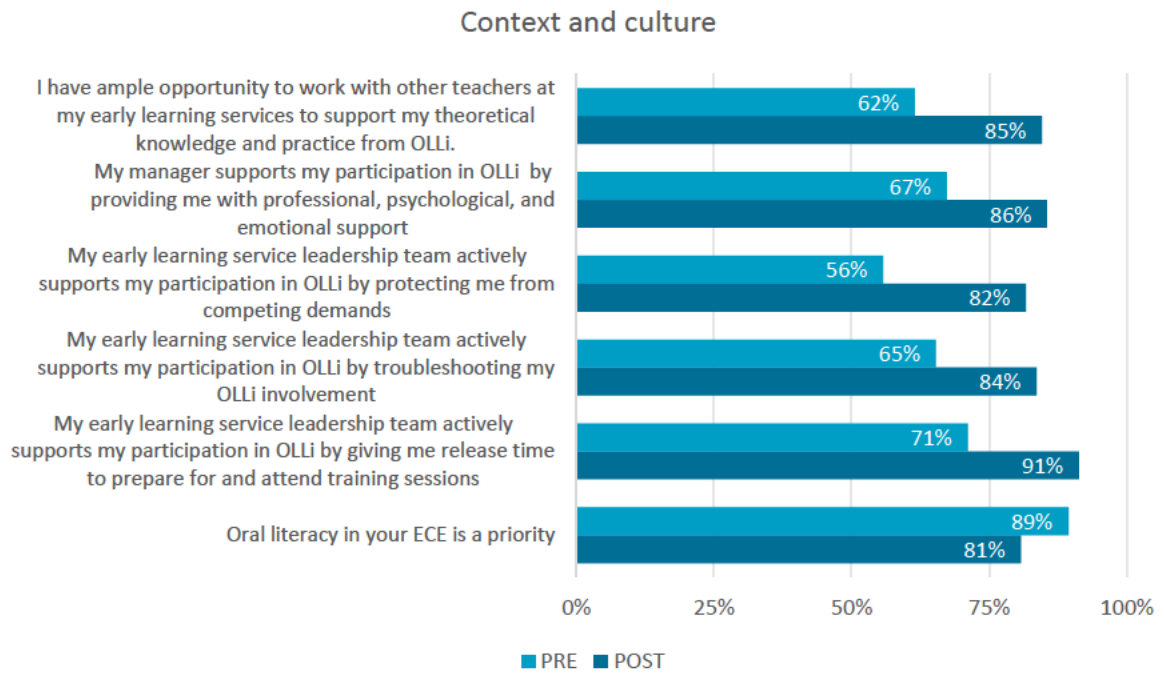


Figure 11: Aggregate pre-post comparison of kaiako rating their agreement with the following statements

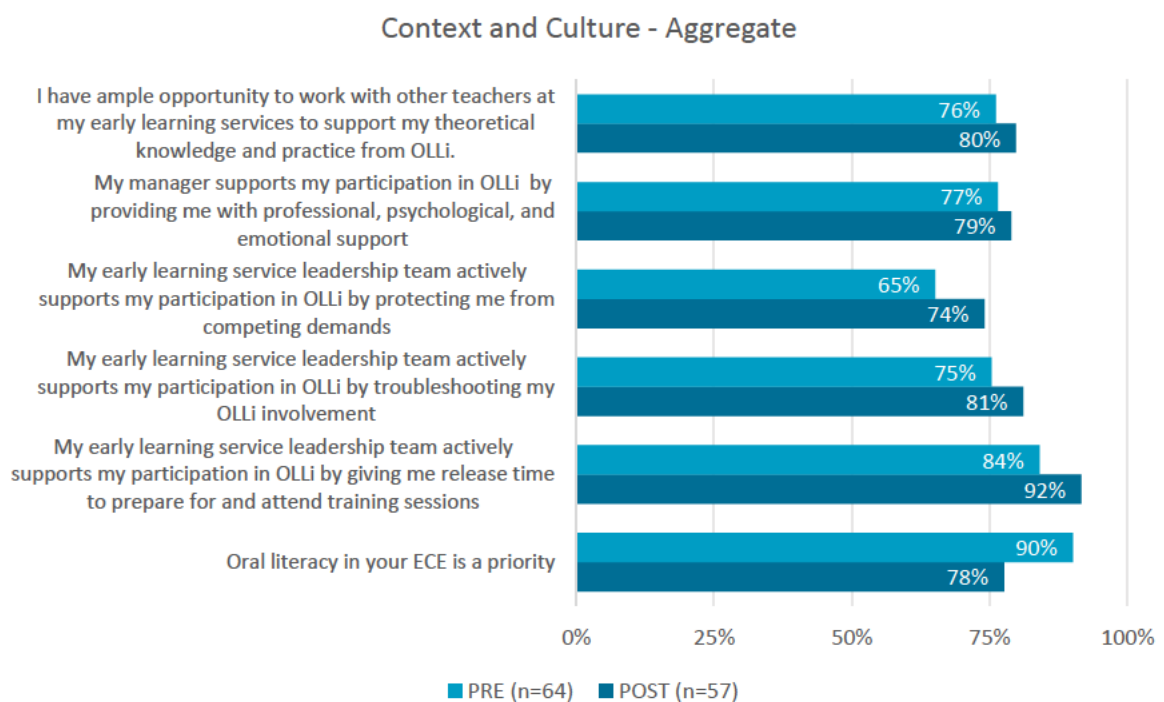


Figure 12: Pre-post comparison of kaiako carrying out actions in the previous week (n=26)

