Locality-based evaluation of *Pathways to the Future — Ngā Huarahi Arataki*

Stage 1 report

Report to the Ministry of Education

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Executive summary

This report is from the first phase of the locality-based longitudinal evaluation[1] of *Pathways to the Future—Ngā Huarahi Arataki*, the strategic plan for ECE. This evaluation provides a baseline picture of how things were in mid-2004 in relation to the participation, quality, and collaborative relationship goals of *Pathways to the Future— Ngā Huarahi Arataki* and before the major ECE strategic plan policy changes began, and of changes that occurred in services and for parents in the eight localities in the study between 2004 and 2006 as strategic actions got underway. The evaluation complements the evaluation of financial sustainability of ECE services 2004–2006, using the same sample of ECE localities and services, undertaken by Health Outcomes International (HOI) (King, 2008).

The report addresses five evaluation questions based on the main goals of the strategic plan, asking to what extent, in what ways, and how effectively, has the strategic plan increased participation in ECE; supported parents' ability to engage in work and training; improved the quality of ECE; facilitated the formation of collaborative relationships between ECE services, parent support and development, schools, health and social services; and improved children's early learning foundations.

Data were collected from a sample of 46 individual services of different ECE service types in each of eight localities, chosen by the MOE and the evaluators to provide some diversity on key relevant variables. Methods included a parent survey, management interview and questionnaire, teacher/educator interview, and observations of process quality in 2004 and 2006. Process quality refers to the environment, interactions, and relationships that occur in an early childhood setting and shape children's learning opportunities and experiences in that setting. MOE national and locality datasets were used to provide a context for changes occurring at ECE service level.

The logic model that was developed by Patricia Rogers (2003) for the MOE shows the likely paths between the goals or intended outcomes of the strategic plan (increasing participation, improving quality, and promoting collaborative relationships), the strategies and actions to support those intended outcomes, and the intermediate outcomes that would occur along the way (such as more registered teachers in ECE, quality teaching and learning practices, and ECE services are accessible). We developed a set of indicators to measure the nature and extent of changes on each intended outcome from 2004 to 2006. We analysed change according to locality characteristics (rural/urban, socioeconomic levels, and population characteristics), service characteristics (type, teacher-led or parent/whānau-led, sessional or full-day), and child characteristics (proportion of children who are Māori, who are Pasifika, who are under two years old, whether the service receives Equity Funding, and in relation to parental data about the child). Data were reported on intermediate outcomes, and analysis made of changes in intended outcomes in relation to changes in intermediate outcomes. We found out about support and barriers related to change through interview and survey data.

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[1]   The MOE evaluation strategy for the ECE strategic plan also includes development of a monitoring system designed to provide indicators of progress and identify emerging problems, and targeted evaluations that both contribute to the overall evaluative picture and inform decisions about individual initiatives.

Strategic plan actions

The main strategic plan actions at April 2006 that had been in place between 2004 and 2006 were:

- *Improving quality*: increasing the proportion of qualified registered teachers in teacher-led services, publishing *Kei Tua o te Pae. Assessment for Learning: Early childhood exemplars* (Ministry of Education, 2005c), and other professional resources, funding professional development, and establishing Centres of Innovation (COI).

- *Supporting participation*: analysis and development of the current network of ECE services, Promoting Participation Projects in areas of low ECE participation, land being set aside for ECE services on new school sites, advice and support for new services, and advice and support to help services meet community need.

- *Promoting collaboration*: MSD parent support initiatives, and *Book 5. Assessment and Learning: Community* (Ministry of Education, 2005c) early childhood exemplars, and professional development related to working with parents and whānau.

- *Supporting strategies*: Equity Funding,[2] a new funding system based on cost drivers and substantial increases in funding rates. Free ECE for three- and four-year-olds for up to 20 hours per week had been announced and the regulatory review was occurring, but policy changes were still to be implemented.

Many of the government initiatives were fairly recent and we did not expect to see marked changes in overall quality, participation, or collaborative relationships between 2004 and 2006.

Increasing participation

"Participation" indicators in this study included whether or not children attend ECE during their preschool years, the duration of attendance, regularity of children's attendance, children's starting age in ECE, and their weekly hours of attendance. MOE national and locality-level data set a context for data from the 46 services.

Studies in the US and UK[3] that compare the performance of children with and without ECE experience, show benefits during schooling for those with ECE experience. Recent research from longitudinal studies suggests that an early starting age in good-quality ECE before age three is associated with gains for children's learning and development, but there is mixed evidence about whether starting before age two is more advantageous than starting between ages two and three.[4] The longitudinal Competent children, competent learners study, large-scale Effective Provision of Preschool Education study,[5] and other US and Swedish research suggest that two or three years attending a good-quality ECE service before starting school is associated with gains for children's learning.

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[2] Equity Funding is a small amount of funding that is additional to bulk funding and discretionary grants, and is intended to reduce educational disparities. It has four components: low socioeconomic, special needs and non-English speaking background: language and culture other than English; and isolation. It is intended to increase participation by providing additional resources, and improve quality through addressing the higher cost for achieving the same educational outcome.

[3] Bridges, Fuller, Rumberger, & Tran, 2004; Gormley, Gayer, Phillips, & Dawson, 2005; Magnuson, Meyers, Ruhm, & Waldfogel, 2004; Sylva, Melhuish, Sammons, Siraj-Blatchford, & Taggert, 2004.

[4] Broberg, Wessels, Lamb, & Hwang, 1997; Sammons et al., 2002; Wylie, Thompson, & Lythe, 2001.

[5] Sylva et al., 2004; Wylie & Hodgen, 2007.

Changes in ECE participation from 2004 to 2006

At national level:

- A higher proportion of children were experiencing ECE prior to school entry in 2006. The proportion of school entrants who had participated in ECE before they started school rose slightly from 2004 to 2006 from 94.1 percent to 94.5 percent. The percentage of three-year-old ECE enrolments rose as a proportion of the estimated population of three-year-olds from 95.2 percent to 96.6 percent in 2006. The percentage of four-year-old ECE enrolments fell slightly from 103.3 percent to 103 percent, but was still over 100 percent (because some children are counted more than once if they attend more than one ECE service).

At ward-level for the eight localities in this study:

- A slightly higher percentage of younger children were enrolled in ECE in 2006: 18 percent were aged two in 2004 compared with 19 percent in 2006, and 11 percent were aged one in 2004 compared with 12 percent in 2006. This pattern is consistent with national trends.

- Children were enrolled for longer hours in 2006, with 20 percent of children enrolled for 30 hours or more per week in 2004, and 22 percent in 2006. Under-one-year-olds showed the greatest shift towards longer hours, from 27 percent spending 30 hours or more at ECE in 2004 to 43 percent in 2006.

- Income levels affected children's participation: the two localities where the median family income was the lowest had very low percentages of ECE participation prior to children starting school—74 percent and 78 percent respectively in 2006. This compares with national figures of children attending a decile 2 school of 86 percent.

At service level:

Data on ECE participation at service level were gathered from parents on two dimensions: "Duration of participation" measured by the proportion of a child's age spent in ECE and starting age, and "Intensity of participation", measured by weekly hours of attendance.

The main shift in indicators of "Duration of participation" from 2004 to 2006 was for children in the study services to have started ECE at a slightly younger age in 2006 (two years in 2004, and one year nine months in 2006); and a slight decrease in those starting after the age of four. Within these patterns, starting age was still very late for some children who started ECE after the age of four (2 percent in 2006).

- Duration in months of ECE participation was about half the time of the child's life (on average a child in this study might be predicted to have more than 2½ years of ECE experience before starting school). This amount of time should benefit children if the ECE service is of good quality. Regularity of children's attendance in ECE, which may also affect children's learning opportunities, was gathered from parents for the first time in 2006. Eighty-three percent of children were reported to have regular attendance.

- "Intensity of ECE participation" in the study services remained at much the same level in 2006 as in 2004, on average 10–15 hours per week. These hours of attendance are within a range that should benefit children, but perhaps offer less opportunity for cognitive gain than 15–20 hours for children over two (Loeb, Bridges, Bassok, Fuller, & Rumberger, 2005). A fifth of younger children (under three years) in the study services were attending an ECE service for more than 30 hours per week in both 2004 and 2006 compared with 11 percent of three- and four-year-olds.

- Overall, *ECE service accessibility* remained much the same between 2004 and 2006 , but with some needs for ECE that were not being met by the study services in relation to hours, especially from those using sessional services and parents with children under two. In 2006, 31 percent of parents would like to use more hours of ECE, but were unable to do so, because their current ECE service did not provide the hours wanted (15 percent), additional hours were too expensive (7 percent), or the service did not have places for the times the parent wanted. Over half wanted to use up to four hours more only. Further parental pressure for more hours is likely now that ECE is free for many three- and four-year-olds attending teacher-led services (36 percent of parents wanted to increase their hours when ECE is free).

- Children *attending more than one service* had increased slightly from 20 percent in 2004 to 24 percent in 2006. Twenty-three percent of these used more than one service to fit into parent working hours, but the most common reason was because parents thought that using two or more ECE services offered benefits for the child, since each service offered different and complementary learning experiences.

- Overall, the main issues related to *ECE service sustainability* of enrolments, staffing, and finances were staffing sustainability, related to management finding it difficult to meet qualified staffing requirements, especially when relievers were needed. Most managers thought they were more financially sustainable or there was no change from 2004 to 2006. This finding compares with King's (2008) evaluation finding that the ECE sector as a whole is financially sustainable and perhaps becoming more so. King has examined financial sustainability in much greater detail than in this report.

The playcentres in the study were more likely to be less sustainable than other ECE service types in all three aspects: service enrolment, staffing, and financial sustainability. Sustainability issues for each of these dimensions may compound one another, since funding is based on enrolments, and fewer enrolments or variable enrolments as children leave means lesser or uncertain funding, and a smaller pool of parent educators who may find it hard to sustain staffing requirements in playcentres.

- ECE services were *responsive* to parent aspirations. In both 2004 and 2006, parents expressed a high degree of satisfaction with their ECE service. Ninety-one percent of parents said their overall satisfaction level was "very good" or "good" in 2004, 92 percent in 2006. Parents were most satisfied with staff qualities and least satisfied with staff:child ratios in both years.

The ward-level data suggest it is in localities where there are planned ECE initiatives underway that positive changes to access and participation are occurring. Most of our participation indicators at service level had not been the target of strategic plan initiatives and since this study is of existing services and current participants, some of the likely impact, e.g. changes to starting age and duration, will not be evident for some years. The evaluation shows some issues in relation to participation, such as the low rates of participation of children in some low-income communities, children enrolled in ECE at a younger age, younger children spending long hours (over 30 hours per week) in ECE, and the desire for parents for more hours at times that suit them. These suggest that it may be valuable for services and the MOE to focus on tailoring changes to community contexts, and to examine wider participation issues, not just whether children attend ECE or not. For example, the findings of a younger starting age and longish hours of ECE for some one- and two-year-olds reinforce the importance of ensuring that good quality all-day provision for this age group is of good-quality, as well as ensuring there is sufficient ECE provision for this age group.

Parents' ability to engage in work and training

Information on paid employment and training was gathered for the first time in 2006. Key findings were:

Sixty-three percent of parents responding had participated in paid employment and 33 percent had participated in training in the last 12 months. ECE services supported workforce and training participation:

- 54 percent of these parents relied on ECE services combined with non-ECE arrangements

- 40 percent relied only on ECE services.

The free ECE implementation could see a shift from non-ECE arrangements, where parents use these in combination with ECE to more using ECE.

Lack of ECE prevented some parents looking for work or taking part in training. For the group who could not make a suitable arrangement, cost (19 percent), insufficient ECE hours (15 percent), and the desired ECE service not having spare places (10 percent) or being available in the locality (8 percent) were main reasons why appropriate ECE was not available.

Lack of ECE prevented 9 percent of parents from participating in training/study. The reasons were in roughly the same rank order as parents wanting paid employment.

Some parents juggled their work and training arrangements around the opening hours of ECE, many relied on friends and family to provide childcare even for very short time periods where service times did not match work times, and to cope with disruptions to work and training when their child was sick or the service was not available. Some parents wanted flexible ECE arrangements, and longer hours for sessional services, especially for them to be open for the same length as a school day.

Overall, these findings on participation and parent employment and training suggest that main challenges for increasing participation are in provision of accessible good-quality ECE services that are responsive to the circumstances and needs of families, especially as more parents are in or interested in employment and training.

Improving ECE quality

The ECE strategic plan intervention logic model identified six intermediate outcomes related to improving ECE quality: "ECE services meet cultural and language aspirations", "More registered teachers in ECE", "Quality in parent-led services", "Reduced ratios and group size", "*Te Whāriki* effectively implemented", and "Quality teaching and learning practices" that were intended to contribute to the overall outcome "Improved quality of ECE". We developed indicators for each of these outcomes, and a system to rate these as "very good", "good", "fair", and "poor" for each of the 46 ECE services in the study.

Changes in ECE service quality from 2004 to 2006

Key findings were:

- *Overall quality*. The percentage of services rated as being of "very good", "good", "fair", or "poor" quality remained much the same from 2004 to 2006. In 2006, 26 percent of children were in services rated as "very good" overall quality, and 46 percent were in services rated as "good" overall quality. Some individual services did change their quality rating from 2004. Seven services had higher ratings, 30 services remained the same, and nine services had lower ratings. Services that were rated as having "very good" overall quality

in both years and those that improved their overall quality from 2004 to 2006, had "good" or "very good" ratings on each of the intermediate outcomes: teaching and learning practices, implementing *Te Whāriki*, and teacher qualifications. Services with low levels of quality in both years or those whose quality declined to "fair" or "poor" quality levels had poor ratings for these intermediate outcomes in 2006, suggesting there are connections between the intermediate outcomes and overall ECE service quality.

- *Teacher qualifications*. Services rated as having "good" levels of staff qualifications doubled between 2004 and 2006 (44 percent in 2006, compared with 22 percent in 2004). "Good" qualification levels were mainly found in teacher-led services where MOE targets and initiatives have been directed. Sixty-one percent of teacher-led services had "good" qualification levels compared with 17 percent of parent/whānau-led services in 2006.

- *Teaching and learning practices* improved between 2004 and 2006. Thirty-nine percent of services improved their assessment practices. Fifty percent were at a "good" or "very good" level for assessment in 2006, compared with 28 percent in 2004. Those at a "very good" level had integrated systems of planning, evaluation, and self-review based on *Te Whāriki*. More services were rated at a "good" level on self-review in 2006 (29 percent) compared with 2004 (15 percent). Planning and evaluation (measured in 2006 only) and self-review were not as well developed as assessment.

- *Implementation of* Te Whāriki. In 2006, 40 percent of services were rated as "good" or "very good" on teachers' understanding of *Te Whāriki* and implementing a bicultural curriculum, compared with 22 percent in 2004. A third of services improved their ratings.

- Ratings on *ECE services meeting language and cultural aspirations* did not change between 2004 and 2006, but services receiving Equity Funding for the language and culture component did better than others.

- Ratings on intermediate quality outcomes that had not been a focus for MOE actions between 2004 and 2006 did not shift. These were *ratios* and *group size*.

Use of strategic plan initiatives and shifts in quality ratings

There was a higher use of MOE professional publications, especially the assessment exemplars, take-up of professional development, and participation in COI and Education Leadership Project workshops in ECE services that improved their ratings on teaching and learning practices, and teachers' understanding of *Te Whāriki*. Ninety-two percent of services improving their assessment ratings used the MOE resource, *Kei Tua o te Pae. Assessment for Learning: Early childhood exemplars*, and most had professional development associated with it. Fifty-two percent of services with low ratings or negative shifts in relation to assessment quality had not used this resource or undertaken MOE-funded professional development.

Teacher-led services that increased their levels of staff holding teacher qualifications and registration made use of MOE initiatives to improve qualifications and become registered. The targets for employment of qualified registered teachers seemed to offer an impetus for these services to encourage existing staff to become qualified and registered. There were no links between shifts in qualification levels and quality shifts. However, one would expect gains for quality from staff improving qualifications to occur over time and to be consolidated with experience.

The use of Equity Funding helped services that were receiving it to improve overall levels of quality. These were services located in low-income communities, services delivering the education programme in a language and culture other than English, and isolated services.

Indicators of intermediate outcomes where policy change did not occur between 2004 and 2006, i.e. reduced ratios and group size, and quality in parent and whānau-led services,[6] showed no consistent shifts from 2004 to 2006.

Differences in strategic plan effectiveness

There were some differences in levels and patterns of change on quality dimensions that were associated with locality, service, and child characteristics:

- *Locality differences.* Minor urban localities, in particular one locality, Kauri, had lower levels on several of the intermediate outcomes, and on levels of overall quality. Differences in levels and shifts seemed to be attributable more to the opportunities within the locality for professional support and staffing rather than the nature of the population of the locality. Features associated with poorer ratings were: isolation from professional support and training opportunities; a limited pool of people to staff ECE services; and limited access to professional support. Localities with high Māori populations did better overall on implementing a bicultural curriculum, and meeting cultural and language aspirations of parents. Some of the services in these localities reported having professional development about biculturalism, and employing Māori staff. The two localities with high Pasifika populations did better overall on levels of qualifications and understanding *Te Whāriki*. These localities were also main urban localities. The services in these localities had no problems in accessing training provision, and made use of MOE initiatives to support training and registration.
- *Service differences.* Teacher-led services had higher average quality levels and more made improvements between 2004 and 2006 than parent/whānau-led services on ratings of teaching and learning practices and qualifications. Specific initiatives to raise qualification levels have been targeted at teacher-led services. They also made greater use of assessment resources and MOE-funded professional development than parent/whānau-led services. Playgroup and puna had low levels on all the intermediate outcomes (except the study puna was rated high on meeting language and cultural aspirations), and were not eligible to access MOE initiatives.
- *Child characteristics.* Services with more than 20 percent under-two-year-olds were rated lower on each of the intermediate outcomes and overall quality ratings. Education and care centres that were rated low all had more than 20 percent under-two-year-olds and had poor teacher qualification levels, and poorer observed adult:child ratios (1:5 and 1:4) than education and care centres that had better quality ratings overall (these averaged 1:3 or lower). These lower quality education and care centres also had poorer ratings of relationships with parents, derived from parent responses to questions about the usefulness of teacher information about the child's learning, the child's happiness, the curriculum, whether the parent talked to teachers about home, their satisfaction with information, and the parent's involvement in assessment and planning. Services receiving Equity Funding had higher ratings on implementing a bicultural curriculum and overall quality ratings, reinforcing the value of Equity Funding for children in isolated services, from low-income families, and in immersion services.

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[6] Note: Parent and whānau-led services other than playgroups and puna had access to professional resources like teacher-led services, and those that were eligible received Equity Funding. Findings related to these initiatives apply to these services too.

Collaborative relationships

Stronger collaborative relationships with ECE services are a strategic plan goal, with two intermediate outcomes: coherence of education birth to eight, and integrated services for children, parents, and whānau birth to 8. We developed indicators for each of these outcomes, and a system to rate these as "very good", "good", "fair", and "poor" for each of the 46 ECE services in the study.

More integrated services for children, parents, and families

- Ratings of *service–-parent relationships* improved between 2004 and 2006, with the number of those reaching a "good" or "very good" level almost doubling over the two years, largely due to improvements in parent participation in assessment and planning. Two-thirds of the services had "adequate" or better ratings for their level of service–parent relationship in 2006. The focus within MOE professional resources on engagement with parents (the early childhood exemplars, self-review guidelines, examples from COI of "community of learners" approaches) contributed to strengthening these ratings. These relationships were strongest in some of the parent/whānau-led services which emphasise the roles and responsibilities of all parents and whānau for the ECE service.

- Overall, *relationships with health services* were "good" or "very good". *Relationships with welfare services* were mixed, ranging from "very good" to "poor". There has been no change since 2004. This intermediate outcome goal is not yet supported with any particular strategic plan actions, and appears highly dependent on individuals, health and welfare organisations' policies, and available time.

- In 2006, 36 percent of the ECE services had no or limited *contact with other ECE service*s in their locality, the same percentage as in the 2003/2004 NZCER national survey of ECE services (Mitchell & Brooking, 2007). However, some closer relationships with other ECE services were beginning to be made through shared professional development and teacher education offered through strategic plan initiatives, and MOE hui. One of the values of meeting with other teacher/educators in such professional forums is likely to be that the focus on teaching and learning enables service participants to learn from each other within their own locality.

Cohesion of education 0–8 years

- Professional *relationships with local schools* improved from 2004 to 2006. Twenty-two percent of ECE services had no or limited contact with all the schools/kura in their locality, compared with 33 percent in 2004. Schools and early childhood services were more likely to work together in respect to transition of children than in 2004, but it is unclear why, in relation to strategic plan initiatives. Perhaps the higher level of professionalism and focus on the importance of ECE has contributed to greater awareness of the importance of transition for both ECE and primary teachers.

Barriers to collaborative relationships

The most common barrier to developing close working relationships with external organisations and parents was insufficient time. The most common suggestion for integrating services was to offer family services from the ECE service site.

Conclusion

Overall, the strategic plan has been effective in starting to raise levels on intermediate outcomes linked with children's learning foundations, such as assessment for learning, self-review, teacher/educator understanding of *Te Whāriki* (the early childhood curriculum), and teacher qualifications. The value of professional resources and professional development, and of improving teacher qualifications in helping raise levels on intermediate outcomes, was strongly reinforced. There is some way to go to get to "very good" levels of quality throughout and our findings reinforce the importance of MOE continuing the strategic plan initiatives aimed at quality improvements. There are also inequalities in access to ECE services, suggesting that new initiatives around participation and planning could be useful.

The take-up of strategic plan initiatives had some limitations, and some issues particular to some kinds of localities, services, or children were not being addressed. This suggests some targeting of MOE initiatives may be useful.

The main message from this evaluation of the early days of the strategic plan is that the initiatives implemented so far are being used as intended to improve teaching and learning.

1. Introduction

Pathways to the Future—Ngā Huarahi Arataki

Pathways to the Future—Ngā Huarahi Arataki is an innovative approach to strengthening education. This is the first long-term strategic plan for any education sector in New Zealand. It was developed through extensive consultation with the ECE sector, within a framework of goals of increasing participation, improving quality, and promoting collaborative relationships. The first two goals are also explicitly connected in the outline of the strategic plan:

> Government's vision is for all New Zealand children to have the opportunity to participate in quality early childhood education no matter their circumstances. (Ministry of Education 2002, p. 1)

This strategic plan is aspirational for both the ECE sector and government. It is accompanied by significant increases in government funding and support. The main strategies as outlined in 2002 are:

To increase participation

- Focus on communities where participation is low, particularly Māori, Pasifika, low socioeconomic and rural communities.

- Be driven by the needs of those individual communities.

- Increase the Government's role in facilitating access to diverse services.

- Support ECE services to be more responsive to the needs of children, parents, families, and whānau.

To improve quality

- Implement the curriculum (*Te Whāriki*) effectively.

- Ensure teachers, ratios, and group size support quality.

- Provide for quality interactions between teachers/parents and whānau and children.

- Establish and reflect on quality practices in teaching and learning.

To improve collaborative relationships

- Improve the development and educational achievement of children between birth and age eight through forming strong links between ECE services, parent support and development, schools, health and social services.

The 2002 outline of the strategy contained specific goals within these strategies, and noted that the strategy would be implemented in steps. The main strategic plan actions are outlined in Appendix A. In summary, actions to *improve quality* are: increasing the number of qualified registered teachers in teacher-led services; publishing

professional resources; funding professional development associated with implementing *Te Whāriki*; and establishing COIs to build innovative approaches to support teaching and learning. *Supporting participation* is occurring through analysis and development of the current network of ECE services, Promoting Participation Projects in areas of low ECE participation, land being set aside for ECE services on new school sites, advice and support for new services, and advice and support to help services meet community need. Some parent support initiatives have also been established by the MSD. Equity Funding was offered from March 2002, intended to assist community-based licensed services in low-income communities, isolated services, and services offering the programme in a language other than English to raise quality and participation. A new funding system was implemented in April 2005, together with substantial increases in funding. Free ECE for three- and four-year-olds for up to 20 hours per week was announced, effective from 1 July 2007.

The strategic plan included "longitudinal research [to] measure the progress of implementation against the three goals as the plan unfolds" (Ministry of Education, 2002, p. 3). This report from NZCER/TKRNT's locality-based longitudinal evaluation is one part of the MOE's wider evaluation of the ECE strategic plan. The MOE evaluation includes: development of a monitoring system designed to provide indicators of progress and identify emerging problems, and targeted evaluations that both contribute to the overall evaluative picture and inform decisions about individual initiatives. The MOE is also undertaking analysis of the annual information it receives from ECE centres, and has commissioned other evaluations of specific initiatives or changes to funding (e.g. of the initial uses and impact of Equity Funding (Mitchell, Royal Tangaere, Mara, & Wylie, 2006a) and the COIs), and an analysis of the financial sustainability of services, linked to and using some data from this study (King, 2008). Research projects were also commissioned where the MOE required information to support policy development, e.g. a study of parental decision making in relation to the use of ECE services (Robertson, 2007), and research on quality in parent/whānau-led services (Mitchell, Royal Tangaere, Mara, & Wylie, 2006b).

As well as measuring progress on the ECE strategic plan goals, the locality-based longitudinal evaluation is intended to provide insight into how the three goals are met, such as the actions services take in response to the new resources coming from the strategic plan that enable improved participation and quality, and the factors that influence these actions. Such insight can help MOE policy makers and people supporting ECE services around the country, as well as people working in individual services. It may lead to the identification of aspects that need more support than originally realised, or changes in emphasis, for example, if one part of the strategic plan appears to be occurring at the expense of another.

Strategic plan implementation 2004–2006

The main strategic plan actions in relation to our data collection are set out in the timeline below. Further information about strategic plan actions is contained in Appendix A.

Baseline data were collected after some strategic plan actions had been initiated, but these were in their early stages. New actions occurred in 2005, including publication of MOE assessment and ICT resources (with accompanying professional development in 2006), large funding increases and establishment of a new funding system based on cost drivers, and an extension to the Promoting Participation Project. The income eligibility threshold for the Childcare Subsidy was expanded in 2004. Currently, 70 percent of families could potentially qualify, based on family income, up from less than half the families before the expansion of income criteria. Other strategic actions were signalled. Any changes made in ECE services in response to these actions might start to be seen in the 2006 data collection for this study.

Timeline of main ECE strategic plan actions and evaluation data collection

Actions	2002	2003	2004	2005	2006	2007
Strategic Plan actions						
Increase participation	Promoting Participation Projects (PPP)—4 pilot projects—focus on Māori and Pasifika ECE Design and Build Scheme published—November Land on school sites for ECE services MOE network analysis and planning		PPP contracting reviewed	PPP extended to other groups with low ECE participation		
Improve quality	All new "persons responsible"' to hold Dip Tchg (ECE) 1 July—pay parity for kindergarten teachers	First 6 designated Centres of Innovation (COI)	1 January—all "persons responsible"' to be registered teachers 4 new designated COIs	ICT for ECE framework Assessment exemplars 6 new designated COIs	31 December—50% of regulated staff in teacher-led services to be registered teachers Professional development on ICT and assessment November—self-review guidelines for ECE	3 new designated COIs
Promote collaborative relationships					8 pilot ECE centre-based parent support and development projects	10 ECE centre-based parent support and development projects
Supporting strategies	March—Equity Funding for community-based services		Childcare subsidy increased and income eligibility threshold expanded	1 April—new funding system based on cost drivers Substantial bulk funding increases Evaluation of initial uses and impact of Equity Funding Research on quality in parent/whānau-led services	1 July—funding rates increased for inflation; Additional funding increases to playcentre Regulatory review on ratios and group size	1 July—up to 20 hours free ECE for 3- and 4-year-olds in teacher-led services and some kōhanga reo Evaluation of Promoting ECE Participation Project Research on parental decision making in relation to ECE services
Evaluation data collection			August 2004–March 2005 Baseline data collected		May–November 2006 Final data collected	

Locality-based evaluation

One of the major factors that could influence the actions people take, and how the strategic plan actually unfolds for children, parents, teacher/educators, and managers, is the locality in which families live, work, and use ECE. It was for this reason that the MOE decided to call for tenders to undertake evaluation on the impact of the strategic plan that would pay attention to differences in local context, and shed some light on what these differences mean for the way the strategic plan takes shape over time.

NZCER and TKRNT, together with HOI, which is focusing on ECE service sustainability both in localities and nationally, were selected to undertake the first phase of this locality-based evaluation. Like the *Pathways to the Future* strategic plan, the evaluation is occurring in steps. We started with several meetings in late 2003, when the evaluation team and MOE ECE policy makers, researchers, and data analysts discussed the intervention logic model[7] that had been developed for the MOE to show the likely paths between the goals of the strategic plan, the strategies and actions to support those goals, the intermediate outcomes that would occur along the way, and the outcomes at the end of the ten-year period. The final version of this model is given at the end of this introduction. The model framed the information that we needed to collect, particularly in relation to the intermediate outcomes. We also discussed the kinds of changes that were likely to occur as a result of the strategic plan within the initial years that this evaluation covers, the factors within, and outside, the strategic plan that were likely to influence outcomes, and risks that could affect the achievement of the outcomes. For example, some of the factors within the strategic plan policy that were expected to affect increasing participation of Māori children were teacher skills and supply, supply of services Māori parents wanted, and alignment of policy; factors outside it included labour market factors, housing, income support and social development policy, the degree and quality of parent/whānau engagement in ECE, and children's health; and risks included services not being accessible or affordable. This analysis also mapped out the information that should be gathered through the evaluation.

This first phase of the evaluation covers only the initial stages of the long-term strategic plan. The most important aspect of this evaluation is to compare how things were in mid-2004 before the major policy changes began, and how things were in the same ECE services in 2006, after some actions had been taken. This comparison enables us to map the changes that occurred in services and for parents between 2004 and 2006. It provides some insight into how change occurred, and whether it is heading as expected by the intervention logic model that underpins *Pathways to the Future—Ngā Huarahi Arataki*. Because it is important to understand how change occurs (or does not), this study focused on a sample of individual services, so that we could both track things over time, and have contextual information. This study is not intended to provide a representative picture of all ECE services. That can be provided by analysis of the national data collected by the MOE, and by periodic national surveys, such as the 2003/2004 NZCER national surveys of ECE services.[8]

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[7]   The intervention logic model was developed by Patricia Rogers, RMIT University, Melbourne, from documentation and discussions with the long-term strategic plan working group, and MOE policy and research staff. In essence, an intervention model shows how something is expected to work, and allows people to test their assumptions and clarify understanding both in the policy development stage, and as a policy unfolds. It is a living model, rather than an inflexible test of whether something is "correct".

[8]   The first NZCER national survey was carried out in late 2003 (Mitchell & Brooking, 2007). It surveyed management, teacher/educators, parents, and parent committee members from 531 ECE services. This sample was approximately 15 percent of all service types, except kōhanga reo. Thus—with the exception of kōhanga reo—the survey provides a generally representative picture.

We began by collecting data in 46 services in eight localities in 2004 (Mitchell, Royal Tangaere, Mara, & Wylie, 2008). We returned to most of these services in 2006, collecting data that would enable us to see what changes had occurred in the services and for parents using these services.

In 2006, the MOE asked us to focus on the following evaluation questions relating to the plan's outcomes:

1. [To what extent, in what ways, and how effectively] has the plan improved children's early learning foundations?

2. [To what extent, in what ways, and how effectively] has the plan increased participation in ECE?

3. [To what extent, in what ways, and how effectively] has participation in ECE supported parents' ability to engage in work and training?

4. [To what extent, in what ways, and how effectively] has the plan improved the quality of ECE?

5. [To what extent, in what ways, and how effectively] has the plan facilitated the formation of collaborative relationships between ECE services, parent support and development, schools, health and social services?

