

# Infants and toddlers: competent and confident communicators and explorers



JUNE 2015

# Ko te Tamaiti te Pūtake o te Kaupapa

## The Child – the Heart of the Matter



Published 2015

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Education Evaluation Reports

ISBN 978-0-478-43821-5



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## Foreword

This report focuses on the quality of education for our youngest children – our infants and toddlers. Early childhood services build on a child’s learning at home and have the opportunity to maximise this important period of development.

Children learn through play. This report provides evidence of stimulating environments in which infants and toddlers were able to explore, communicate, make choices, express themselves and be challenged. These early childhood services provided an environment in which our youngest children thrive. They were given the space, time and relationships needed to develop into competent and confident communicators and explorers.

Overall, the young children in these services were well cared for and they were safe. ERO did find variability in how well services supported infants and toddlers as communicators and explorers and this variability was across all service types. While providing a nurturing environment, the next step for some of these services is to focus on learning opportunities through play and language.

The best results happen when teachers, leaders, parents and whānau work together at every stage of a child’s development and learning. A collective, cohesive approach ensures the child is the heart of the matter.



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June 2015

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## Overview

Good quality early childhood education and care for infants and toddlers has lasting benefits for children and their parents and whānau.<sup>1</sup> This time is a critical and fundamental period of development for children as it lays the foundations for lifelong learning. The communication and exploration strands of *Te Whāriki*, the Ministry of Education's curriculum for early childhood, are crucial to these foundations.<sup>2</sup>

The number of infants and toddlers participating in early childhood education (ECE) has considerably increased. In 2000, 49,322 children up to two years of age were enrolled in early childhood services. This had increased by 53 percent to 75,514 in 2013.<sup>3, 4</sup>

This report presents ERO's findings about how well 235 early childhood services reviewed during Terms 1 and 2, 2014 supported infants and toddlers to become competent and confident communicators and explorers. We were interested in finding out what was happening in early childhood services where infants and toddlers were well supported as communicators and explorers. We also wanted to know about the challenges or barriers for services that were not as successful in supporting infants' and toddlers' learning and development.

ERO used *Te Whāriki's* definition of infants as children aged from birth to 18 months, and toddlers as children aged from one to three years. *Te Whāriki* positions infants and toddlers as learners with individual preferences, needs and desires:

*Infants, toddlers and young children have distinctive and different needs and characteristics. These will determine the focus of the curriculum as it applies for each learner.<sup>5</sup>*

### WHAT DID ERO FIND?

Early childhood services gave priority to establishing warm and nurturing relationships with infants and toddlers and had less emphasis on communication and exploration. Although ERO found variability in how well services supported infants and toddlers as communicators and explorers, structural issues did not appear to contribute to variability in the sample of services reviewed. Variability was found across services with different ratios, group sizes and percentages of qualified and registered teachers.

- 1 Dalli, E et al. (2011). *Quality early childhood education for under-two-year-olds: What should it look like? A literature review*. Retrieved from [www.educationcounts.govt.nz/publications/ECE/Quality\\_ECE\\_for\\_under-two-year-olds/executive-summary](http://www.educationcounts.govt.nz/publications/ECE/Quality_ECE_for_under-two-year-olds/executive-summary)
- 2 The communication and exploration strands are part of a holistic framework integral to *Te Whāriki*.
- 3 Data includes kindergartens, Playcentres, education and care services, and home-based education and care networks. It excludes Te Aho o Te Kura Pounamu – The Correspondence School and Te Kōhanga Reo. Retrieved from [www.educationcounts.govt.nz](http://www.educationcounts.govt.nz). The Ministry of Education currently reports child hours not the number of children enrolled – a child may be enrolled in two different services.
- 4 See [www.educationcounts.govt.nz](http://www.educationcounts.govt.nz) for more detail.
- 5 Ministry of Education. (1996). *Te Whāriki, He Whāriki Mātauranga mō ngā Mokopuna o Aotearoa, Early Childhood Curriculum*. (p.20). Retrieved from [www.educate.ece.govt.nz/~media/Educate/Files/Reference%20Downloads/whariki.pdf](http://www.educate.ece.govt.nz/~media/Educate/Files/Reference%20Downloads/whariki.pdf)

### A RESPONSIVE CURRICULUM

Just over half of the services in the sample (56 percent) had a responsive curriculum that supported infants and toddlers to become competent and confident communicators and explorers.<sup>6</sup> Teachers<sup>7</sup> in these services were attuned and responded to infants' and toddlers' verbal and non-verbal communication. The children were encouraged to try new things and to explore the experiences they were interested in more deeply.

In the most responsive of these services, children experienced a high quality curriculum and responsive interactions and relationships. Children's interests and their parents' aspirations informed the curriculum and daily routines. How well each service promoted positive learning outcomes for infants and toddlers was most influenced by:

- high quality leadership
- a highly reflective culture where teachers inquired into and regularly reflected on their teaching practice
- whole-staff professional learning and development in relation to infants and toddlers.

These factors meant infants and toddlers experienced a curriculum that fostered and extended their learning and development.

### A LESS RESPONSIVE CURRICULUM

The services that were less responsive continued to give priority to wellbeing and belonging, but provided less opportunity for infants and toddlers to become confident communicators and explorers. Although teachers usually responded to infants' verbal and non-verbal communication they did not build on these opportunities for rich extended conversations or oral language development. There were fewer opportunities for infants to explore and develop physical confidence. Teachers were less likely to use what they knew about individual infants' and toddlers' interests and developmental milestones to provide experiences that supported children's abilities to actively explore and communicate in many ways.

Infants were often better supported than toddlers in these services. In the main, infants enjoyed warm and nurturing relationships with teachers. They experienced routines that reflected their home environment through reciprocal relationships between key teachers,<sup>8</sup> infants' and their parents. In contrast, toddlers were less likely to experience a curriculum that linked the home and the service and extended their interests – the focus was more often on behaviour and routines. Toddlers in these services were also less likely to experience a supportive and well-planned transition from spaces for children up to two years old to spaces for children over two years.

6 'Responsive curriculum' is explored further in the Findings section.

7 The term teacher as used in this report refers to teacher, educator and kaiako.

8 Key teachers are the people who have the most knowledge about each child and their family/whānau. They are responsible for sharing this knowledge and making decisions regarding the child's learning and development, teaching and learning strategies, and teacher practices, in collaboration with the rest of the teaching team. Retrieved from [www.educationcounts.govt.nz/\\_data/assets/pdf\\_file/0011/22601/COI-Massey-Childcare-Centre-Ako-Ngatahi-Teaching-and-Learning-Together-as-One.pdf](http://www.educationcounts.govt.nz/_data/assets/pdf_file/0011/22601/COI-Massey-Childcare-Centre-Ako-Ngatahi-Teaching-and-Learning-Together-as-One.pdf)

## CHALLENGES

When designing and implementing their curriculum for infants and toddlers, many early childhood services need to broaden their focus from the wellbeing and belonging strands of *Te Whāriki* to also include the communication and exploration strands.

The communication and exploration strands offer teachers opportunities:

- to respond to children's interests
- to help them to develop working theories and dispositions for learning
- to increase children's understanding of the world around them.

ERO identified that many of the services judged to have 'limited responsiveness' had the capability to make improvements to better focus on communication and exploration for their infants and toddlers.

Infancy and toddlerhood are critical periods for children's learning and development. If supported well, children are more likely to experience success as lifelong learners.

## Next steps

### RECOMMENDATIONS

ERO found that most services have a strong foundation on which to further improve the responsiveness of their curriculum for infants and toddlers.