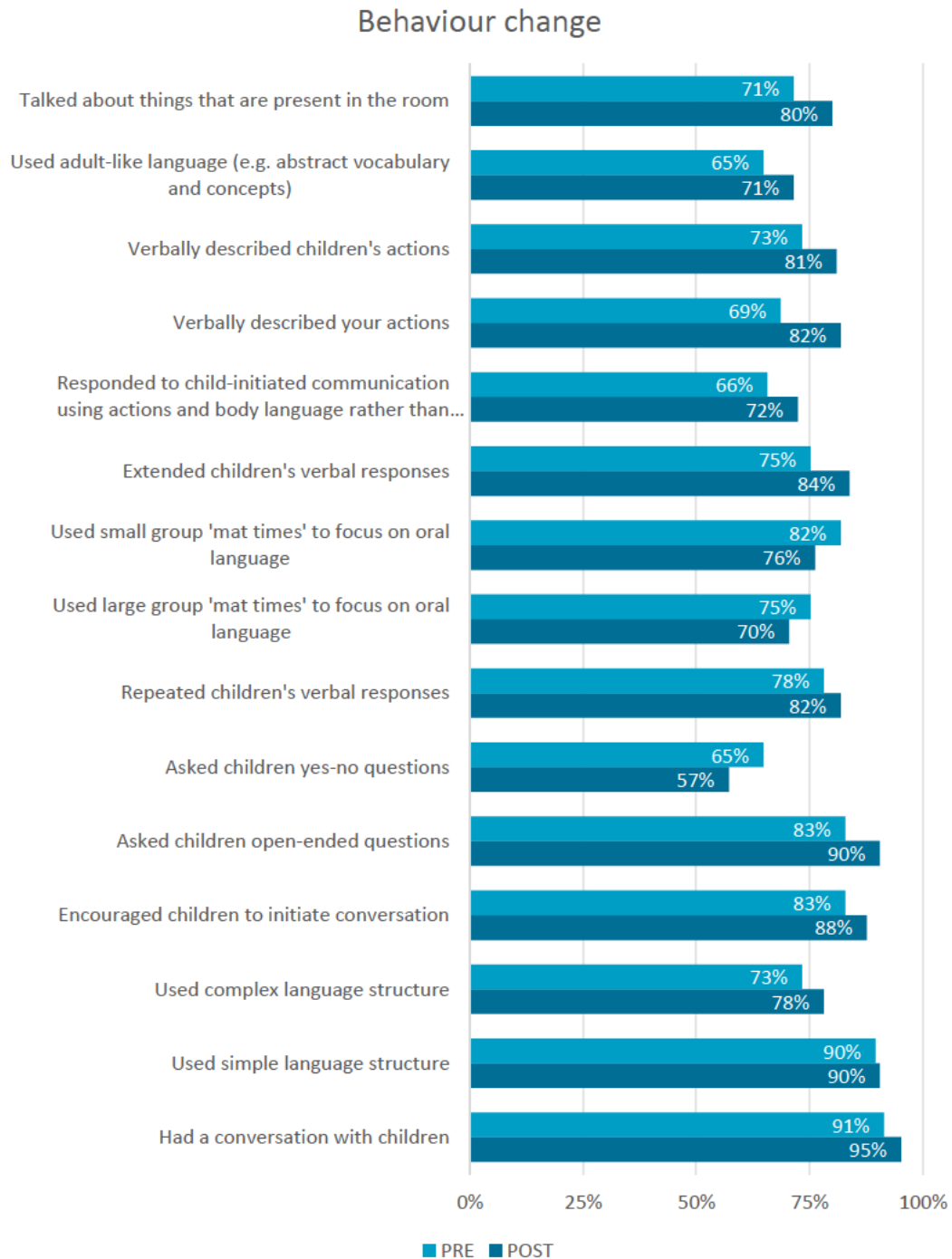


Figure 13: Aggregate pre-post kaiako carrying out certain activities in the previous week