These five questions frame the report. Responses to the first question, "To what extent, in what ways, and how effectively has the plan improved children's early learning foundations?" are woven through findings within other relevant sections, mainly Chapter 5, "Improving the quality of education".

Layout of report

To answer these questions, we have used the discussions around the intervention logic model and reference to research-based evidence to develop a set of indicators and rubrics around each of the plan's three major goals and the intermediate outcomes that are the target of government actions, and are expected by the logic model to contribute to the goals. For each set of indicators, we have analysed levels and patterns of change in ratings where we have data for both 2004 and 2006. We then provide some analysis of the factors that may make a difference in relation to the achievement of the strategic plan's outcomes.

Locality is the first of these. We have analysed three main characteristics of the localities that could affect the outcomes: whether they are rural or urban; low socioeconomic or not; the percentage of Māori with children under five; the percentage of Pasifika with children under five.

Service characteristics may also affect changes that occur in relation to the strategic plan. We have compared services in relation to their type; whether they are teacher-led or parent/whānau-led; and whether they are sessional or full-day.

We have also compared changes for services in relation to child characteristics: the proportion of under-twos on their roll; and in terms of the social characteristics of their roll, the proportion of Māori, proportion of Pasifika, and whether they receive Equity Funding (indicating low socioeconomic status, isolation or teaching in a language other than English).

We surveyed parents at each of the services in the study, a total of 886 in 2004 and 793 in 2006. This is a sizeable cross-section of ECE users, and provides useful information not just about these particular services in relation to

the strategic plan goals, but also about patterns of children's participation in ECE that may have some implications for the ongoing implementation of the strategic plan.

The report starts with an outline of the methodology used. Chapters 3 to 6 address the evaluation questions. Chapter 3 focuses on promoting participation, Chapter 4 in relation to parent education and employment, Chapter 5 on improving the quality of education, and Chapter 6 on enhancing collaborative relationships. In each of these chapters, the format is the same. Dimensions of the strategic plan goal are described, followed by analysis of 2006 levels on these dimensions and patterns of change (where data for 2004 and 2006 are available) for localities, services, and children, analysis by intermediate outcomes of the strategic plan, and of drivers and impediments to change. A final section for each summarises the evidence in relation to the evaluation question. In a final chapter, we discuss what the findings may mean for the likely impact of the strategic plan in the study localities, and nationally. Appendix E includes parent responses to the implementation of free ECE, soon after the policy was announced.

Framework for the evaluation of 'Pathways to the Future'

Government social, labour market, economic, health, immigration, education...policies

Demographic changes

Community resources, services, cultures, languages, relationships...

Ultimate outcomes

Parents can engage in education, training and employment if they choose

Children develop and enhance strong early learning foundations, including building a strong sense of identity.

Increased community capacity to engage in other community activities

"Children develop an understanding of what it means to live both locally and globally as Māori or as one of the many cultures of New Zealand.

This is inclusive of opportunities to help all access te ao Māori, the Māori world, as well as the many Pasifika, European and Asian cultures present in New Zealand today.

Strategic Plan goals

Increased participation in quality ECE
Special focus on Māori children, Pasifika children & children in low socio-economic and rural communities

Parents and whānau are strengthened and empowered to play a significant role in their children's early education and development

Improved quality of ECE
Quality teaching
Quality services

Collaborative relationships between
• ECE and families/whānau
• ECE and schools
• ECE & other family services

Intermediate outcomes

Increased participation in ECE

Parents can identify quality in ECE

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i
s
k

Parents value ECE

ECE services are accessible

ECE services are sustainable

ECE services are responsive

Services meet cultural & language aspirations

Quality in parent led services

Te Whāriki effectively implemented

Quality teaching & learning practices

Reduced ratios and group size

More registered teachers in ECE

Coherence of education 0–8 years

Integrated services 0–8 years

Outputs

Actions

2. Methodology

Purpose of this evaluation

In its outline of what it wanted from this locality-based evaluation, the MOE noted that:

> some aspects of the implementation of *Pathways to the Future* will be different in different contexts because needs and issues are different in different places. Consequently, the outcomes of *Pathways to the Future* may differ in different contexts.

These contexts included geographical location, government policy context, demographic, community, and family/whānau. The purpose of this evaluation was to:

- put our understanding of how *Pathways to the Future—Ngā Huarahi Arataki* works into context

- add depth to our understanding of how the elements of *Pathways to the Future—Ngā Huarahi Arataki* interact

- provide an early warning on problems that may be arising during the implementation period 2003–2006.

The objectives for the first stage of this evaluation are:

Within specified locations, over the period 2003–2006:[9]

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a) To establish baseline measures in 2004 related to the stated goals.

b) To describe the implementation process and the impact of the implementation.

c) To determine whether there is any change from baseline measures in 2006.

d) To analyse the evidence from each locality to understand, with respect to the stated goals and the logic model:
   – what is working so far, and why
   – what is not working so far, and why.

e) To analyse similarities and differences in relation to what works in different contexts.

f) To provide evidence of any unintended outcomes that may arise from the implementation to date.

The baseline report (Mitchell, Royal Tangaere, Mara, & Wylie, 2008) provided information for objective *a*, and analysis in relation to objectives *d* and *e*.

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[9]   The evaluation began on 1 March 2004, and 2004 is the baseline year for tracking change.

This report, after fieldwork in mid-2006 in the same localities, with the same services, addresses objectives *b–f*. The emphasis on locality as a primary unit of analysis shifted in 2006, when the MOE asked us to focus on the following evaluation questions relating to the plan's outcomes:

1. [To what extent, in what ways, and how effectively] has the plan improved children's early learning foundations?

2. [To what extent, in what ways, and how effectively] has the plan increased participation in ECE?

3. [To what extent, in what ways, and how effectively] has participation in ECE supported parents' ability to engage in work and training?

4. [To what extent, in what ways, and how effectively] has the plan improved the quality of ECE?

5. [To what extent, in what ways, and how effectively] has the plan facilitated the formation of collaborative relationships between ECE services, parent support and development, schools, health and social services?

Evaluation design

The evaluation design had to provide ways to gather meaningful information relevant to the strategic plan goals and outcomes that could be tracked over time, to see what changes were occurring in ECE services and for parents. It also needed to be able to relate any changes found to both the national level (e.g. changes to funding or regulations), and the local context. The local context included other ECE services, on the underlying assumption that the diversity of the ECE sector and its relative openness to new providers would have a bearing on participation and quality in any given locality. Neighbouring services are to some degree in competition with each other, and can have some influence on each other's roll numbers and composition. For example, in an area where a Pasifika service opens, existing services may lose Pasifika children; where one service offering a similar programme or hours costs parents less than another, it may mean that others nearby lose children. If parents perceive kindergarten to be an essential step to starting school, other services may lose children when the kindergarten can take them, or find that formerly full-time attendees want to access their service only part-time. Changes in an ECE service's roll numbers or composition may lead to changes in practice that affect quality.

The locality-based focus of the evaluation provides a useful framework for gathering relevant data, and for some of the analysis. But it is not without some limitations. Ideally, the definition of a locality would encompass a bounded setting within which families live, work, and use only the ECE services found within it. This would enable us to narrow down the factors that could be influencing the kinds of change occurring in relation to the strategic plan. However, that is not how things are in contemporary New Zealand. While many families use ECE services that are within reach of their homes, others may live in one area, and use an ECE service—or services— in another, depending on factors such as their employment, family/whānau support, and the location of an ECE service they want to use. This means some caution is needed in interpreting changes in individual ECE services simply in relation to the immediate locality, and the services in it. An evaluation that gathered in-depth data on all the ECE services in a wider area that were likely to be used by families would also be ideal, but expensive.

When it comes to interpreting the social and demographic contexts of a set of ECE services that are geographically close, the wider worlds in which families operate also need to be taken into account. Ideally again,

a study like this would be able to gather or have access to current relevant social and demographic information for both the specific locality itself, and the area around it, to understand factors outside the ECE services and the strategic plan that may affect what we see changing in the ECE services. In designing the study, we thought of interviews with the relevant local body and government offices to see what trends were occurring, and what effect they might be having—such as the closure or opening of a major employment source, or shifts in housing availability and affordability. This was too costly; and so we are reliant on Census data taken only every five years. This gives information on some demographic characteristics, but not social trends that may be affecting families' ECE needs.

We are limited in what we can chart in terms of participation. We can track changes in regularity of attendance, number of hours, and starting age, but we cannot tell what proportion of a locality's preschoolers are accessing the ECE services in that locality, because no current information on the number of preschoolers in a given area is available. Schools provide the MOE with information provided by parents about whether their new entrant child has attended ECE, and the type, which gives some indication for the ECE attendance of children just before they come to school. But it cannot tell us whether this ECE attendance was in the same locality, or about the ECE attendance patterns of younger children. This locality-based evaluation was not intended to cover all these aspects, being only one part of the MOE's overall evaluation strategy.

Intervention logic is often used to evaluate programmes with defined beginnings and ends, and to map out the ways in which progress towards a defined end is expected to occur. The intervention logic model used for the *Pathways to the Future—Ngā Huarahi Arataki* strategic plan is at a high level, relating goals to outcomes over time. These outcomes and goals are directional and are not defined in terms of quantitative targets (e.g. 100 percent ECE attendance for all four-year-olds, or 75 percent of all services achieving high ratings for the quality of teacher/educator:child interaction, by 2012). Only some aspects that fall within regulations have been given clear targets, such as having all teacher/educators in teacher-led programmes registered by 2012.

Progress towards the outcomes and goals of the strategic plan is measured here in terms of indicators of the main strategies of the plan set out on page 1 of this report. These strategies can be thought of as the underlying assumptions about how the increased support for ECE would translate into action, and the kinds of action that would gradually improve participation, quality, and collaborative relationships. We have used these strategies as the basis for forming the sets of indicators that allow us to track change over time. Other information collected at the service and locality levels enables us to see what may be contributing to any changes seen on these indicators.

Sample

Localities

The eight localities for the study were chosen by the MOE, NZCER, and TKRNT to provide diversity on key relevant variables. These were:

- geographical location, including North or South Island and different degrees of isolation
- ethnic composition, especially percentage of Māori population and percentage of Pasifika population
- demographic changes anticipated, especially projected under-five population growth or decline
- ECE service supply and demand

- range of ECE services (e.g. licensed, licence-exempt, different ownership structures, different service types, different philosophies, different language and culture provision, and special character services).

All the wards chosen had median incomes below the average for New Zealand, so the sample is not representative with respect to income levels.

Electoral wards were used as a systematic way to define locality boundaries. Electoral wards are subsets of City Districts (previously Territorial Local Authorities). Statistics New Zealand notes that "the ward system was designed to allow for the recognition of communities within a district and to increase overall community involvement in the local government system" (Statistics New Zealand, 2005). Boundaries are reviewed preceding local body elections. Wards are therefore already defined localities that should have coherence as communities. All the wards selected had individual incomes below the median in 2001.

While the wards provided a way to define localities that were likely to operate as communities for electoral purposes, the case study approach focusing on reasonably comprehensive data collection from individual ECE services meant that wards were too big to be able to include every ECE service. Census Area Unit/Units (CAUs) were used within each ward to define the geographic area for the ECE services to be followed over time. CAUs usually coincide with suburbs or parts of suburbs, thus allowing a closely defined geographical area to be intensively studied within the setting of a broader community. The following table sets out some key social characteristics of the eight localities chosen.

Table 1 **Characteristics of the 8 localities (2001* Census data)**

Kauri	Ethnicity of population: 70% Māori, 5% Pasifika ECE participation of new school entrants in 2004—low Median income: $13,100 Unemployment rate: 18.7% Locality: North Island, minor urban
Pohutukawa	Ethnicity of population: 20% Māori, 45% Pasifika ECE participation of new school entrants in 2004—low Site for Promoting Participation Project Median income: $14,500 Unemployment rate: 13.4% Locality: North Island, main urban
Kowhai	Ethnicity of population: 26% Māori, 15% Pasifika ECE participation of new school entrants in 2004—low Site for Promoting Participation Project, property provision likely Median income: $17,200 Unemployment rate: 11.8% Locality: North Island, main urban
Karaka	Ethnicity of population: 24% Māori, 2.2% Pasifika ECE participation of new school entrants in 2004—high Median income: $17,600 Unemployment rate: 5.7% Locality: North Island, minor urban
Totara	Ethnicity of population: 31% Māori, 3.1% Pasifika ECE participation of new school entrants in 2004—moderately high Median income: $14,000 Unemployment rate: 10.2% Locality: North Island, minor urban
Nikau	Ethnicity of population: 5.5% Māori, 0.5% Pasifika ECE participation of new school entrants in 2004—moderately high. Increasing school rolls, high demand Median income: $16,800 Unemployment rate: 4.3% Locality: South Island, main urban
Rata	Ethnicity of population: 9.6% Māori, 3.9% Pasifika, ECE participation of new school entrants in 2004—high Median income: $17,200 Unemployment rate: 8.4% Locality: South Island, main urban
Rimu	Ethnicity of population: 11.2% Māori, 0.7% Pasifika ECE participation of new school entrants in 2004—high Median income: $17,300 Unemployment rate: 3.9% Locality: South Island, secondary urban

* We report 2001 Census data rather than 2006 Census data because this is what the sample is based on. Median individual income for all of New Zealand was $18,500 in 2001. Unemployment rate for all of New Zealand is 7.5 percent.

Main urban areas have minimum population of 30,000 and are centred on a city or major urban area. Secondary urban areas have a population between 10,000 and 29,999 and are centred on the larger regional areas. Minor urban areas are urbanised settlements (outside main and secondary urban areas) centred around smaller towns with a population of 1000 to 9999. Rural centres have a population of 300–999. (Source: Statistics New Zealand, 2005.) The MOE and NZCER chose main urban, secondary urban, and minor urban areas because rural areas did not have a range of ECE service types. Nevertheless, the minor urban areas in our sample each had some isolated services.

Sample services

The services in this study comprise 20 percent of the services in the wards that were used to define the localities. This varied from 63 percent in one rural ward, to 10 percent in an urban ward. There were 231 licensed services in the eight study wards in 2004, and 227 in 2006. Data on the number of licence-exempt services were unreliable and are not included, but the puna and playgroup in our sample are shown.

The sample was not chosen to provide a representative sample of either services in a ward, or enrolments in a ward. We sought one of each major ECE service type in each locality where possible. The ward data were used as context to help interpret changes in the sample services. The sample was focused on wards with lower income levels.

The next table gives a breakdown for each locality. Pohutukawa and Kowhai wards experienced the most changed provision. Pohutukawa ward had the most new provision, but also experienced temporary closure of a Pasifika centre, and closure of an education and care centre and a kōhanga reo. Pohutukawa is a high Pasifika main urban locality, and a site for a Promoting Participation Project. Kowhai had the most closures, and opening of an education and care service. Kowhai is also an urban locality, high Māori and high Pasifika, and a site for a Promoting Participation Project.

The baseline report contains more information about provision in the eight wards.

Table 2 **Provision and sample service types in each ward in 2004 and 2006**

Ward	Service types	Service types 2004	Changes in service types 2006	Sample
Kauri	Kindergarten Kōhanga reo Playcentre Education and care Home-based Playgroup Punanga	1 11 9 5 0	One playcentre opened. One kōhanga reo opened.	1 1 1 1 0 1 1
Pohutukawa	Kindergarten Kōhanga reo Playcentre Education and care Home-based Pasifika	8 8 5 49 2 4	One Pasifika centre closed temporarily, one education and care centre closed, one kōhanga reo closed. One home-based network moved. Three education and care centres opened.	1 1 1 1 1 3 (incomplete data on 1 Pasifika centre in 2006 because of closure)
Kowhai	Kindergarten Kōhanga reo Playcentre Education and care Home-based Pasifika	8 8 4 44 2 1	Two education and care centres closed, one home-based network closed, one kōhanga reo closed. One home-based network moved. One education and care centre opened.	1 1 1 2 1 1
Karaka	Kindergarten Kōhanga reo Playcentre Education and care Home-based	3 3 2 4 4	One home-based network closed. One home-based network opened.	1 1 1 1 1
Totara	Kindergarten Kōhanga reo Playcentre Education and care	1 4 1 3	No change.	1 1 1 2
Nikau	Kindergarten Kōhanga reo Playcentre Education and care	2 1 2 6	One kindergarten opened.	1 1 1 2
Rata	Kindergarten Kōhanga reo Playcentre Education and care Pasifika Home-based	4 1 1 9 1 2	Two home-based services closed.	1 1 1 1 1
Rimu	Kindergarten Kōhanga reo Playcentre Education and care Home-based	2 2 1 2 1	One kōhanga reo closed. One kōhanga reo moved. One playcentre opened.	1 1 1 1 1

Services were approached by letter and telephone, and any that did not want to participate were replaced by a service with the same characteristics within the locality, or very close to it. Where there were no other ECE services of that type, we did not select a replacement, because of the locality framework being used.

TKRNT used its connections with whānau to approach the kōhanga reo chosen for its sample. NZCER evaluators approached the other services.

Most services approached in this way agreed to take part. The early intervention centre was too busy to participate initially because it was preparing for an Education Review Office (ERO) visit and working on a MOE contract, but agreed to take part from the beginning of 2005.

The proposed sample was reduced by two Māori immersion centres and one kōhanga reo, with MOE agreement. The TKRNT evaluator attended the management meeting of one of the Māori immersion centres, provided information, and made telephone calls, but the owner would not make a decision and after 10 weeks, the MOE agreed that we would not pursue this any further. The second Māori immersion centre did agree to take part, but then withdrew because of work pressure. One kōhanga reo approached had personnel problems and declined to take part. As it was an extra kōhanga reo for the locality, it was not replaced.

In total, 12 education and care services (seven private and five community-owned), eight kindergartens, eight kōhanga reo, and eight playcentres are taking part in the study. There is at least one of each of these main types in each locality. Of the other service types, five Pasifika services (from three localities), three home-based services (from three localities), one puna, and one playgroup are taking part. One of the education and care services serves children with special needs drawn from a wide area.

This small sample was not intended to be representative of all ECE services or parents of children attending ECE, but to provide understanding of the changes occurring in ECE.

Community meetings

Community meetings were held in each locality in June-July 2004. The aims of the community meetings were to:

- discuss the evaluation so that the local community[10] was well informed about it
- generate support for the collection of locality-based data. It was felt to be important to have the support of ECE services since the funding review and regulatory review were occurring at the time and we did not want the evaluation confused with these
- find out some information about local issues relating to strategic plan goals and policies (especially planning and provision) and pinpoint sources of further information
- discuss how the community would like to use the findings from their locality study
- discuss ways to feed back findings.

NZCER and TKRNT evaluators developed a format and material for presentation to the community meetings, comprising background information about the strategic plan and government budget announcements, an explanation of the locality-based evaluation, small-group discussion questions, and the organisation of a final full-group session. The small-group discussions were intended to find out what participants thought about what was

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10   Local community is the CAU in which the sample ECE services are located and other organisations that have relationships with these ECE services (or nearby).

happening in ECE in relation to their locality, what participants predicted would happen in the future given proposed qualification, ratio, and funding changes, and the nature of relationships among ECE services and with other organisations. The final full-group session was organised so that people could hear from other groups, raise issues and suggestions, and discuss what feedback they would like from the meetings.

We invited representatives from all ECE services (including parents as representatives) and primary schools within each of the CAUs where the evaluation was occurring to attend, using MOE contact information. We also invited health, welfare, and community organisation, iwi, and government department representatives whom we expected would have relationships with the ECE services.

An average of 28 people attended each meeting (the smallest number was 14, and the largest 35).

In four community meetings, people from a range of organisations said they were meeting together for the first time to discuss ECE provision, and in three of these localities, follow-up meetings were arranged by people in organisations working with ECE services.

The meetings were particularly useful in informing the participants, gaining their interest and goodwill, and providing some new information about the localities and perceptions of the strategic plan. They were not representative meetings, since some services were not present, and at some meetings, people were present who were not from the immediate locality.

We did not hold further community meetings. However, notes of the community meetings were sent back to participants with a contact list, and we advised the participants that the main themes were reported to the MOE in the baseline report.

Data collection in the localities

Baseline data collection began in August 2004. While data collection was completed for 44 services by the end of November, data for two services could only be undertaken in January–March 2005.

2006 data collection began in May 2006, and was completed by the end of August, except for five services. Three of these were completed in November 2006, and the other two in February 2007. We were unable to do the observations and teacher interview in one of the home-based services since the co-ordinator was not successful in getting a caregiver to agree to being observed and interviewed. One Niuean centre temporarily closed and only partial data were received from it. At the time of closure there was a roll of eight, the service had had five ERO reviews in the past three years and the service had experienced difficulties with the landlord and financial issues.

Training of field researchers

In 2004, NZCER and TKRNT field researchers shared two days training about the purpose and background of the evaluation, interviewing and the interview schedules, and the use of the service quality rating scale (for those unfamiliar with it). All four NZCER field researchers had used the rating scale recently, as had the TKRNT project leader. The two TKRNT field researchers who had not used the rating scale rated the same service as the TKRNT project leader, afterwards comparing and discussing ratings, to ensure there was a consistent understanding of the items and their marking.

In 2006, the fieldwork team consisted of the same four NZCER field researchers and the TKRNT project leader. We shared a day's meeting to discuss the data to be collected in this second phase.

In each year, NZCER and TKRNT researchers visited each service on two occasions. These occasions were a week or more apart in 2004 (except for the puna which was in the same week), and in the same week (not consecutive days) in 2006.

Service data sources

The field researchers:

- rated each ECE service on process quality and actual teacher/educator:child ratios and group size, on two occasions
- obtained a service profile of the operation of ECE service (filled in by service managers)
- gathered information about operation and pedagogical practice from the service management
- interviewed the parent management committee/whānau and/or management (in 2006, the interview was replaced by a questionnaire)
- surveyed parents/whānau in the ECE service
- held a group interview with teachers/educators/kaiako.

ECE service management or staff were asked to distribute the parent/whānau survey and information about the evaluation at the field researcher's first visit. The field researcher also talked informally to parents/whānau as they picked up their children, and encouraged responses. Completed surveys were collected on their second visit to the ECE service.

Written surveys were not feasible to use with parents attending one service that caters for refugees. We worked with the supervisor of this service to turn the survey into a set of 10 questions that were asked of parents as a group, in both 2004 and 2006. Three group sessions, each lasting several hours, were held at the service, with bilingual staff attending each. The groups were facilitated by the adult programme leader at the service, and notes provided by the staff. This turned out to be a very useful process for the service itself:

> I think this experience has been great for all of us. Families certainly enjoyed being consulted, and said so. Feedback was given with respect and humour. I have never had so much feedback ever from families involved in early childhood centres. We would certainly repeat this exercise again. (ECE service manager)

The mix of methods used in the evaluation is intended to provide comprehensive information, including service and parent perspectives, that relate directly to the strategic plan's goals and outcomes, including services' expectations and planned actions, and to also provide contextual information to help understanding of any differences emerging across localities and services.

NZCER ECE service quality rating scale

Ratings of quality using the NZCER/TKRNT process quality rating scale have been used to make evaluative judgements about the level of quality in 2004 and 2006. Process quality refers to the environment and interactions and relationships that occur in an early childhood setting and shape children's learning opportunities and experiences. This scale was first used in the longitudinal Competent Children, Competent Learners project, and was further developed by NZCER/TKRNT for their evaluation of Equity Funding (comparing baseline ratings

with ratings of the same services a year later) and study of Quality in Parent/whānau-led Centres (analysing factors that were associated with different quality rating levels). It has also been used as a source of data to decide and assess cycles of action research/professional development in the Wilton Playcentre Centre of Innovation work. We used 29 items from the scale. These are briefly outlined in Appendix B. Use of this scale enabled us to measure change over time for particular aspects, as well as overall.

The instruments used in this evaluation are available from NZCER on request.

Analytic framework

The framework we used to analyse change between 2004 and 2006 was developed and discussed with MOE officials before being finalised.

For each intended ECE strategic plan outcome, except the synthesising outcome "improved learning foundations", we followed similar steps to establish dimensions for each outcome and make evaluative judgements about levels reached on them.

1. We described dimensions for each intended outcome. These dimensions have either been associated in research evidence with benefits for children, or are based on the strategic plan goals. For example, three dimensions of participation were established: levels, duration, and intensity of participation.

2. We described indicators for each dimension that show how we measured that dimension. For example, the indicator of levels of participation was a rating derived from the proportion of children enrolled in ECE prior to school entry in each locality. The indicators of levels of quality were ratings on five aspects of quality: "Adults are responsive" "Adults extend children"; "Children complete work and concentrate", Children support, co-operate, and co-construct learning"; "Education programme content"; and "Resources". These were derived from ratings made by field researchers who observed in the services on items that measured that aspect. We also showed whether the same measure was used in 2004, allowing analysis of the shifts on the measure between 2004 and 2006.

3. We developed rubrics for the quality and collaborative relationship dimensions, which describe three levels of overall achievement for each indicator, rated as "good", "adequate", or "poor". The rubrics were decided through reference to research evidence, government policy goals, or baseline findings. They were finalised after review and discussion with the MOE. The rubrics are given a numerical rating (maximum 3, minimum 1) and their importance is weighted (maximum 3, minimum 1). To get the indicator score, the weighted mean of the ratings for each item is calculated. The weighted mean = (total of each rating x its weight)/(total weights).

4. Where there was more than one indicator for each dimension, we combined the indicator scores to reach a dimension score and used a scale of "very good", "good", "adequate", or "poor" to describe the dimension rating. The mean was used to rate the dimension: "Very good": 2.5–3; "Good": 2.2–2.49; "Fair": 1.7–2.1; "Poor": 1–1.6. Where there was only one indicator of a dimension, the indicator score was the dimension score. We describe the importance of each dimension ("very important", "important", and "desirable") with reference to research evidence where available.

5. The dimension scores were then combined, to provide an overall judgement of the level of achievement on each intended outcome. This overall judgement is categorised as "very good", "good", "fair", or poor".

Each service gets a rating for each quality and collaborative relationship indicator, dimension, and overall outcome. These are used to make evaluative judgements about 2006 levels and shifts in levels from 2004 to 2006. For example, in 2004, service A was rated as "very good" on two indicators of quality ("adults are responsive" and "children complete work"), "good" on one indicator ("children co-operate and co-construct learning"), and "fair" on three indicators ("education programme content", "adults extend children", and "ECE resources"). Its overall quality rating was "good". In 2006, this centre had sustained its "very good" ratings, and improved its ratings on two of the other indicators. Its overall rating in 2006 was "very good".

We did develop rubrics for participation dimensions, but decided there were good reasons not to use them. Unlike our data for quality dimensions, where research evidence about benefits of dimensions of quality is clear, it is hard to make evaluative judgements about levels of participation because participation benefits depend on whether the service is of good quality, the educational aims of the service (e.g. language learning may require more hours of exposure), and family circumstances. In addition, we as a society do not have agreement about what might be good for young children in terms of levels of participation in ECE and the MOE has not suggested desirable targets for participation dimensions. Thus, rather than using evaluative terms to describe levels on participation dimensions, we have provided detailed data for the dimensions to show levels and shifts from 2004 to 2006.

Appendix C has further information about the analytic frame and describes the rubrics developed for the quality and collaborative relationships outcomes.

Data from MOE provided for localities are examined separately from data relating to the services followed over time. At service level, data from parents about their children are combined with data from teacher/educators and managers for the service of those children.

Analysis

A) *Levels in ratings*

For each indicator, dimension, and overall outcome we analysed levels of ratings in 2006.

B) *Patterns of change 2004 to 2006.*

For each indicator, dimension, and overall outcome we analysed levels and patterns of change in ratings from 2004 to 2006 where we had data from both years.

C) *Analysis of change in ratings for localities, services, and children*

In order to address the question "For whom" has the plan resulted in increased/decreased/no change in indicator, dimension, and overall ratings, we analysed patterns of change from 2004 to 2006 for localities, services, and groups that are the focus of strategic plan actions and goals. Analysis was made separately of data gathered at locality level and data gathered at service level.

Ci) **Locality characteristics**

Changes in indicator, dimension, and overall ratings for a) data collected at locality level and b) data collected at service level were analysed in relation to the following characteristics of localities:

- Main urban/minor or secondary urban
- Low socioeconomic /not

- Population characteristics (percentage of Māori with children under five; percentage of Pasifika with children under five).

Cii) Service characteristics

Change in indicator, dimension, and overall ratings for data collected at service level (but not locality level) was analysed in relation to the following characteristics of services:

- Service type
- Service is teacher-led or parent/whānau-led
- Service is sessional or full-day.

Ciii) Child characteristics

Change in indicator, dimension, and overall ratings for data collected at service level (but not locality level) was analysed in relation to the following characteristics of children in that service:

- Proportion of children attending the service who are Māori. The cut-off point was over 12 percent Māori, chosen because it provided a mid-point (half the services had more than 12 percent Māori children)
- Proportion of children attending the service who are Pasifika. There were only 19 services with any Pasifika children, and five of these had only one or two Pasifika children. We chose a cut-off point of 4 percent in order to sample services with several or more Pasifika children
- Whether the service receives Equity Funding, i.e. whether the service serves low-income families, delivers the education programme in a language and culture other than English, and/or whether it is isolated
- Proportion of children enrolled at the service under two years old.
- Parental data about their child was analysed in relation to income level, employment status,and highest formal qualification of parents filling in the questionnaire, and ethnicity of the child.

D) Analysis by intermediate outcomes

Intermediate outcomes were also given ratings in their own right. At service level, we provided a second level of analysis through comparison of changes in ratings of indicators, dimensions, and overall outcome ratings with changes in indicator ratings of the following intermediate outcomes:

- *Participation*. ECE services are accessible; ECE services are sustainable: ECE services are responsive; ECE services meet cultural and language aspirations
- *Quality*. ECE services meet cultural and language aspirations; more registered teachers in ECE; quality in parent/whānau-led services; reduced ratios and groups size; *Te Whāriki* effectively implemented; quality teaching and learning practices.

Analysing supports and barriers to change

We analysed the ratings of 2006 levels and patterns of change in ratings from 2004 to 2006 in relation to data from interviews with teacher/educators, parent questionnaires, and management questionnaires about supports and barriers to improvements on the dimensions. This helped us address questions of how improvements/no improvements had come about at service level.

We analysed patterns of change or of no change in each overall rating in relation to MOE actions, service actions, and any other relevant changes for the service or locality.

Addressing the evaluation questions

We synthesised these analyses to address each evaluation question.

3. Increasing participation

Research evidence on the value of ECE, as well as its role in supporting parental employment, underlies the ECE strategic plan focus on increasing participation in good-quality ECE. The evidence has grown stronger since the strategic plan was published. Studies in the US and UK (Bridges et al., 2004; Gormley & Phillips, 2003; Magnuson, et al., 2004; Sylva et al., 2004) that compare the performance of children with and without ECE experience, show benefits during schooling for those with ECE experience. A key finding of the large-scale longitudinal Effective Provision of Preschool Education study in the UK (Sylva et al., 2004) was that "Preschool experience compared to none, enhances all-round development in children" (p. ii). In New Zealand, the Competent Children, Competent Learners study (Wylie & Hodgen, 2007; Wylie, Hodgen, Ferral, & Thompson, 2006; Wylie, Thompson, & Kerslake Hendricks, 1996) found that children who attended good-quality ECE had higher scores on a range of competencies during schooling than those attending poorer quality ECE services.