ERO recommends that early childhood services:

- note the good practice examples of highly responsive services in this report
- use this report, including the self-review questions in Appendix 1, to evaluate and improve, where necessary, their curriculum and practice for infants and toddlers
- specifically focus on communication and exploration for infants and toddlers when reviewing planning, assessment, appraisal goals and evaluation processes
- review their processes to ensure that toddlers are well supported during transitions within the service.



## Introduction

This report investigates whether early childhood services provided a curriculum that promoted positive learning outcomes for infants and toddlers and enabled them to become competent and confident communicators and explorers. The goals in the communication and exploration strands of *Te Whāriki* are the foundation for children's future learning.

ERO's evaluation was prompted by recent reports that highlighted the need to focus on how infants and toddlers are supported in New Zealand's early childhood education sector. These reports identified the importance of ensuring that those working with children up to two years of age understand and are able to respond to them in a way that supports this critical and fundamental period of development. A sector advisory group advised the Government to provide specialised professional learning and development (PLD) for all staff working in services licensed for children up to the age of two years. The advisory group highlighted that poor quality education and care can undermine children's learning and development.<sup>9,10</sup>

The Ministry of Education (the Ministry) responded with a PLD programme for 2013 to 2015 that included a focus on strengthening early learning opportunities for infants and toddlers.<sup>11</sup> This PLD was provided for services with low participation rates or those needing support to improve practices.

Two 2013 ERO reports, *Working with Te Whāriki* and *Priorities for Children's Learning in Early Childhood Services*,<sup>12</sup> found that the exploration and communication strands of *Te Whāriki* were less visible in services' curriculum planning and assessment documentation than other strands of the curriculum. Both these strands are vital to infants and toddlers in becoming leaders of their own learning, deciding what they want to learn, and making sense of the world.

### WHY ARE COMMUNICATION AND EXPLORATION IMPORTANT?

*Te Whāriki* highlights the importance of communication and exploration as two of the five strands of the curriculum:

- Language grows and develops in meaningful contexts when children have a need to know and a reason to communicate.
- Children learn through play – by doing, by asking questions, by interacting with others, by setting up theories or ideas about how things work and trying them out, and by purposeful use of resources.

Communication is vital for children to be able to share their strengths and interests, find out what they want to know, and take increasing responsibility for their learning.

9 Ministry of Education Sector Advisory Group. (2012). *Improving quality of early childhood education services for children aged less than two years*. Ministry of Education: Wellington.

10 Office of the Children's Commissioner. (2011). *Through their lens: An inquiry into non-parental education and care of infants and toddlers*. Retrieved from [www.occ.org.nz/assets/Uploads/Reports/Education/Through-their-lens.pdf](http://www.occ.org.nz/assets/Uploads/Reports/Education/Through-their-lens.pdf).

11 Ministry of Education. (2014). *Strengthening early learning opportunities (SELO)*. Retrieved from [www.education.govt.nz/early-childhood/running-an-ece-service/employing-ece-staff/selo/](http://www.education.govt.nz/early-childhood/running-an-ece-service/employing-ece-staff/selo/).

12 Retrieved from [www.ero.govt.nz/National-Reports](http://www.ero.govt.nz/National-Reports).

## PAGE 6

*Te Whāriki* outlines four communication goals for children. These are that children experience an environment where they:

- develop non-verbal communication skills for a range of purposes
- develop verbal communication skills for a range of purposes
- experience the stories and symbols of their own and other cultures
- discover and develop different ways to be creative and expressive.

The exploration strand is grounded in the principles of holistic development and empowerment.

*Holistic Development:*

*The curriculum reflects the holistic way children learn and grow*

*Empowerment:*

*Children should experience open-ended exploration and play in an environment where tasks, activities and contexts are meaningful to children. Exploration involves learning with others as well as independently and enhances children's sense of self worth, identity, confidence and enjoyment.*

The four goals for exploration outlined in *Te Whāriki* are that children experience an environment where:

- their play is valued as meaningful learning and the importance of spontaneous play is recognised
- they gain confidence in and control of their bodies
- they learn strategies for active exploration, thinking and reasoning
- they develop working theories for making sense of the natural, social, physical and material worlds.

The goals in the communication and exploration strands of *Te Whāriki* set the foundation for young children's future learning as outlined in *The New Zealand Curriculum*.<sup>13</sup> Its vision and values describe that we want our young people to be literate and numerate, creative, energetic and enterprising. Students are encouraged to value innovation, inquiry and curiosity by thinking critically, creatively and reflectively.

In mathematics, learners explore and use patterns and relationships in quantities, space and time, and in English they succeed when they are effective oral, written and visual communicators and able to think critically and in depth. These and other learning areas in *The New Zealand Curriculum* build on the learning outlined in the communication and exploration strands of *Te Whāriki*.

13 Ministry of Education. (2007). *The New Zealand Curriculum for English-medium teaching and learning in years 1-13*. Retrieved from <http://nzcurriculum.tki.org.nz/The-New-Zealand-Curriculum>.

## CURRICULUM SPECIFIC TO INFANTS AND TODDLERS

ERO's evaluation focuses on the curriculum provided for infants and toddlers (birth to three years), particularly in relation to the exploration and communication strands of *Te Whāriki*. *Te Whāriki* states:

*The way in which each early childhood service implements curriculum will vary. Each service will develop its own programmes to meet the needs of its children, families, the specific setting, and the local community. Programmes will be based on the curriculum principles and be planned and evaluated in terms of the curriculum's strands and goals.*

*Te Whāriki* states that, to thrive and learn, an infant must have an intimate, responsive and trusting relationship with at least one other person. While infants can develop close attachments with several people, *Te Whāriki* suggests this attachment is not possible with many people. Infants must experience physical and emotional security to become confident in relationships and as learners. *Te Whāriki* provides some key curriculum requirements for infants. These are:

- one-to-one responsive interactions
- an adult consistently responsible for, and available to, each infant
- higher staff ratio than older children
- sociable, loving and physically responsive adults attuned to infant needs
- individual programmes adjusted to infant rhythms
- predictable and calm environment
- partnership between parents and other adults caring for infants.<sup>14</sup>

During toddlerhood children are evolving a sense of self and independence from adults but still need continual emotional support. Their ongoing dependence on adults is often in conflict with their growing independence and knowledge. Toddlers need lots of practice at the physical, social, reasoning and language skills they are acquiring at a fast pace. They need both challenge and comforting routines. *Te Whāriki* provides some key curriculum requirements for toddlers. These are:

- a secure environment and a programme that provides both challenge and predictable routines
- opportunities for independent exploration and movement
- a flexible approach – with spontaneity and a pace that allows toddlers to try things themselves
- adults who encourage toddlers' cognitive skills and language development
- responsive and predictable adults who understand and accept their development swings.<sup>15</sup>

14 Ministry of Education. (1996). *Te Whāriki, He Whāriki Mātauranga mō ngā Mokopuna o Aotearoa, Early Childhood Curriculum*. (p.22). Retrieved from [www.educate.ece.govt.nz/~media/Educate/Files/Reference%20Downloads/whariki.pdf](http://www.educate.ece.govt.nz/~media/Educate/Files/Reference%20Downloads/whariki.pdf).

15 Ministry of Education. (1996). *Te Whāriki, He Whāriki Mātauranga mō ngā Mokopuna o Aotearoa, Early Childhood Curriculum*. (p.24). Retrieved from [www.educate.ece.govt.nz/~media/Educate/Files/Reference%20Downloads/whariki.pdf](http://www.educate.ece.govt.nz/~media/Educate/Files/Reference%20Downloads/whariki.pdf).