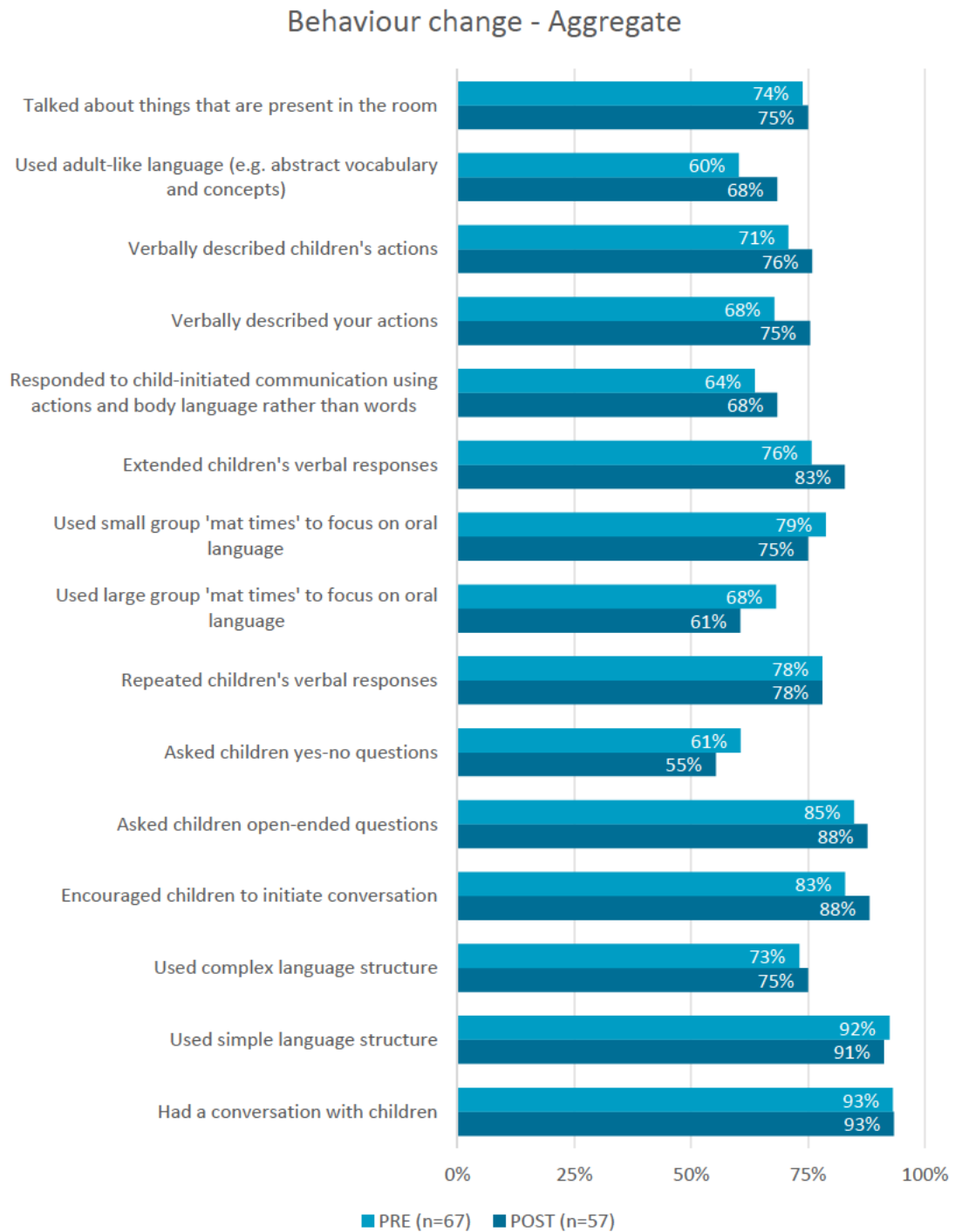


Figure 14: Pre-Post comparison of kaiako survey respondents rating their confidence in carrying out the following actions (n=26)