By 2006, a range of government initiatives were aimed at increasing ECE participation. Many were targeted initiatives or were fairly recent. MOE Promoting Participation Projects were established as pilot projects in 2002, initially for Māori and Pasifika families. The targeting was extended to families with low ECE participation from 2005. From 2002, the MOE was offering advice and support for new services or to help (existing) services meet community need, providing space on new school sites for ECE services, and undertaking ECE network analysis and planning. The Childcare Subsidy, targeted at families meeting low-income and other criteria, was increased and the income eligibility threshold expanded in 2004. The new funding system and funding rates for all licensed ECE services had been in place from 1 April 2005. The funding system is based on service cost drivers and is expected to encourage participation by constraining increased costs to parents. Free ECE is regarded as a lever to increase participation for three- and four-year-olds: this was implemented after data collection for this study from 1 July 2007.[11] We would not, therefore, expect to see marked changes in indicators of participation from the current users of the ECE services in this study, since it is a study of existing services and therefore existing users, unless they were in services affected by ECE participation initiatives. A different study, following nonusers and existing users over time could shed light on how policy changes affecting costs to parents enter into decisions about extending hours of their child's attendance, changing services, or starting ECE.

MOE statistics on enrolments and participation prior to school entry can show national and ward-level shifts from 2004 to 2006 since their data are collected from all licensed ECE services, and families of school entrants. This data would be expected to incorporate any family whose child had come into ECE because of national participation initiatives, and services using initiatives.

In this chapter we draw on MOE national data, MOE data for the wards in our study, and data obtained from the 46 ECE services in the study to analyse changes from 2004 to 2006. Service-level data gathered in this study

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[11]   See Appendix A for more details of these initiatives.

provide information that is not collected by the MOE, such as management, parent and teacher views of ECE provision, needs of families, and information about children's ages of entry into ECE and duration of attendance.

We start by discussing the indicators of participation that we developed, and the data sources used to measure them. In order to provide a 2004 and 2006 picture of provision and participation characteristics, we report on national and ward-level statistics, using the MOE RS61 datasets and information provided by the MOE. We then analyse participation data from the 46 ECE services in this study. Our picture of participation patterns and change is not intended to be representative, but by putting different data together, we can see what might account for patterns and shifts, and therefore how MOE initiatives can contribute.

The evaluation question:

To what extent, in what ways, and how effectively has the plan increased participation in ECE?

The intervention logic model identified an overall participation outcome, "Increased participation in ECE services", and five intermediate outcomes, "Parents value ECE", "ECE services are accessible", "ECE services are sustainable", "ECE services are responsive", and "ECE services meet cultural and language aspirations" that were intended to contribute to the outcome "Increased participation in ECE". We developed indicators for each of these outcomes, except for "Parents value ECE" (which was not measured since our sample was of current users only), and report on shifts in relation to these indicators from 2004 to 2006.

The ward-level and service-level data sources for participation dimensions are set out in Tables 3 and 4 below.

Table 3   **Ward-level data sources in 2004 and 2006**

Dimension	Indicators
Level of participation	**Current enrolment**: Percentage enrolment of populations in wards (RS61). This dataset is supplied by licensed services only.
	Participation prior to school entry: Information supplied by parents of new entrants to schools in wards, expressed as a percentage of new entrants (School statistics for schools in wards)
ECE services are accessible	Provision—ward data
	MOE data on provision
	MOE data on closures
Intensity of participation	MOE data on weekly hours in ECE (RS61)

Service-level data used information from parents about their own child's participation, and parent views about service accessibility, opening times, and satisfaction; information from management about service sustainability, field researcher observations, and information from teachers about Māori language and culture. The number of services with in-depth data in both years varied for each dimension and indicator from 34 to 46. For example, only 34 managers responded to questions about changes to financial sustainability because others did not feel able to respond to these questions or did not want to divulge financial information. We report on shifts for service for which we held complete data. The number of parents responding was 870 in 2004 and 793 in 2006.

Table 4 **Service-level data sources in 2004 and 2006**

Dimension	Indicators
Duration of participation	**Starting age**: Age child started ECE (Parent questionnaire)
	Duration in months: Number of months child in ECE by age (Parent questionnaire)
Intensity of participation	**Hours of attendance**: Average hours of attendance per week (Parent questionnaire)
Regularity of attendance	Regularity of attendance in last month: Parent responses (2006 only)

Intermediate outcome	Indicators
ECE services are accessible	Provision of services meets demand
	Parent responses to
	"Whether times (days, weeks) child attends suits parent" (Parent questionnaire)
	Parents' rating of how well service meets needs of close to work / and close to home, hours (Parent questionnaire)
	Supply
	Percent parents on waiting list for other services (Parent questionnaire)
	"Whether choice of service meets parent needs" (Parent questionnaire)
	Affordability
	Parent views of affordability (Parent questionnaire)
ECE services are sustainable	Enrolments
	Spare places (Management questionnaire)
	Proportion of children who stay until they go to school (Management questionnaire)
	Staffing
	Whether service has enough teachers to meet requirements, whether service predicts problems in meeting staffing requirements in future, whether qualified teachers are used to cover for absences (Management questions on teacher supply—rating of difficulties)
	Financial
	Management questions on whether service is financially stable (Management questionnaire)
ECE services are responsive	Provision of services meets needs of families
	Overall satisfaction (Parent questionnaire)
	Rating of how well service meets parents' aspirations in relation to ECE programme, staffing, and environment (Parent questionnaire)
ECE services meet cultural and language aspirations	Parents' cultural and language aspirations are met
	Different measures for kōhanga reo, Pasifika, and general ECE services used
	Parents' rating of how well service meets cultural aspirations (Parent questionnaire)
	Rating of teacher explanation of how the service meets parents' and whānau language and cultural aspirations (Teacher questionnaire)
	Tikanga Māori and te reo Māori are evident within the education programme
	Rating scale item for tikanga Māori and te reo Māori
	Responsiveness to different cultures and heritages of children
	Rating scale item for inclusiveness of setting

Participation—national picture

MOE figures show that, nationally, participation in ECE has increased slightly from 2004 to 2006. The proportion of school entrants reported by parents to have had regular ECE immediately prior to starting school rose between 2004 and 2006—from 94.1 percent to 94.5 percent.

The number of ECE enrolments overall reported by ECE services was approximately the same in 2004 (184,513) and 2006 (184,454). The number of ECE enrolments of three-year-olds and four-year-olds fell between the two years, but so did their estimated population. The percentage of three-year-old ECE enrolments rose as a proportion of the estimated population of three-year-olds (from 95.2 percent in 2004 to 96.6 percent in 2006) and the percentage of four-year-old ECE enrolments fell slightly as a proportion of the estimated population of four-year-olds (from 103.3 percent to 103 percent).

Note, however, that there are some difficulties in making accurate calculations of ECE enrolments. Since the figures come from individual ECE services, children attending more than one ECE service are counted more than once, a reason why enrolment rates of more than 100 percent are possible. Several studies (Department of Labour and National Advisory Council on the Employment of Women, 1999; Mitchell & Brooking, 2007; Wylie et al., 1996) and this evaluation, have found a consistent figure of around 20 percent of children are enrolled in more than one ECE service in New Zealand. There is also difficulty in gaining accurate estimates of the number of children of different ages living in different localities since Census information is gathered only every five years. The latest Censuses were in 2001, before the data were collected for this study, and 2006, too late to be used in this study. The actual proportion of children attending ECE is therefore only an estimate.

Provision and participation—ward-level picture

Provision

The services in this study overall comprised 20 percent of all the ECE services in the wards that were used to define the localities. Our sample varied from 63 percent in one minor urban locality to 10 percent in a rural locality.[12] There were 231 licensed ECE services in the eight study wards in 2004, and 227 in 2006. The next table gives the range of licensed ECE service types in 2004 and 2006. Data on the two licence-exempt services (a playgroup and puna) that are studied in this evaluation are not included in this table since data on the number of licence-exempt services in these localities were unreliable.

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[12]   The sample was not chosen to provide a representative sample of either services in a ward, or enrolments in a ward. We sought one of each ECE service type in each location, where possible. The ward data were used as context to help interpret changes in the sample services.

Table 5 **Licensed ECE service types and numbers for the eight study wards**

Service type	2004 (n=231)	2006 (n=227)
Kindergarten	29	31
Kōhanga reo	38	37
Education and care	121	124 (includes Pasifika)
Playcentre	24	25
Pasifika	8	
Home-based	11	10

In the eight wards in this study, two services closed in 2004, both because of declining rolls. One was in Rimu, a secondary urban locality, and one in Pohutukawa, a main urban locality.

There were 12 closures in 2005 and 2006. Four were education and care services (one of these, a Pasifika service in Pohutukawa that was in our study closed and later reopened); four were home-based networks; three were kōhanga reo; and one was a playcentre.

Nine new services opened, four in the localities with Promoting Participation Projects. These were:

- One playcentre and one kōhanga reo (Kauri, a minor urban, predominantly Māori area)
- One Pasifika centre and two education and care centres (Pohutukawa, a high Pasifika main urban locality, a site for Promoting Participation Project)
- One education and care centre (Kowhai, a main urban locality, a site for Promoting Participation Project)
- One home-based network (Karaka, a minor urban locality)
- One kindergarten (Nikau, a main urban locality, high ECE participation levels and high demand).

Enrolment

In total, there were 9459 children enrolled in the licensed and licence-exempt ECE services in these eight wards in July 2004, and 9564 in July 2006. Over a third were aged four years or more.

The overall increase was 1.1 percent. A higher percentage of one- and two-year-olds were enrolled in 2006. The pattern is consistent with national trends showing the rate of percentage increase in enrolments has been greatest for young children aged one, two, and three years (Ministry of Education, 2007).

The biggest percentage increases in enrolments of under-two-year-olds were in two localities, Kauri and Totara. Both were minor urban localities. In Kauri, two new services opened, a kōhanga reo and playcentre. Both catered for younger children. Perhaps the availability of different types of centre catering for particular age groups impacts on participation of that age group.

Table 6 **ECE enrolments by age, year, and locality**

Locality	Under one year		One year		Two years		Three years		Four years		Five years	
Percentage change 2004–2006	+1.3		+11.3		+7.2		+1.5		-6.5		+40	
	2004 390 %	**2006 395 %**	**2004 1053 %**	**2006 1172 %**	**2004 1706 %**	**2006 1829 %**	**2004 2754 %**	**2006 2795 %**	**2004 3475 %**	**2006 3259 %**	**2004 81 %**	**2006 114 %**
Kauri	4	7	14	16	20	19	26	29	33	27	3	3
Pohutukawa	4	5	12	13	17	20	30	28	36	33	1	2
Kowhai	4	4	10	12	18	17	29	30	39	36	1	1
Karaka	5	4	13	12	21	20	28	27	33	34	0	1
Totara	2	3	6	11	15	14	32	33	45	34	8	5
Nikau	2	2	8	8	18	19	33	33	39	38	0	0
Rata	5	4	14	11	21	21	30	30	30	34	1	0
Rimu	6	4	11	12	14		21		47		2	1

Numbers do not add up to 100 percent because of missing data from about 2 percent of services overall. All licensed and licence-exempt services are included.

Children were enrolled for longer hours in the licensed ECE services in the study wards in 2006.

The age group with the greatest shift towards longer hours was under-one-year-olds. In 2006, 30 percent of under-one-year-olds in ECE services in these eight wards were enrolled for 39 hours or more per week compared with 21 percent in 2004.

Table 7 **Enrolment hours by year and age (under three)**

Age	Under one year		One year		Two years	
Hours per week	**2004 (n=357) %**	**2006 (n=368) %**	**2004 (n=940) %**	**2006 (n=1047) %**	**2004 (n=1532) %**	**2006 (n=1681) %**
Less than 9	37	28	33	30	39	37
9–18	18	10	14	16	19	19
18–21	5	5	4	5	4	4
21–30	13	13	15	13	11	11
30–39	6	13	9	10	7	8
39+	21	30	25	25	20	21

The hour categories are those used in the RS61. Kōhanga reo data were not available.

Two localities stood out for their high percentages of under-one-year-olds who were enrolled in ECE for 39 hours or more per week: Kowhai (43 percent of enrolments for this age group) and Pohutukawa (40 percent). Both are sites for Promoting Participation Projects. In Pohutukawa, two education and care centres and one Pasifika centre

opened. In Kowhai, an education and care service opened. In both localities the new services catered for children of mixed ages, but only a small number of under-one-year-olds were enrolled.

Table 8 **Enrolments by age in new services in Pohutukawa and Kowhai in 2006**

Locality	Under one year (n)	One year (n)	Two years (n)	Three years (n)	Four years (n)
Pohutukawa	8	20	38	28	18
Kowhai	9	9	5	4	2

The free ECE policy (implemented 1 July 2007) is intended to remove cost barriers and therefore support three- and four-year-olds access to teacher-led services for up to 20 hours free ECE per week. Seventy-two percent of three-year-olds in ECE were attending for less than 19 hours a week in 2004, compared with 70 percent in 2006. Seventy-six percent of four-year-olds in ECE were attending for less than 19 hours per week in 2004, compared with 67 percent in 2006. It will be interesting to look at changes in enrolment by hours for this age group after free ECE has become established to see if sessional services offering less than 15 hours per week for this age group extend their operating hours, whether attendance hours of three- and four-year-olds increase and whether parent desire for additional hours is met. In our parental survey for this study, before free ECE was implemented, 36 percent of parents stated they would like to increase the hours their child attended when ECE is free for three- and four-year-olds, and 15 percent were unsure (see Appendix E).

Table 9 **Enrolment hours by year and age (over two)**

Age	Three years		Four years		Five years		Overall (0–5 years)	
Hours per week	2004 (n=2512) %	2006 (n=2601) %	2004 (n=3267) %	2006 (n=3064) %	2004 (n=46) %	2006 (n=78) %	*2004 (n=8654) %*	*2006 (n=8839) %*
Less than 9	50	51	28	23	28	15	37	35
9–18	22	19	48	44	35	39	30	27
18–21	3	4	4	7	7	5	4	5
21–30	8	8	8	10	24	32	9	10
30–39	4	5	3	5	0	6	5	6
39+	14	14	10	11	7	3	15	16

The hour categories are those used in the RS61. Kōhanga reo data were not available.

Through the implementation of the ECE strategic plan, the Government is seeking to increase the ECE participation of Māori and Pasifika children. Overall for these eight wards,[13] European children comprised 49 percent of enrolments in both 2004 and 2006, Māori children were 27 percent in 2004 and 25 percent in 2006, Pasifika children 13 percent (2004) and 14 percent (2006), and Asian children 9 percent in both 2004 and 2006. However, it is hard to make a meaningful interpretation of these data on ethnicity since we did not have information about the overall population levels in wards by ethnicity.

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[13]   These figures include kōhanga reo children.

In Karaka, the percentage of Māori enrolments went down from 31 percent to 26 percent.

Table 10 **2004 and 2006 ECE enrolments by ethnicity**

	European/ Pākehā		Māori		Pasifika		Asian		Other	
Locality	**2004 (4669) %**	**2006 (4701) %**	**2004 (2527) %**	**2006 (2409) %**	**2004 (1272) %**	**2006 (1374) %**	**2004 (830) %**	**2006 (820) %**	**2004 (161) %**	**2006 (260) %**
Kauri	19	21	78	77	2	1	0	1	0	0
Pohutukawa	39	41	18	16	23	24	17	15	2	4
Kowhai	36	35	34	33	18	19	9	10	2	3
Karaka	68	73	31	26	1	1	1	0	0	0
Totara	48	40	47	56	2	2	3	3	0	0
Nikau	89	86	8	8	0	1	2	1	1	4
Rata	75	74	14	12	5	6	4	4	3	3
Rimu	88	85	10	14	1	0	1	0	0	0
Overall	49	49	27	25	13	14	9	9	2	3

Numbers do not add up to 100 percent because of missing data from about 2 percent of services overall. All licensed and licence-exempt services are included.

Attendance regularity

Levels of regularity of attendance have implications for both children's learning opportunities, and for services' sustainability, since MOE funding is tied to actual attendance.

Overall, the regularity of attendance of the children enrolled in an ECE service in these wards did not change between 2004 and 2006. Around 81 percent of children attended regularly in each year. In two wards, Kauri and Totara, the percentages of children attending regularly were less than 80 percent in both years. These wards have the highest Māori population (70 percent and 31 percent respectively) and lowest median income levels of all the wards in the study. Nevertheless, there were improvements in regularity of ECE attendance in these two wards: 71 percent of Kauri children attended regularly in 2006, compared with 66 percent in 2004, and 77 percent of Totara children attended regularly in 2006, compared with 71 percent in 2004.

Attendance across both years was high in Nikau (a growing suburb). Three of the five services in Nikau in this study were full-day: a kōhanga reo and two education and care centres, and participants at the 2004 community meeting reported on pressure from parents for full-day places to suit parents' employment needs. It may be that regularity of attendance was higher because parents needed to use the service for childcare while they were working.

Table 11 **Regularity of enrolled children's attendance in study wards**

Locality	Proportion attending regularly 2004	Proportion attending regularly 2006
Kauri	66	71
Pohutukawa	81	82
Kowhai	82	81
Karaka	89	83
Totara	71	77
Nikau	86	88
Rata	85	82
Rimu	80	88
Overall	81	82

Taken from services' RS61 annual reporting to MOE asking services to report on each child's regularity of attendance. Figures do not include kōhanga reo.

Casual attendance reduced between 2004 and 2006. Casual attendance was 2.7 percent of the total daily enrolments in the eight wards in 2004 and 1.5 percent in 2006; and 3.3 percent of the total daily attendance in 2004 and 1.8 percent in 2006.

ECE attendance of school entrants

Attendance in any ECE service before school entry decreased in four localities, stayed the same in two localities, and increased in two localities. Two localities, Karaka and Kowhai, showed the most marked shifts in attendance of new entrants from 2004 to 2006. In both localities attendance decreased.

Across the eight wards (localities), the percentage of children having any ECE attendance before starting school varied from 99 percent to 73 percent in 2004, and 97 percent to 74 percent in 2006. All the localities in the study had a lower median income than the income for all of New Zealand. MOE statistics (Ministry of Education, 2007) show that the extent to which children participate in ECE differs between different socioeconomic backgrounds. In 2006, 86 percent of children who attended a decile 1–2 school attended an ECE centre before starting school compared with 99 percent of children attending a decile 9–10 school. Some low-income wards in this study had considerably lower percentages of ECE participation, suggesting the value of examining locality patterns and tailoring initiatives to the local context.

Table 12 **ECE attendance of new entrants to school in 2004 and 2006**

Locality	Overall attendance (% of new entrants) 2004	Overall attendance (% of new entrants) 2006
Kauri	73	74
Pohutukawa	78	78
Kowhai	80	76
Karaka	98	88
Totara	94	92
Nikau	91	92
Rata	96	96
Rimu	99	97

National figures (Ministry of Education, 2007) also showed a slight fall in ECE participation from 2005 to 2006 for children attending decile 1–2 schools (86 percent in 2006). This may suggest that MOE participation initiatives did not increase participation in ECE of three- and four-year-olds in these wards overall.

Three localities (Kauri, Pohutukawa, and Kowhai) had comparatively low percentages of children attending an ECE before school entry both in 2004 and 2006. These three localities had the highest unemployment rates of the eight localities at the 2001 Census (18.7 percent, 13.4 percent, and 11.8 percent respectively compared with 7.5 percent for all of New Zealand). Pohutukawa and Kowhai are main urban localities, with high Pasifika populations. Pohutukawa has average incomes under $14,500 and Kowhai average incomes over $17,200 (median income for all New Zealand was $18,500 at the 2001 Census). Both localities are sites for Promoting Participation Projects. We have already noted the increase in hours of attendance of under-one-year-olds enrolled in ECE in these two localities, which could be associated with increased ECE provision for this age group.

Pohutukawa had gained three services since 2004, and Kowhai had gained one. The number of one- and two-year-olds attending the ECE services in Kowhai and Pohutukawa increased from 2004 to 2006 (23 percent increase in Kowhai, and 25 percent increase in Pohutukawa). It is not clear whether these increases are because more young families are living in the locality, because of MOE strategic plan initiatives, or because of changes in work practices or attitudes to ECE.

Kauri has a high Māori population, low average incomes (median income $13,100), and is a minor urban locality. Reasons for nonattendance in ECE according to ECE service managers there were the cost of travel or lack of access to transport for rural families, the high levels of unemployment, cost to families of ECE participation, and in addition, for parent/whānau-led services, parents wanting a "drop off" rather than a parent/whānau-led service. Limited provision to meet diverse needs of families was another issue identified by service management in 2004 and 2006, and in the community meetings held in 2004.

The locality with the greatest increase in participation and the highest levels of ECE attendance before starting school was Rimu. From 2004 to 2006, there was a 106 percent increase in one-, two- and three-year-olds attending ECE in this locality. Rimu is a minor urban locality, with low Māori and low Pasifika populations, and median income of $17,300. It has a low unemployment rate (3.9 percent at the 2001 Census)—perhaps a reason

for the increase in younger children attending ECE. As well, Rimu had gained a playcentre since 2004. The main participation issue for services in this study was waiting lists in three of the five services.

Managers in the study services identified participation issues for children currently attending ECE. These varied according to some locality characteristics:

- *Localities where median income is under $17,000.* Managers in these localities were more likely to say cost, transport difficulties, bad weather, and transient families were barriers to ECE participation. Some managers in these localities thought ECE should be free for all children, including younger children and children in parent/whānau-led services.
- *Minor urban localities*. Managers in minor urban localities were more likely to describe reasons for nonparticipation as being linked to rurality issues—travel distances and cost or lack of transport, especially in localities where the average income is under $17,000.

Participation—service-level picture

This section gives details of participation levels and shifts from 2004 to 2006 for the services in the study, and looks at factors that might be related to differences in participation patterns and shifts.

Dimensions of ECE participation

Duration of ECE participation

Data on two indicators of duration of ECE participation were measured in 2004 and 2006, duration in months and starting age.

Duration in months was chosen as an important participation indicator because of research suggesting that two or three years attendance at an ECE service before starting school is associated with gains for children in cognitive competencies and learning dispositions (Barnett & Lamy, 2006; Broberg et al., 1997; Sylva et al., 2004; Wylie & Hodgen, 2007; Wylie et al., 2004), provided the ECE service is of good quality. With respect to *learning dispositions*, longer duration and an early starting age in good-quality ECE centres are beneficial, but longer duration in centres rated low-quality in terms of having poor structural features (especially teacher qualifications) and poor adult–child interactions and communication is not.

Starting age. An early starting age before age three is associated with gains in competencies (Broberg et al., 1997; Sammons et al., 2002; Wylie et al., 2001), but there is mixed evidence about whether starting before age two is more advantageous than starting between age two and three. A small number of international studies have found an early starting age before age two or three is associated with higher levels of *antisocial or worried* behaviour at the time of attendance or shortly after school entry. These associations were generally found in centres rated as low-quality, suggesting it is early entry combined with poor quality that contributes to negative impacts (Hausfather, Toharia, La Roche, & Engelsmann, 1997; Sammons et al., 2003). There is evidence that language is easier to learn at an early age (Meade, Puhipuhi, & Foster-Cohen, 2003). An early start in kōhanga reo and Pasifika services may assist language learning.

Intensity of participation

Intensity of participation was measured by MOE statistics for the study services on weekly hours of ECE attendance. However, few research studies have focused on the relationship between learning outcomes and weekly hours or the intensity of ECE participation. The longitudinal Effective Provision of Preschool Education study (Sylva et al., 2004) of everyday ECE serving children from a range of family backgrounds found no evidence that full-time provision resulted in better outcomes for children than part-time. Their study did not differentiate between children in varying hours of part-time provision. One large US study (Loeb et al., 2005) found that, on average, children who had attended ECE centres for 15–30 hours a week experienced stronger cognitive gains than those attending for less. There were additional gains for children from low-income families attending for more than 30 hours, but not for those from middle- and high-income families. Additional hours for higher income families failed to improve cognitive outcomes and slowed social development relative to 15–20 hours per week. Some US studies report that attendance of more than 30 hours per week in centres rated as low-quality is associated with moderately more antisocial/aggressive behaviour at the time of attendance or shortly after school entry. Quality of education and care is an important moderator of any negative effects of the amount of time in care (Love et al., 2003).

Language learning takes many hours of exposure, and "preschoolers learning a second language need, and ideally get, many thousands of hours being exposed to the language" (Meade et al., 2003, not paginated). TKRNT recommends at least 30 hours per week for kōhanga reo children.

Duration of participation

Months of ECE attendance

On average, in 2006, parents reported that their child had been attending an ECE service for about half the time since their birth (e.g. if the child was aged four years, average attendance was 24 months or more; if the child was aged three years, average attendance was around 18 months).

Months of ECE attendance differences were apparent in relation to service type. Children who attended kindergarten in this study were more likely to have spent a lower proportion of their time since birth participating in ECE than children from other services.

Starting age

Children were starting ECE earlier in 2006. The average starting age reported by parents was two years in 2004, and one year nine months in 2006. This average starting age of around two years is likely to be beneficial (if the ECE service is good-quality) in terms of outcomes for children. The measure of starting age was somewhat different in each year. In 2006, we asked about starting age directly. In 2004, we calculated starting age from subtracting age of child currently from length of time the child had attended any ECE service. These different methods pose a limitation around what we can say in terms of comparability.

However, in 2006, the starting age was very late for 2 percent of children (16 children) who started ECE after they turned four. Fourteen of these 16 children were enrolled at kindergarten. In 2006, the oldest starting age was four years six months. It would take a different study of children at school entry to find out about the total percentage of children starting ECE after the age of four.

We found differences in levels and shifts between 2004 and 2006 for the indicator "starting age" in relation to service type. Children attending parent/whānau-led services had an early starting age (average 16 months in 2004; 15 months in 2006). In many of these services children would have attended with their parent. The other groups with an early starting age were of children in home-based services (average 13 months in 2004; 12 months in 2006) and education and care services (average 20 months in 2004; 16 months in 2006). The starting age for children in education and care services was younger in 2006.

Children attending the puna also started young (one year four months in 2004; six months in 2006), but those attending the playgroup had started later (one year six months in 2004, two years two months in 2006). Both services were in minor urban locations, with small numbers of families, and variations were likely because of differences in family composition in each year.

Children attending kindergarten had a later starting age than children attending other ECE service types on average (two years 11 months in 2004; two years five months in 2006). Kindergarten parents in this study and other studies (Mitchell & Brooking, 2007; Mitchell et al., 2006b) were more likely to emphasise the value of ECE supporting transition to school than parents from other services. Perhaps this emphasis leads more of these parents to focus on the years before school entry as valuable for ECE participation.

However, the pattern for kindergartens may be changing, since, on average, parents of kindergarten children reported a younger starting age in 2006 (two years five months) compared with 2004 (two years 11 months). This is likely to be because children were going to another ECE service before starting kindergarten, since only one kindergarten in this study reported starting children younger. Kindergartens usually cater for children for two years before starting school and 33 percent of kindergarten parents (99 of 301) said their child had been attending ECE for more than two years. The trend could be because of parents placing a greater value on ECE at a younger age, increased maternal employment and the need for childcare, or ECE becoming more affordable with the Childcare Subsidy.

Table 13 **Average starting age in months by service type (2004 and 2006)**

Service type	Average starting age (2004)	Average starting age (2006)
Puna	1 year 4 months (n=6)	6 months (n=8)
Kōhanga reo	1 year 5 months (n=142)	1year 4 months (n=106)
Education and care	1 year 8 months (n=208)	1 year 4 months (n=218)
Home-based	1 year 6 months (n=33)	1 year 1 month (n=26)
Kindergarten	2 years 11 months (n=360)	2 years 5 months (n=301)
Pasifika	1 year 4 months (n=52)	1 year 4 months (n=32)
Playcentre	1 year 5 months (n=79)	1 year 3 months (n=95)
Playgroup	1 year 6 months (n=6)	2 years 2 months (n=7)

Intensity of participation

Hours of attendance

The average hours of ECE attendance were 10–15 hours per week in both 2004 and 2006. These hours of attendance are within a range that should benefit children, but perhaps offer somewhat less opportunity for cognitive gain than 15–20 hours for children over two (Loeb et al., 2005). According to parent reports, 39 percent of children overall attended ECE for less than 10 hours per week in 2004, and 35 percent in 2006.

Children attending playgroups (100 percent in 2004 and 2006), playcentre (89 percent in 2004; 86 percent in 2006), and puna (83 percent in 2004; 75 percent in 2006) were more likely to attend for less than 10 hours per week.

Parent responses showed some variation in hours of attendance by child age in 2004 and 2006, i.e. a higher percentage of children under three attending for less than 10 hours per week in 2006, and for more than 30 hours per week in 2004 and 2006, compared with children aged three and over.

Table 14 **Hours of attendance by child age in 2004 and 2006**

Hours per week	Under three		Over three	
	2004 (n=194) %	2006 (n=215) %	2004 (n=627) %	2006 (n=454) %
Less than 10	39	39	39	33
More than 30	18	20	11	11

Table 7, reported earlier, showed a 2 percent decrease in children attending less than nine hours per week, and a 2 percent increase in children attending more than 30 hours per week for the wards in this study.

Intensity of participation increased (i.e. children attended for longer hours) from 2004 to 2006 in the following service types:

- sessional services
- kindergarten, playcentre and puna
- services with a high percentage of under twos.

Since the sessional services in the study did not offer parents longer hours in 2006, longer hours reported by parents may have been from dual enrolments for children using these services. Longer duration in services with under-two-year-olds may also have been to fit with parent employment patterns.

The evaluation occurred before the implementation of free ECE hours (see discussion of parental response to free ECE, in Appendix E). There were no specific strategic plan actions at the time of the evaluation associated with lowering the ECE starting age or increasing hours of attendance. However, most of the kindergarten managers said they thought the reason why some parents did not use their service was that they wanted longer hours.

MOE figures show that, nationally, average weekly hours of attendance increased slightly between 2004 and 2006. They rose from 12.5 to 12.6 hours for kindergartens, from 19.5 to 20.8 hours for education and care services, and from 21.3 hours to 22 hours for home-based services. They remained constant at 4.4 hours for playcentres.

Regularity of attendance

Information about regularity of attendance was gathered from parents for the first time in 2006. In 2004 and 2006, this information came from managers. The parent data give a more accurate picture of regularity and the reasons for absences.

In 2006, most children (658 of 793; 83 percent) were reported to have regular attendance. Sixteen percent of parents (130) stated their child had missed three or more ECE sessions or days in the last four weeks. There were some differences in regularity of attendance associated with income levels and ethnicity:

- Twenty percent of parents (38 of 191) with family incomes under $30,000 said their child had missed three or more sessions/days, compared with 15 percent of parents (21 of 143) with family incomes over $70,000.
- Twenty-six percent of Māori children (68 of 263) missed three or more sessions/days in the last four weeks, compared with 19 percent of Asian children (6 of 32), 14 percent of Pasifika children (8 of 56), and 10 percent of New Zealand European children (38 of 392). Twenty percent of children (10 of 50) from other population groups (e.g. South American, African, Middle Eastern) also missed three or more sessions/days.

The main reasons for nonattendance given by parents were that the child was sick or on holiday. Other reasons were lack of transport (which is affected by low income), bad weather, and other family commitments.

Intermediate outcomes

ECE services are accessible

The NZCER 2003/2004 national survey of ECE services (Mitchell & Brooking, 2007) found some issues related to accessibility of services. The reasons parents could not access different services when they wished was because of waiting lists or the service was not available in the locality.

We used two indicators for the intermediate outcome "ECE services are accessible": "Services meet needs" and "Supply meets demand".

Services meet needs was measured by parent ratings of whether the times for their current services suited them, and of how well service meets needs of close to work / and close to home, and hours.

Supply meets demand was measured by the proportion of parents on the waiting list for other services. In 2004, we asked whether the choice of service in the area met parental needs, and in 2006, whether there was an ECE service the parent would like to use but could not, and the reasons for their responses.

Affordability was measured by how parents rated affordability.

Services meet needs

Most parents were satisfied with the times the service was available. Nine percent of parents in each year said the times their child attended did not suit them.

However, nearly a third of parents (246 of 793; 31 percent) stated they would like to use more hours when this question was asked directly in 2006. Over half (56 percent) wanted to use up to four more hours only.

Kōhanga reo parents (18 percent) and puna parents (13 percent) were less likely to want to use more hours than other parents.