The Ministry's ECE Educate website provides early childhood leaders and teachers with questions to help them reflect on their everyday teaching and learning practices in relation to communication and exploration.<sup>16</sup>

*Communication: Do you invite me to communicate and respond to my particular efforts? Do you hear me?*

*Exploration: Do you engage my mind, offer challenges, and extend my world? Do you let me fly?*

A recent review of the research evidence about the quality of education and care for children up to the age of three notes that:

*The first three years of life are a period like no other. During these early years, babies and young children experience phenomenal growth in brain development, and in their understanding of themselves and the world around them. They are active and curious learners from birth, able to lead their own learning within the context of close, intimate and supportive relationships with responsive adults.<sup>17</sup>*

This review of the research evidence suggests five key conditions for quality. These are:

- knowledgeable and capable practitioners, supported by strong leaders
- a stable team of staff with a low turnover
- effective use of staff (e.g. favourable ratios, staff continuity)
- secure yet stimulating physical environments
- engaged and involved families.

It also identifies four key dimensions of quality teaching and learning for children up to the age of three. These are:

- stable relationships and interactions with sensitive and responsive adults
- a focus on play-based activities and routines which allow children to take the lead in their own learning
- support for communication and language
- opportunities to move and be physically active.

A 2011 literature review about quality for up to two-year-olds highlights two key dimensions associated with high quality provision of education and care.<sup>18</sup> These are:

- attuned interactions that establish secure relationships which stimulate emotional and cognitive growth

16 Retrieved from [www.educate.ece.govt.nz](http://www.educate.ece.govt.nz)

17 Mathers, S., Eisenstadt, N., Sylva, K., Soukakou, E., & Ereky-Stevens, K. (2014). *Sound Foundations – A Review of the Research Evidence on Quality of Early Childhood Education and Care for Children Under Three Implications for Policy and Practice*: p 4. Retrieved from [www.suttontrust.com/researcharchive/sound-foundations/](http://www.suttontrust.com/researcharchive/sound-foundations/).

18 Retrieved from [www.educationcounts.govt.nz/publications/ECE/Quality\\_ECE\\_for\\_under-two-year-olds/executive-summary](http://www.educationcounts.govt.nz/publications/ECE/Quality_ECE_for_under-two-year-olds/executive-summary)

- an environment that is free of toxic stress (small group sizes, high adult-to-child ratios, a calm relaxed atmosphere with unhurried, individual routines).

This literature review emphasises that teaching and learning for infants and toddlers is specialised and not the same as that for older children. This is because of the different communication style of this age group and their increased need for physical care and emotional nurturing. The curriculum for infants and toddlers places the teacher at the centre and promotes the importance of attachment relationships.

An article by Rameka and Walker<sup>19</sup> discusses issues related to working with Māori babies in early childhood services in New Zealand. The authors note their concerns about the ‘non-existence of literature on Māori perspectives of infants and toddlers in early childhood education.’ Their study concluded that despite some similarities between Western and Māori perspectives on infants and toddlers, there are some differences that need to be acknowledged.

*Educators must be open to learning about and understanding te ao Māori perspectives in order for their practices with Māori babies to be culturally and socially responsive. Aroha is the foundation of the care and education of Māori babies. Educators cannot fully respect Māori babies if they do not understand the concept of aroha.*

19 Rameka, L. and Walker, R. (2012). Mā te huruhuru ka rere: birds require feathers to fly The First Years: Ngā Tau Tuatahi. *New Zealand Journal of Infant and Toddler Education*, Vol 14:2. (pp18-24).

## Methodology

### ERO'S FRAMEWORK FOR EVALUATION

An overall judgement was made for each early childhood service in response to the following evaluation question:

*To what extent does this service's curriculum promote positive learning outcomes for infants and toddlers, particularly in relation to the **communication and exploration** strands of Te Whāriki?*

ERO gathered information during regular education reviews in 235 early childhood services during Terms 1 and 2, 2014. ERO asked the following key questions in each service to inform their overall judgement:

1. What informs and influences the service's curriculum (with a focus on communication and exploration strands and associated goals) for infants and toddlers?
2. How do relationships and interactions between teachers and infants and toddlers support them in relation to the goals associated with exploration and communication?
3. What does assessment information show about infants' and toddlers' progress and learning in relation to communication and exploration?
4. How does the physical environment support infants and toddlers to become competent and confident communicators and explorers?
5. What do leaders and teachers know about the extent to which their curriculum supports infants and toddlers as competent and confident communicators and explorers?

Our report findings are guided by the following questions:

- What is happening in early childhood services where infants and toddlers are well supported to become competent and confident communicators and explorers?
- What are the challenges and/or barriers for services in supporting infants and toddlers to become competent and confident communicators and explorers?

ERO also gathered information about the ages of children enrolled, adult-to-child ratios, group sizes and qualifications of staff working with children from birth to two years old and children aged from two to three years old. We also gathered information about recent professional learning and development specific to infants and toddlers.

*Appendix 1* includes some self-review questions for services to use for self review, inquiry and reflection. *Appendix 2* has more information about the sample.

### DATA COLLECTION

During each early childhood service's review, ERO collected information from a variety of sources including:

- discussions with leaders and teachers at each service
- informal discussions with parents and whānau
- observations of teaching and learning at the service
- documentation related to the operation of the service and children's learning.

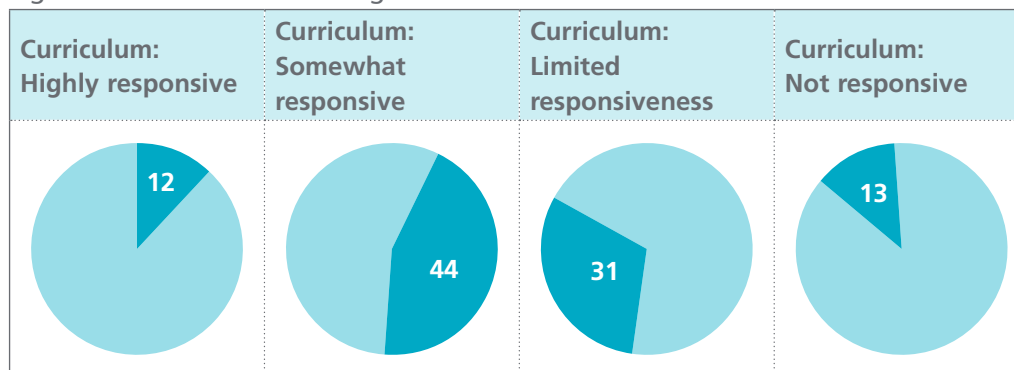
## Findings

### ERO'S OVERALL FINDINGS

ERO found variability between services in how well each service's curriculum supported infants and toddlers to become competent and confident communicators and explorers. This is similar to findings from previous research.<sup>20</sup>

Figure 1 shows that over half of the services in this evaluation had a 'highly responsive' or 'somewhat responsive' curriculum<sup>21</sup> that supported positive learning outcomes for infants and toddlers. The aspects of practice for the four categories of services are expanded upon in Figure 2 and throughout the findings.

Figure 1: ERO's overall findings



New Zealand and international research points to structural elements of quality, such as ratios, group sizes, roll sizes and teacher qualifications, as important factors in determining the quality of education and care, particularly for children up to two years of age. However, they are not the sole factors.

*Structural and regulatory elements are not necessarily indicators of quality by themselves. Rather, they set up the conditions for quality practice.<sup>22</sup> Nor does quality provision depend on any one theoretical position, provided the practices are good.<sup>23</sup>*

The relationship between structural elements, teachers' theoretical knowledge and their knowledge of infants' and toddlers' emerging interests contributes to education and care that promotes positive learning outcomes for these children.