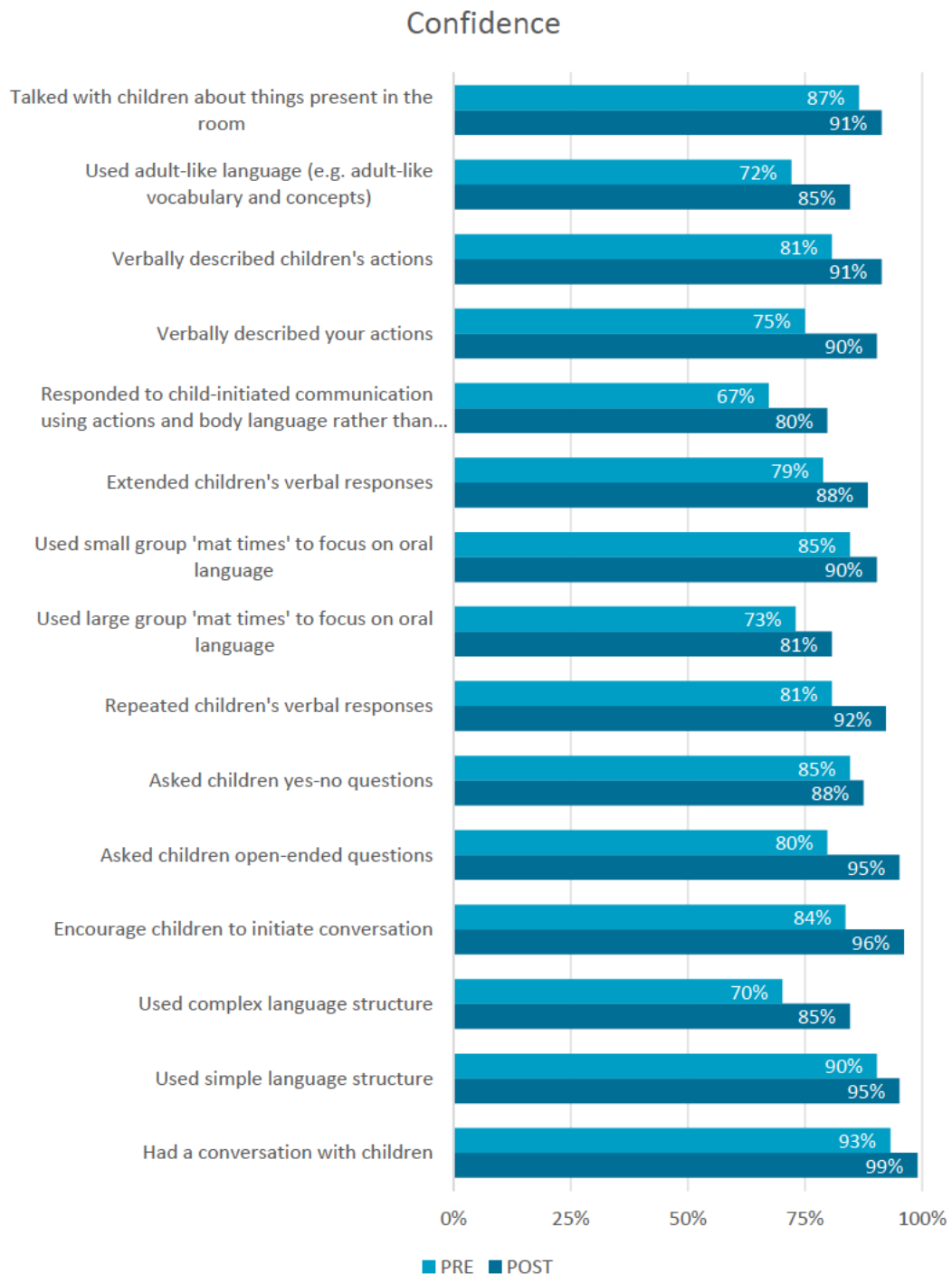
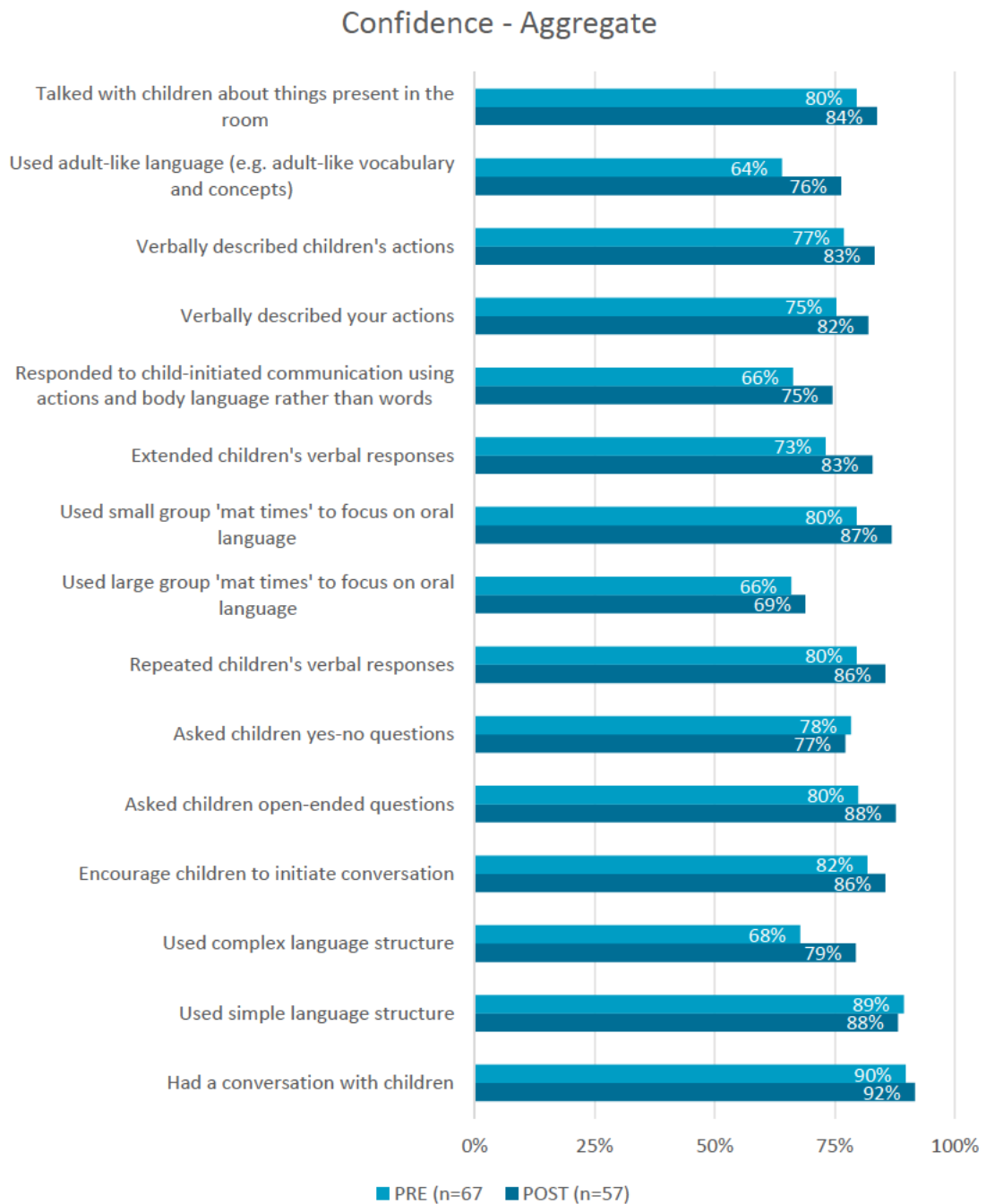
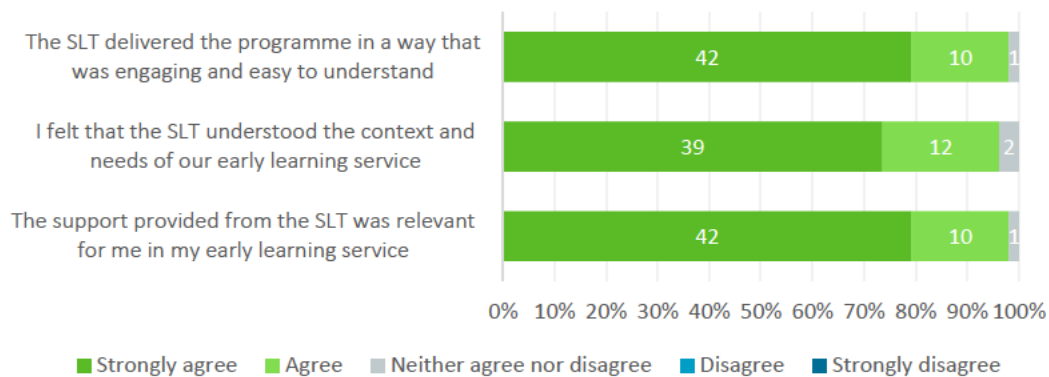