The reasons why more hours were not being used were mainly that the service did not offer more hours (48 percent of parents wanting more hours). Other main reasons were that more hours were too expensive (24 percent) and the ECE service had no places for the hours the parent wanted (22 percent).

Supply meets demand

Few (current user) parents reported their children were on a waiting list for another service: (7 percent or 61 of 870 parents in 2004; 9 percent or 73 of 793 parents in 2006). The apparent increase in children on a waiting list in 2006 could perhaps be accounted for by kindergarten parents being a lower proportion of the parent responses in 2006 than in 2004,[14] and the main demand for places being from nonkindergarten users.

Just under half of those on waiting lists were under three years. The mean age for children on a waiting list for kindergarten in 2006 was three years two months.

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[14]   360 kindergarten parents (41 percent of 870 parents) responded in 2004; 301 kindergarten parents (38 percent of 793) responded in 2006.

Playcentre parents were most likely to have their child on a waiting list for another service (24 percent in 2004; 26 percent in 2006), followed by home-based parents (18 percent in 2004; 15 percent in 2006) and education and care parents (14 percent in 2004; 17 percent in 2006).

Table 15 **Percent of parents with child on waiting list for another service by type and year**

Year	Kindergarten	Playcentre	Kōhanga reo	Pasifika	Education & care	Playgroup/ Puna	Home-based	Total
2004	n=8 2%	n=19 24%	n=3 2%	n=0 0%	n=28 14%	n=0 0%	n=6 18%	n=64 7%
2006	n=5 2%	n=25 26%	n=1 1%	n=1 3%	n=36 17%	n=2 6%	n=4 15%	n=73 9%

The increase of 2 percent of parents waiting for a place in 2006 is negligible, given that the overall percentage of parents waiting for a place is less than 10 percent. Higher percentages of parents waiting for a place and a different picture would have been found if nonusers had also been included.

Only 10 percent of parents in both 2004 and 2006 said the choice of service type did not meet their needs (2004 question) or that there was an ECE service the parent would like to use but could not (2006 question).

In each year more Pasifika service parents and playgroup/puna parents stated the choice of service did not meet their needs or wanted to use a new service but could not. The playgroup and puna parents were only a small sample (12 in 2004; 7 in 2006). Home-based parents in 2006 were more likely to want to use another service but could not.

Table 16 **Percent of parents for whom choice of service does not meet needs (2004) or parent would like to use another service but cannot (2006)**

Year	Kindergarten	Playcentre	Kōhanga reo	Pasifika	Education & care	Playgroup/ Puna	Home-based	Total
2004	38 (11%)	6 (8%)	12 (8%)	7 (16%)*	20 (10%)	3 (25%)*	2 (6%)	88 (10%)
2006	26 (9%)	6 (6%)	6 (6%)	7 (22%)*	23 (11%)	2 (29%)*	5 (19%)*	75 (10%)

* Denotes a higher percentage of parents than overall total.

The main reasons overall why parents could not use another service were:

• the service was too expensive (37, or 42 percent in 2004; 18, or 24 percent in 2006)
• the service was not available locally (13, or 15 percent in 2004; 19, or 25 percent in 2006)
• the service had no free places (21, or 24 percent in 2004; 18, or 24 percent in 2006).

The cost of using a different type of ECE service was less of a barrier for parents in this study in 2006.

Overall, the main types of service parents wanted to use but could not use in 2006 were: education and care (49 percent),[15] kōhanga reo (15 percent), kindergarten (12 percent), playcentre (8 percent), and home-based (8 percent). The question was not asked in 2004.

Pasifika service parents wanting to use another service were more likely to want to use an education and care centre (71 percent). They were also more likely to say another service type was too expensive (75 percent in 2004; 71 percent in 2006). Playgroup and home-based parents were more likely to say their preferred service was not available locally, but numbers were small.

Parents using sessional services and services with a high percentage of under-twos were the two groups whose demands for different hours, times, or places increased from 2004 to 2006.

In 2006, we asked a new question about whether the parent would like to use more hours of ECE (in addition to whether the times and hours suited). Thirty-one percent of parents (246 of 793 parents) would like to use more hours. The main reasons why they could not use more hours were that:

- their current ECE service did not provide the hours the parent wanted (117 parents, or 15 percent)
- additional hours were too expensive (59 parents, or 7 percent)
- their current ECE service did not have places for the hours wanted (55 parents, or 7 percent).

Kindergarten parents (70 of 301 kindergarten parents, or 23 percent) were over-represented in those whose service did not provide the hours wanted. Parents may find that they cannot get the hours they want since few ECE service managers (14 percent) said they would increase their hours. Home-based (eight of 26 home-based parents, or 31 percent) and education and care parents (34 of 218 education and care parents, or 16 percent) were over-represented in those saying additional hours were too expensive. Thirty-six percent of eligible parents would like to increase the hours their child attended ECE when ECE is free for three- and four year olds (see Appendix E), reinforcing the point that cost is a barrier to attending for longer hours.

Fewer Pasifika parents (seven of 32 Pasifika parents, or 22 percent), kōhanga reo parents (19 of 106 kōhanga reo parents, or 18 percent), and puna parents (one of eight puna parents, or 13 percent) wanted more hours of their current ECE service compared with other ECE service users.

Just over half of those who wanted more hours wanted only up to four more hours per week (57 percent of the 242 parents responding to this question). The length of additional time wanted was:

- up to 2 hours (45 parents or 19 percent)
- three or four hours (91 parents, or 38 percent)
- 5–9 hours (59 parents, or 24 percent)
- 10 to 14 hours (25 parents, or 10 percent)
- 15 or more hours (22 parents, or 9 percent).

Affordability

From parents' perspectives, ECE services were very slightly less affordable in 2006. Seventy-two percent of parents found the service affordable or "easily affordable" in 2004, compared with 67 percent in 2006. This is

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[15]   Note: percentages are of parents responding that they wanted to use another service but could not (n=75).

likely to be accounted for by the higher proportion of education and care respondents in 2006 (27 percent) compared with 2004 (23 percent). These respondents were more likely to rate their ECE service as "affordable but difficulties" or "barely affordable" than overall (33 percent compared with 23 percent overall in 2004; 42 percent compared with 27 percent overall in 2006).

Table 17 **Affordability of ECE services for parents in 2004 and 2006**

Year	"Easily affordable" %	"Affordable" %	"Affordable, but some difficulties" %	"Barely affordable" %
2004 (n=870)	31	41	21	3
2006 (n=793)	30	37	24	3

Attending more than one ECE service

We did not include concurrent attendance of two or more ECE services in the indicator of accessibility, but this pattern adds to our understanding of ECE participation and parental decision making around services. Consistent with other studies, there was a reasonably high incidence of children attending more than one ECE service. There was a slight increase in levels of attending more than one ECE service between 2004 and 2006, from 20 percent (175 of 870 parents) to 24 percent (193 of 793 parents).

In 2006, we asked parents why they used more than one service. Parents using more than one service gave two main reasons: to fit in with parents' working hours (44 of 193, or 23 percent) and for the benefit of the child, but the most common reason was because parents thought that using two or more ECE services offered benefits for the child, since each service offered different and complementary learning experiences. For example, parents thought that one or other service offered the child extra stimulation (38 parents, or 20 percent), helped the child socialise (21 parents, or 11 percent), and prepared the child for school (14 parents, or 7 percent). Less common reasons were parent involvement in learning, and parent support.

ECE services are sustainable

This measure used management questionnaire responses to cover dimensions of:

- service enrolment sustainability (whether there were no or few spare places, and children remained until they went to school)
- staffing sustainability (whether management found it easy to meet regulated staffing requirements, including relievers, and did not predict future staffing problems)
- financial sustainability (whether management rated their service as financially stable).

Responses to our questions on service sustainability are not directly comparable because questions were asked in interview in 2004 and questionnaire in 2006. We report on 2006 data, which also asked service managers to look back over two years and comment on sustainability issues.

Service enrolment sustainability

Spare capacity may be an indication that a service is finding it difficult to fill all child places (although some service managers opt not to operate at full capacity).

In 2006, 21 percent of services had spare places for all days or sessions, 12 percent had spare places for most days or sessions, and 33 percent had spare places for a few days or sessions. Managers were almost equally divided about whether and how their service had experienced change in spare places: 10 ECE service managers stated there were more spare places in 2006 than they had in 2004; 14 had no change in spare places; and 14 said they had fewer spare places. (Eight did not respond to this question.) Playcentre managers were more likely than other service managers to report that having spare capacity was a long-term issue: four of the eight playcentre managers reported having spare capacity for two or three years, and one for 18 months to two years.

Rolls were mostly stable for 78 percent of services in 2006, i.e., most children stayed until they went to school. All the kindergarten and kōhanga reo management responding to this question had stable rolls. The least stable rolls were reported by home-based managers (two of three stated half or more of children left before going to school) and playcentre managers (four of eight reported that over half left before going to school).

Staffing sustainability

In 2006, managers were asked whether they found it easy to meet regulated requirements, including relievers, and whether they predicted problems in having sufficient qualified teachers/educators in the future. We did not include the puna and playgroup in this data because they are not required to have qualified educators. However, the puna parents said that they struggled to employ a qualified teacher as a co-ordinator and predicted problems in doing this. They wanted such a person.

Kindergartens reported the greatest ease in meeting staffing requirements and playcentre managers the greatest struggle. Nevertheless, only three of eight playcentres did not use qualified educators to cover for absences, suggesting that they were managing to uphold educator qualification standards, even though it was difficult.

Table 18 **Problems in staffing sustainability in 2006**

Year	Kindergarten (n=8)	Playcentre (n=8)	Kōhanga reo (n=5)	Pasifika (n=2%	Education & care (n=12)	Home-based (n=3)	Total (n=38)
Struggles to meet regulated staffing requirements	1 (13%)	7 (88%)	3 (43%)	-	2 (17%)	1 (33%)	8 (19%)
Only sometimes, rarely or never uses qualified relievers	-	3 (38%)	5 (71%)	1 (50%)	7 (58%)	1 (33%)	17 (41%)
Predicts future problems in having sufficient qualified teachers/educators	4 (50%)	8 (100%)	2 (40%)	2 (100%)	12 (100%)	2 (67%)	28 (82%)

Financial sustainability

The HOI report (King, 2008), *Evaluation of the Sustainability of ECE Services During the Implementation of Pathways to the Future—Ngā Huarahi Arataki*, has examined financial sustainability in much greater detail than is provided here. It consulted with sector stakeholders, analysed MOE and Statistics New Zealand data sets, and analysed financial data from the services in our evaluation. Their study found increased costs associated with the strategic plan are largely being met by the new ECE funding system. Their range of indicators of sustainability suggested that the ECE sector as a whole is sustainable and perhaps becoming gradually more so. It also found

that on average the growth in ECE service fees had been less than the growth in the general cost of living and in average hourly earnings. Their study suggests that 5–10 percent of ECE services may not be comfortably sustainable in 2006. This study was based on analysis of financial data.

In 2006, we asked managers to rate how financially stable their service was. Twelve percent marked that they were "struggling financially", 49 percent were "just managing", and 33 percent were "stable financially". The 12 percent that were struggling financially is close to the upper estimate in the King (2008) study of services that were not comfortably sustainable in 2006.

We also asked managers to rate whether they were more financially stable than in 2004, whether there had been no change, or whether they were less financially sustainable. Fifteen service managers did not respond to this question. Of those 30 who did respond, most thought they were more financially sustainable or there was no change—43 percent thought they were more financially sustainable, 30 percent thought there was no change, and 27 percent thought they were less financially sustainable. Playcentre managers (five of the seven responding to this question) were more likely than other managers to state that they were less financially sustainable.

On an individual service level, a Niuean service that was financially unsustainable and closed in 2006 (we did not collect complete data on this service) has since been supported by the MOE and is now operating again.

Overall sustainability

In summary, the main sustainability problems for all services were staffing and roll stability. These are discussed in the section on "barriers to improving quality" in Chapter 5. The playcentres in the study were more likely to be less sustainable in all aspects: service enrolment sustainability, staffing sustainability, and financial sustainability. Sustainability issues for each of these dimensions may compound one another, since funding is based on enrolments, and fewer enrolments or variable enrolments as children leave means lesser or uncertain funding, and a smaller pool of parent educators who may find it hard to sustain staffing requirements.

ECE services are responsive

The dimension, "ECE services are responsive", was measured by indicators of parental satisfaction from the parent survey in 2004 and 2006. Parents were asked to rate how well their aspirations were met on a range of items about their current ECE programme, staffing, resourcing, and environment. They were also asked to rate their overall satisfaction with the ECE service.

Parents' ratings of how well the ECE service met their needs were ranked in the same order and meeting similar levels of satisfaction in 2004 and 2006. Parents were most satisfied with qualities of the teachers/educators—their warmth and friendliness and the happiness of children. The ECE service environment, resources, and health and safety standards were also highly rated. There was no change in parental satisfaction with the quality of the ECE programme and qualified teachers/educators from 2004 to 2006: both of these have been targets of strategic plan initiatives. Staff:child ratios, which have not yet had changes made in relation to strategic plan goals, were the most poorly rated characteristic in both 2004 and 2006.

Table 19 **Parental satisfaction with characteristics of the ECE service in 2004 and 2006**

Parental needs	"Very well"		"Well"		"Satisfactorily"		"Poorly or very poorly"	
	2004 (n=870) %	2006 (n=793) %	2004 (n=870) %	2006 (n=793) %	2004 (n=870) %	2006 (n=793) %	2004 (n=870) %	2006 (n=793) %
Friendly teachers/ educators	78	77	17	17	4	4	0.2	1
Children happy and settled	74	75	21	19	3	5	0.1	0.1
Warm and nurturing teachers/ educators	72	74	21	18	4	5	1	0.2
Well-resourced ECE service	65	66	24	23	8	9	0.2	1
High standards health and safety	62	62	27	29	8	8	0.2	1
Qualified teachers/ educators	62	62	26	25	7	9	1	1
Good-quality ECE programme	61	61	28	27	7	8	1	1
Good reputation	59	58	30	30	7	9	1	1
Hours that suit	56	56	26	27	13	12	1	2
Not too expensive	52	49	28	29	16	17	1	2
Attractive building and space	47	47	34	34	14	15	1	2
Good ERO report	45	43	31	30	9	9	0.3	2
High adult:child ratios	44	48	38	35	12	13	2	2

Levels of overall parental satisfaction were high in both 2004 and 2006, and almost exactly the same.

Table 20 **Overall parental satisfaction with ECE service in 2004 and 2006**

Year	Very good	Good	Satisfactory	Poor
2004 (n=842)	574 (66%)	218 (25%)	50 (6%)	
2006 (n=793)	535 (67%)	196 (25%)	43 (5%)	1 (0.1%)

Slight negative shifts in levels of satisfaction were found within one locality, Kauri, and for the playgroup, but levels were still generally "good" or "very good".

Managers' views of support for and barriers to changes in ECE participation in their service

What do ECE service managers see as the support or barriers to children participating in their ECE service? Managers could be expected to have an overview of the reasons why parents did not use their service. In addition, playcentre and kōhanga reo management comprise whānau.

We asked managers what they thought of the following ECE strategic plan initiatives to increase ECE participation: MOE network analysis; MOE Promoting Participation Projects; MOE advice and support for new services or to help (existing) services meet community need; and provision of space on new school sites for ECE services.

Only about a third of managers commented on these participation initiatives, and many of these said they knew nothing about them. These are targeted initiatives and so all managers would not have been expected to have heard about them. Where they had experienced them, managers were positive that the initiatives helped enhance service sustainability and attract participation or had helped their own service become established.

Consistent positive comments were made by service management who had made contact with co-ordinators for MOE Promoting Participation Projects. These included management from two Pasifika services, a kindergarten, playcentre, and kōhanga reo. The contact had supported the development of one kindergarten as bilingual, making it more attractive to Māori families.

MOE advice and support helped one Pasifika centre to understand and meet requirements to become licensed, and another Pasifika centre to "build community".

Most managers were positive about provision of space for ECE centres on new school sites, and a kindergarten had been built on one of these. However, the playcentre management in this locality thought this new building had adversely affected participation for them because it was next door to the playcentre.

One or two home-based and playcentre management were negative about these initiatives, because they thought the initiatives were not inclusive of their services.

Barriers to increasing ECE participation were service-specific. The main reasons why parents did not use their service, according to managers, were:

- cost (education and care)
- cost and preference for centre-based services (home-based)
- hours of operation unsuitable for parents, especially those in paid employment (kindergarten);
- the high level of parental involvement and parent preference for a "drop-off" service (playcentre)
- parents' limited understanding of te reo and tikanga Māori, preference for a nonimmersion service (kōhanga reo).

Cost and lack of local provision of a desired service type were reasons why some current parents were not able to use the service that they wished to use. These parents were current ECE service users—some of the same reasons appear to apply to both users and nonusers.

Managers suggested several initiatives to improve participation. Most related to service specific issues—extension of free ECE to kōhanga reo and playcentre, reducing volunteer workload and valuing stay-at-home parents in

playcentre, and making home-based care more attractive so that caregivers could be recruited, and education for families about the benefits of ECE, and helping families to "become more aware they make a difference to their child's learning". This suggestion is consistent with the focus of the MOE "Team-up" project on helping parents with ideas for supporting children's learning at home, and the growing emphasis within many ECE services on parent support, learning, and participation in curriculum, assessment, and planning.

To what extent, in what way, and how effectively has the strategic plan increased participation in ECE?

To what extent has the strategic plan increased participation in ECE?

There are limitations in the evaluation design in relation to tracing changes in ECE participation:

- Many of the MOE participation initiatives are targeted initiatives or too recent to be expected to have affected services in this study yet.
- Data on participation were collected from current users of ECE services. Valuable and potentially different insights into reasons for nonparticipation could be gained from nonusers of ECE.
- Information on actual populations of preschool children in the wards in the study are estimates since Census data were taken only in 2001 and 2006. We did not have access to Census 2006 data. Ideally, changes in ECE enrolment figures from 2004 to 2006 should be calculated as a proportion of the actual population of preschool children.
- ECE enrolment figures include children who are using more than one ECE service and who are therefore counted more than once. Several studies, including this evaluation, have found a consistent rate of around 20 percent of children attending more than one service.
- Ideally, the findings would be considered alongside data on wider patterns that affect ECE service usage, such as parental employment patterns in the wards. We did not have access to wider information, and so were limited in the conclusions we could draw.

With these cautions, some patterns of change in ECE participation from 2004 to 2006 and reasons for participation change in relation to ECE strategic plan initiatives are evident.

Nationally, ECE participation of school entrants in ECE prior to starting school increased only slightly from 94.1 percent to 94.5 percent. The percentage of ECE enrolments of three-year-olds rose from 95.2 percent in 2004 to 96.6 percent in 2006; and although the percentage of four-year-olds fell slightly, it was still over 100 percent (because of double counting).

Data on the eight wards in this study showed some shifts in participation and provision between 2004 and 2006, some of which could reasonably be linked to strategic plan initiatives. There are indications that Promoting Participation initiatives and MOE discretionary grants and planning support are helping new provision to become established where it is needed in some localities, contributing to some increases in ECE hours of attendance:

- Nine new services opened in these wards between 2004 and 2006, offering additional places. Four of these services were in the two localities with Promoting Participation Projects (Kowhai and Pohutukawa) where building to meet community needs was a priority.

- Younger children were enrolled for longer hours in 2006. Under-one-year-olds showed the greatest shift towards longer hours, from 21 percent with 39 hours or more in 2004 to 30 percent in 2006. The localities where the hours of enrolment of this age group had increased most were Kowhai and Pohutukawa.

- The Government is seeking to increase the ECE participation of Māori and Pasifika children through the ECE strategic plan. Overall, the proportion of Māori and Pasifika children enrolled in ECE barely changed between 2004 and 2006. However, in one ward, Totara, with high Māori population, the percent of enrolment accounted for by Māori children increased from 47 percent to 56 percent. Services in this ward had the highest overall ratings for "Implementing a bicultural curriculum", and some of these services also reported on close relationships with local wānanga, iwi, and marae, suggesting a continued focus through the ECE strategic plan on biculturalism, and collaborative relationships with Māori, is important.

- Overall, participation in ECE for school entrants prior to starting school continued to vary widely by the localities in our study, ranging from 97 percent with ECE experience to 74 percent. The low levels of participation in the lowest income localities in our study are below those found in national MOE figures for children attending decile 1–2 schools (86 percent in 2006). Although changes in ECE participation for younger age groups attributable to strategic plan initiatives would not be expected to be reflected in school entry statistics for a few years, these findings suggest that it will be necessary to find local solutions to encouraging ECE participation before school entry if all children are to have such opportunities.

In relation to *duration of participation* (months of participation and starting ages), the average starting age was younger in 2006: decreasing from two years in 2004 to one year nine months in 2006. There was also a decrease in those starting after the age of four. Duration of ECE participation was about half the time of the child's life (on average a child in this study might be predicted to have more than 2½ years of ECE experience before starting school). This starting age and duration should offer benefits to children in terms of their learning and development, provided the ECE service is good-quality.

Intensity of participation (hours of weekly attendance) in the study services remained at much the same level as in 2004. At a national level, MOE figures show average weekly hours of attendance rose between 2004 and 2006. The evaluation occurred before the implementation of free ECE hours and there were no specific strategic plan actions at the time of the evaluation for lowering the ECE starting age or increasing hours of attendance.

Overall, service *accessibility* remained much the same between 2004 to 2006, but with some needs for ECE that were not being met by the study services in relation to hours, especially from parents using sessional services and those with children under two. In 2006, 31 percent of parents would like to use more hours than they were currently (this question was not asked directly in 2004). Over half wanted to use up to four hours only. The main reason why more hours were not being used was that the service did not offer them (48 percent), more hours were too expensive (24 percent), and the ECE service had no places for the hours the parent wanted (22 percent). Thirty-six percent of parents wanted to increase the hours their child attended ECE when ECE is free for three- and four-year-olds, reinforcing the point that cost is a barrier to attending for longer hours. Affordability for parents was similar between 2004 and 2006, suggesting that funding increases have compensated for increased costs because of strategic plan initiatives.

The main *sustainability* issues for all services were staffing and roll stability. These are discussed in the section on "barriers to improving quality" in Chapter 5. The playcentres in the study were more likely to be less sustainable in all aspects: service enrolment sustainability, staffing sustainability and financial sustainability. Sustainability issues for each of these dimensions may compound one another.

In terms of overall parental satisfaction, ECE services were rated highly on their *responsiveness*, and there were no real changes between 2004 and 2006. Ninety-one percent of parents in 2004 and 92 percent of parents in 2006 rated their overall satisfaction with their ECE service as "very good" or "good". Similarly, parents were most satisfied with staff qualities (friendly, warm, and nurturing), children's happiness, and the ECE service resources in both 2004 and 2006. Despite improvements to staff qualifications in teacher-led services, ratings of parental satisfaction with staff qualifications remained the same in both years (62 percent of parents were "very well" satisfied with this aspect). The lowest levels of parental satisfaction were with adult:child ratios.

In what way has the strategic plan increased participation in ECE?

The ward-level data, described above, suggest that it is in localities where MOE planned participation initiatives are occurring that positive changes to access and participation are happening. Some individual services in the study had also benefited from MOE participation initiatives. Services in one locality had actively participated in MOE Promoting Participation Projects. Intensity of participation (hours of weekly attendance) increased for children using two of these eight services: a playcentre and a Pasifika service. The level of intensity was already high in five of the remaining six services, and moderate in the last. MOE support had helped a Niuean ECE service, threatened with closure, to keep operating. Data were not collected on this centre in 2006 because it had not been reopened at the time of data collection. Those few services that had used MOE initiatives for increasing participation or had advice and support, reported that they had been helped to become more sustainable or to attract participation.

How effectively has the strategic plan increased participation in ECE?

As noted above, it is very early days to be evaluating the effectiveness of the strategic plan in relation to increasing participation in ECE. In addition, since this study is of existing services and current participants, some of the likely impact, e.g. changes to intensity, starting age, and duration, will not be evident for some years.

Raising levels of participation for all children

It was outside the scope of this evaluation to gather data about children who are not currently participating in ECE. However, school entry data show some children continuing to miss out, and participation indicators show experience in ECE services is short term for some children.

Levels of participation were predominantly affected by:

- locality characteristics—localities with low income levels and issues associated with rurality posed barriers to participation
- service characteristics, and the options they provided with respect to starting age, hours of attendance, location.

Responsiveness of services to parental needs

There are current pressures on services to offer hours that suit parents. A third of parents overall would like to use more hours of ECE, but were unable to do so, because the service did not provide the hours wanted (15 percent), additional hours were too expensive (7 percent), the service did not have places for the times wanted (7 percent), and parents wanted to use a different type of service but could not.

Thirty-six percent of parents would like to increase their hours of ECE use when ECE is free for three- and four-year-olds. Most of these were thinking of increasing hours within their current service type. This could be for up to 20 hours, not necessarily all day. Only a small percentage of parents would like to change to another service type.

However, only some service managers, mainly kindergarten and kōhanga reo, were considering increasing their hours. An unintended outcome of the free ECE policy may be a reduction in the number of places available, if services offering two sessions a day extend hours for individual children and reduce to only one session. There could be fewer places for parents who want less than 20 hours a week. Another unintended outcome of free ECE may be greater pressure on capacity if parents want to move their child to a different service type.

In Quebec, the introduction of universal childcare with low capped fees in the late 1990s was associated with a large increase in the use of childcare, including shifts from informal to formal childcare (Baker, Gruber, & Milligan, 2005). There the number of subsidised places was expanded through creation of new places. The services in this study did not appear to be planning to increase the number of places they offered at a rate that would meet the study parents' desires for the particular combination of service type and hours that appealed to them. However, some new services were established in these localities, particularly where there were MOE initiatives.

The incidence of children attending more than one service is around 22 percent. The patterns found in this study in 2004 and 2006 are long-standing. They are consistent with those found in the NZCER 2003/2004 national survey, the Competent Children, Competent Learners study using data from 1993/1994, and the Department of Labour/NACEW Childcare Survey 1998. Parents do not seem to see free ECE as something that would make them change this pattern.

However, this long-standing pattern may have implications for accessibility of ECE services in a given location, e.g., a kindergarten extending its hours may need to give preference to children who will stay for the longer hours. This could be at the cost of those who are also attending another service, and issues could arise if this other service(s) is not able to offer the additional hours needed by those who dual attend, or not able to offer the programme which appealed.

Playcentre may find itself challenged by the free hours policy, both in terms of losing children, and also, if it continues to offer sessional provision, attracting some who cannot get into kindergartens, but who do not want to commit themselves to the voluntary parental workload associated with playcentre attendance. Playcentre management predicted a reduction in three- and four-year-olds' enrolments if ECE is free only in teacher-led services.

Provision for babies and toddlers

The figures on participation indicate a younger starting age and growing proportion of younger children attending ECE, and more babies and toddlers attending all-day provision in the localities in this study. Taken together, these findings reinforce the importance of good-quality all-day provision for under-two-year-olds since an early starting age and long hours in poor-quality ECE may be detrimental.

4. ECE and education and employment

The evaluation question:

To what extent, in what ways, and how effectively has participation in ECE supported parents' ability to engage in work and training?

Dimensions of education and employment

We gathered information on paid employment and training for the first time in 2006. This information uses parent survey responses asking about childcare arrangements of parents, and how well these suit parental needs. Some of the questions were adapted from the Department of Labour/NACEW (1999) *New Zealand Childcare Survey 1998*. Where consistent information has been collected, general findings are compared.

Parents' employment and study arrangements

Sixty-three percent of parents responding to the survey had participated in paid employment at any time in the last 12 months, and 33 percent had undertaken training/study.

The most common childcare arrangements[16] allowing parents to undertake employment or training included both family and ECE services:

- partner (29 percent)
- member of whānau (26 percent)
- education and care (24 percent)
- kindergarten (17 percent)
- kōhanga reo (9 percent)
- friend/neighbour (8 percent)
- home-based ECE (5 percent)
- playcentre (3 percent)
- Pasifika ECE (1 percent)
- puna (1 percent).

Forty-six percent of employed parents or parents in training/study who used an ECE service used only ECE services for their childcare needs. Many of these relied on one service only. Just over half the parents who were employed or in training combined ECE with non-ECE for their childcare arrangements. The next most common arrangement was one ECE arrangement on its own. Eighteen percent of families used more than one ECE

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[16]   Note: multiple responses are included.

arrangement. A few children had five arrangements, combining ECE and non-ECE. There was a slightly higher use of more than one arrangement for parents in part-time work.

Table 21 **Use of ECE and non-ECE arrangements while parent working or in training/study among ECE users (n=412)**

Number of ECE arrangements	No non-ECE arrangement (n=191) %	One non-ECE arrangement (n=138) %	Two non-ECE arrangements (n=71) %	Three non-ECE arrangements (n=12) %
One ECE service (n=337)	39	27	13	2
Two ECE services (n=71)	7	7	4	1
Three ECE services (n=4)	0.4	0.2	0.2	

Robertson (2007) found that 35 percent of families experienced a "care gap" between the number of hours mothers were working and the number of hours children were attending ECE although they did not ask how parents addressed the "care gap".

We asked parents who had been in paid employment or training/study in the last 12 months about their demand for ECE and care arrangements, accessibility, and disruptions to arrangements.

Demand for ECE and care arrangements

The main unmet need for ECE and care while parents were in employment or training/study was for different times to be available (10 percent).

This compared with 31 percent of parents overall who would like to use more hours. Four percent of parents in employment or training/study said the times did not suit but indicated that they managed. Parents wanted:

- longer hours (4 percent)
- earlier times (1 percent)
- flexible times (1 percent)
- school hours (1 percent)
- other (1 percent).

The main comment from those who wanted different times to be available was about the need for different times at the beginning or end of the day to fit with their employment or study arrangements:

> Needs to be open 30 mins earlier to 30 mins later. (Education and care parent)

> I need to be at my campus by 8.30 am and I finish at 3 pm. Kōhanga starts at 8.45am and finishes at 3pm. I have to pick up my child by 3 and no later. (Kōhanga reo parent)

Most parents working shift work used partners and whānau for childcare, sometimes in combination with paid care:

> I work in the evenings 4–11 pm, on a four to one roster so there is not care available for me. I pay people to look after my children in my home until my husband gets home. (Education and care parent)

> Most of the time I work evenings and if I do a day shift my partner looks after her unless it's her kindy day. I don't use kindy as a childcare, it is a place where she goes to learn and get ready for school. If I wanted her in childcare I would send her to a childcare place. (Kindergarten parent)

A common comment from kindergarten parents who were employed or in training/study was that they would like kindergartens to operate a school day:

> Would be able to work more hours if school hours were available at this centre. (Kindergarten parent)

Some parents, using more than one ECE arrangement, commented on difficulties in juggling work with these arrangements. Parents had to rely on others to move the child from one arrangement to another, and sometimes parents had to make changes to their usual arrangements:

> When kindy's on I can't put my child from one to the other so they go to daycare if I can't get my family member to help look after them. (Kindergarten parent)

Playcentre parents acknowledged that paid employment and study did not fit well with playcentre operation which requires parent participation:

> The nature of playcentre makes it difficult to study, train, or work on the days you attend. You would not choose playcentre as a childcare option on the days you work. Part of playcentre is that it is a parent co-operative and therefore parents are educators as well in that they work as mother helps in session. Thus you need to be at session to do this.

Accessibility

Most-used ECE and care arrangements were close to parents' home (51 percent), followed by close to work or training/education institution (19 percent). The definition of "close" was decided by the respondent. Likewise, the parental decision-making research (Robertson, 2007) found that parents preferred services that were close to home and had suitable opening hours, and that using a service that was close to work did matter to some, but was less important.