### Variation of structural elements across service type

As part of this evaluation, ERO gathered information about each service's adult-to-child ratios, group sizes and the percentage of qualified and registered teachers working with children aged from birth to two years and from two to three years. This information,

20 Office of the Children's Commissioner. (2011). *Through their lens: An inquiry into non-parental education and care of infants and toddlers* (pp. 18-22). Retrieved from [www.occ.org.nz/assets/Uploads/Reports/Education/Through-their-lens.pdf](http://www.occ.org.nz/assets/Uploads/Reports/Education/Through-their-lens.pdf). See Appendix 3 for more information.

21 *Te Whāriki* states that curriculum is the sum total of experiences, activities and events, whether direct or indirect, which occur within an environment designed to foster children's learning and development. Ministry of Education. (1996). *Te Whāriki, He Whāriki Mātauranga mō ngā Mokopuna o Aotearoa, Early Childhood Curriculum*. (p.10). Retrieved from [www.educate.ece.govt.nz/~media/Educate/Files/Reference%20Downloads/whariki.pdf](http://www.educate.ece.govt.nz/~media/Educate/Files/Reference%20Downloads/whariki.pdf)

22 Goelman et al., 2006 as cited in Office of the Children's Commissioner. (2011). *Through their lens: An inquiry into non-parental education and care of infants and toddlers* (pp. 18-22). Retrieved from [www.occ.org.nz/assets/Uploads/Reports/Education/Through-their-lens.pdf](http://www.occ.org.nz/assets/Uploads/Reports/Education/Through-their-lens.pdf).

23 Office of the Children's Commissioner. (2011). *Through their lens: An inquiry into non-parental education and care of infants and toddlers* (pp. 18-22). Retrieved from [www.occ.org.nz/assets/Uploads/Reports/Education/Through-their-lens.pdf](http://www.occ.org.nz/assets/Uploads/Reports/Education/Through-their-lens.pdf).



along with information about service type, licensed roll numbers, ownership arrangements and ages of children enrolled, is shown for each of the four categories in *Appendix 4*.

The figures in *Appendix 4* show that ‘highly responsive’ services included kindergartens, education and care services and Playcentres, as well as a range of roll numbers, ownership arrangements and ages of children. Adult-to-child ratios were similar across the four categories. Group sizes and the percentages of qualified and registered teachers working with infants and toddlers were very similar across ERO’s categories.<sup>24</sup> Within each of the four categories, there were services that met or exceeded minimum requirements regarding ratios and best practice guidelines for group size. There was a spread across services in terms of roll numbers and percentages of qualified and registered teachers working with infants and toddlers.<sup>25</sup>

#### Characteristics of services with a highly responsive curriculum

Services with a ‘highly responsive’ curriculum had some common characteristics that went beyond the structural elements. These characteristics included:

- high quality leadership
- a highly reflective culture where teachers inquired into and regularly reflected on their teaching practices
- whole-staff professional learning and development about infants and toddlers.

At these services, leaders and teachers had a shared understanding of ways to support infants and toddlers that led to positive outcomes for these children.

These services were well led and managed, with leaders using the strengths and knowledge of team members to benefit children’s learning. Leaders had high expectations for teaching and learning and promoted a collaborative and collegial culture. Teachers had a shared understanding of their approach to the education and care of infants and toddlers. Self review was well established and teachers were highly reflective about their teaching practice.

Teachers had a deep knowledge of *Te Whāriki*, and how it informed their service’s curriculum. As a result of professional learning and development (PLD) (often whole staff), teachers knew about current theories and research regarding the education and care of infants and toddlers, and as a team, had considered how to incorporate this knowledge into their practice in ways that made their curriculum ‘highly responsive’. Teachers and leaders evaluated the resulting changes to practice and the impact of this for children.

Teachers knew the infants’ and toddlers’ strengths and interests and respected and trusted them to be initiators, explorers and self-directed learners. This knowledge came from a strong focus on continuity of care. For many services in this group, the practice of having primary and secondary caregivers or key teachers for each child meant teachers developed lasting and meaningful relationships with them.<sup>26,27</sup>

24 Differences in ratings between adult-to-child ratios, group sizes, roll sizes and percentages of qualified and registered teachers were checked for statistical significance using a Kruskal-Wallis H test. There were no statistically significant differences. The level of statistical significance for all statistical tests in this report was  $p < 0.05$ .

25 See *Appendix 4* for more detail.

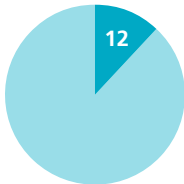
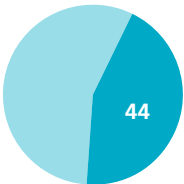
26 Primary/secondary caregivers, or key teachers, are based on theories of attachment. Definitions of attachment emphasise that an emotional bond develops over time.

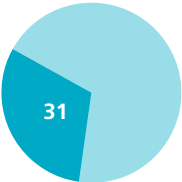
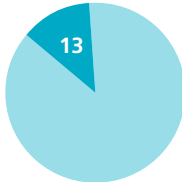
27 Mathers, S., Eisenstadt, N., Sylva, K., Soukakou, E., & Erekly-Stevens, K. 2014. *Sound Foundations – A Review of the Research Evidence on Quality of Early Childhood Education and Care for Children Under Three Implications for Policy and Practice*: p 18 Retrieved from [www.suttontrust.com/researcharchive/sound-foundations/](http://www.suttontrust.com/researcharchive/sound-foundations/)

## INFANTS AND TODDLERS AS COMPETENT AND CONFIDENT COMMUNICATORS AND EXPLORERS

Figure 2 shows the characteristics of the services in the four categories in relation to eight aspects of practice ERO investigated.

Figure 2: Curriculum responsiveness and aspects of practice

	Highly responsive	Somewhat responsive
Aspects of practice to promote positive learning outcomes for infants and toddlers		
Teacher knowledge of <i>Te Whāriki</i> , current research and theories	Extensive use of teacher knowledge to inform curriculum.	Good use of teacher knowledge to inform curriculum.
Leadership – expectations for teaching and learning, and reflection on teacher practice	Well led with high expectations for teaching and learning, including teacher reflection on practice and links to performance appraisal/self review.	Good leadership. Strong focus on improving teacher reflection and links to self review.
Curriculum, including parents' and whānau aspirations to inform curriculum	High quality curriculum based on what teachers knew about children's interests and their parents' aspirations. Teachers encouraged children to try new things, express their ideas and feelings and lead their own learning.	Most of these services planned a responsive curriculum for infants, but less so for toddlers. Children's learning in relation to the communication strand of <i>Te Whāriki</i> was more visible than for exploration. Parents' aspirations were sought and acted on.
Professional learning and development (PLD) about infants and toddlers	Whole staff PLD related to infants and toddlers resulted in positive outcomes.	Teachers in two-thirds of these services had undertaken PLD related to infants and toddlers. Little or no review of the impact of any PLD.
Relationships and interactions	Responsive and reciprocal relationships between children and teachers and between older and younger children were fostered.	Teachers knew children well but were not always responsive to children's interests.
Assessment in relation to communication and exploration	Assessment captured children's learning and progress over time, and this information informed curriculum planning.	Good in many, but poor in others.
Environment to support infants' and toddlers' learning	Thoughtfully designed, well resourced environments were safe, stimulating and challenging.	Thoughtfully designed, well resourced environments were safe, stimulating and challenging.
Self review	Well established and staff knew about the impact of their practices.	Most still developing self-review practice.