Figure 15: Aggregate pre-post comparison of kaiako survey respondents rating their confidence in carrying out the following actions



Post survey questions

Figure 16: Kaiako perceptions on the support provided (n=53)



18 people chose to explain their answers with comments. Most of these comments (12) communicated themes of positive and engaging delivery styles of SLTs.

"[SLT] was great. The sessions were fun, and we were able to communicate openly and honestly through out. I felt very supported when I struggled with a few of the concepts, there was never any judgement." – kaiako survey response

"[SLT] has a really great delivery style so it never felt tedious or boring when we attended each workshop." – kaiako survey response

Other comments included having a knowledgeable SLT, highly recommending the programme, and strategies being easy to put into practice. One comment indicated they would have been good for the SLT to have a chance to observe the needs of the children in their ELS:

"It would be great if the SLT had an opportunity to observe tamariki at the kindergarten to see their needs in regards to English being second language before starting this course with kaiako." – kaiako survey response

Another person commented on the confusion with different sets of children and the paperwork:

"The needs for the centre was a bit confusing because I realised that OLLi was focussed on 2 sets of children. One set was for the programme and the other set were to identify children with severe needs. The paper work was a bit confusing too. Probably needs to be made clear on the onset." – kaiako survey response

Question: If you could change one thing to make OLLi delivery better, what would it be?