Some of the reasons parents liked the ECE service to be close to home was because they did not want their child to spend long hours in travelling, and they liked the child to form relationships with children in the community:

> I work 70 km away (full-time employment and part-time study). I prefer our child to attend an ECE service close to our home so she does not have to travel in the car long distances every day. She plays with children in her own town, and if I have to work late my husband is able to pick her up or drop her off if I need to leave for work before 7.30 am. (Education and care parent)

> Because it is a Kōhanga I prefer [it to be] close to children's school and family members. I don't mind the travel. (Kōhanga reo parent)

> Because I work in Wellington and leave at 6 am and don't return home until 7pm at night. I don't want my child to move around. This arrangement works for the time being. (Education and care parent)

Some parents had family or friends in their home locality to assist with taking the child to the service:

> My wife and I work in the city. We chose this ECE because of its proximity to my parents who care for my child when she finishes at the ECE. (Kindergarten parent)

Some kōhanga reo parents found the van service that took their child to kōhanga reo was helpful:

> [My work] is in [the city] but the kōhanga is close to home and they run a van service that picks the children up from home so I have more than enough time to travel. (Kōhanga reo parent)

However, one of the problems with the ECE service being close to home rather than work or training institution was dealing with unexpected lateness:

> Our daycare is close to home but it sometimes means I have to rush to get there in time if I leave work late. (Education and care parent)

Some parents did not have a choice of where the ECE service was located because there were no places in services that were convenient for the parent:

> It's not close to polytech so always late. All other daycares are full so I have to go out of my way. (Education and care parent)

Most of the 10 percent of parents who did not think the location of their ECE service was convenient wanted the ECE service to be close to their home, or were rural parents, and the distance was unavoidable.

Disruptions to regular arrangements

Almost a quarter (23 percent) of parents experienced disruptions to their regular arrangements that affected their paid employment or training/study. The most common reason was that the parent's child was sick (17 percent), but other common reasons were the service operating times or unavailability of the usual caregiver. Six percent of parents experienced disruptions because of closure over holidays, and 3 percent because of temporary closures. A child's sickness was also the most common reason for disruption of arrangements for parents in the Department of Labour/NACEW (1999) *New Zealand Childcare Survey 1998*.

Access to ECE and care as a barrier to paid employment and training/study

We asked all parents about access to ECE as a barrier to employment and study. Many parents did not respond to these questions, and these nonresponses have been excluded. The sample size of those who did respond ranged from 382 to 417. This includes parents already in employment/training.

Lack of ECE was given as the only reason or an important reason for parents not looking for a job (14 percent), turning down a job (12 percent), or leaving a job (5 percent). The Department of Labour/NACEW (1999) *New Zealand Childcare Survey 1998* found access to ECE prevented a similar percentage of parents, 15 percent, from looking for a job.

For the group who could not make a suitable arrangement, the main reasons why a suitable arrangement could not be made were:

- cost (19 percent)
- the ECE service did not provide the hours wanted (15 percent)
- the ECE service had no spare places (10 percent)
- there was no suitable service in the locality (8 percent).

Cost and lack of suitable hours were also the main ECE-related reasons why suitable arrangements could not be made in the Department of Labour/NACEW (1999) *New Zealand Childcare Survey 1998.*

Problems in accessing ECE were less of a barrier to participation in study or training in both this study and the Department of Labour/NACEW (1999) *New Zealand Childcare Survey 1998*, possibly indicating an improvement in accessing ECE since 1998. This was a barrier for 9 percent of parents in this evaluation and 14 percent of mothers and 3 percent of fathers in the *New Zealand Childcare Survey 1998*. Lack of ECE prevented a small percentage of parents from changing the hours they regularly did study or training (3 percent) or made parents leave study/training (3 percent).

The main reasons why a suitable arrangement could not be made were in roughly the same rank order as parents wanting paid employment, i.e.:

- cost (7 percent)
- the ECE service did not provide the hours wanted (4 percent)
- there was no suitable service in the locality (3 percent)
- the ECE service had no spare places (2 percent).

The free 20 hours ECE for 3- and 4-year-olds policy is likely to support labour market goals. Parents indicated that free ECE would enable them to enrol in education/training (10 percent), start employment (10 percent), or increase hours of employment (10 percent).

To what extent, in what ways, and how effectively has participation in ECE supported parents' ability to engage in work and training?

Over half the parents responding in this study had participated in paid employment and training in the last 12 months. ECE services supported workforce and training participation:

- fifty-four percent used ECE combined with non-ECE arrangements
- forty-six percent used only ECE.

When free ECE is implemented, there could be a shift from non-ECE arrangements, where parents use these in combination with ECE, if the non-ECE care takes place within ECE opening hours and there are places in these services.

Conversely, lack of ECE was a barrier preventing some parents looking for work or taking part in training. Cost (19 percent), insufficient ECE hours (15 percent), and the desired ECE service not having spare places (10 percent) or being available in the locality (8 percent) were main reasons why appropriate ECE was not available.

The picture from the parent survey is that some parents juggled their work and training arrangements around the opening hours of ECE, many relied on friends and family to provide childcare even for very short time periods where service times did not match work times, and coped with disruptions to work and training when their child was sick or the service was not available. Some parents wanted flexible ECE arrangements, and longer hours for sessional services, especially for them to be open for the length of a school day.

If a goal of ECE is to support parents in paid employment and training, one challenge emerging from these findings is how to design ECE service provision so that it offers flexibility to meet family needs, and provides high-quality ECE for children. Labour market policies, including conditions of work and paid parental leave that enable working families to reconcile work and family responsibilities, are also relevant.

5. Improving the quality of education

The data for this evaluation were collected early in the implementation of the strategic plan (Appendix A describes strategic plan actions). By 2006, a range of government initiatives were aimed at improving quality, but many were fairly recent. The new funding system and funding rates had been in place only from 1 April 2005, assessment resources (and accompanying professional development) and the ICT strategy were also published in 2005, and other professional resources, such as self-review guidelines, were being developed. The most established policies in relation to raising quality were the targets and initiatives for registered teachers in teacher-led services, the establishment of COIs, and the provision of Equity Funding. All were announced in 2002. Only the first group of COIs were completing their terms in 2006. Thus we would not expect at this stage of the roll-out of the strategic plan to see marked change in overall levels of quality.

The evaluation question:

To what extent, in what ways, and how effectively has the plan improved the quality of ECE?

In this chapter, we draw on data obtained from the 46 services in the study to analyse quality changes from 2004 to 2006.

Service-level data on the quality of ECE service provision come from field researcher observation-based ratings, using a structured measure of aspects of process quality. Process quality is described as "those aspects of an early childhood education program which children actually experience" (Smith et al., 2000). It refers to the environment and the interactions and relationships that occur in an early childhood setting and shape children's experiences. Our measure of dimensions of ECE quality, the NZCER/TKRNT process quality rating scale, included items that have been identified as making a long-term contribution to positive outcomes for children (Siraj-Blatchford et al., 2003; Wylie & Hodgen, 2007; Wylie et al., 2006; Wylie et al., 1996). The quality rating scale had 29 items and is included as Appendix B. Ratings on each item were done by trained field researchers after they had observed the service for an entire half day, on two separate occasions, at least a week apart.

The ECE strategic plan intervention logic model identified six intermediate outcomes: "ECE services meet cultural and language aspirations"; "More registered teachers in ECE"; "Quality in parent-led services"; "Reduced ratios and group size", "*Te Whāriki* effectively implemented"; and "Quality teaching and learning practices", that were intended to contribute to the outcome "Improved quality of ECE". We developed indicators for each of these outcomes, and a system to rate these as "very good", "good", "fair", and "poor" (Appendix C has details).

Some intermediate outcome indicators were rated from data gathered from the MOE RS61July staff return from licensed ECE services, teacher interviews, and parent questionnaire data. Management questionnaires and teacher interviews and questionnaires were used for information on use of MOE strategic plan incentives, resources, and professional development.

The number of services with in-depth data in both years was 45. Incomplete data were collected on a Pasifika centre that closed during data collection in 2006. The number of parents responding was 870 in 2004 and 793 in 2006. The service-level data sources for each quality dimension and intermediate outcome are set out in Table 22 below.

Table 22 **Service-level data sources in 2004 and 2006**

Dimension	Indicators
Quality of ECE service provision	Adults responsive (Field researcher rating)
	Adults extend children's learning (Field researcher rating)
	Children complete work and concentrate (Field researcher rating)
	Children support, co-operate, and co-construct learning (Field researcher rating)
	Education programme content (Field researcher rating)
	Resources and environment (Field researcher rating)
	Overall quality (Combining ratings on indicators above)

Intermediate outcome	Indicators
ECE services meet cultural and language aspirations	Parents' cultural and language aspirations are met
	Different measures for kōhanga reo, Pasifika, and general ECE services used
	Parents' rating of how well service meets cultural aspirations (Parent questionnaire)
	Rating of teacher explanation of how the service meet parents' and whānau language and cultural aspirations (Teacher interview)
	Tikanga Māori and te reo Māori are evident within the education programme
	Field researcher rating for tikanga Māori and te reo Māori
	Responsiveness to different cultures and heritages of children
	Field researcher rating for inclusiveness of setting
More registered teachers in ECE	Percentage of teachers having service-appropriate qualification (RS61)
Quality in parent-led services	Compared parent/whānau-led services and teacher-led services on intermediate outcomes
	Self-report data on levels of language fluency and cultural knowledge in kōhanga reo and Pasifika services (Parent educator questionnaire)
Reduced ratios and group size	Observed ratios and group size (Field researcher rating)
Te Whāriki effectively implemented	Indicator rating for understanding and use of *Te Whāriki* (Ratings from teacher interview data)
	Indicator rating for implementing a bicultural curriculum (Ratings from teacher interview data)
Quality teaching and learning practices	Indicator ratings of assessment, planning, programme evaluation, self- review (Ratings from teacher interview data)

Dimensions of quality

The dimensions of ECE quality used to examine ECE service quality were:

• *Adults are responsive and guide children.* A service that received the highest possible rating for this aspect of quality would have teachers/educators who responded quickly and directly to children, moving among

children to encourage their involvement, and participating in their play. Teachers/educators would use positive reinforcement, guidance, and explanation as guidance techniques.

- *Adults extend children's learning*. A service that received the highest possible rating for this aspect of quality would have adults who take advantage of opportunities to extend children's thinking by asking open-ended questions, scaffolding, and co-constructing learning. Sustained adult:child conversations and joint problem solving would be commonplace.

- *Children complete work and concentrate*. In a service with the highest possible rating for this aspect, children would have control over when activities are completed, and could select their own activities from a variety of learning areas. Children would concentrate for sustained periods of time in learning episodes and persevere in the face of challenges. Routines would not cut across learning episodes.

- *Children co-operate and co-construct learning*. In a service with the highest possible rating for this aspect, children would be seen to share, extend comfort to other children, offer to help, support, and co-operate with each other. Children would use negotiation to solve interpersonal problems. They would initiate learning experiences, scaffold, and co-construct learning with other children.

- *Education programme content*. A service that received the highest possible rating would have plenty of opportunities for children to experience a print-saturated environment, that encourages print awareness. Stories would be read, told and shared, and children encouraged to explore thoughts, experiences, and ideas through using symbols. Children would engage in child-initiated creative play, such as singing, drama, making music, and there would be evidence of creativity and artwork. Adults would use a range of mathematical ideas and language, and encourage mathematics for a variety of purposes. Children would be seen to problem solve and experiment.

- *ECE resources*. A service that received the highest possible rating would have plenty of equipment and activities to encourage fine motor skills and gross motor skills. There would be enough age-appropriate resources to avoid problems of waiting and competing for scarce resources. Space would be provided for children to explore the physical world, with varied surfaces, levels, and slopes.

- *Overall quality*. A service that received the highest possible rating would have "very good" ratings on all the above indicators, which are combined.

The early childhood services in this study were assessed on dimensions of process quality twice in 2004 and twice in 2006. Use of this scale enabled us to measure change from 2004 to 2006 for these dimensions, as well as overall quality, show how dimensions of quality relate to overall quality, and relate levels of process quality and changes to it, to intermediate outcomes of the strategic plan, e.g., more registered teachers in ECE, quality teaching and learning practices, and strategic plan actions. This enabled us to track whether there had been an improvement in the quality of service provision over the two years of the early roll-out of the ECE strategic plan, which is likely to have improved outcomes for children, and reasons for any change in quality.

Levels of quality and patterns of change 2004 to 2006

Overall quality of ECE services in 2006

By 2006, overall quality in nine services (20 percent) was rated "very good", and "good" in 20 services (44 percent). This means that the kinds of interactions, child engagement, educational programme content, and resources that are associated with positive learning and developmental outcomes for children were observed at

least some or most of the time in around two-thirds of the ECE services in the study over our two visits. Overall quality was rated "fair" in 16 services (35 percent), and "poor" in one service in 2006.

Levels of quality in over 80 percent of services were "good" or "very good" for the three dimensions, "Adults are responsive and guide children", "Children complete work and concentrate", and "Resources".

Lower ratings, where about half the services had "fair" or "poor" ratings were found on three dimensions. These were "Children support, co-operate, and co-construct learning", "Adults extend children's learning", and "Education programme content". As discussed in Appendix C, we categorised these dimensions as particularly important for children's learning. Evidence from the Competent Children, Competent Learners project in New Zealand (e.g. Wylie & Hodgen, 2007) and the large-scale Effective Provision of Preschool Education project (EPPE) in England and Northern Ireland (Siraj-Blatchford et al., 2003; Sylva et al., 2004) found that adult–child interactions such as "sustained shared thinking" and open-ended questioning were linked with children's competencies in later schooling. Such interactions require children to take a problem-solving approach and think for themselves. The EPPE project found that in the most effective preschool settings, neither adult-initiated nor child-initiated activities dominated. The EPPE authors argued that adults therefore need to create opportunities to extend child-initiated play as well as adult-initiated group work, because of the importance of each for promoting learning. The EPPE project also found that practitioners need to understand the curriculum area being addressed. In the Competent Children, Competent Learners study exposure to the written word in ECE settings, where print is seen as enjoyable and meaningful, also made a continuing contribution to children's competencies at ages 10, 12, 14, and 16 years.

Table 23 **2006 levels of service performance on quality dimensions**

Item	"Very good" n (%)	"Good" n (%)	"Fair" n (%)	"Poor" n (%)
Resources (n=46)	21 (46)	16 (35)	9 (20)	
Children complete work and concentrate (n=46)	18 (39)	22 (48)	5 (11)	1 (2)
Adults responsive (n=46)	14 (30)	25 (54)	7 (15)	
Children co-operate and co-construct learning (n=45)*	6 (13)	19 (42)	14 (31)	6 (13)
Education programme content (n=46)	6 (13)	16 (35)	19 (41)	5 (11)
Adults extend children's learning (n=46)	6 (13)	16 (35)	17 (37)	7 (15)

* The Early Intervention centre was not rated on this item.

Changes in overall quality from 2004 to 2006

Figure 1 below compares each service's overall quality rating in 2004 with their overall quality rating in 2006, to see how individual services changed over the two years. A rating of 4–5 is "very good", 3-4 "good", 2–3 "fair", and less than 2 "poor".

There were no significant changes between 2004 and 2006 in ratings of overall quality. Looking at individual services, the shifts in quality that occurred were to an adjacent level of quality, and were not large, indicating most services sustained 2004 levels of quality in 2006.

Comparing 2006 to 2004, seven services (16 percent) had higher ratings, and nine services (20 percent) had lower ratings. Three services retained "very good" levels, so could not have improved on our rating scale. The other services sustained existing levels. Services that were "fair" or "poor" quality in 2004 that were still at that level in 2006 were: four of the 12 education and care centres (all were private centres), three playcentres, the puna, and playgroup.

Figure 1 **Changes in overall quality ratings from 2004 to 2006**
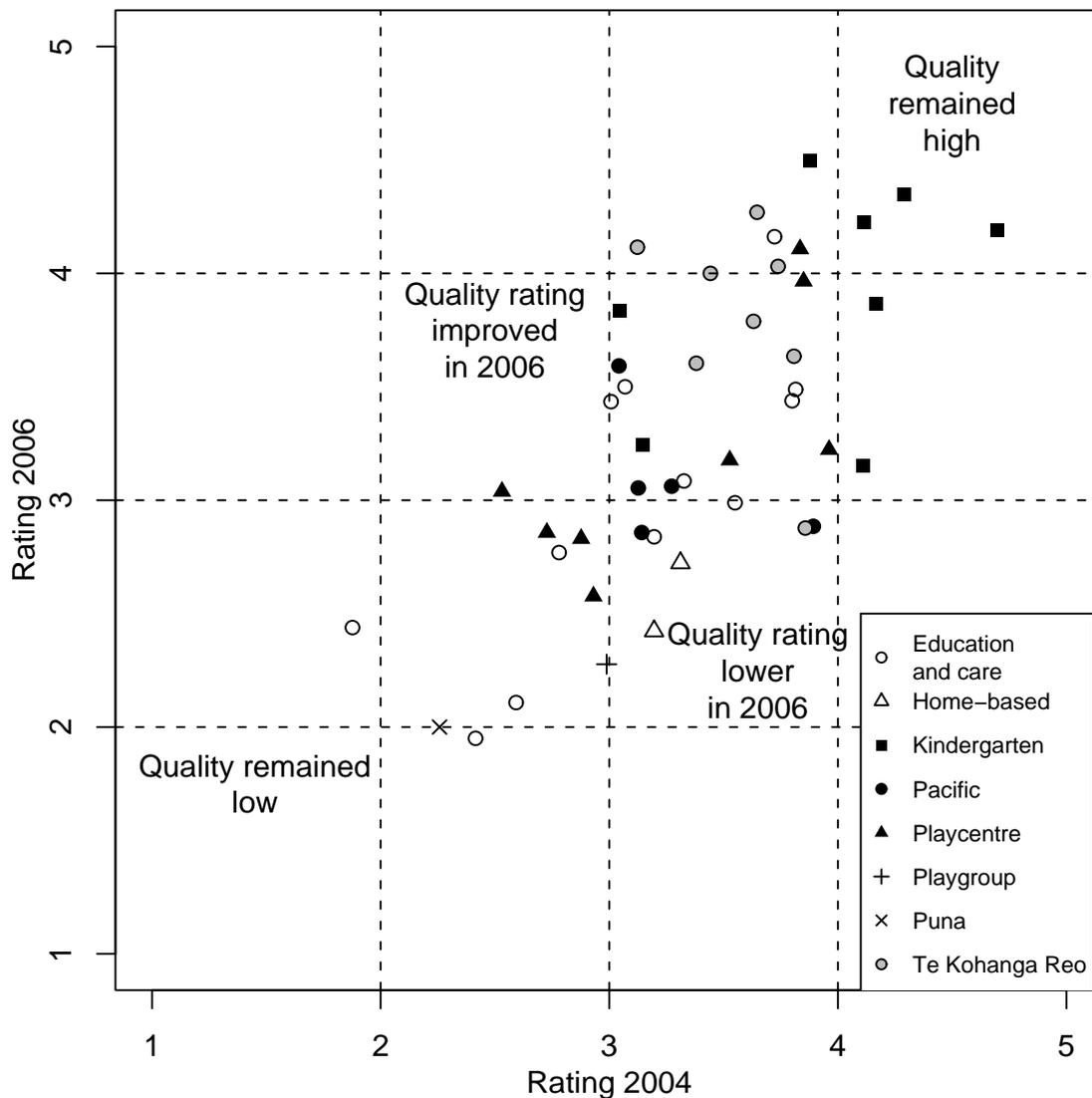
We would expect children's learning foundations to benefit most in services in this study that were of a level of "good" and "very good" quality, with the greatest benefits in the services rated as "very good" quality. In 2006, 72 percent of the children attending the ECE services in this study were in "good" or "very good" quality services. Of the 1853 children in services in this study in 2006:

- Twenty-six percent of children (476) were in services rated "very good" (25 percent in 2004).
- Forty-six percent of children (856) were in services rated "good" quality (56 percent in 2004).
- Twenty-eight percent of children (524) were in services rated "fair" or "poor" quality (19 percent in 2004).

This looks like a negative shift in 2006, but 13 percent of those rated "fair" quality in 2006, were close to a "good" rating (c.f. only 6 percent in 2004).

Children had better access to some quality dimensions than others. In 2006:

- Eighty-eight percent of children were in well-resourced environments. We categorised this cluster of items as "moderately important", since they offer tools for children to learn and experiment and framing conditions for learning to occur (see Appendix C).
- Eighty-seven percent of children were in environments where they were often or always encouraged to complete work and concentrate. This cluster of items is associated in research evidence with children being involved, developing perseverance and learning dispositions, and thinking for themselves. We categorised these items as "very important".
- Eighty-three percent of children were in environments where there were "very good" or "good" responsive adult:child interactions, positive reinforcement, and guidance. We categorised this cluster of items as "very important" since they are linked in research evidence with children developing learning dispositions.

Around half the children were in environments where some quality dimensions were only "fair" or "poor". In 2006:

- Fifty-one percent of children were in environments where adults hardly ever extended children or challenged their thinking.
- Forty-six percent of children were in environments where there was very little evidence of children supporting each other and co-constructing learning.
- Forty-five percent of the children were in environments where the education programme content was "fair" or "poor".

Table 24 **Number of children in services of different quality dimensions in 2006 (n=1853)**

Cluster of items	"Very good" n (%)	"Good" n (%)	"Fair" or "poor" n (%)
Resources	997 (54)	624 (34)	232 (13)
Children complete work and concentrate	697 (38)	905 (49)	251 (13)
Adults are responsive	599 (32)	943 (51)	311 (17)
Education programme content	312 (17)	708 (38)	833 (45)
Children co-operate and co-construct learning	264 (14)	734 (40)	855 (46)
Adults extend children	300 (16)	612 (33)	941 (51)

Overall, the dimensions where quality in about half the services was mainly "fair" or "poor" required interactions and environments that were cognitively challenging for children. Cognitively challenging adult:child interactions may be harder to initiate and sustain. Siraj-Blatchford et al. (2003) in the longitudinal EPPE study in the UK, found, for example, that open-ended questions made up only 5.1 percent of the questioning used in "excellent" settings in their case studies, and that "sustained shared thinking" did not happen very frequently. These are aspects of our dimension "Adults extend children".

Analysis of levels and shifts in overall quality from 2004 to 2006 for services, children, and localities

In the second level of analysis, we examined levels and shifts in overall quality from 2004 to 2006, in relation to characteristics of children, localities, and services to understand why some services' quality improved, some declined, and some remained low. We report only those characteristics (from all the characteristics analysed for this evaluation) which showed an association with differences in quality levels or patterns of change between 2004–2006. Differences in patterns were considered in relation to strategic plan actions, and supports and barriers to change.

Child characteristics

Three of the four child characteristics we analysed (proportion of children attending the service who are Pasifika, proportion aged under-two, the service receipt of Equity Funding) were linked to patterns of overall quality level or shifts in quality. There was no link with the fourth child characteristics, the proportion of Māori children attending the ECE service.

Services receiving Equity Funding (n=22), indicating that children in these services were from low-income homes, children had special educational needs, or were from non-English speaking backgrounds, services were offering ECE in a language other than English, or services were isolated, were more likely to make positive shifts in overall quality from 2004 to 2006. Twenty-seven percent of these services (n=6) compared with 8 percent (n=2) of services not receiving Equity Funding made positive shifts. Services with an Equity Index were under-represented in the group that had "fair" quality in both years—9 percent (n=2) compared with 29 percent (n=7) of services not receiving Equity Funding.

Most managers of services receiving Equity Funding commented that Equity Funding had improved the quality of their service or enhanced participation. Equity Funding expenditure was on curriculum resources, specialist equipment (for the Early Intervention centre), subsidising excursions, and language support (aspects that would be expected to improve quality), or enabling participation. Equity Funding had reduced the need for fundraising and enhanced sustainability in several services:

> It has enabled us to provide high-quality resources and experiences for using in centre and on excursions for our families which may otherwise be unaffordable. (Playcentre)

> Has certainly allowed our kōhanga reo to purchase more resources and to implement the Kaupapa Mae effectively. (Kōhanga reo)

> Has contributed to us being able to retain low fees. Contributes financially to centre income. (Education and care)

> Made huge difference. Gave us security. Would have had to fundraise twice as much especially with falling rolls! (Kindergarten)

An evaluation of the initial impact and usage of Equity Funding (Mitchell et al., 2006a) showed similar spending purposes: Equity Funding was used to improve staffing (e.g. professional development, training, and staffing levels), curriculum resources and experiences, and teaching and learning resources. Expenditure on these aspects was associated with improvements in quality or maintenance of high-quality levels.

Two of the nine services with over 20 percent of their children aged under-two and continuing "fair" quality levels were receiving Equity Funding. They faced distinctive pressures: high parent turnover in one and a high number of families from non-English speaking backgrounds in the other. Equity Funding was reported to be insufficient to help the latter service with the language and cultural support it wanted.

Services with over 20 percent of children under two years old (n=22) were over-represented in the group with "poor" or "fair" levels of quality in both 2004 and 2006 (33 percent in 2006 compared with 8 percent with 20 percent or fewer children under two years old). These services included all types except kindergartens.

Nevertheless, two services with high percentages of under-two's were rated as being of "very good" overall quality, and seven were rated as "good" overall quality in both years, indicating that it is possible to cater very well for this age group in a pedagogical sense. Two factors stood out as differentiating the under-two services with "very good" and "good" overall quality ratings from the under-two services with "poor" or "fair" quality ratings: educator:child ratios, and relationships with parents:

- Seven of 11 of the "poor" or "fair" quality services with over 20 percent under-two-year-olds had observed ratios of 1:4 (educator to children) or worse, compared with one of this group of services that had "good" or "very good" overall quality ratings (n=11) in 2006.
- The two "very good" quality services with over 20 percent under-two-year-olds were rated as "very good" in their relationships with parents. None of the poorly rated centres with under-twos had "very good" relationships with parents. The rating for relationships with parents was formed from parent responses to questions about the usefulness of teacher information about the child's learning, the child's happiness, and the curriculum, whether the parent talked to teachers about home, their satisfaction with information about their child, and the parent's involvement in assessment and planning.

Services with over 4 percent Pasifika children (n=12) were more likely to have consistently "good" levels of quality than other services (50 percent compared with 29 percent). Eight of these services had improved staff qualifications from "adequate" to "good" levels in 2006. The service types were playcentres, kindergartens, Pasifika services, and education and care services. This group did not include home-based services, the puna, or the playgroup, all of which had consistently "fair" ratings of overall quality. It seems likely that it was the "good" staff qualifications and the service types that contributed to "good" levels of quality in these services.

Locality characteristics

Twenty-four percent of services in minor urban localities were rated "fair" or "poor" in both years, compared with 12 percent of services in main urban localities. "Fair" or "poor" levels of overall quality in both 2004 and 2006 were mainly found in three of the four localities that were minor or secondary urban localities. Managers considered factors that affected overall quality in these localities were the small population base and relative isolation, which contributed to a limited pool of qualified teachers/educators, qualified relievers, and registration

supervisors, and in one locality, Kauri, isolation from professional support. Services in the fourth minor urban locality had mainly "good" or "very good" quality levels. This locality was reasonably close to a large city, was well serviced by professional support, and service managers did not describe the locality as isolated.

Table 25 **Significant locality characteristics and overall quality levels and shifts in relation to strategic plan actions**

Overall quality levels and shifts	Typical locality characteristics of group	Differences in relation to strategic plan actions	Differences in relation to locality issues
Consistently "good" or "very good" levels of overall ECE quality	Overall quality "good "or "very good" in four of five services in one locality, Totara (minor urban, under $17,000, high Māori, low Pasifika).	Four services in Totara locality had in-centre professional development from a college of education focused on teaching and learning. One of these was part of exemplar project. Some professional development was related to te reo and tikanga Māori.	
Positive shifts in overall ECE quality	No consistent locality trends		
Negative shifts in overall ECE quality	Overall quality in Rata locality (main urban, over $17,000, low Māori, low Pasifika) decreased in all five services.	.	New services opening in Rata creating competition for qualified staff.
Consistently low levels of overall ECE quality	Services in minor and secondary urban localities over-represented. Overall quality consistently low in five of six services in one locality, Kauri (minor urban, under $17,000, high Māori, low Pasifika)	Strategic plan actions for professional development not being accessed, difficulties in accessing qualified staff.	Professional development providers not coming to Kauri.

Service characteristics

Distinctive patterns of overall quality levels and shifts were associated with service type, but not with whether the services were teacher-led or parent/whānau-led, or whether they were sessional or full-day.

Table 26 **Service types and quality levels and shifts in overall quality**

Service type	Positive shifts in overall quality (n=8)	Negative shifts in overall quality (n=8)	Consistently "very good" levels (n=3)	Consistently "good" levels (n=18)	Consistently "fair" or "poor" levels (n=9)
Education and care	2	2		5	4
Kindergarten	1		3	4	
Kōhanga reo	4	1		3	
Playcentre	1	1		3	3
Pasifika		2		3	
Home-based		2			
Playgroup and puna					2

Over half the services had consistently "good" or "very good" ratings of overall quality between 2004 and 2006. Seven out of eight kindergartens were consistently rated as "good" or "very good" in overall quality, as were about half the Pasifika centres, education and care centres, kōhanga reo, and playcentres.

The playgroup and puna were consistently rated as "fair" quality in both years, and the two home-based services for which we had data in both years shifted to "fair" quality levels in 2006. None were rated "poor" quality. Four of seven private education and care centres were rated as "fair" quality in both years. In these services, the positive interactions and environment that contribute to children's learning were observed only infrequently.

Relationships between intermediate outcomes and levels of quality

In this section, we examine whether there are relationships between "good" and "very good" ratings on the intermediate outcomes and overall quality levels overall, i.e., on the actual quality of teacher–child interactions. These interactions are aspects that most directly affect children's learning. This comparison gives some indication of whether more attention to some of these intermediate outcomes would advance progress towards the strategic plan's goal of having the quality in all ECE services that will enable children participating to "develop and enhance strong early learning foundations, including building a strong sense of identity".

ECE services' overall quality was generally reflected in their ratings for the intermediate outcomes, with ECE services of "very good" quality having the highest ratings for each of the intermediate outcomes, and those of "fair" or "poor" quality having the lowest ratings.

Table 27 **"Good" or "very good" intermediate outcome and overall quality ratings in 2006**

"Good" or "very good" ratings for intermediate outcomes	"Very good" quality (n=9)	"Good" quality (n=21)	"Fair" or "poor" quality (n=16)
Bicultural curriculum* (n=14)	7 (100%)*	6 (40%)*	1 (6%)
Meeting language and cultural aspirations (n=15)	8 (89%)	6 (29%)	1 (6%)
Assessment (n=23)	7 (78%)	10 (46%)	5 (31%)
Te Whāriki (n=18)	6 (67%)	9 (43%)	3 (19%)
Planning (n=18)	6 (67%)	9 (43%)	3 (19%)
Qualifications (n=20)	5 (56%)	9 (43%)	6 (38%)
Self-review (n=12)	5 (56%)	6 (29%)	1 (6%)
Evaluation (n=9)	3 (33%)	5 (24%)	1 (6%)

* Excluding kōhanga reo which were not rated on this item because they are immersion Māori.

There was consistency in size and direction between the ratings on intermediate outcomes and the ratings of overall service quality. Services that had a "very good" overall rating were more likely to have a "good" or "very good" rating on the intermediate outcomes. Hence, for example, 78 percent of services that were rated as having "good" or "very good" overall quality, also had "very good" ratings for assessment, compared with 46 percent of services that were rated "good" quality, and 31 percent of services that were rated "fair" or "poor" quality. This suggests that the intermediate outcomes are related to teachers' ability to offer good-quality teaching and learning experiences, and that current MOE strategic plan policies and actions to further develop ECE services' competence need to be continued. If prioritisation for new actions is needed, our analysis of the service, locality, and child characteristics associated with low levels of overall quality and progress on the intermediate outcomes might suggest where the need is greatest.