Limited responsiveness	Not responsive
	
<p>Variable use of teacher knowledge to inform curriculum.</p>	<p>Limited use of teacher knowledge to inform curriculum.</p>
<p>Variable leadership. In some services, leaders were beginning to develop higher expectations for teaching and learning.</p>	<p>Leadership of service overall poor, with leaders lacking knowledge of good practice for the education and care of infants and toddlers.</p>
<p>More likely to respond to interests and strengths of infants than they were to those of toddlers.</p>	<p>Curriculum was not responsive to children's interests and was often largely teacher directed for toddlers. Parents' aspirations were informally sought but not used to inform curriculum. Teaching practice did not extend children's learning.</p>
<p>Teachers in many of the services had not undertaken any PLD related to infants and toddlers.</p>	<p>Teachers in most of these services had not undertaken any PLD related to infants and toddlers.</p>
<p>Generally, good, but interactions with toddlers were less responsive. Teachers were not always responsive to children's interests.</p>	<p>Relationships were positive but interactions did not extend children's learning.</p>
<p>Adequate in many, but poor in others.</p>	<p>Generally poor, more about participation in activities than focused on children's learning.</p>
<p>Safe, stimulating and challenging, but access was restricted at times.</p>	<p>Lacked challenge.</p>
<p>Generally little or no self review.</p>	<p>No self review.</p>

### What did teaching and learning look like in the most responsive services?

High quality curriculum and teaching practices were evident. Teachers valued and used what they knew about individual children's homes and families to support their learning. Teachers wove the communication and exploration strands of *Te Whāriki* meaningfully through the programme according to children's developing needs and emerging interests. They were familiar with infants and toddlers' verbal and non-verbal communication and responded positively to their efforts. Infants and toddlers were developing a sense of security and confidence.

Children had opportunities to initiate activities and develop independence. Teachers extended toddlers' language by using meaningful and open-ended questioning and giving children time to respond. Children's preferences were respected and they had opportunities to take responsibility for their own learning.

Teachers supported children to express their ideas and feelings. They encouraged child-initiated conversations. Toddlers had opportunities to successfully interact with other children and adults. Positive relationships with older children allowed infants and toddlers opportunities to observe, listen and try new experiences.

Teachers encouraged children to try new things and make connections to what they were interested in. They encouraged infants and toddlers to explore different environments, by introducing new resources in deliberate ways and offering new and challenging experiences and activities. Teachers supported children to take risks and solve problems. They were often physically nearby to provide support, but were careful not to interfere. Toddlers had opportunities to make decisions, ask questions, think creatively and use their imagination.

Relationships with infants and toddlers were an important feature of the curriculum in these services. ERO found that:

- children were settled, secure and confident through having a key person who provided continuity of care
- children experienced one-to-one interactions that were meaningful and positive, and they felt respected and cared for<sup>28</sup>
- teachers worked alongside children at their level and pace
- children could choose if they wanted to play or interact with others, or be on their own
- children's ideas were affirmed by teachers who were skilled at following the child's lead
- teachers modelled care and respect through their interactions with children and flexibility in care routines.

28 This was determined through observations, discussions with parents and whānau, talking with children where appropriate, and assessment information.

These services placed emphasis on successfully transitioning children into and within the centre, which meant that parents and whānau had many opportunities to develop trusting relationships with teachers. Parent-teacher communication was strong and teachers were able to easily discuss parent/whānau aspirations and expectations in both formal and informal ways. Leaders and teachers were highly responsive to these aspirations. Teachers understood what children liked to do with their families at home and responded to them in culturally and developmentally appropriate ways. They made links between learning activities at home and at the service. Teachers shared developments in children's learning with parents and whānau.

Assessment information made children's learning and progress in relation to the communication and exploration strands of *Te Whāriki* clearly visible to parents and whānau. Children's progress was fostered through planned experiences that were based on their identified next steps or suggested goals.

Environments were thoughtfully designed and easily adaptable and children had the independence and freedom to explore and use resources. Indoor environments included spaces for painting and drawing, writing, construction, collage and family and dramatic play. Children had access to indoor climbing structures, balls, science tables, musical instruments, books and natural and tactile materials. Photos and displays were at heights that infants and toddlers could engage with. Outdoors, children could safely explore climbing frames, ropes and pulleys, wheels, slides, ramps, bridges, planks and bikes. Activities such as sand, water and messy play were accessible. Environments included grassed areas, densely planted areas and gardens, as well as resources to encourage dramatic and imaginative play. Non-mobile infants were able to explore through a range of sensory experiences. There were safe spaces for infants to enjoy floor time and spaces that encouraged them to climb, crawl and explore.

#### What was it like for infants and toddlers in these services?

Infants and toddlers in these services were competent and confident communicators and explorers. This was evident where:

- children confidently communicated verbally and non-verbally and experimented with language
- toddlers asked open-ended questions and engaged in conversations with adults and other children that showed and developed their curiosity and problem solving
- infants had opportunities to roll, crawl, climb and pull themselves up in safe spaces, as well as opportunities to observe and interact with older children

- toddlers confidently explored both indoor and outdoor environments and investigated ideas and concepts in science, music, physical movement, gardening, sand, water and messy play, construction, art and drama
- children explored at their own pace, experimented, took risks and solved problems, and developed independence, curiosity and perseverance
- children re-enacted their experiences outside of the service in their play (evident in parent feedback and records of learning)
- infants and toddlers made choices about what was to happen to them and teachers waited for children to respond to the choices offered
- toddlers, along with their parents and whānau, revisited their learning to see how they had grown in confidence and competence over time.

Infants and toddlers in these services were learning to express their ideas and feelings, and to persist when faced with challenge and uncertainty. They were learning strategies for: active exploration, thinking and reasoning and how to share their ideas and knowledge of how things work with others.

### PROMOTING POSITIVE LEARNING OUTCOMES FOR INFANTS

Research shows that education and care are interrelated. For infants, the curriculum combines care routines and everyday experiences. Teachers need to understand the different communication styles of infants and the increased physical care and emotional nurturing they require. The relationships and interactions between teachers and infants (and their parents and whānau) are more important than the activities that infants participate in.<sup>29</sup>

Practices that provided positive learning outcomes for infants were evident in services where teachers knew the infants well, and were knowledgeable about attachment theories<sup>30</sup> and how to respond to infants' non-verbal cues.<sup>31</sup> Primary caregiving was a strong feature. Teachers:

- understood when very young children preferred their own company or needed interaction with others
- understood and responded to non-verbal communication such as body language and subtle cues
- gave infants appropriate challenges such as opportunities to pull, push, touch and grasp
- supported language development through routines and everyday happenings.

29 Dalli, C., White, E., Rockel, J. et al. (2011) *Quality early childhood education for under-two year olds: What should it look like? A literature review*. Ministry of Education: Wellington: Chapter 4.

30 Attachment, in early childhood education, is an emotional attachment that infants form to their primary caregiver, which enables them to develop a sense of security and trust during the first few years of life.

31 Non-verbal communication includes 'ways in which infants and toddlers, with incomprehensible speech, engage communicatively with others' and includes bodily movements, eye movements, pointing, social references, emotions, vocal utterances, coordinating gestures and vocalisation, and expression to mirror others. Cooper, M., Hedges, H., Ashurst, L., Harper, B., Lovatt, D. & Murphy, T. (2012). Infants' and toddlers' interests and inquiries: being attentive to non-verbal communication. *The First Years: Ngā Tau Tuatahi. New Zealand Journal of Infant and Toddler Education*, Vol 14:2. (pp11-17).

The indoor spaces and routines reflected infants’ home environments, which helped create a strong sense of belonging. Young babies had safe but open spaces to observe others and be part of the group. Spaces allowed them to roll, crawl, pull themselves up, and lift their heads

The following examples describe opportunities for exploration and communication experienced by infants.

**Exploration – balance and challenge**

In the nursery, a 10-month-old boy is gaining confidence in his ability to pull himself up and take a few steps. He pulls himself onto a small balance frame, holding his teacher’s hand for security. He carefully walks sideways along the rail, looking to his teacher for reassurance, and smiling at the praise and encouragement he receives.