- Shorter workshops (4)
- Share the OLLi learning with more kaiakos (4)

"I would like to see training done with Primary teachers to support continuity of strategies for our children and to develop better relationships with primary teachers" – kaiako survey response

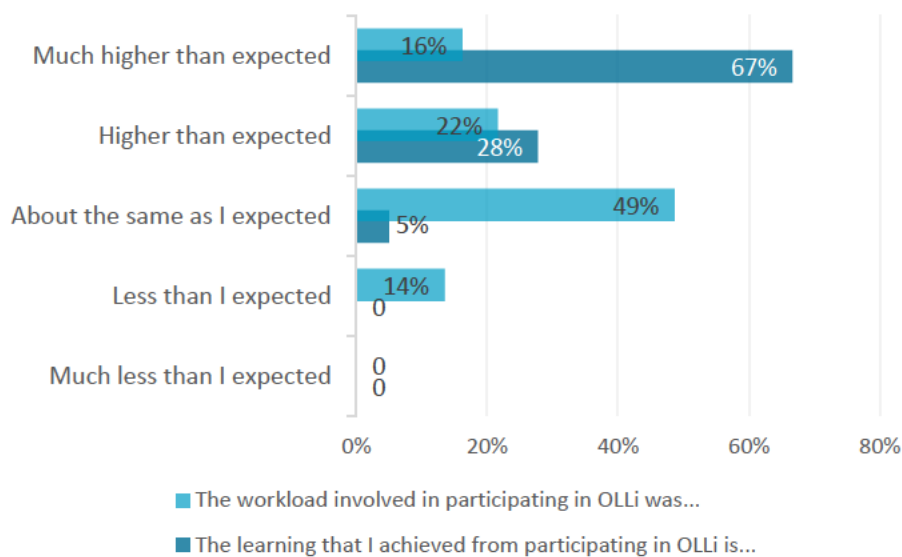
- Longer timeframe for the cohort (3)
- Ongoing follow up (2)

"I would like there to be continuous follow up from the SLT not just one or two visits but forever - what I mean by this is that this content is so important and needs teams to be on board. For it to work we need to be accountable for making sure it is continued to be presented for our team and our tamariki." – kaiako survey response

- More video feedback (2)
- Preferring sessions scheduled at different times (2)
- Other comments included beginning internal evaluation earlier, not having to work with identified children and accompanying paperwork, having course delivered by someone with experience of working with children on the floor, and more interactive activities.

"Encourage services to begin their internal evaluation before the OLLi workshops begin. Once you are accepted into the programme would be a good time to encourage/promote the internal evaluation." – kaiako survey response

Figure 17: Expectations versus reality for kaiako workload and learning



Question: How likely is it (on a scale of 1-10) that you would recommend OLLi to another learning service? (n=37)

Standard Net Promoter Score calculation was used to support this analysis. This includes the classifications of promoters, passives and detractors. The Net promoter score = 84%

- 32 Promoters (9-10)
- 4 Passives (7-8)
- 1 Detractor (1-6).

13. APPENDIX 2: MACARTHUR BATES ANALYSIS

The MacArthur Bates analysis is based on the dataset provided to Synergia on the 4th January 2019. There were a total of 244 unique child assessment scores using the MacArthur Bates outcome tool (Table 10). It is important to be mindful of the small sample size here, as the total population would have been approximately 1500.

Table 10: Summary of MacArthur Bates responses

Variable	Count (n)	Mean	Std Dev	Min	Max
Parent_Pre	88	70.5	31.4	4	124
Parent_Post	20	69.6	37.8	6	117
Kaiako_Pre	103	56.1	36.0	0	121
Kaiako_Post	33	67.3	37.5	0	116

13.1 Kaiako collected data

A two-sample t-test of all kaiako collected MB-3 assessments demonstrates a difference in means of 11.2 between the pre-intervention and post-intervention scores. However, the difference is not statistically significant, $p = 0.12$).

Table 11: Two sample t-test for kaiako collected matched pairs

Variable	Count (n)	Mean	Std Err	Std Dev	95% Conf Int	
Kaiako_Pre	103	56.1	3.5	36.0	49.1	63.1
Kaiako_Post	33	67.3	6.5	37.5	54.0	80.6
Combined	136	58.8	3.1	36.6	52.6	65.0
Difference		11.2	7.3		-3.2	25.6

There were 26 matched pairs for kaiako collected MB-3 assessments. A paired t-test on the total assessment scores demonstrates a significantly higher mean post-intervention scores, $p < 0.001$, when compared to pre-intervention scores (47.5 vs 66.2 respectively).

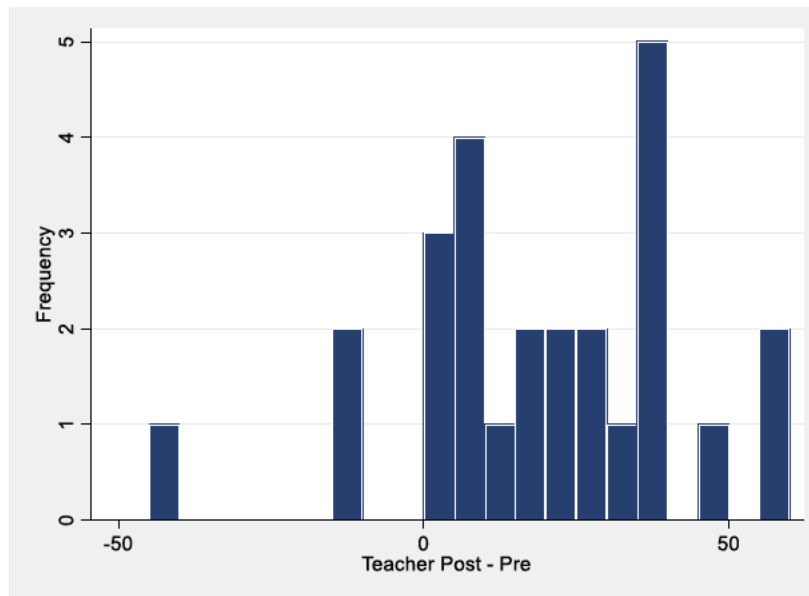
Table 12: Paired t-test for kaiako collected matched pairs