Services with low ratings of overall quality in 2004, or 2006, or in both years, all catered for children under two-years.[17] In teacher-led services, observed staff:child ratios of 1:4 or 1:5 were found in three of the four education and care services with low ratings compared with other services catering for this age group, which had ratios 1:1 to 1:3. These services also had poor adult qualifications.

Differences in adult:child ratios in services catering for children over two years were not related to overall quality ratings. This may be because ratios were confounded with teacher qualifications: all the services for children over two years that had lower adult:child ratios also had "good" staff qualification levels. Nevertheless, the observed adult:child ratios were all better in the sample services than regulated ratios, because of child absences on the day of observations.

No relationships were found between the number of children attending a service and its overall quality rating. The ECE outcomes literature review suggested:

> It may be that how children are grouped within settings, rather than overall centre size is what counts for quality. The English *EPPE* study showed more 'sustained shared thinking' which is associated with better cognitive achievement was more likely to occur with adults working 1:1 with children and during focused small group work. (Mitchell, Wylie, & Carr, 2008, p. 88)

Strategic plan initiatives and shifts in ratings

Professional resources and support

Consistent patterns were found between use of the MOE's assessment exemplars, MOE-funded professional development linked to the exemplars and *Te Whāriki*, and levels and shifts in overall quality. Use of these resources and opportunities were compared for two groups:

- services rated "very good" on overall quality in both years, and services shifting up in quality ratings in 2004
- services rated "poor" or "fair" on overall quality in both years, and services shifting down in overall quality ratings.

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[17]   Note that some services with under-two-year-olds were operating at high-quality levels.

Those rated "very good" in both years were included because they could not move higher on our rating scale, and those rated "fair" or "poor" in both years were included because they could not move lower. Use of other MOE resources (such as the ICT resources and self-review guidelines) were not analysed because they had only recently been published and had been accessed by only a few.

All but one of those rated "very good" in both years, or shifting up in overall quality ratings, had used *Kei Tua o te Pae*, and 55 percent of these had also participated in MOE-funded professional development. One service was a COI. Practitioners in these services also thought that the resources and professional development had impacted positively on teaching and learning in their service.

These resources and professional development opportunities were less frequently accessed by services rated "fair" or "poor" in both years, or shifting down in overall quality between 2004–2006. Over half these services had not used either *Kei Tua o te Pae*, or taken part in MOE-funded professional development. Two of the services shifted in ratings from "very good" to "good"; they had used the MOE resources and accessed the funded professional development, but teachers in one of these services were critical of the poor quality of tertiary education providers offering professional development.

Table 28 **Comparison of services making positive and negative shifts on overall quality and use of MOE resources and professional development**

Overall quality	*Kei tua o te Pae* and professional development n(%)	*Kei tua o te Pae* only n(%)	Professional development only n(%)	None n(%)
Positive shifts or "very good" ratings in 2004 and 2006 (n=11)	6 (55)	3 (27)	1 (9)	1 (9)
Negative shifts or "fair" or "poor" ratings in 2004 and 2006 (n=17)	5 (29)	1 (6)	2 (12)	9 (52)

Use of *Kei Tua o te Pae* was also associated with improved ratings on assessment:

• Ten of 12 services with improved assessment ratings in 2006 used this resource, and most also had associated professional development.
• All those with "very good" ratings in 2006 used the resource and had professional development associated with it.

Qualification incentives

All services with "very good" overall quality ratings in 2004 and 2006 (n=3) had "good" staff qualification levels in both years. All but one of the nine services (89 percent) with "poor" or "fair" quality ratings in both years had "poor" levels of qualification in both years. These service types were education and care services (four), playcentre (three), the playgroup, and the puna. Playgroups and puna have not been the target for strategic plan actions to raise qualification or training levels. The four (of seven) private education and care services that were

rated as "fair" or "poor" overall quality in both years did not improve staff qualification levels over the time period, although strategic plan actions have targeted this area. In three of the four services, 2006 qualification levels were "poor", and in one they were "adequate". In the three other private education and care services, which had "good" levels of quality in 2006, qualification levels were "adequate" in two, and "good" in the third. Kindergartens, on the other hand, which were all rated "good" or "very good" on overall quality in 2006, were already required to have qualified and registered teachers before the ECE strategic plan targets were announced.

There were no consistent patterns between those shifting up or down on indicators of qualified staffing and shifts in overall quality. It may be that the data do not allow patterns to be seen since many services improved qualifications (n=14) or had a "good" level of qualification (n=7) in both years, and only some shifted down on qualification ratings (n=6). Only one of those services that improved their qualification ratings had "fair" or "poor" overall quality in 2006.

Not all the services that made use of MOE incentives to improve qualifications had "good" ratings for qualifications in 2006. This could be because of the time it takes for staff to become qualified, i.e., staff in training would not count as the service having improved qualifications, and because of staff turnover.

Intermediate outcomes shifts 2004–2006 and 2006 levels

Quality teaching and learning practices

Quality teaching and learning practices were measured through indicators of assessment, planning, evaluation, and self-review (Appendix C). These practices are intended to support high-quality teaching and learning by offering opportunities for teachers, managers, and parents/whānau to gather and examine evidence/information and use it to enhance the quality of the curriculum. Indicators for each of these practices were described within four levels: "poor", "fair"; "good"; and "very good". Vignettes describing examples of different ratings from the fieldwork are provided in Appendix D. Ratings on indicators of assessment and self-review are compared for 2004 and 2006. Ratings on indicators of planning and evaluation were made for 2006 only, so we report 2006 levels only.

Since the Curriculum Development Project 1991–1992 co-ordinated by Margaret Carr and Helen May (1992), and publication of *Te Whāriki*, 1993 (draft), 1996 (final), MOE policy initiatives and contracted research projects, publications, and professional development have put emphasis on curriculum enactment, especially planning, assessment, evaluation, and self-review (Carr et al., 2000). The 2004 data collection was undertaken after useful research and resources for teachers were available (Carr, 1998; Carr, May, & Podmore, 1998; Carr et al., 2000; MOE, 1996a, 1998, 1999), but before publication of *Kei Tua o te Pae, Assessment for Learning: Early Childhood Exemplars* or the self-review guidelines (Ministry of Education, 2005a, c, 2006). The ICT strategy and associated video had been published (Ministry of Education, 2005b). The ICT strategy focuses predominantly on the potential of ICT to support learning and teaching practice, and to make informed decisions about ICT in ECE settings. These last three were strategic plan initiatives. The 2006 data collection asked participants about their use of these new resources and associated professional development. Only the draft self-review guidelines had been published in 2006, and these had not been sent to all services.

Overall, ECE services had higher ratings for assessment and planning than for evaluation and self-review in 2006. The highest ratings were for assessment practices, which have also been the greatest focus in MOE professional

publications and professional development. Half the services were rated as "good" or "very good" for their assessment practices, compared with 40 percent in relation to their planning practices, 26 percent in relation to their self-review practices, and 19 percent in relation to their evaluation practices.

Table 29 **ECE service ratings in relation to teaching and learning practices in 2006 (n=46)**

Teaching and learning practices	"Very good"	"Good"	"Fair"	"Poor"
Assessment	5 (11%)	18 (39%)	20 (43%)	3 (7%)
Planning	3 (7%)	15 (33%)	21 (46%)	7 (15%)
Self-review	1 (2%)	11 (24%)	17 (37%)	17 (37%)
Evaluation	1 (2%)	8 (17%)	23 (50%)	14 (30%)

We can compare 2004 and 2006 levels for the assessment and self-review aspects of teaching and learning practices.

Changes in assessment practices

Consistent with strategic plan goals and actions, ECE services improved their ratings for assessment practices between 2004 and 2006. Eighteen ECE services (39 percent) improved their ratings for assessment practices and only three (7 percent) had negative shifts. Five services were rated as "very good" in 2006 for assessment practices, where only one was rated as "very good" in 2004.

Figure 2 **ECE services' assessment practice ratings from 2004 to 2006**
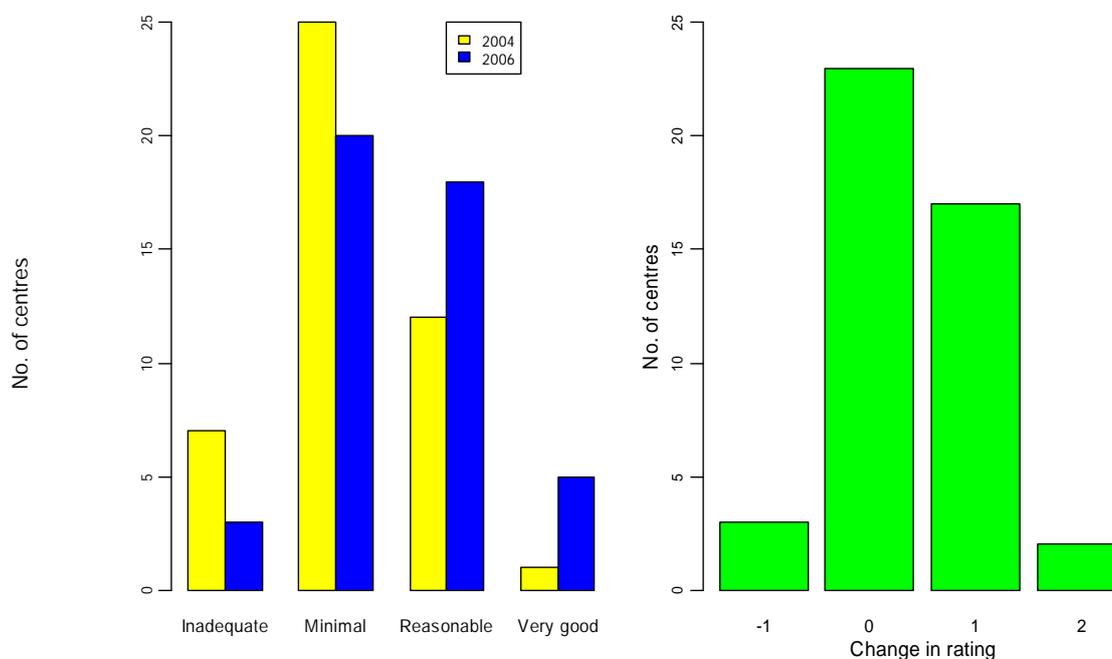
Changes in self- review practices

More services were rated as having "good" self-review practices, and fewer as having "fair" levels in 2006 compared with 2004. There was no change in the number of services rated as having "poor" self-review (16

services), or "very good" self-review (one service). Twenty-one ECE services' ratings of self-review remained unchanged from 2004 to 2006. Thirteen services improved their ratings and nine services had lower ratings in 2006.

There seemed to be a link between "good" or "very good" ratings of self-review and overall quality ratings. Services with "good" or "very good" levels of self-review also had "good" or "very good" levels of overall quality, although "good" or "very good" overall quality could sometimes occur with "fair" or "poor" self-review ratings. Conversely, all but one service with low overall quality ratings had "fair" or "poor" self-review ratings.

Figure 3   **ECE services' self-review practice ratings 2004 to 2006**
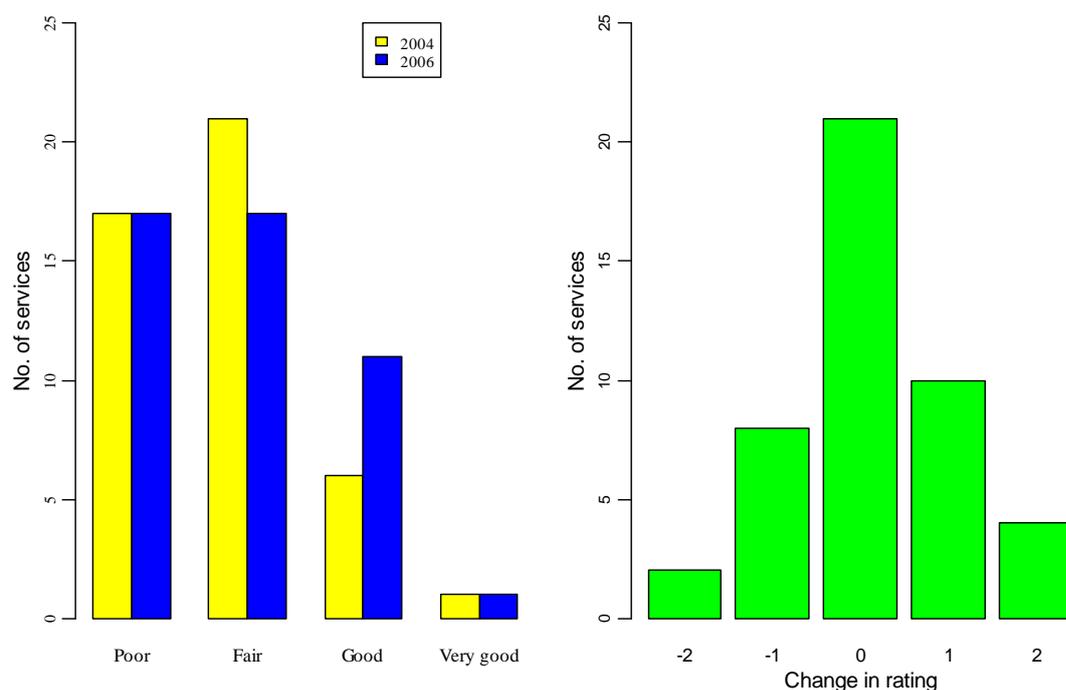
Analysis of levels in teaching and learning practices for localities, services, and children
Localities
Poorer 2006 ratings on all dimensions of teaching and learning practices were found in minor urban localities. The poorest ratings overall were in one locality, Kauri, where only one "good" rating was made, for planning. This locality also had the lowest level of quality overall, and in relation to strategic plan actions, problems in accessing qualified staff and professional development.

Locality differences were most marked for assessment practices. Minor urban localities and localities with a high Māori population did poorly on assessment.

In Table 30 below and subsequent tables, the number and percentage are of the number of services in the type of locality labelled in the column heading.

Table 30 **Locality characteristics and "very good" or "good" teaching and learning practices in 2006**

"Very good" or "good" teaching and learning practices	Minor urban (n=21)	High Māori (n=23)	High Pasifika (n=15)	Under $17,000 (n=24)
Assessment (n=23, 50%)	7 (33%)*	8 (33%)*	8 (53%)	11 (46%)
Planning (n=18, 40%)	7 (33%)	9 (39%)	5 (33%)	8 (33%)
Self-review (n=12, 26%)	4 (19%)	6 (26%)	3 (20%)	7 (29%)
Evaluation (n=9, 19%)	5 (24%)	4 (17%)	4 (27%)	4 (17%)

* Percentage stands out from overall percentage for "very good" or "good" ratings for this practice.

Service characteristics

Teacher-led services had higher ratings for assessment and planning than parent/whānau-led services. Sessional services had higher ratings for assessment practices than full-day services. There were service type differences: kindergartens were rated high on all practices except evaluation, and the playgroup and puna were rated lowest. Home-based services had "poor" ratings for all these aspects other than planning. Kōhanga reo had "poor" ratings for assessment and planning.

Table 31 **Service characteristics and "very good" or "good" levels of teaching and learning practices in 2006**

"Very good" or "good" levels	Teacher-led (n=28)	Parent/ whānau-led (n=18)	Sessional (n=20)	Full-day (n=26)	Service types differing markedly from overall proportion
Assessment (n=23, 50%)	17 (61%)*	7 (39%)*	10 (50%)	10 (38%)*	Kgtn (63%), Pasifika (60%), kōhanga (38%), home-based (33%), playgroup/puna (none)
Planning (n=18, 40%)	14 (50%)*	3 (17%)*	10 (50%)	8 (31%)	Kgtn (88%), Pasifika (20%), kōhanga, playgroup/puna (none)
Self-review (n=12, 26%)	7 (25%)	5 (28%)	6 (30%)	5 (19%)	Kgtn (50%), playcentre (38%), home-based, playgroup/puna (none)
Evaluation (n=9, 19%)	5 (18%)	4 (22%)	3 (15%)	5 (19%)	Home-based, playgroup/puna (none)

* Percentage stands out from overall percentage for "very good" or "good" ratings for these practices

Child characteristics

Services with higher Māori enrolments had poorer ratings on assessment practices than were found overall. Services with higher Māori enrolments and services with higher percentages of under-twos had poorer planning practices.

Table 32 **Child characteristics and "very good" or "good" teaching and learning practices in 2006**

"Very good" or "good" teaching and learning process	Over 12% Māori children enrolled (n=24)	Over 4% Pasifika children enrolled (n=15)	Get Equity Funding (n=22)	More than 20% under two (n=22)
Assessment (n=23, 50%)	9 (38%)*	7 (47%)	10 (46%)	11 (50%)
Planning (n=18, 39%)	7 (29%)*	7 (47%)	10 (46%)	6 (27%)*
Self-review (n=12, 26%)	5 (21%)	5 (33%)	7 (32%)	4 (18%)
Evaluation (n=9, 20%)	3 (13%)	4 (27%)	6 (27%)	2 (22%)

* Percentage stands out from overall percentage for "very good" or "good" ratings for this process.

Te Whāriki is effectively implemented

Te Whāriki, published in 1996, is a bicultural curriculum for all children from birth to school starting age. It is founded on aspirations for children to:

> . . . grow up as competent and confident learners and communicators, healthy in mind, body and spirit, secure in their sense of belonging and in the knowledge that they make a valued contribution to society. (Ministry of Education, 1996b, p. 9)

Te Whāriki is conceptually complex. The emphasis is on children's competencies, dispositions, and theory building, and the child as a participant within a social world. It is a framework, rather than a prescriptive curriculum, and defines curriculum broadly as "the sum total of the experiences, activities and events, whether direct or indirect, which occur within an environment designed to foster children's learning and development" (Ministry of Education, 1996b, p. 10). It "requires attention to every aspect of every child's experience within the early childhood setting" (Nuttall, 2003, p. 162). It rejects more traditional notions of curriculum that prescribe aims and content, and expects services to create their curriculum in a culturally situated way. The word "whāriki" in the name is a "woven mat" reflecting the view of curriculum as "distinctive patterns" (Ministry of Education, 1996b, p. 11).

Currently, the mandatory document is the *Desirable Objectives and Practices* (DOPs) (Ministry of Education, 1996a) which sets out national objectives for early childhood education, and is used by the ERO in their three-yearly review of each ECE service.

Two dimensions were measured for this intermediate outcome: understanding of *Te Whāriki*, and implementation of a bicultural curriculum (for all services except kōhanga reo and puna). Thirty-nine percent of the services were at a "good" or "very good" level in their understanding of *Te Whāriki* in 2006. Forty percent of the non-Māori immersion ECE services were at a "good" or "very good" level in their implementation of a bicultural curriculum.

Table 33 **Ratings of understanding *Te Whāriki* and implementing a bicultural curriculum in 2006**

Indicator	"Very good" n(%)	"Good" n(%)	"Fair" n(%)	"Poor" n(%)
Understanding *Te Whāriki* (n=46)	1 (2%)	17 (37%)	23 (50%)	5 (11%)
Implementing a bicultural curriculum (n=37)	2 (5%)	13 (35%)	18 (49%)	5 (14%)

Changes in understanding Te Whāriki

Overall, ratings of understanding of *Te Whāriki* had improved between 2004 and 2006. Over a third of individual services had improved their ratings, and only three had shifted negatively.

Only five services were rated as "poor" in 2006 compared with 14 services in 2004.

Figure 4 **Changes and levels of understanding *Te Whāriki* from 2004 to 2006**
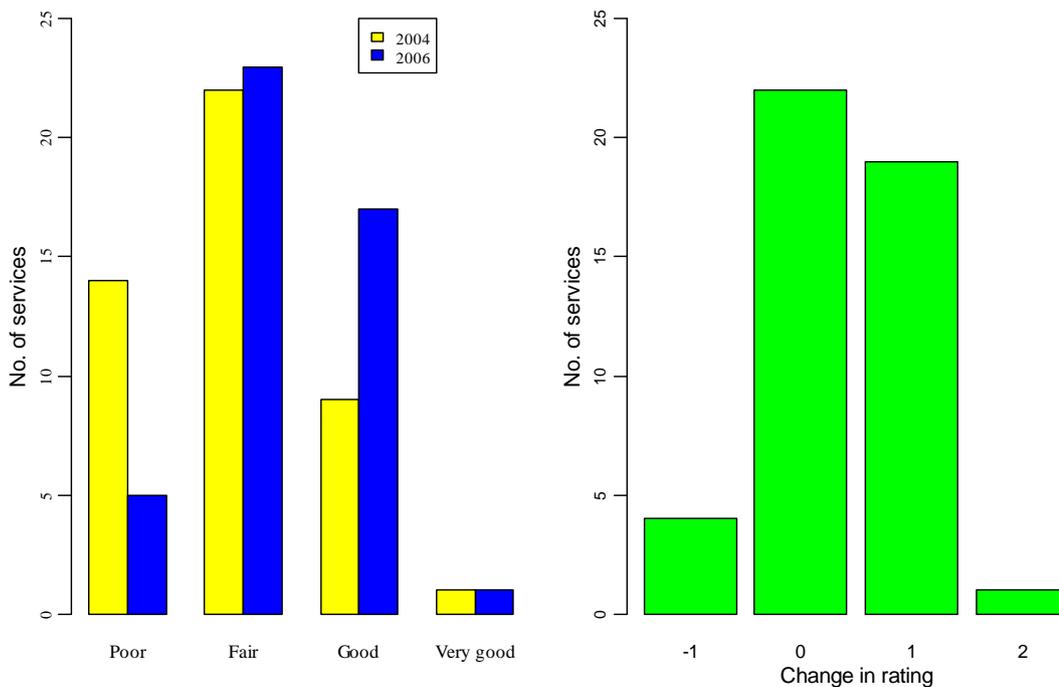
Changes in implementing a bicultural curriculum[18]

Overall, ratings of implementation of a bicultural curriculum had also improved between 2004 and 2006. About a third of individual services had improved their ratings, and only one had shifted negatively.

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[18] Kōhanga reo and the puna were not rated on this indicator because they deliver a total immersion Māori curriculum.

Figure 5   **Changes and levels in implementing a bicultural curriculum from 2004 to 2006**
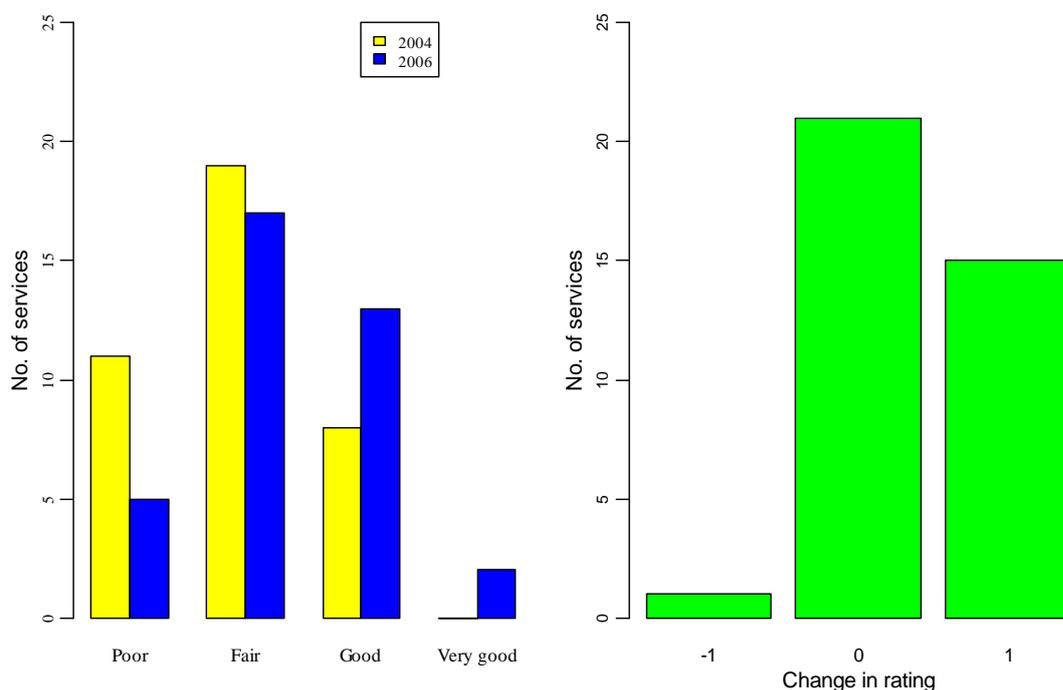
Analysis of levels in implementing Te Whāriki *in relation to locality, service, and child characteristics*

Localities

Poorer ratings on understanding *Te Whāriki* were found in Kauri, where no services had "good" or "very good" ratings in 2004 or 2006. This locality also had lower ratings than other localities on overall quality and on assessment, evaluation, and self-review. This was a minor urban locality and its lower ratings negatively affected the overall percentage of services in minor urban localities that were rated as "very good" or good" in teachers' understanding of *Te Whāriki* (24 percent, compared with 39 percent overall).

Three main urban localities, Nikau, Kowhai, and Pohutukawa, had higher percentages of services with "good" or "very good" ratings for implementing *Te Whāriki* in 2006 (80 percent, 57 percent, and 50 percent respectively). None of the services in these localities had negative shifts in ratings between 2004 and 2006:

- In Nikau, three of five services had positive shifts in ratings between 2004 and 2006, and the other two maintained their 2004 levels in 2006 (one at a "good" level, the other "poor").
- In Kowhai, four of seven services had positive shifts in ratings between 2004 and 2006, and three maintained their 2004 levels in 2006 (two at "good" levels and one at a "poor" level).
- In Pohutukawa, three of six services had positive shifts in ratings between 2004 and 2006, and three maintained their 2004 levels in 2006 (two at "good" levels and one at a "poor" level).

Pohutukawa and Kowhai were localities with high Pasifika populations (45 percent and 15 percent respectively at the 2001 Census).

Table 34 **Locality characteristics and "very good" or "good" implementation of *Te Whāriki* in 2006**

"Very good" or "good" ratings	Minor urban (n=21) %	High Māori (n=23) %	High Pasifika (n=15) %	Under $17,000 (n=24) %
Understanding *Te Whāriki* (n=18, 39%)	5 (24%)*	7 (30%)	8 (53%)*	10 (42%)

* Percentage stands out from overall percentage for "very good" or "good" ratings for this process.

It seems likely that differences in the shifts and levels relating to the implementation of *Te Whāriki* could be attributed to the qualification levels, nature, and take-up of professional development opportunities and use of professional resources rather than the nature of the population within the localities.

Teachers in services shifting to "very good" or "good" ratings for understanding *Te Whāriki* from 2004 to 2006 or maintaining "good" or "very good" ratings in 2006 were more likely to report take-up of professional development linked to *Te Whāriki*, make use of *Kei Tua o Te Pae*, *Assessment for Learning: Early childhood exemplars* (which is based on *Te Whāriki*), and have "good" ratings for teacher/educator qualifications than were services that maintained "poor" ratings or shifted from a "good" to a "fair" rating.

Forty-seven percent of services that maintained "fair" or "poor" ratings for understanding *Te Whāriki* from 2004 to 2006 also used *Kei Tua o te Pae*. However, the take-up of professional development for this group was low (13 percent), suggesting that perhaps professional development combined with use of *Kei Tua o te Pae* is important.

A pattern was not clear cut for these four services (a kindergarten, two education and care centres, and a playcentre) that shifted down to a "fair" or "poor" rating: all had professional development linked to *Te Whāriki* and half used *Kei Tua o Te Pae* and had "good" teacher qualifications. However, apart from the kindergarten, all of these services reported issues related to qualification levels or professional support. The playcentre, which moved from a "fair" to a "poor" rating on implementing *Te Whāriki*, had "good" qualification levels but reported struggling to encourage parents to do the training and difficulties in exchanging duties when the usual educator was unavailable. It had copies of *Kei Tua o te Pae*, but did not use it. One of the education and care centres used *Kei Tua o te Pae*, but "the [professional] support was not available". The other education and care centre was rated only "adequate" for qualifications and had difficulty in recruiting appropriate qualified staff. The manager raised questions about the quality of some qualified teachers.

Table 35 **Professional development, qualification levels, and "very good" or "good" understanding of *Te Whāriki* in 2006**

Ratings for understanding *Te Whāriki* (n=45)	Professional development linked to *Te Whāriki* n=21 (47%)	Use of *Kei Tua o te Pae* n= 22 (49%)	"Good" service rating for teacher qualifications n=20 (46%)
Maintained "very good" or "good" rating 2004–2006 (n=7)	6 (85%)	4 (57%)	4 (57%)
Shifted up to "very good" or "good" rating in 2006 (n=11)	7 (64%)	7 (64%)	7 (64%)
Shifted down to "fair" or "poor" rating 2004–2006 (n=4)	4 (100%)	2 (50%)	2 (50%)
Shifted up from "fair" to "poor" rating (n=9)	2 (22%)	2 (22%)	3 (33%)
Maintained "fair" or "poor" rating in 2006 (n=15)	2 (13%)	7 (47%)	4 (27%)

A higher percentage of services in localities with high Māori populations had "good" or "very good" ratings on implementing a bicultural curriculum (61 percent, compared with 40 percent overall).

Service characteristics

Service type, but not whether the service was teacher or parent/whānau-led, or full-day or sessional, was related to differences in understanding *Te Whāriki* and implementing a bicultural curriculum. Services that stood out from the overall ratings were as follows:

• Kindergartens had higher ratings ("good" or "very good") for understanding *Te Whāriki* (50 percent in 2004 and 2006, compared with 22 percent overall in 2004, and 39 percent overall in 2006) and implementing a bicultural curriculum (50 percent in 2004, compared with 21 percent nonimmersion services in 2004; 75 percent, compared with 41 percent nonimmersion services in 2006).

• A lower percentage of kōhanga reo had "good" or "very good" ratings on understanding *Te Whāriki* (13 percent in 2004, 25 percent in 2006). Kōhanga reo were not rated on implementing a bicultural curriculum since they aim for total immersion Māori.

• No home-based services had "good" or "very good" ratings for implementing a bicultural curriculum in 2004 or 2006.

• The playgroup had "poor" ratings on understanding *Te Whāriki* and implementing a bicultural curriculum, and the puna on understanding *Te Whāriki* in both 2004 and 2006.

Child characteristics

There were differences between services with more than 20 percent of children aged under two years and other services with fewer or no children under two years in understanding *Te Whāriki*, but only in 2004. Fourteen percent of services with more than 20 percent of children aged under two-years had "good" or "very good" ratings for understanding *Te Whāriki*, compared with 32 percent of services with fewer or no children under two years in 2004. By 2006, 38 percent of services with more than 20 percent of children aged under two years had "good" or "very good" ratings for understanding *Te Whāriki*, compared with 40 percent of the latter group.

Slightly fewer services with more than 20 percent of children aged under two years had "good" or "very good" ratings for implementing a bicultural curriculum in 2004 and 2006 (11 percent compared with 15 percent with fewer or no under-twos in 2004; 33 percent in 2006, compared with 45 percent with fewer or no children aged under two years in 2006).

More qualified teachers work in ECE

The ECE strategic plan set targets for increasing the number of registered teachers in teacher-led services. By 2005, all persons responsible were required to be registered teachers. Further targets were set for December 2007—50 percent of regulated staffing required to be registered teachers; 2010—80 percent of regulated staffing to be registered teachers, (services can also count teachers studying for an New Zealand Teachers Council (NZTC) approved qualification as up to 10 percent of the 80 percent requirement), 2012—all regulated staff to be registered teachers or at least 70 percent of regulated staff to be registered teachers and the remainder to be studying for an NZTC approved qualification. A recognised ECE qualification is necessary to become eligible for registration.

Parent/whānau-led services, kōhanga reo, and playcentres are not required to employ registered teachers, but have their own service-specific qualifications. The ECE strategic plan did not set targets for improving educator qualifications for these services.

International research evidence shows linkages between staff qualifications and outcomes for children.