**Infants and making choices, communicating and following their interests**

Teachers are responsive to infants and toddlers, support them to make decisions and choices, and encourage meaningful conversations. Only two of the five children (aged between 12 and 16 months) are ready for morning tea. Another teacher helps them into their chairs and gives them their morning tea, also talking to them about what they are doing. Another teacher reads a story to the other three children, talking to them about the pictures and asking questions to prompt them to communicate with each other.

The key issue for these services was to develop a curriculum that fully responds to infants’ strengths and interests. Infants primarily make sense of their world through sensory exploration and physical activity, and are sensitive to their surroundings. Children benefit from a rich sensory space that provides for safe exploration and active whole-body learning. A well-designed space supports child-initiated and teacher-facilitated learning.

What do services that were less responsive to infants need to do to improve?

These services need to:

- maintain their emphasis on wellbeing and belonging, but also support infants to become confident communicators and explorers
- increase understandings of teaching practices and their role to appropriately support and challenge these very young children as communicators and explorers

- support teachers to use rich conversations to enhance infants' oral language development
- ensure non-mobile infants have opportunities to learn and develop in an environment conducive to their development.

### PROMOTING POSITIVE LEARNING OUTCOMES FOR TODDLERS

In the early years, children's main way of learning and developing is through play. Play gives toddlers the opportunity to explore, observe, experiment, solve problems and learn from their mistakes. However, toddlers need support and opportunities to do this. Play also helps toddlers build relationships by learning about who they are and where they fit in the world. A well-planned curriculum, based on toddlers' changing interests and abilities, empowers them to make their own choices and supports their learning. It encourages the development of social relationships with their peers and adults.

In services that promoted positive learning outcomes for toddlers, teachers planned experiences that were based on toddlers' interests and modelled how to communicate and express emotions and ideas. They carefully planned transitions into the space for over two-year-olds with support from key teachers. Self review focused on practices to support children between the ages of two and three years and changes in practice were put in place to better support and promote more positive learning outcomes.

In these highly or somewhat responsive services, environments for toddlers enabled them to move freely around and opportunities for communication and exploration were maximised. Where possible toddlers played alongside older children and tuakana teina relationships were promoted.<sup>32</sup> Resources were accessible and designed for toddlers to experiment, explore and interact with.

In services that supported positive learning outcomes for toddlers, teachers put into practice their knowledge of *Te Whāriki*, education theories and philosophies to support toddlers in their play. Parents' and whānau aspirations for their children were sought, discussed and informed the curriculum. Teachers supported toddlers to make successful transitions from spaces for those up to two years of age to environments with older children. The following examples outline high quality opportunities for exploration and communication experienced by toddlers.

<sup>32</sup> The tuakana teina relationship is an integral part of traditional Māori society and provides a model for buddy systems. An older or more expert tuakana helps and guides a younger or less expert teina (originally a younger sibling or cousin of the same gender). In a learning environment that recognises the value of ako (teaching and learning), the tuakana teina roles may be reversed at any time.



**Messy play and creativity**

Toddlers explore and work together in open-ended activities that enable them to experiment with their own ideas. Six toddlers play with some warm finger paint – mixing colours, using small vehicles to make patterns in the paint and pouring paint between containers. They try different ways of getting the paint onto the surface and different ways of smearing and making marks. The children are learning about cause and effect, problem solving, pattern making, collaboration and physical coordination.

**Imagination and problem solving**

Two two-year-old boys are playing with planks and a truck. The truck gets stuck in the mud. Both the boys decide they need to get the truck out of the mud. ‘We need ropes.’ The boys go to the sandpit to get some ropes and then try to tie these around the planks. Finding it difficult, they ask a teacher for help. The teacher asks ‘What do you think we can do?’ The boys explain they want to tie the ropes to the planks to move the truck, and that they need help. With help from the teacher, they are successful at getting the truck out of the mud and are off again. Five minutes later – ‘Oh no! Truck stuck in mud again!’ The teacher asks ‘Did you push the truck into the mud again?’ ‘Yes’ reply the boys. ‘So what might you do?’ asks the teacher.

**Making exploration and communication visible in learning**

Assessment information for toddlers shows their progress over time in terms of communication and exploration. One toddler’s e-portfolio shows her beginning to show initiative at story-time by requesting stories she wants to hear. The portfolio shows her becoming more involved with interactive stories, fully participating in group stories and being actively involved. Later learning stories show her asking and answering questions about stories.

Another toddler’s e-portfolio shows the development of his problem solving. It shows that he has an inquisitive mind and likes to work things out for himself. Being curious and asking questions about why certain things happen are identified as some of his strengths. After listening to a story about fishing and taking part in a discussion about making rods and fishing, he was a key helper in solving the problem of how to catch the fish by suggesting they make a hook like on a real fishing rod.

**Exploration**

On a sunny day, the teacher sets up some water play. The toddlers rush to the water trough and watch as the teacher fills the trough with water. They start splashing and laughing. The teacher and the children talk about the temperature of the water, the colour, texture, and even what it smells like. They have many different resources in the trough to stimulate exploration and experimentation – sieves, funnels, pipes, cups, jugs, plastic bottles and bowls.

**Exploration – balance and challenge**

Teachers encourage the younger toddlers to explore as and when they are ready. One toddler wants to climb a ladder. A teacher is close by, to support his attempts and ensure his safety, as he climbs as high as he feels comfortable. The teacher celebrates with him when he achieves his goal.

What do services that were less responsive to toddlers need to do to improve?

These services need to:

- develop a curriculum that better responds to toddlers' strengths and interests and provides an appropriate level of challenge and risk taking
- provide activities driven by teacher knowledge and responsiveness to the toddlers' interests and curiosity
- provide environments where toddlers can freely access outdoor areas, and interesting resources that support them to experiment and explore their ideas
- focus less on toddlers following routines and behaviour management; and eliminate teacher-directed activities such as formal literacy and numeracy activities
- carefully plan transitions for toddlers to spaces for over two-year-olds, ensuring that children who may have had a primary caregiver in the under-two space are well known to teachers as they make the transition into the older children's space
- improve the frequency and quality of teachers' interactions with toddlers in mixed aged groups of two, three and four-year-olds, and ensure they are not overlooked, other than when they seek attention in ways such as grizzling and complaining, but provided with positive support and encouragement in their exploration and communication.

### **BUILDING CAPABILITY TO IMPROVE**

Across the services judged as ‘somewhat responsive’, ‘limited responsiveness’ or ‘not responsive’, ERO identified a variety of improvements needed in curriculum, relationships, assessment, environment and self review.

We identified that many of the services judged to have ‘limited responsiveness’ had the capability to make improvements to better focus on communication and exploration for their infants and toddlers. Some of the services had only recently begun to enrol toddlers and needed to extend good practices already in place for older children. Nearly half of the services in the ‘limited responsiveness’ category were governed by an association or organisation that had PLD and support processes in place to assist the individual services to improve.

## Conclusion: improving outcomes for infants and toddlers

Generally, infants and toddlers were supported in well-designed learning environments and by warm and nurturing relationships with adults in the service. This support reflected a strong focus on wellbeing and belonging for these very young children.

Just over half of services supported infants and toddlers well and promoted positive outcomes for these children. These services not only focused on wellbeing and belonging, but also on supporting children to be communicators and explorers. Services' curricula were based on children's interests and their parents' aspirations, and children's learning was shared with parents. Assessment information also informed deliberate teaching practices that meant infants and toddlers continued to learn and develop as communicators and explorers. Teachers reviewed and reflected on their practice and considered the impacts on infants and toddlers and how they could improve teaching and learning.