Variable	Count (n)	Mean	Std Err	Std Dev	95% Conf Int	
Kaiako_Pre	26	47.5	6.0	30.8	35.1	59.9
Kaiako_Post	26	66.2	7.7	39.4	50.3	82.0
Difference	26	18.7	4.5	22.8	9.4	27.9

The substantial difference in mean pre-intervention scores for all kaiako collected assessments compared to only those with a post-intervention score collected (56.1 to 47.5) suggests **there may be a risk of bias** if the post assessments are not systematically conducted.

Distribution of pre and post scores is shown in Figure 18.

Figure 18: Distribution of individual pre-post *differences* for kaiako collected MB-3 scores (n=26)



13.2 Parent responses

A two-sample t-test of all parent collected MB-3 assessments demonstrates a difference in means of 0.9 between the pre-intervention and post-intervention scores. This difference is not statistically significant at the 0.05 level ($p=0.907$).

Table 13: Two sample t-test for parent collected matched pairs

Variable	Count (n)	Mean	Std Err	Std Dev	95% Conf Int	
Parent_Pre	88	70.5	3.3	31.4	63.9	77.2
Parent_Post	20	69.6	8.5	37.8	51.9	87.3
Combined	108	70.4	3.1	32.5	64.2	76.6
Difference		0.9	8.1		-17.0	15.1

There were only 9 matched pairs for parent collected MB-3 assessments. A paired t-test on the total assessment scores for these children demonstrates a difference in means of 26.4 between the pre-intervention scores and post-intervention scores which was statistically significant ($p = 0.028$). This analysis is exploratory due to the small sample size.

Table 14: Paired t-test for parent collected matched pairs

Variable	Count (n)	Mean	Std Err	Std Dev	95% Conf Int	
Parent_Pre	9	63.6	11.2	33.7	37.6	89.5
Parent_Post	9	90.4	12.0	36.1	62.7	118.2
Difference	9	26.9	9.3	27.8	5.5	48.3

However, the mean scores for the pre and post scores differ substantially between those children included in the matched pairs to the aggregate scores for all children which again raises the **potential risk of bias** in the children who received both a pre and post assessment.

13.3 Comparing parent and kaiako responses

For both parents and kaiakos there was a larger number of pre-assessments collected than post-assessments. There was also a higher number of kaiako collected assessments than parent collected (Table 10).

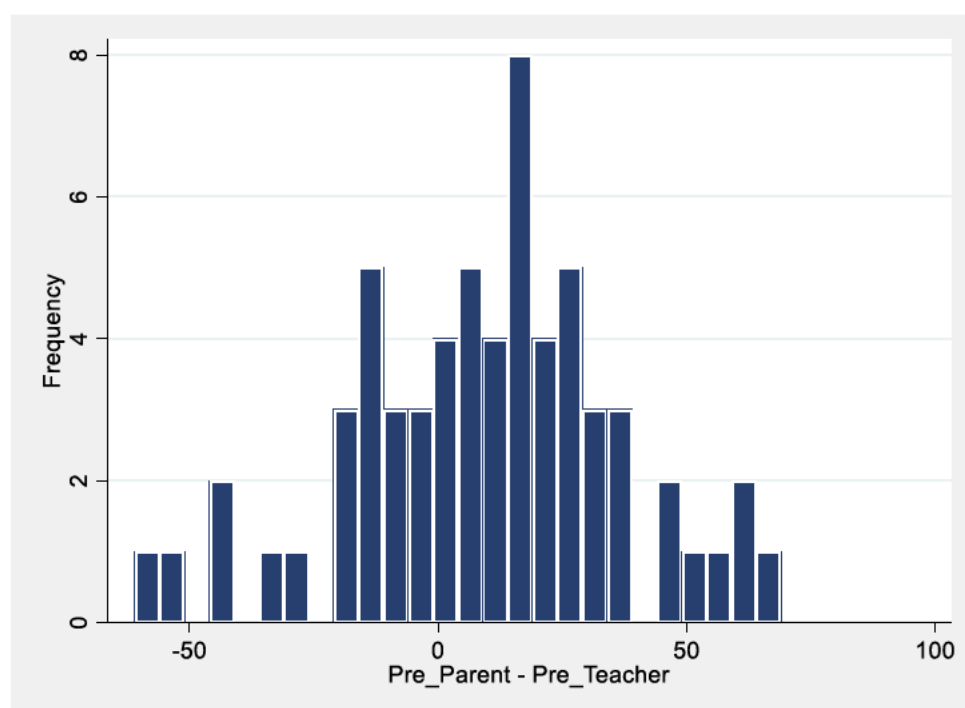
For the pre-assessments, there were 63 children that had been scored by both parents and kaiakos. On average, parents scored their children's oral language and literacy significantly higher (i.e., by 9.0 units), $p = 0.01$, than kaiakos.