> Qualified teachers are likely to draw on their knowledge and experience of children and pedagogy to offer the kinds of cognitively challenging adult–child interactions that are linked with gains for children. The NICHD ECCRN study (2002) using structural equation modelling, found a mediated path from structural indicators of quality (teacher qualifications and staff:child ratios) through process quality to cognitive competence and caregiver ratings of social competence. These authors suggest that "more caregiver training may lead to better interactions between children and adults, while lower ratios may lead to more interactions" (NICHD ECCRN, 2002, p. 206). (Mitchell et al., p. xiii)

MOE figures show that, nationally, the proportion of services with 50 percent or more of their teachers with recognised ECE qualifications rose between 2004 and 2006 from 44 to 58 percent for education and care services, from 97 to 100 percent for home-based service co-ordinators, and from 99 to 100 percent for kindergartens. The proportion with 70 percent or more of their teachers with recognised ECE qualifications rose from 15 to 24 percent for education and care services, from 90 to 98 percent for home-based service co-ordinators, and remained at 94 percent for kindergartens. In the case of Pasifika services, the proportion with 50 percent or more of qualified teachers rose from 20 to 33 percent, and the proportion with 70 percent or more rose from 4 to 9 percent.

Consistent with strategic plan goals to increase the number of registered teachers by setting targets and providing support such as incentive grants and resources, recognised ECE qualifications in the localities in this study also increased from 2004 to 2006. Services with a "good" level of qualification had 70 percent or more of teachers holding a Diploma of Teaching (ECE) or higher (teacher-led services); one or more kaiako holding whakapakari in kōhanga reo; and one or more educators holding course 4 or higher in playcentre.

In 2006, 44 percent of services had "good" levels of teacher/educator qualifications, and 18 percent had "adequate" levels. The 2006 qualification levels were a marked improvement on qualification levels in 2004,

when only 22 percent of services had "good" levels of qualifications. Nevertheless, a similar percentage of services (around 38 percent) were rated "poor" in both years.

Table 36   **Levels of qualifications in 2004 and 2006**

Year	"Good" n(%)	"Adequate" n(%)	"Poor" n(%)
2004 (n=46)	10 (22)	19 (41)	18 (39)
2006 (n=45)*	20 (44)	8 (18)	17 (38)

One service did not provide qualification information in 2006, because it closed during fieldwork. Its qualifications were rated "poor" in 2004.

At an individual service level, seven of 45 services remained at "good" levels in both years. All but one was a teacher-led service. Four were kindergartens, one was an education and care centre administered by a kindergarten association, one was a home-based service, and one was a playcentre. Kindergartens have been required to employ qualified and registered teachers since 2002, and the kindergarten association had a policy of employing registered teachers in the education and care centre.

Out of the 14 services (31 percent) that shifted to higher ratings between 2004 and 2006, 12 (86 percent) were teacher-led services. Of these, all but one shifted to a "good" rating. Four of these were Pasifika services (we did not have qualification information for the fifth Pasifika service in the study), three were education and care services, three were kindergartens, two were home-based services, one was a playcentre, and one a kōhanga reo. The higher funding levels for qualified teachers in teacher-led services are likely to offer incentives for services to improve staff qualification levels. Managers from three of these services (two Pasifika and one education and care) also used other government initiatives to improve qualifications, i.e., the Incentive Grant and the MOE and NZTC kit: *Towards Full Registration. A support kit*.

Three services went down from "good" to "adequate" levels of qualifications in 2006: a kindergarten and two kōhanga reo. All these services had experienced turnover of existing staff. Two were in the Kauri locality where management said it was hard to recruit qualified teachers/kaiako because they were not attracted to working in this locality. The kindergarten's staffing difficulties were reported to be temporary.

Ten services remained at "poor" levels in both years. Four were teacher-led services—all of these were private education and care centres. Their service managers all reported high teacher turnover. In three, qualification levels were rated "poor" in 2004 and 2006. All had staff in training, and one of these reported using government incentives to help the service achieve the level of registered teachers (Teach NZ Scholarships and Incentive Grant). Three of these private education and care services were in minor urban localities. These managers reported that new graduates were not attracted to teaching in small towns, or that there were insufficient qualified teachers in the area:

> People don't want to move to Rimu once they have trained in big cities. (Rimu)

> Young people who train might leave and work in cities where it is more fun. (Kauri)

> Not enough qualified teachers in the area. (Totara)

The teacher-led kindergarten in Kauri also reported on difficulty in recruiting teachers to the locality, but this was not an issue for kindergartens in Rimu or Totara. The education and care service in Kowhai (a main urban area) that was rated "poor" in both years reported on competition from other services for qualified teachers as a key reason for difficulties in recruiting staff:

> Not getting the new graduates as they are already working in centres as part of their practicum requirements.

The other services with low ratings in both years were four playcentres, two kōhanga reo, and the puna and playgroup. No educator qualification or registration incentives have been offered to these services through the ECE strategic plan. The playcentres and kōhanga reo reported insufficient people undertaking higher level training. The puna had difficulties in recruiting a qualified supervisor, and the playgroup relied on parents for the playgroup programme.

Services that shifted up for their ratings on teacher qualification levels remained much the same in their ratings of overall quality over these years. The exception was a kōhanga reo that shifted from a "poor" rating for qualifications to a rating of "good". It improved on all dimensions of quality and shifted from an overall quality rating that was only just "good", to a rating of "very good". This kōhanga reo also had extensive professional development and was engaged in action research to improve teaching and learning. The only other service to shift markedly from a "poor" to a "good" rating on levels of qualification was a playcentre. It slightly improved its overall quality rating score, although not dramatically, and quality remained "fair". It could be argued that it takes experience for practitioners to integrate understandings from teacher education into teaching practice, so shifts in quality levels will take time. As well, some teachers improving their qualifications said they did not have time for professional development as well as undertaking qualification-related training.

Six services (13 percent) shifted down in teacher qualification ratings between 2004 and 2006 (three kōhanga reo, two playcentres, and one kindergarten). All three kōhanga reo had difficulties in recruiting and retaining kaiako with appropriate cultural knowledge for the service. All were encouraging staff to do higher levels of training, and providing mentoring. The main reason for negative shifts for the playcentres was insufficient parents undertaking higher levels of training. Both had parents in training. The kindergarten had temporary staffing difficulties.

Analysis of levels of qualifications for localities, services, and children
Localities

Differences in ECE service levels of teacher qualifications in 2006 were associated with three locality features:

- Poorer qualification levels were found in minor urban localities and localities with a high Māori population. Thirty-three percent of services in these locality types were rated as "good" compared with 44 percent overall.
- Better qualification levels were found in localities with a high Pasifika population (57 percent were rated as "good" compared with 44 percent overall). These localities were also main urban localities.

One locality, Kauri, had no services with "good" qualification levels in 2006, and two services in this locality had shifted down in ratings from 2004 to 2006.

Service characteristics

Teacher-led services were over-represented in service types whose overall staff qualifications were at a "good" level in 2006. Seventeen teacher-led services (61 percent) were rated at a "good" level, compared with three

parent/whānau-led services (17 percent). Government targets and incentives for staff to become qualified and registered have been offered to teacher-led services, but no qualification targets have been set for parent/whānau-led services, or MOE initiatives offered for educator training or teacher registration in these services.

Sessional services (50 percent) were doing better than full-day services (38 percent) on qualification levels in 2006.

Service types differing markedly from the overall proportion with "good" qualifications (44 percent) in 2006 were:

* Home-based[19] (four of four, 100 percent), kindergarten (seven of eight, 88 percent), and Pasifika (three of four,[20] 75 percent). These were doing better on qualifications than overall.
* Parent/whānau services: playcentre (two of eight, 25 percent), kōhanga reo (one of eight, 13 percent), and playgroup (none). These had fewer kaiako/educators with qualifications at a "good" level.

Child characteristics

Services catering for Pasifika children had better ratings for teacher qualifications. A higher percentage of "poor" teacher qualification ratings were found in services receiving Equity Funding (35 percent compared with 13 percent not receiving Equity Funding) and services with over 20 percent under-twos (50 percent compared with 25 percent with fewer or no under-twos). The services receiving Equity Funding that had "poor" ratings for teacher qualifications were predominantly kōhanga reo and playcentre. These findings, taken alongside the findings of poorer overall quality levels in services with over 20 percent under-twos, suggest that it could be useful to target qualification incentives to services with high proportions of under-twos. Kōhanga reo and playcentre were more likely to cater for this age group.

Table 37 **Child characteristics and "good" service ratings for teacher qualifications in 2006**

"Good" qualification levels	Over 12% Māori enrolled (n=24) %	Over 4% Pasifika enrolled (n=14)** %	Get Equity Funding (n=22) %	More than 20% under-two (n=22) %
Overall 20 (44%)	9 (38%)	9 (64%)*	7 (32%)*	6 (27%)*

*   Percentage stands out from overall percentage for "very good" or "good" ratings for this dimension.

**   Data on qualification levels missing from one service. Services could be counted in more than one category.

Reduced ratios and group size

Low adult:child ratios are important in enabling teachers to be responsive to children, and scaffold and stimulate learning. In a recent literature review of outcomes of ECE (Mitchell, Wiley et al., 2008), ratios were found to be especially important for language stimulation of babies and toddlers. The impact of group size is less clear since much depends on how the early childhood service activities are organised. There is usually only limited whole-group focus and more than one teacher in early childhood services. Children tend to move in and out of different size groups throughout a session or day.

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[19]   The qualification was for the co-ordinator rather than the home-based educator.

[20]   Incomplete data on one Pasifika centre in 2006 because of closure.

The current regulations around ratios and group size are:

Adult:child ratios

Roll numbers, age of children, and whether the service is all-day or sessional are used to determine regulated age groups and ratios. Currently, there are two age bands: under-2-year-olds and over 2-year-olds. Ratios for under 2-year-olds are 1:5. Ratios for over 2-year-olds are 1:6, 2:20, 3:30 etc. in all-day centres, and 1:8, 2:30, 3:45, 4:50 in sessional centres. The ratios in playcentre (1:5 for over 2½-year-olds and a nominated caregiver or parent for children under 2½ years) are better than those regulated for teacher-led services.

Some additional staffing through provision of an Education Support Worker may be available for children with special needs who meet criteria.

Maximum centre size

The maximum number of children who can attend an ECE service at any one time is 50 children, with no more than 25 aged under two. In playcentre only 30 children are able to attend at any one time.

Proposed ratio and group size changes

A new framework will be implemented over 2009 and 2010, with different age bands: under-2½-year-olds and over-2½-year-olds. From July 2009, ratios for under-2½-year-olds will be 1:5, and ratios for over-2½-year-olds will be 1:10 in all-day centres. From July 2010, ratios for over-2½-year-olds will be 1:14 in sessional centres. Decisions have still to be made about group size.

Levels of ratios and group size

Actual ratios and group size are often better than regulations because of child absences. Our observations began in the winter months (August) in 2004, and were done during the winter of 2006. Winter weather may have led to greater child absences, and hence lower ratios and group size than would be found at other times of the year.

Observed ratios and group size varied according to service type. Kindergartens had the highest number of children per staff member, and the largest group sizes. Playcentres, playgroups, puna, and home-based services had the lowest number of children per staff member, and the smallest group sizes. The largest mean group size, in a kindergarten, was 37.5 children (taken over four occasions). The highest number of children per staff member was 1:12, also in a kindergarten.

Table 38 **Observed mean teacher:child ratios and group sizes in 2006**

Service	Mean teacher:child ratio	Mean no. of under-2s	Mean no. of over-2s	Mean number of children
Kindergarten (n=8)	1:7		27.09	27.28
Education and care (n=12)	1:4	4.62	18.13	22.75
Pasifika (n=4)	1:4	4.56	12.75	17.31
Kōhanga reo (n=8)	1:3	4.25	13.41	17.66
Playcentre (n=8)	1:1 (mixed)	2.75	7.06	9.81
Home-based (n=3)	1:2	0.25	1.75	2
Playgroup (n=1)	1:1	1	4.75	5.75
Puna (n=1)	1:1			3

Changes in ratios and group size

No shifts in ratios or group sizes occurred in these ECE services between 2004 and 2006. This is not unexpected since strategic plan actions to improve ratios are not due to be implemented until 2009. Decisions about group size have not yet been made.

Issues if regulated ratio age bands change to under-2½ years, 2½ years and over

We asked management to comment about the three options in the MOE consultation occurring in 2006 for changing the regulated ratio age bands. Since then, decisions have been made. In this section we report on management responses to operating under the age bands: under-2½-year-olds 2½ years and over, since these bands are to become regulated over 2009 and 2010. Most (49 percent) thought there would be no issues, or were not sure (35 percent). Education and care and kōhanga reo management were the only service types to predict issues. These were about re-organising age groupings, or the cut-off age for attendance. It was too soon for most management to say what they might do if ratios changed.

ECE services meet cultural and language aspirations

This intermediate outcome was measured through different items for Pasifika services, kōhanga reo, and English-medium services. Equity Funding has been targeted at services providing ECE in a language other than English for their education programme, but no other strategic plan actions have yet been specifically aimed at improving this outcome.

Table 39 **Descriptions of "very good" rating for ECE services meet cultural and language aspirations**

Kōhanga reo	Pasifika	English-medium
Kōhanga reo meets parental cultural needs well, high ratings from observations of te reo and tikanga Māori, kaiako high level of te reo fluency, and ability to initiate and participate in Māori cultural practices.	*Pasifika* meets parental cultural needs well, high ratings acceptance of all cultures, teacher high level of Pasifika language fluency, and ability to initiate and participate in Pasifika cultural practices.	*English-medium services* meet parental cultural needs well, high rating te reo and tikanga Māori, high rating of implementing a bicultural curriculum, high rating accepting cultures of all children.

Thirty percent of services were rated as meeting language and cultural aspirations at a "good" or "very good" level in 2004; and in 2006, 33 percent.

Table 40 **Levels of services meeting language and cultural aspirations in 2004 and 2006**

Year	Very good	Good	Fair	Poor
2004 (n=46)	8 (17%)	6 (13%)	18 (39%)	14 (30%)
2006 (n=45)*	7 (16%)	8 (17%)	17 (37%)	13 (29%)

* One home-based service was not rated in 2006.

An equal number of services moved up as moved down a rating from 2004 to 2006 (seven services). These were to an adjacent rating except for two services moving up from "fair" to "very good". These two services both reported undertaking extensive professional development related to inclusion. One was a special intervention centre, with most staff undertaking professional development related to blind and low-vision students. Parent educators in the other service, a playcentre, reported on professional development on inclusive practice, *Kei Tua o te Pae*, and te reo and waiata. These emphases are relevant to this indicator.

Analysis of levels of meeting language and cultural aspirations for localities, services, and children
Localities
Higher ratings on services meeting language and cultural aspirations were found in localities with high Māori populations. Forty-seven percent of services in these localities (n=23) had "very good" or "good" ratings on meeting parent language and cultural aspirations, compared with 33 percent of services overall. This was the only locality characteristic that differentiated locality ratings.

One locality, Totara, did very well overall, with four of five services (80 percent) rated "good" or "very good", and the fifth rated close to "good". This locality had a wānanga, and two services had developed close relationships with marae and iwi.

Service characteristics
Service type was the only service characteristic associated with high levels on meeting language and cultural aspirations. The highest levels were in the three immersion service types—the puna, kōhanga reo (63 percent), and Pasifika (60 percent), compared with 26 percent for English-medium services. These services aim to sustain and strengthen their language and culture, and all but the puna received Equity Funding for providing ECE in a language and culture other than English. None of the immersion services were rated as "poor" for this intermediate outcome.

High ratings for meeting language and cultural aspirations were least likely among the private education and care services. Five of seven were rated as "poor" (71 percent) in both years. This compared with three community-based education and care services rated "very good" or "good" (60 percent), one rated "fair", and one rated "poor" (20 percent each) in 2006. The private services rated "poor" on meeting language and cultural aspirations also had overall quality ratings of "fair" or "poor" in 2004 and 2006.

Child characteristics

Services with higher Māori enrolments and services receiving Equity Funding had higher ratings on meeting language and cultural aspirations than were found overall.

Services with more than 20 percent under-twos had lower ratings.

Table 41 **Child characteristics and "very good" or "good" ratings on meeting language and cultural aspirations in 2006**

"Very good" or "good" ratings	Over 12% Māori enrolled (n=24) %	Over 4% Pasifika enrolled (n=15) %	Get Equity Funding (n=22) %	More than 20% under-two (n=22) %
Meeting language and cultural aspirations (n=15, 33 percent)	10 (42%)*	5 (33%)	13 (59%)*	4 (18%)*

* Percentage stands out from overall percentage for "very good" or "good" ratings for this process.

Quality in parent/whānau-led services

One of the intermediate outcomes of the strategic plan is to improve quality in parent/whānau-led services.

Research investigating quality in these services was published in 2006.[21] The research analysed factors that contributed to children's learning, and parent learning and support in playgroups, playcentre, kōhanga reo, puna, and Pasifika services. It showed the following factors were associated with higher quality:

• structural factors, i.e., qualified educators/kaiako, good quality resources, small group size (in playgroups)
• parent participation in training and professional development/wānanga
• experienced adults working in the education programme
• access to and use of a wide range of professional advice and support
• parent participation in the education programme
• leadership for adult learning.

High levels of communal language fluency were a contributing factor to language and culture learning and maintenance in kōhanga reo, puna, and Pasifika centres.

High volunteer workload distracted some playcentre parents from participating fully in aspects of the playcentre that were important for children's learning.

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[21] Mitchell et al. (2006b).

Like other services, parent/whānau-led services, except playgroups, have had access to MOE professional resources and funded professional development. Other specific strategic plan actions to improve quality for these services are recent and occurred after the time that the 2006 data for this evaluation were collected:

- The May 2006 Budget increased playcentre funding to improve financial sustainability and "help reduce the time Playcentre volunteers currently need to spend on administration, so they can spend more time with children" (Maharey, 2006). Playcentre training is now funded at its full EFT value (the Playcentre Education Diploma was previously funded at about a third of its EFT value). This may reduce the amount of levies that playcentres need to pay to their associations for training, and so reduce their need to fundraise, and encourage more parents to train.
- Kōhanga reo that meet criteria for qualified kaiako[22] are eligible to access funding for free ECE for three- and four-year-olds from July 2007.

Parent/whānau-led services compared with teacher-led services

We found differences on some intermediate quality outcomes between parent/whānau-led services and teacher-led services in this study. These differences are summarised here, with suggestions for the reasons in differences:

- Five parent/whānau-led services had "very good" ratings for their levels of relationships with families in 2006, but so too did three teacher-led services: a Pasifika education and care service, and two home-based services. In 2004, only the two home-based services and three kōhanga reo had "very good" ratings on this indicator. Parent/whānau participation is a core philosophy of parent/whānau-led services.
- Fewer parent/whānau-led services were rated at a "good" level for educator/kaiako qualifications. There were no MOE initiatives to improve teacher qualifications or registration in these services between 2004 and 2006.
- Playcentre, puna, and playgroup had better average actual ratios than those found in other service types. (Many parents attend with their child.)
- Kōhanga reo, Pasifika services and puna had higher ratings on meeting language and cultural aspirations than other service types. (Kaupapa of each service.)
- Kōhanga reo had lower ratings on assessment, planning, evaluation, self-review and understanding *Te Whāriki*. Kaiako had not accessed MOE resources or professional development. The kōhanga reo with the highest overall quality rating ("very good") was the only kōhanga reo that rated well ("good" rating) on assessment, self-review and understanding of *Te Whāriki*. It was rated at a minimum level on planning and evaluation.
- The playgroup and puna had low overall ratings of quality, teaching and learning practices, and understanding *Te Whāriki*. There are no ECE strategic plan initiatives for these services.

Levels of language fluency and cultural knowledge

Data were collected on self-rated levels of language fluency in the kōhanga reo and Pasifika centres.

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[22] These kōhanga reo must have: one person who has completed the Wakapakari Tohu; OR, one person in the final year of Wakapakari Tohu; OR, one person who has both of the following: entry into final year of Wakapakari Tohu approved by the Te Kōhanga Reo National Trust Assessment of Prior Learning/Recognition of Prior Learning panel; and an early childhood teaching qualification recognised by the NZTC for teacher registration purposes.

All of these services were rated as "adequate" or "good"[23] in 2004 and 2006 in the ability of kaiako/teachers and whānau to hold a sustained conversation with children in Māori or their Pasifika language. There were no shifts in levels.

Most Pasifika participants rated themselves as "good" in 2004 and 2006 in ability to initiate and participate in cultural practices. Kōhanga reo participants varied from "poor" to "good" in 2004. Most rated themselves as "adequate" or "good" in 2006.

In 2006, many participants thought their abilities had improved since 2004. Most kōhanga reo and nearly half the Pasifika participants said their oral language fluency had improved. Almost all thought their ability to speak the language with children had improved. More kōhanga reo parents than Pasifika participants thought their ability to initiate and participate in cultural practices had improved. This may be because more Pasifika parents were already fluent in their home language and understanding of their home cultural practices.

Table 42 **Perceived changes in language fluency and cultural practices from 2004 to 2006**

Ability		Kōhanga reo whānau and kaiako (n=132) %	Pasifika parents and teachers (n=9) %
Ability to speak language	Improved	71	44
	Same	26	56
	Worse	3	
Ability to initiate and participate in cultural practices	Improved	58	33
	Same	28	67
	Worse	2	

The reasons given for improvements indicated the value to these parents of working in the education programme where the language and cultural practices are followed, and participating in courses and study:

• participation in the education programme (kōhanga reo, 51 percent; Pasifika, 33 percent)
• participation in wānanga/courses (kōhanga reo, 36 percent; Pasifika, 11 percent)
• kaumatua/elder support (kōhanga reo, 33 percent; Pasifika, 0 percent)
• participation in community activities (kōhanga reo, 20 percent; Pasifika, 22 percent).

These improvements are not the result of strategic plan actions, but reflect opportunities taken up within these services. They confirm findings from the Quality in Parent/whānau-led Services study about how language and cultural learning occurs (Mitchell et al., 2006b).

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[23] Adequate: 50–79 percent can hold a sustained conversation with children in Māori or their Pasifika language. Good: 80 percent or more can hold a sustained conversation with children in Māori or their Pasifika language.

Supports and barriers to improving quality

The data reported in this section are from 2006 only.

Supports for improving quality

Use of MOE resources and support for quality

Most of the teachers in the services had accessed at least one of the MOE resources and support to improve quality provided within the strategic plan. Most used were *Kei Tua o te Pae. Assessment for Learning: Early childhood exemplars*, professional development linked to exemplars and *Te Whāriki*, teaching and learning stories, and COI publications and workshops. However, teachers at most kōhanga reo, and the playgroup and puna made little use of these resources and support. Little teacher use had been made overall of the then new ICT strategy or the Web-based portal for teaching and management resources, Te Kete Ipurangi.

Kōhanga reo used purapura wānanga and resources from TKRNT. Playcentres and kindergartens also used resources and professional development provided by their respective associations.

Table 43   **Use of MOE professional resources and support (teachers' views)**

Resources and support	Kgtn (n=8)	Education and care (n=12)	Kōhanga reo (n=8)	Playcentre (n=8)	Pasifika (n=4)	Home-based (n=3)	Playgroup/ Puna (n=2)	Overall (n=45)
Kei tua o te Pae	8 (100%)	10 (83%)	1 (13%)	3 (38%)	2 (50%)	1 (33%)		25 (56%)
MOE professional development	7 (88%)	6 (50%)	1 (13%)	4 (50%)	3 (75%)	1 (33%)		21 (47%)
COI publications and workshops	6 (75%)	6 (50%)	1 (13%)	4 (50%)	2 (50%)			19 (42%)
Teaching and learning stories	2 (25%)	9 (75%)		3 (38%)	3 (75%)	1 (33%)		18 (40%)
Draft self-review guidelines					1 (25%)			
Quality journey	2 (25%)	2 (17%)		2 (25%)	2 (20%)	2 (67%)		10 (22%)
ERO indicators/ reviews	2 (25%)	2 (17%)		3 (38%)		1 (33%)		5 (11%)
ICT strategy	3 (38%)	1 (8%)						4 (8%)
Te Kete Ipurangi	1 (13%)	2 (17%)						3 (7%)

All but one Pasifika service, many education and care centres (62 percent), and one kindergarten had used government initiatives to increase their number of registered teachers:

• The Incentive Grant was most commonly used by education and care centres (42 percent), followed by TeachNZ scholarships (25 percent), the Primary Study Grant (17 percent), and the Support Grant for Provisionally Registered Teachers (8 percent).

• Pasifika services used the Incentive Grant (40 percent) and the MOE and NZTC kit: *Towards Full Registration. A support kit* (20 percent).

• One kindergarten (13 percent) had used the MOE and NZTC kit: *Towards Full Registration. A support kit*.

Twenty-two services (48 percent) were receiving Equity Funding.

Impact of MOE initiatives

Most participants commented very positively on the use and impact of MOE resources aimed at enhancing teaching and learning practices, and the early childhood curriculum. The most used resource was *Kei Tua o te Pae. Assessment for Learning: Early childhood exemplars*. Comments about these assessment resources, the COI programme, and the Education Leadership programme showed they were being used in ways to enhance teaching and learning practices that met our criteria of "good" practice. Less use was made of the draft self-review guidelines and the ICT strategy, but these were more recent initiatives.

Table 44 **Views of MOE professional resources and support**

Resource	Perceived value	Typical comments	Who used resource?
Kei Tua o te Pae. Assessment for Learning: Early childhood exemplars	Contributed to greater understanding of assessment linked to practice, useful resource for improving assessment for children's learning, helped make assessments open to contribution of parents.	Allowing teachers to focus on the children's learning and recording process. (Education and care teacher) Given us another perspective. Getting parents more involved. (Kindergarten teacher) Brilliant. Has provided an easy to understand and implement way to observe, recognise learning, and respond. (Playcentre educator)	Over half the services were making comprehensive use of resource. Others were starting to use it.
Education Leadership Programme	Valuable in generating understanding of the nature of distributed leadership, and teachers' role.	As a leader I am a role model for other staff. (Education and care teacher). That leadership is done by all together collaboratively. (Kindergarten teacher)	A few teachers were involved in this programme.
COIs	Offer concrete exemplars of good practice. Dissemination had been wide-ranging.	[COIs] demonstrate wise practice. [They offer] better idea of standards linked to quality.	Teachers/educators from 19 services (42 percent) had seen articles and reports, or participated in workshops about this work.

Resource	Perceived value	Typical comments	Who used resource?
		Excellent. Wellington playcentre delivered excellent workshop on scheme in Nelson. Also supported in P/C Journal. (Playcentre parent management)	
Draft self-review guidelines	Participants had mixed feelings (positive, ambivalent, and negative) about the value of these guidelines. Those who were negative were concerned about how much time the practices would take, and administrative workloads.	This has made us more aware of self-review. Clearly written easy to read. (Kindergarten management) Helps to build up the areas where it is needed. To provide a better learning programme for children. (Pasifika ECE supervisor) No. Have enough work to do! (Playcentre parent management)	The draft self-review guidelines had just been published when we collected data, and few participants were using them.
ICT strategy	The ECE ICT strategy and video "Foundations for Discovery" was launched on 12 April 2005. Its aim is to promote the use of ICT as a tool for strengthening effective teaching and learning, and to help ECE services operate.	Children can be responsible for their own learning. (Kindergarten head teacher) It helps the teachers to catch that special moment of the child's interest. (Pasifika ECE supervisor) Centre can't afford this but would love it! (Playcentre parent management) Some risk management issues to be explored in HBC. (Home-based care co-ordinator)	About half the service management had not seen it. Those who were aware of it had either used it and were positive about it, or said it made no difference to them. Within the latter group, several did not have appropriate hardware or thought ICT was too costly.

Professional development

Most teacher/educators, except in playgroups, had undertaken at least some professional development, covering a wide range of diverse topics, including te reo in a kōhanga reo, observation in an education and care centre, functional vision assessment in an early intervention centre, and creativity in a playcentre.

Most kindergarten teachers and home-based educators, and half the education and care teachers undertook in-centre professional development and attended short workshops. The most common form of professional development for Pasifika, playcentre, and kōhanga reo teachers/educators was short workshops. Playcentre educators and kōhanga reo kaiako and kaiāwhina mostly attended workshops organised by their own umbrella organisations.

Assessment professional development, particularly about learning stories, was most often mentioned when teachers described the most significant thing they had learnt in the last 12 months that had had an impact on their teaching. Very positive comments were made about professional development related to assessment for learning:

> Strengthened link between theory and practice; inspired my teaching, heightened awareness of and responsiveness to children, leading their learning and the effect this has on their developing competence (Kindergarten teacher).

> Able to see bigger picture and how different types and styles of learning stories have meaning. (Home-based educator)

> I did it before, but now it has a huge impact in my field as an early childhood teacher. It opened up a clear picture of how to assess the children's learning. (Pasifika ECE teacher)

In kōhanga reo, the most significant learning was about te reo and tikanga Māori:

> Two day professional development for Kaiako to learn about our rohe at our local Marae. (Kōhanga reo kaiako).

> Learning about the area we live in … iwi, hapü, people, stories, pakiwaitara. (Kōhanga reo kaiako).

> Has made a great impact on my life, knowing the meaning of my job and how much it means to Te Reo Māori. (Kōhanga reo kaiako)

> Advanced my Te Reo, enhanced my speech and boosted my confidence. (Kōhanga reo kaiako)

In a puna, where the co-ordinator had attended a workshop in a previous year, valuable learning about how to stimulate children and encourage parent involvement had occurred:

> To allow the children to decide on activities and encourage them to try new things. Also encouraging the parents to have a positive input with classtime activities. (Puna co-ordinator)

Qualification incentives

Government initiatives to help services achieve the required level of registered teachers have contributed to improvement of qualification levels in teacher-led education and care services and Pasifika services.

Most playcentres had parents in training, were actively encouraging parents to undertake higher level courses, and were mentoring parents. Just over half the kōhanga reo had whānau in training. Some were encouraging whānau to undertake training and mentoring whānau in training. There were no special government initiatives for encouraging parents/whānau to become qualified as there are in teacher-led services. However, kōhanga reo are now able to access free ECE if they have one person in the final year of the Whakapakari Tohu programme and one person with an early childhood teaching qualification recognised by the NZTC for teacher registration purposes. This may encourage kōhanga reo to employ registered teachers.

Targets for regulated staff in teacher-led services to be registered

In general, Pasifika, education and care centre, and home-based management thought that regulated targets for staff to be qualified and financial incentives for staff to be registered were drivers for improvements in quality. They thought these have provided an impetus for staff to train, and for management to support training:

> [The targets have led to] a drive by our teachers to become qualified. (Education and care manager)

> [The targets have encouraged us to] take more responsibility for the service. (Pasifika manager)

Four of 12 education and care centre managements thought the registered teacher requirement for the person responsible had contributed to teacher professionalism and a "more rounded knowledge". They supported the targets for other staff to be registered.

Some education and care centre and home-based service management commented that the targets did not make a difference to their service because it already employed qualified teachers. Three managers commented on difficulties they had in meeting the targets (see next section on barriers).

Kindergarten, playcentre, and kōhanga reo management said the targets made no difference to them. Kindergartens had already had to meet these targets, and the targets did not apply to playcentre and kōhanga reo. There are targets now for kōhanga reo wanting to access free ECE. Kindergarten managers appreciated the Beginning Teacher Grant.

Equity Funding

The use of Equity Funding seems to have helped services that are receiving it to improve overall levels of quality from 2004 to 2006. In an evaluation of the initial impact and uses of Equity Funding (Mitchell et al., 2006a), Equity Funding was associated with an increase in overall ECE service quality levels or maintenance of high levels where services spent Equity Funding on professional development, teaching technology, staffing support, and training. The Equity Funding evaluation found that services most likely to make quality gains spent directly on items related to quality, used Equity Funding alongside other actions aimed at improving quality, used needs analysis linked to goals for children, and involved teachers/educators with close knowledge of children in decision making about expenditure. In this evaluation of the strategic plan, most spending of Equity Funding was on such items.