However, these good practices were less evident in almost half the services in this evaluation. In less responsive services, although teachers maintained an appropriate focus on children's wellbeing and belonging, they struggled to encompass the communication and exploration strands of *Te Whāriki* in their curriculum. Teachers in these services had a more limited understanding of *Te Whāriki* and teaching practices specific to infants and toddlers. Teachers needed to extend their knowledge and understanding of current research, approaches and philosophies to provide a relevant and responsive curriculum for toddlers, particularly two-year-olds.

For infants and toddlers, high quality education and care is critical during this fundamental period in a child's development.<sup>33</sup> While teachers often knew children well, the curriculum was not always responsive to infants' and toddlers' strengths and interests. In addition to this, much assessment information did not identify children's progress or the increasing complexity of their learning and development.

The quality of the transitions for toddlers from spaces for up to two-year-olds to spaces for those over two was of particular concern. Infants often had key teachers who knew them and their families well. This meant the curriculum and interactions were responsive, and relationships were warm and nurturing. However, in many services transitions were not as well supported by nurturing key relationships or a responsive curriculum.

33 Office of the Children's Commissioner. (2011). *Through their lens: An inquiry into non-parental education and care of infants and toddlers*. Retrieved from [www.occ.org.nz/assets/Uploads/Reports/Education/Through-their-lens.pdf](http://www.occ.org.nz/assets/Uploads/Reports/Education/Through-their-lens.pdf). See Appendix 3 for more information.

For infants and toddlers to be competent and confident communicators and explorers, leaders and teachers need to give them opportunities to improvise, randomly explore, compromise, negotiate and be playful. When children choose their own activities, they are more likely to be closely involved and to ask and follow up on their own questions or the questions of others.<sup>34</sup> Children need to develop the expectation that communication can be a source of delight, that there are multiple ways of expressing ideas and feelings, and to learn to interpret others' ideas, feelings and actions.<sup>35</sup>

ERO has identified next steps (see page 3) for services to help them better support infants and toddlers to become competent and confident communicators and explorers.

34 Ministry of Education. (2007) *Kei Tua o Te Pae The Strands of Te Whāriki: Exploration, Ngā Taumata Whakahirahira ki Te Whāriki: Mana Aotūroa*. Ministry of Education: Wellington: p.3-4. Retrieved from [www.educate.ece.govt.nz/~media/Educate/Files/Reference%20Downloads/ex/ECEBk13/ECEBk13P1to5Text.pdf](http://www.educate.ece.govt.nz/~media/Educate/Files/Reference%20Downloads/ex/ECEBk13/ECEBk13P1to5Text.pdf).

35 Ministry of Education. (2007) *Kei Tua o Te Pae The Strands of Te Whāriki: Communication, Ngā Taumata Whakahirahira ki Te Whāriki: Mana Reo*. Ministry of Education: Wellington: p.3. Retrieved from [www.educate.ece.govt.nz/~media/Educate/Files/Reference%20Downloads/ex/ECEBk14/ECEBk14P1to6Text.pdf](http://www.educate.ece.govt.nz/~media/Educate/Files/Reference%20Downloads/ex/ECEBk14/ECEBk14P1to6Text.pdf).

## Appendix 1: Self-review questions

How well does our curriculum promote positive learning outcomes for infants and toddlers, particularly in relation to the communication and exploration strands of *Te Whāriki*?

- Do we use the aspirations and expectations of parents and whānau to plan our curriculum for infants and toddlers?
- How do we use our assessment information to make decisions about the curriculum for infants and toddlers?
- Is the culture, language and identity of each child acknowledged, valued and reflected in our curriculum?
- Do our teachers know each child well, particularly in relation to the strands of communication and exploration?

What do we know about current research and approaches to curriculum for children up to three years of age?

- How do we use the principles of *Te Whāriki* to help us critique and evaluate the relevance of the research and approaches to infant and toddler education and care in our service?

How well do we engage in one-to-one, highly responsive **interactions** with infants and toddlers?

- How do we support infants' and toddlers' verbal and non-verbal language development?
- How effective are we at intentionally building on and extending each child's vocabulary and conceptual understandings?
- Do we know and respond to the language used by each child?

How effective are our assessment and planning processes in supporting us to notice, recognise and respond to the strengths, interests and capabilities of infants and toddlers?

How well does our assessment information build infants and toddlers' identity (includes culture) as confident and competent communicators and explorers?

- What information do we include about infants' and toddlers' working theories and dispositions in their assessment records?
- Do our assessment records clearly show how infants and toddlers are developing and progressing as communicators and explorers over time?

- Do we include the perspectives of children and their parents and whānau?
- How well does our assessment information reflect the deepening and increasing complexity of infants' and toddlers' learning?

How well do we plan and regularly review the physical environment to ensure it supports the learning and development of infants and toddlers?

- Does our environment reflect and celebrate the languages, symbols and artefacts of children's cultural backgrounds?
- Do our infants and toddlers experience an environment that stimulates their interests and includes appropriate challenges?
- Do we have sufficient space to prevent overcrowding?
- How do we ensure that infants and toddlers are not placed in situations where they are exposed to stress that they cannot control?
- Do children always have support from an adult who can soothe and comfort them when necessary?

What do we know about the impact of our curriculum decisions on infants and toddlers? How do we know this? What actions do we take to improve our practice?

## Appendix 2: Services in this evaluation

Figure 1: Service type

Service type	Number of services in sample	Percentage of services in sample	National percentage of services as at 30.7.14	National percentage of services with 0-2 year olds enrolled
Kindergarten	21	9	17	1
Playcentre	28	12	12	20
Education and Care Service	180	76	61	63
Home-based Education and Care Network	6	3	10	16
<b>Total</b>	<b>235</b>	<b>100</b>	<b>100</b>	<b>100</b>

The service types in this sample are not representative of national figures. Education and care services are over-represented, and kindergartens and home-based education and care networks are under-represented. These differences are statistically significant.<sup>36</sup> Most kindergartens do not have children up to three years of age enrolled.

Figure 2: Locality of services

Locality	Number of services in sample	Percentage of services in sample	National percentage of services as at 30.7.14	National percentage of services with 0-2 year olds enrolled
Main urban	185	79	73	68
Secondary urban	12	5	7	7
Minor urban	22	9	11	12
Rural	16	7	9	13
<b>Total</b>	<b>235</b>	<b>100</b>	<b>100</b>	<b>100</b>

The locality of services in this sample is representative of national figures.

<sup>36</sup> The differences between observed and expected values in Tables 1-3 were tested using a Chi square test.



Figure 3: Roll group of services

Roll group	Number of services in sample	Percentage of services in sample	National percentage of services as at 30.7.14	National percentage of services with 0-2 year olds enrolled
1-50 children	123	52	76	62
51-100 children	100	43	22	35
101+ children	12	5	2	3
<b>Total</b>	<b>235</b>	<b>100</b>	<b>100</b>	<b>100</b>

The roll group sizes in this sample are not representative of national figures. Services with 51-100 children enrolled are over-represented, and services with 1-50 children enrolled are under-represented. These differences are statistically significant. This reflects the under-representation of home-based education and care networks in this sample, and that most kindergartens do not have children enrolled under three years of age.

Figure 4: Ages of children enrolled in services

Ages of children enrolled	Number of services in sample	Percentage of services in sample
Mixed ages <sup>37</sup>	86	37
Separate spaces for over and up to two years	90	38
Only up to two years old	2	1
Only over two years old	57	24
<b>Total</b>	<b>235</b>	<b>100</b>

<sup>37</sup> Services where children enrolled include children up to the age of two years and children over two years of age.