Table 15: Paired t-test for parent compared to kaiako collected pre assessment scores (n=63)

Variable	Count (n)	Mean	Std Err	Std Dev	95% Conf Int	
Parent_Pre	63	76.7	3.7	29.4	69.3	84.1
Kaiako_Pre	63	67.7	4.5	35.7	58.7	76.7
Difference	63	9.0	3.4	27.1	2.2	15.8

Distribution of pre and post scores is shown in Figure 19.

Figure 19: Distribution of individual parent vs kaiako differences for pre-assessment scores (n=63)



14. APPENDIX 3: SDQ ANALYSIS

The Strengths and Difficulties Questionnaire (SDQ) analysis is based on the dataset provided to Synergia on the 4th January 2019. There were a total of 162 unique child total difficulties scores using the SDQ (Table 16). The total difficulties score consists of the scores from: conduct problems, emotional problems, hyperactivity problems, and peer problems.

Table 16: Summary of SDQ responses for total difficulties score (n=162)

Variable	Count (n)	Mean	Std Dev	Min	Max
SDQ_Pre	135	7.6	5.4	0	20
SDQ_Post	27	7.8	6.2	0	25

14.1 Total difficulties score

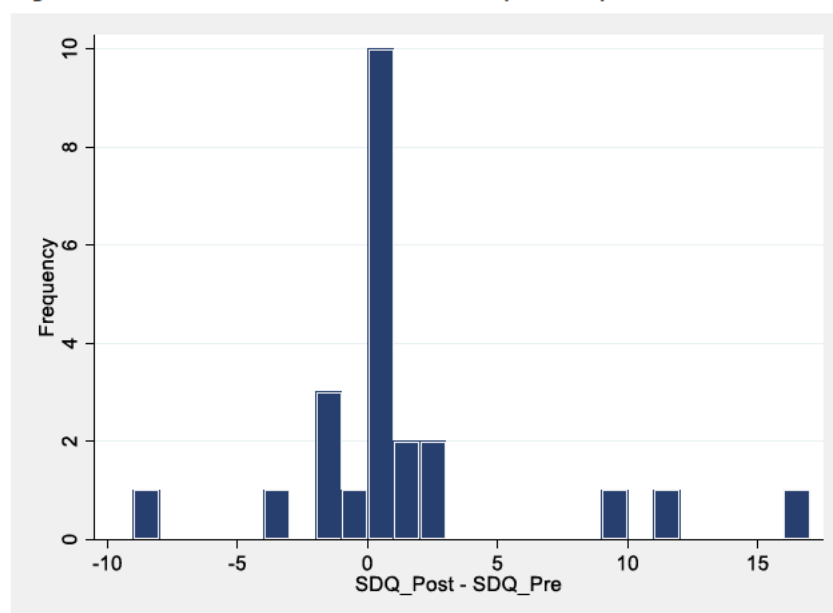
A paired t-test on 23 matched pairs on the total difficulties scores demonstrates a 1 unit difference in means between the pre-intervention scores and post-intervention scores which was not statistically significant ($p = 0.36$).

Table 17: Paired t-test for SDQ total difficulties scores

Variable	Count (n)	Mean	Std Err	Std Dev	95% Conf Int	
SDQ_Pre	23	6.7	1.0	4.9	4.6	8.8
SDQ_Post	23	7.7	1.4	6.5	4.8	10.5
Difference	23	-1	1.1	5.2	-3.2	1.2

There were 10 children with no difference between their pre- and post- scores (Figure 20).

Figure 20: Distribution of difference between pre- and post- total difficulties scores (n=23)



14.2 Prosocial scores

A paired t-test on 23 matched pairs for the prosocial scores found no significant difference between pre- and post- scores for the prosocial scores ($p = 0.40$).

Table 18: Paired t-test for SDQ prosocial scores

Variable	Count (n)	Mean	Std Err	Std Dev	95% Conf Int	
Pre_Prosocial	23	7.1	0.48	2.3	6.1	8.1
Post_Prosocial	23	7.5	0.42	2.2	6.7	8.4
Difference	23	-0.4	0.46	2.2	-1.3	0.56

Distribution of pre and post scores is shown in Figure 21.

Figure 21: Distribution of difference between pre- and post-prosocial scores (n=23)