### Appendix 3: Through their lens

A 2011 report<sup>38</sup> by the Office of the Children's Commissioner identified eight interrelated structural and process dimensions that underpin high quality education and care provisions for infants and toddlers:

- high adult-to-child ratios
- small group sizes
- staff qualifications and skills
- positive and responsive care relationships
- superior environments
- parent involvement
- attention to health and safety requirements
- effective pedagogy through a socially, culturally and developmentally appropriate curriculum.

The OCC report found teachers needed to give greater attention to the specific interests and needs of infants and toddlers, in particular:

- more emphasis on responsive caregiving
- more attention to specific knowledge, skills and professional learning about infants and toddlers.<sup>39</sup>

38 Office of the Children's Commissioner. (2011). *Through their lens: An inquiry into non-parental education and care of infants and toddlers*. Retrieved from [www.occ.org.nz/assets/Uploads/Reports/Education/Through-their-lens.pdf](http://www.occ.org.nz/assets/Uploads/Reports/Education/Through-their-lens.pdf).

39 Retrieved from [www.occ.org.nz/assets/Uploads/Reports/Education/Through-their-lens.pdf](http://www.occ.org.nz/assets/Uploads/Reports/Education/Through-their-lens.pdf) p182.

## Appendix 4: Service type and structural information

Figure 1: 'Highly responsive' services

<b>'Highly responsive' services (29 services)</b>			
<b>Service type</b>	<b>Licensed roll</b>	<b>Ownership</b>	<b>Ages of children enrolled</b>
<ul style="list-style-type: none"> <li>• 26 of 180 Education and Care Services</li> <li>• 1 of 28 Playcentres</li> <li>• 2 of 21 Kindergartens</li> <li>• 0 of 6 Home-based Education and Care Networks</li> </ul>	<ul style="list-style-type: none"> <li>• 13 of 123 services licensed for 1-50</li> <li>• 15 of 100 services licensed for 51-100</li> <li>• 1 of 12 services licensed for 101+</li> </ul>	<ul style="list-style-type: none"> <li>• 16 of 132 privately owned services</li> <li>• 13 of 103 community based services</li> </ul>	<ul style="list-style-type: none"> <li>• 10 of 86 mixed age services</li> <li>• 14 of 90 services with separate spaces for up to two and over two year olds</li> <li>• 0 of 2 services for only up to two year olds</li> <li>• 5 of 57 services for only over two year olds</li> </ul>
<b>Children aged 0-2 years</b>	<b>Adult-to-child ratio</b>	<b>Group size</b>	<b>Percentage of qualified staff</b>
Mode (most common)	1:4	10	80
Range	1:1 to 1:5	2 to 30	50 to 100
<b>Children aged 2-3 years</b>	<b>Adult-to-child ratio</b>	<b>Group size</b>	<b>Percentage of qualified staff</b>
Mode (most common)	1:8	30	80
Range	1:3 to 1:10	3 to 44	60 to 100

Figure 2: 'Somewhat responsive' services

<b>'Somewhat responsive' services (103 services)</b>			
<b>Service type</b>	<b>Licensed roll</b>	<b>Ownership</b>	<b>Ages of children enrolled</b>
<ul style="list-style-type: none"> <li>• 78 of 180 Education and Care Services</li> <li>• 16 of 28 Playcentres</li> <li>• 7 of 21 Kindergartens</li> <li>• 2 of 6 Home-based Education and Care Networks</li> </ul>	<ul style="list-style-type: none"> <li>• 54 of 123 services licensed for 1-50</li> <li>• 43 of 100 services licensed for 51-100</li> <li>• 6 of 12 services licensed for 101+</li> </ul>	<ul style="list-style-type: none"> <li>• 59 of 132 privately owned services</li> <li>• 44 of 103 community based services</li> </ul>	<ul style="list-style-type: none"> <li>• 40 of 86 mixed age services</li> <li>• 38 of 90 services with separate spaces for up to two and over two year olds</li> <li>• 0 of 2 services for only up to two year olds</li> <li>• 25 of 57 services for only over two year olds</li> </ul>
<b>Children aged 0-2 years</b>	<b>Adult-to-child ratio</b>	<b>Group size</b>	<b>Percentage of qualified staff</b>
Mode (most common)	1:4	12	100
Range	1:1 to 1:5	1 to 36	0 to 100
<b>Children aged 2-3 years</b>	<b>Adult-to-child ratio</b>	<b>Group size</b>	<b>Percentage of qualified staff</b>
Mode (most common)	1:6	20	100
Range	1:1 to 1:10	2 to 83	10 to 100

Figure 3: 'Limited responsiveness' services

<b>'Limited responsiveness' services (72 services)</b>			
<b>Service type</b>	<b>Licensed roll</b>	<b>Ownership</b>	<b>Ages of children enrolled</b>
<ul style="list-style-type: none"> <li>• 51 of 180 Education and Care Services</li> <li>• 9 of 28 Playcentres</li> <li>• 9 of 21 Kindergartens</li> <li>• 3 of 6 Home-based Education and Care Networks</li> </ul>	<ul style="list-style-type: none"> <li>• 36 of 123 services licensed for 1-50</li> <li>• 33 of 100 services licensed for 51-100</li> <li>• 3 of 12 services licensed for 101+</li> </ul>	<ul style="list-style-type: none"> <li>• 40 of 132 privately owned services</li> <li>• 32 of 103 community based services</li> </ul>	<ul style="list-style-type: none"> <li>• 26 of 86 mixed age services</li> <li>• 23 of 90 services with separate spaces for up to two and over two year olds</li> <li>• 1 of 2 services for only up to two year olds</li> <li>• 22 of 57 services for only over two year olds</li> </ul>
<b>Children aged 0-2 years</b>	<b>Adult-to-child ratio</b>	<b>Group size</b>	<b>Percentage of qualified staff</b>
Mode (most common)	1:4	10	80
Range	1:3 to 1:5	3 to 30	50 to 100
<b>Children aged 2-3 years</b>	<b>Adult-to-child ratio</b>	<b>Group size</b>	<b>Percentage of qualified staff</b>
Mode (most common)	1:10	25	100
Range	1:1 to 1:15	3 to 50	20 to 100

Figure 4: 'Not responsive' services

<b>'Not responsive' services (31 services)</b>			
<b>Service type</b>	<b>Licensed roll</b>	<b>Ownership</b>	<b>Ages of children enrolled</b>
<ul style="list-style-type: none"> <li>• 25 of 180 Education and Care Services</li> <li>• 2 of 28 Playcentres</li> <li>• 3 of 21 Kindergartens</li> <li>• 1 of 6 Home-based Education and Care Networks</li> </ul>	<ul style="list-style-type: none"> <li>• 20 of 123 services licensed for 1-50</li> <li>• 9 of 100 services licensed for 51-100</li> <li>• 2 of 12 services licensed for 101+</li> </ul>	<ul style="list-style-type: none"> <li>• 17 of 132 privately owned services</li> <li>• 14 of 103 community based services</li> </ul>	<ul style="list-style-type: none"> <li>• 10 of 86 mixed age services</li> <li>• 15 of 90 services with separate spaces for up to two and over two year olds</li> <li>• 1 of 2 services for only up to two year olds</li> <li>• 5 of 57 services for only over two year olds</li> </ul>
<b>Children aged 0-2 years</b>	<b>Adult-to-child ratio</b>	<b>Group size</b>	<b>Percentage of qualified staff</b>
Mode (most common)	1:4	10	100
Range	1:2.5 to 1:7	4 to 30	0 to 100
<b>Children aged 2-3 years</b>	<b>Adult-to-child ratio</b>	<b>Group size</b>	<b>Percentage of qualified staff</b>
Mode (most common)	1:10	30	80
Range	1:3 to 1:10	4 to 40	50 to 100

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