Barriers to ECE services improving their quality

Barriers to making improvements in ECE service quality were reported to be almost the mirror image of aspects that contributed to positive change in quality. Difficulties in recruiting and retaining appropriate staffing/volunteer educators, and difficulties in accessing training and professional development were commonly cited. Other barriers included: insufficient time and conditions to support effective teaching and learning practices, especially in education and care centres and kōhanga reo; and high volunteer workload, especially in playcentres.

Some problems are experienced mainly in particular service types and in some circumstances; for example, employment of staff competent in language and culture in Pasifika services, kōhanga reo, and a centre with many children from non-English speaking families; a limited pool of qualified teachers in some localities.

Staffing
Difficulties in recruiting and retaining qualified teachers in teacher-led services
Recruiting and retaining qualified teachers were difficulties for teacher-led service types, except for most kindergartens and home-based services.

The main concern for *education and care* service and *Pasifika* service management was whether the supply of qualified teachers to meet future regulatory requirements would be sufficient, rather than meeting requirements in

2006 at the time the data were collected. However, one centre had current difficulties in meeting regulation requirements at the beginning and end of the day, and several had difficulties when permanent staff were absent.

The main reason for difficulties was that the pool of qualified teachers was limited. This was particularly so in Kauri, a minor urban locality, with high Māori population and income levels below $17,000.

In several education and care centres, current staff were not willing to become qualified and registered, according to managers. It is necessary to hold a teaching qualification in order to become registered.

Pasifika services and an education and care centre catering for refugee children reported difficulties recruiting teachers with appropriate language and cultural expertise. In this latter centre, refugee cultural and language teacher aides are employed. They offer understanding of the families' education, religions, and world views, support the home language, and write assessments in children's home languages. They are not qualified teachers and are not in a position to undertake ECE teacher training because their English language level, especially written English, does not allow entry to a degree or diploma. The supervisor in this centre supported the 2012 qualified teacher requirement but predicted, that without additional staffing in centres like this, a major problem would be:

> Not being able to employ refugee women who have the languages, cultures, and refugee experience and empathy of our families. (ECE centre catering for refugee families)

She suggested the special situation of this centre and others like it could be acknowledged through additional funding for language and culture support staff to work alongside registered teachers. This service was receiving Equity Funding but the amounts were insufficient to cover the costs of employing these staff.

A playcentre with a high number of children from non-English speaking homes also suggested funded support for such specialists working with families with English as a second language.

Difficulties for teachers in becoming registered

The following difficulties were experienced by teachers (registered and unregistered) who commented on the process of becoming registered:

- insufficient time for undertaking work related to teacher registration (Pasifika, 67 percent; kindergarten, 67 percent; education and care, 25 percent)
- cost of registration (Pasifika, 17 percent; education and care, 11 percent)
- access to a registration supervisor (education and care, 14 percent)
- perceived poor quality of registration supervisors (education and care, 11 percent).

Most of the teachers finding it hard to access a registration supervisor were from one locality, Rimu (minor urban, population decreasing, income levels over $17,000), and had reported the same problem in 2004.

One or two kōhanga reo and playcentre teachers also reported issues with teacher registration, indicating some want to become registered, although registration is not a requirement for these services.

Staffing in parent/whānau-led services

Staffing problems for playcentre and kōhanga reo arose from the need to retain people and encourage them to do higher level training. The main staffing issues identified by management were:

- difficulties in accessing sufficient qualified people to meet regulated staffing requirements because insufficient people were doing higher level training (playcentre, 88 percent; kōhanga reo, 43 percent)
- difficulties in recruiting qualified educators/supervisors (playcentre 50 percent; kōhanga reo 29 percent)
- difficulties in finding qualified relievers and exchanging duties if the usual educator was away (kōhanga reo, 43 percent; playcentre, 38 percent)
- difficulties in recruiting people with appropriate cultural knowledge (kōhanga reo, 43 percent).

A high turnover of parents and volunteer workload were main reasons for staffing problems in playcentre. Turnover reduced the number of parents with higher levels of qualification. Several playcentre participants suggested provision of incentives to improve playcentre training levels could provide motivation, e.g., recognition of playcentre courses as prior learning towards the Diploma of Teaching (ECE), and free playcentre training.

In kōhanga reo, one suggested incentive to help resolve staffing issues was to offer payment for training.

Paid noncontact time and staff meeting time

According to teachers, insufficient paid noncontact time and whole-staff meeting time prevented staff in some education and care centres and kōhanga reo from having team discussions about children and the curriculum, and undertaking assessments, planning, and evaluation that contribute to quality:

> With no 'paid contact' time outside our work hours it is really poor. We can't discuss things enough or put the time into our programme and planning like we should. (Education and care teacher)

> Time is a big issue in our kōhanga reo for staff to discuss / hui and share with others about tamariki. We have no time during the day as we work with the tamariki. We find time when we can fit it in, but the tamariki always come first. (Kōhanga reo kaiako)

Timetabling meetings so everyone could attend at the same time posed problems in some all-day centres since some staff were always rostered to be on duty with the children and some teachers worked on different shifts:

> Apart from fortnightly meeting time the only other time we share as a team is at morning tea—even then one of us (at least) is on duty, supervising play. Afternoon kai—one teacher is usually on noncontact so there is another opportunity for shared team-talk gone. PM N/C occurs at kai time so teachers automatically have their kai break included as part of N/C time. This is the reality of it all. (Education and care teacher)

There were difficulties in getting everyone together in centres where there was no overlap in times that different part-time teachers worked:

> Not able to attend (staff meetings) with centre staff as I am in a shared job. I read minutes and follow through. (Education and care teacher)

Staffing: locality issues

One locality, Kauri, stood out. It had the lowest levels of overall quality in both 2004 and 2006, and negative shifts on assessment although services in this locality had mainly "good" ratings on the dimensions "Adults are responsive" and "Children complete work and concentrate". This locality experienced the highest level of staffing difficulties and the poorest access to professional development. As well as being a minor urban locality, Kauri also had a high Māori population, and low income levels. Compared with other localities, a higher proportion of

services in Kauri sometimes struggled to meet regulation requirements (33 percent compared with 19 percent overall), and rarely or never used qualified teachers to cover for absences (50 percent compared with 33 percent). In this locality, teachers reported having to travel long distances to attend professional development and train through correspondence study. Travel time and cost was a deterrent to undertaking professional development:

> Wanted to do a toddler / infant course but none available in [region], have to travel to [city] but too far. (Education and care teacher)

Some individual circumstances within services in this locality were making it difficult to improve quality. As well, getting staff trained in the education and care centre meant some short-term difficulties, while staff were undertaking study. Expansion into out-of-school care was also creating difficulties. The field researcher noted that in 2006:

> Kindergarten—constant staff turnover since the previous visit and the head teacher has had personal circumstances impacting.

> The childcare had moved premises since previously expanding the numbers. However while the premises were larger and the numbers greater, it was very difficult to get trained staff. Some staff were now being trained, this meant that there were relievers who were somewhat less than satisfactory in some instances. Further, while the premises were larger, only the under twos area was set up to support a learning programme. The facilities and equipment and layout of the over twos area was in progress but not carried out due to costs. This impacted on the programme, e.g. there were few tables free for activities so children had limited choices. The childcare also runs an after school programme every day—this is not separated from the ECE environment—quite chaotic as older children took the staff and space resourcing.

> The playcentre was effectively used as a meeting place for the very few families left in the area. Sporadically more families attended (according to the interviewee) however there were just three families consistently attending—limited training had been done.

> The playgroup had had a complete turnover of families and was starting afresh. The previous committee had been slow to relinquish control, e.g. the admin, and so the new families had no historical information. They did say that support from [MOE official] was very useful. Generally the families wanted a social meeting place as an ECE had been set up next door at the school and the older children attended this.

Accessing professional development

Playgroup/puna (100 percent) and home-based educators (67 percent) were most likely to be concerned that they had limited or no opportunities for professional development. The greatest impediment to change that they identified was lack of access to workshops (playgroup/puna) or training for caregivers (home-based).

One puna participant commented on the value of workshops:

> No workshops were available. 2002–2005 I attended several which were really helpful. (Puna co-ordinator)

Almost a third of education and care and kindergarten teachers also said they had limited professional development opportunities.

Volunteer workload

High volunteer workload inhibited educators in some playcentres from focusing fully on aspects to enhance quality for children:

> Because playcentre adults have to fundraise, run the centre administration, and run the play programme—we don't spend as much time as I would like preparing activities, planning, and assessing play. I would like more emphasis on observing and recording observations of children. The quality of assessment varies hugely between centres. Some do well. Some do very little. PD on how to evaluate would be useful. (Playcentre educator)

Parent and community involvement and development

Some kōhanga whānau management and kaiako thought greater involvement of whānau awhi (whānau help) and strengthening relationships with local marae trustees, local kura kaupapa Māori, and local government officials would help improve their service quality. Those who wanted greater whānau involvement regarded this as essential to the kōhanga reo kaupapa, and to strengthening te reo for parents.

Pasifika service management thought that parent education and workshops could help improve their service quality.

ECE service staff and management suggestions to help services improve quality

Managers' main suggestions for how government, community, or service initiatives would help their service improve were about how existing initiatives could be targeted to address specific service and locality issues. These were mainly about staffing, training, and professional development, to address issues of quality, specialist training needs, and access to staffing and teacher education and professional development providers.

The major challenges that teachers raised and initiatives that could support them were specific to service type, but two issues were common to several service types: pay parity for all teachers, and ensuring staff stability. Competition for staff contributed to high staff turnover because staff left for more attractive remuneration in other services:

- Education and care teachers wanted pay parity, and were concerned about competition for staff, and teacher turnover. One message was "not to move the goal posts" with respect to qualification requirements. These requirements were seen as being "on track" to helping improve quality.
- Pasifika teachers wanted pay parity, and financial recognition of elders.
- Kindergarten teachers were concerned about implementation of the 20 hours free for three- and four-year-olds, and wanted to ensure their noncontact time was preserved if their operation changed to longer sessions or from sessional to full-day.
- Home-based co-ordinators wanted funding for educator training.
- Kōhanga reo kaiako wanted support to retain their kaupapa, and to strengthen te reo.
- Playcentre educators found it a challenge to retain parents and encourage parents to undertake higher level training. They wanted greater valuing of parental roles and of education offered within playcentre.

- Puna and playgroup educators would like pay for a co-ordinator (puna), support for educators, and a rural needs fund for travel (playgroup).

To what extent, in what way, and how effectively has the strategic plan enhanced quality?

In this section, the different parts of this chapter are pulled together to answer the evaluation question "To what extent, in what way, and how effectively has the strategic plan enhanced quality?"

To what extent has the strategic plan enhanced quality?

The strategic plan aims to improve the quality of education through actions related to the intermediate outcomes of the strategic plan logic model. In 2006, some shifts in the intermediate outcomes and overall quality related to strategic plan actions were starting to be evident:

- Teaching and learning practices improved between 2004 and 2006 for many of the services. Thirty-nine percent of services improved their assessment practices. Fifty percent were at a "good" or "very good" level in 2006. Those at a "very good" level had integrated systems of planning, evaluation, and self-review based on *Te Whāriki*. We did see benefits of *Kei Tua o Te Pae* in enhancing assessment practices coming through quite quickly for services that used it.

  More services were rated at a "good" level of self-review in 2006 compared with 2004 (29 percent, compared with 15 percent respectively).

  Planning and evaluation (measured in 2006 only) and self-review were not as well developed as assessment, but had also received less focused resourcing and professional support through the strategic plan.

- Teachers' understanding of *Te Whāriki* and implementing a bicultural curriculum improved between 2004 and 2006. About a third of individual services improved their ratings on these two dimensions. In 2006, around 40 percent of services were rated as "good" or "very good" on each of these practices.
- The percentage of services rated as "good" with respect to staff qualifications improved from 2004 (22 percent) to 2006 (44 percent). This figure is for all services overall—"good" qualification levels were mainly found in teacher-led services where MOE targets and initiatives have been directed. In 2006, 61 percent of teacher-led services had "good" qualification levels compared with 17 percent of parent/whānau-led services.
- Ratings on ECE services meeting language and cultural aspirations did not change between 2004 and 2006, but services receiving Equity Funding for the language and culture component did better than others.

  Ratings on intermediate outcomes that had not been a specific general focus for MOE initiatives did not shift. These were ratios (improvements in regulated ratios are planned for 2009) and group size (decisions are still to be made about any changes).

The measure of the strategic plan outcome "Improved quality" was the NZCER/TKRNT process quality rating scale, which includes items that have been identified as making a long-term contribution to positive outcomes for children. Sixty-four percent of services were rated at a "good" or "very good" quality level in 2006. The percentage of services within each quality level remained much the same from 2004 to 2006. However, some individual services did change their quality rating from 2004. These shifts and levels are considered later in this section when we analyse how effectively the strategic plan has enhanced quality.

In what way has the strategic plan improved quality?

Professional publications and professional development initiatives

MOE professional publications, especially assessment exemplars, professional development linked to assessment and *Te Whāriki*, and opportunity for teachers to participate in COI and Education Leadership project workshops have contributed to improvements in assessment and self-review, and teachers' understanding of Te Whāriki and implementation of a bicultural curriculum. Ninety-two percent of services improving their assessment ratings used the MOE resource, *Kei Tua o te Pae. Assessment for Learning: Early childhood exemplars*, and most had professional development associated with it. Teachers attribute improvements in these teaching and learning practices and implementation of *Te Whāriki* to higher levels of teacher education, professional development, and professional support for curriculum. These are strategic plan initiatives.

Planning, evaluation, and self-review which were not as highly rated as assessment in 2006, had also received less focused MOE resourcing and professional support through the strategic plan.

Teacher qualification targets and initiatives

Pasifika services, education and care services, and home-based services increased their levels of staff holding teacher qualifications and registration. Teachers in these services made use of targeted MOE initiatives to improve qualifications and become registered. Not all the services using initiatives had improved staff qualifications by the 2006 data collection, but were working towards improvements. The targets set for employment of qualified registered teachers were an impetus for services to employ registered teachers and to encourage staff to become qualified and registered. Management from services that had not previously employed qualified teachers thought the targets had contributed to teacher professionalism and professional knowledge.

Equity Funding

The use of Equity Funding helped services that were receiving it to improve overall levels of quality, when their spending was on staffing and curriculum resources. These were services located in low-income communities, services delivering the education programme in a language and culture other than English, and isolated services. This is consistent with other findings of the positive contribution Equity Funding expenditure makes to improved quality when it is spent on aspects to support the curriculum (Mitchell et al., 2006a).

Outcomes without current MOE policy initiatives

Indicators of intermediate outcomes where policy initiatives had not been a focus, i.e., reduced ratios and group size, and quality in parent and whānau-led services,[24] showed no consistent shifts from 2004 and 2006.

In 2006, most services had better actual (observed) staff:child ratios (i.e., more staff to children) than those that are regulated. All but six services (13 percent) had "good" ratios. This does not mean that services were doing well in respect to staff:child ratios. In many services, the ratios were better because of child absences when the observations were done.

In 2006, many whānau and kaiako/supervisors in kōhanga reo and Pasifika services thought their ability to speak te reo or their home language with children, and to initiate and participate in cultural practices had improved from

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[24] Note: Except for playgroups and puna, parent and whānau-led services had access to professional resources like teacher-led services, and those that were eligible received Equity Funding. Findings related to these initiatives apply to these services too.

2004 to 2006. Nevertheless, the service ratings on meeting language and cultural aspirations did not change over these years. Where these levels of performance have been improved, they are through service initiatives rather than the strategic plan *per se.*

How effectively has the strategic plan improved quality?

In order to address this question, we analysed levels and patterns of change on each dimension from 2004 to 2006 for localities, services, and groups of children, to show who is using and benefiting from strategic plan initiatives. Then we brought together data on links between strategic plan initiatives and overall quality levels.

Locality characteristics

In comparison with other localities, minor urban localities, in particular one locality, Kauri, had lower levels on several of the intermediate outcomes, and on levels of overall quality. The features of these localities associated with poorer ratings were:

- isolation from professional support and training opportunities
- a limited pool of people (staffing, parent educators)
- limited access to registration supervisors.

These features were most evident in Kauri (minor urban, low SES, high Māori population), where participants said they could not access professional development because it was not available to their service (playgroup and puna) or because the travel time of 1½ hours each way was prohibitive, and teachers had to undertake training through correspondence. The strategic plan initiatives were available to them in principle, but these difficulties meant they were not being accessed fully.

Localities with high Māori populations did better overall on implementing a bicultural curriculum, and meeting cultural and language aspirations of parents. One locality, Totara, stood out as doing better than other localities on meeting language and cultural aspirations. Services in this locality attributed their "bicultural journey" to close relationships with Māori parents, the wānanga, marae, and iwi, professional development on biculturalism (one service), and employment of Māori staff. Apart from the professional development, provided through MOE contracted professional development, these do not relate to strategic plan actions *per se*. However, they do link to the collaborative relationships goal of the strategic plan, and suggest that finding ways to support relationships with Māori parents, iwi, and marae would strengthen this outcome.

The two localities with high Pasifika populations, Pohutukawa and Kowhai, did better overall on levels of qualifications and understanding *Te Whāriki*. These localities also had in common that they were main urban localities. The qualification targets provided an impetus for teachers to become qualified and management to support them to train. These services had no problems in accessing training provision, and made use of MOE initiatives to support training and registration. The key issue in one of these localities (Pohutukawa) was recruiting staff with cultural understanding to suit their families, including Pasifika children and also a high number of children from non-English speaking homes.

Service characteristics

Teacher-led services had higher levels than parent/whānau-led services with respect to teaching and learning practices and qualifications. Teacher-led services made greater use of assessment resources and MOE-funded professional development linked to *Te Whāriki*. Some playcentre and kōhanga reo used only their own

organisations for professional support, especially kōhanga reo. The higher qualification levels are directly attributable to strategic plan targets and initiatives for teacher-led services only. The playgroup and the puna had low levels on all the intermediate outcomes, although the puna was rated high on meeting language and cultural aspirations.

Table 45 **Service characteristics and levels* on intermediate outcomes and overall quality**

Strategic plan outcome	Teacher-led (n=28)	Parent/whānau-led (n=18)	Sessional (n=20)	Full-day (n=26)	Service types differing markedly from overall proportion
Teaching and learning practices	+ (assessment and planning)	– (assessment and planning)	+ (assessment)	– (assessment)	+ Kgtn – Home-based, puna, playgroup
Understanding *Te Whāriki*					+ Kgtn – Kōhanga, puna, playgroup
Implementing** bicultural curriculum					+Kgtn – Home-based, playgroup
Qualifications	+	–	+		+ Home-based, kgtn, Pasifika – Playcentre, kōhanga reo, playgroup
Meeting language and cultural aspirations					+ Kōhanga reo, puna, Pasifika
Overall quality					– Playgroup, puna, home-based

* A positive sign denotes services that stood out by being higher on levels of outcomes than other services. An empty cell denotes no marked differences between service types. A negative sign denotes services that stood out by being lower on levels of outcomes than other services.

** Kōhanga reo and the puna not rated on this item because they are immersion te reo.

Child characteristics

Services with more than 20 percent of children aged under two years were doing worse on each of the intermediate outcomes and overall quality ratings. However, most teachers in these services with under-two-year-olds that were rated "good" or "very good" in overall quality had used the assessment exemplars, and several said that the booklet, *Assessment for Infants and Toddlers* (Ministry of Education 2005c), was of particular practical value to their situation. Some comments suggested professional development and resources for this age group are limited. As well as having poor qualification levels, we found that education and care centres that were rated low and catered for under-two-year-olds had poorer actual adult:child ratios (1:5 and 1:4) than education and care centres that had better quality ratings overall (these averaged 1:3 or lower). International research evidence suggests that low adult:child ratios are particularly important for babies and toddlers. The conversations and

interactions occurring in these early years contribute to language and communication development (Burchinal et al., 2000; NICHD Early Child Care Network, 2002).

Services receiving Equity Funding were doing well on implementing a bicultural curriculum and overall quality ratings, reinforcing the value of Equity Funding for children in isolated services, from low-income families, and in immersion services. Perhaps the lower ratings found for qualifications in this group is because isolated services which were included in this group had difficulty in accessing qualified adults, and parent/whānau-led services (many of which received Equity Funding) had greater difficulty in recruiting and retaining qualified kaiako/educators.

Table 46 **Child characteristics and levels* on intermediate outcomes and overall quality**

Strategic plan outcome	Over 12% Māori enrolled (n=24)	Over 4% Pasifika enrolled (n=15)	Get Equity Funding (n=22)	More than 20% under-two (n=22)
Teaching and learning practices	– (assessment)	+ (planning)		– (planning)
Understanding *Te Whāriki*		–		–
Implementing** bicultural curriculum	+		+	–
Qualifications		+	–	–
Meeting language and cultural aspirations	+		+	–
Overall quality			+	–

*   A positive sign denotes child characteristics that stood out by being higher on levels of outcomes than other child characteristics. A negative sign denotes child characteristics that stood out by being lower on levels of outcomes than other child characteristics. An empty cell denotes no marked differences.

**   Kōhanga reo and the puna not rated on this item because they are immersion te reo.

Overall quality and indicators of intermediate outcomes

Overall levels of quality were "good" or "very good" in two-thirds of the ECE services in this study.

Although performance on the six particular quality dimensions included within the overall quality levels did not improve from 2004 to 2006 overall, there were clear linkages between indicators of intermediate outcomes and quality ratings for services at the extremes of quality:

*   Services that were rated as having "very good" overall quality in both years and those shifting up had high ratings ("good" or "very good") on each of the intermediate outcomes, teaching and learning practices, implementing *Te Whāriki*, and qualification levels of teachers/educators.
*   Services with low levels of quality ("poor" or "poor") in both years and shifting down had poor ratings ("poor" or "fair") for these intermediate outcomes.

This evaluation also offers very positive findings about the value of MOE assessment resources and MOE-funded professional development. In general, in ECE services that had "good" or "very good" ratings of quality,

teachers/educators made greater use of MOE professional publications, especially assessment exemplars, and took up MOE-funded professional development and opportunities offered through the Education Leadership Project and COIs, than did ECE services that had lower ratings of these processes.

6. Enhancing collaborative relationships

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The evaluation question:

To what extent, in what ways, and how effectively has the plan facilitated the formation of collaborative relationships between ECE services, parent support and development, schools, health and social services?

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Stronger collaborative relationships are a strategic plan goal, with two intermediate outcomes: coherence of education birth to age eight, and integrated services for children, parents, families, and whānau 0–8. Intermediate outcomes are described in the intervention logic model as outcomes that should be strengthened through strategic plan actions, and that would contribute to meeting strategic plan goals and ultimate outcomes. Stronger collaborative relationships are portrayed as strengthening and empowering families to play a significant role in their children's early education and development, as well as contributing to the ultimate outcome of children developing strong learning foundations, and increasing capacity to engage in other community activities.

Actions to support coherence of education are:

• initiatives to support smooth transition to school and continuity in education
• initiatives to link ECE and family policy.

Planned actions to support provision of more integrated services include:

• interagency work between the MOE, Health and Social Development to improve links in early years' services
• support for services to involve parents and whānau in teaching, learning, and assessment
• support for services to strengthen links with whānau, hapü and iwi, and local Pasifika and other ethnic communities
• provision of parent support and development and other social services from some ECE service sites.

Specifically, in 2006, the Ministry of Social Development (MSD) funded 10 pilot projects for ECE services offering parent support and development from their service. *Kei Tua o te Pae. Assessments for Learning: Early childhood exemplars* and professional development includes exemplars of how assessments include and construct a learning community that invites the participation of children, families, whānau, teachers, and beyond.

Dimensions of collaborative relationships

Data were collected on two dimensions of collaborative relationships:

• *More integrated services for children, parents, and families*. The strength and quality of relationships between ECE services and parents/whānau, health services, and social services, were examined. The focus on relationships with parents was on partnerships that support pedagogical aims.
• *Cohesion of education 0–8 years*. Relationships between ECE services and with schools were assessed from the perspective of ECE teacher/educators in relation to supporting coherent educational approaches.

More integrated services for children, parents, and families

Relationships between ECE services and parents/whānau

Constructive working relationships between parents and teachers can enhance adults' understanding of children's learning and learning opportunities, and so contribute to learning and wellbeing in both settings. Children who see their parents working closely together with their teachers "gain a sense of continuity and of being cared for" and experience a "trusting and secure environment in which they can learn and grow" (Whalley & the Pen Green Centre Team, 2001).

The Desirable Objectives and Practices (DOPs) require ECE services to work in partnership with parents/guardians to promote and extend the learning and development of each child who attends the service. Sharing pedagogical aims and practices between families and teachers is one way to strengthen the consistency of interactions and environment, to support children's learning and development.

The longitudinal EPPE study of effective ECE pedagogy linked to cognitive and socioemotional outcomes for children (Siraj-Blatchford et al., 2003; Sylva, Siraj-Blatchford, & Taggert, 2003) found that excellent settings "shared child-related information between parents and staff, and parents were often involved in decision making about their child's learning programme" (Siraj-Blatchford et al., 2003, p. vi). When ECE services promoted a relationship with parents in terms of shared pedagogical aims, and pedagogical efforts were made at home to support the child's learning, good developmental outcomes for children were achieved.

Kei Tua o te Pae, which had been published when the 2006 data for this evaluation were gathered, discusses how assessments can draw on parents' knowledge of their own child, and how this knowledge is useful in planning for learning, whether at home or in the ECE setting.

In this section we examine relationships between parents and teachers/educators that could support a child's learning and participation.

Overall quality of service relationships with parents

In 2006, two-thirds of the services had "adequate" or better ratings for their level of service–parent relationships. An adequate rating means that many, but not most or all parents, reported that they talked with teacher/educators about their own child's progress, behaviour, and wellbeing, they found this communication was useful, and they contributed to assessment and planning for their own child.

Ratings on quality of service-parent relationships improved between 2004 and 2006, with the number of those reaching a "good" or "very good" level almost doubling over the two years, from 10 (22 percent) to 19 (42 percent) out of 45.

Table 47 **Quality of relationships with parents in 2004 and 2006**

Year	"Very good" n(%)	"Good" n(%)	"Adequate" n(%)	"Poor" n(%)
2004 (n=45)	6 (13)	4 (9)	21 (47)	14 (31)
2006 (n=45)	9 (20)	10 (22)	20 (44)	6 (13)

Fourteen services, from all service types except the playgroup and puna, improved their ratings for relationships with parents, and six services had negative shifts. The services with negative shifts were all parent/whānau-led services, four kōhanga reo, one playcentre, and the puna.

The shift upward in the two years was largely due to improvements in ratings for parent participation in planning and assessment. Teachers attributed this to using *Kei Tua o te Pae*, use of ICT to communicate about learning with parents, and professional development. Ten of the 14 services making positive shifts in relationships with parents had used *Kei Tua o te Pae*. None of the six services shifting negatively had used it. (One was "just starting" to use it.)

Service relationships with parents—specific items

Overall, parents were very positive about their ECE service in both 2004 and 2006:

- In 2006, 68 percent said their overall satisfaction with the ECE service was "very good", and 25 percent said it was "good", much the same as the 65 percent and 26 percent respectively in 2004.
- Most parents (93 percent) always felt welcome at their ECE service in 2006 (92 percent in 2004).
- In 2006, 85 percent of parents thought they got enough information about their child's progress (82 percent in 2004).
- Parents found "very useful" the information they received about how settled and happy the child is (63 percent in 2006, 62 percent in 2004), the child's progress (52 percent in 2006, 50 percent in 2004), the child's interests and abilities (54 percent in 2006, 51 percent in 2004), the child's learning programme (46 percent in 2006, 43 percent in 2004), and the early childhood curriculum (31 percent in 2006, 30 percent in 2004).
- In 2006, 47 percent of parents were asked to take part in planning and assessment (36 percent in 2004). More playcentre parents (78 percent), and fewer home-based parents (35 percent) were involved in these aspects. The most common ways of being involved were through teachers and parents sharing learning stories and children's portfolios.

Levels of ECE service–parent relationships and localities, services, and children
Service differences

The only difference in ratings of ECE service–parent relationships was related to service type. In 2006, two kōhanga reo, two playcentres, two home-based services, two Pasifika services, and one education and care service were rated highest on levels of relationships with parents. None of the other teacher-led services were rated as "very good".

Children from non-English speaking homes

The only service with "poor" ratings in both years was a service with a high number of families for whom English was a second language. Management from this service said educators wanted cultural support to help them work with these families, and the service was under other pressures from high turnover of parents.

By contrast, a service catering for children from refugee families where language and cultural support teacher aides were employed had "good" ratings on working with parents. The following notes made in the focus group discussion with these parents show the breadth of support parents gained from being able to talk to staff in their own languages. This would not have been possible without language and cultural support staff:

What do you talk about with your child's teacher? Does having teachers who speak the same language as you help you to understand about how your child is learning?

Talk about the children; their English language development, their general positive feedback—maths, numbers, behaviour, singing, music, stories, health routines, happy, sad, tired, sick; lots of information exchanged.

Talk about WINZ, housing, citizenship, family learning, health issues.

Our home culture is strengthened through having bilingual staff.

These parents were pleased with information they received about their child's learning. The information parents liked (and would like to have more of) ranged from daily events, to children's wellbeing, learning dispositions and skills, and how learning occurs:

Brings home photographs to tell us about the day.

Children are making friends. They are happy and settled.

More learning stories please (repeated several times).

I like stories. I put them on the walls at home. I send our stories overseas.

Stories, ABC, listening, songs, 1 2 3.

My child is learning to choose.

Free play helps my child.

I like tidy up time. Children are learning responsibility.

When asked what they liked best about their centre, parents singled out children's learning and happiness, and also the bilingual teachers, the place of food from their own culture, and the use of their child's home language and music, and English language and "music from New Zealand".

The evaluation raised some issues about working in centres with a high number of children from non-English speaking homes that were not specifically being addressed through strategic plan actions in 2006. Teachers and managers in these centres expressed a need for language and cultural support for working with the culturally diverse families. In the service catering for children from refugee families, language and cultural support workers played a vital role in working with families in their own language and bringing understanding of cultural practices. The centre supervisor said the centre will face difficulties when the 2012 teacher qualification targets are required because funding is insufficient for this centre to employ qualified teachers and these support staff. She argued that it needs both. An unintended consequence of the strategic plan could be that the centre loses these staff who make it possible to communicate effectively with children and families.

One possibility is for centres with a high number of children with additional needs to be targeted for additional support. Such a targeted system operated nationally for kindergartens in the 1980s when the Department of Education paid for additional teachers for some kindergartens on the grounds of special needs. Equity Funding has not addressed all these needs for the centres in this study and in the evaluation of the initial uses and impact of Equity Funding (Mitchell et al., 2006a) since the funding levels are insufficient to cover staffing.

What parents like best about their ECE service

The importance of their own child's wellbeing and learning, and the qualities of teachers/educators were also aspects that other parents in most centres highlighted:

> He loves going and talks about the teachers and children he plays with at home. It is a very important part of his life and meets some of his needs and likes that are not met at home. He is an only child and gives him the opportunity to learn important social and relationship skills. He is able to choose his activities and has lots of fun. (Education and care parent)

> The staff are friendly, caring and approachable. They understand if I have concerns for my child's learning, for example my child did not know colours so I approached the staff and they worked on that and now she knows her colours. (Kindergarten parent)

Parents in playcentre, kōhanga reo, and Pasifika services appreciated aspects that were distinctive in their parent/whānau-led services. Playcentre parents emphasised learning and support for parents and for children, and the active role of parents as educators:

> The recognition and support as me as a parent being the best educator for my child. The strong link between the home and centre environment. The philosophy of child initiated play, the celebration of children as competent learners and the support given to families to be involved in their child's education. (Playcentre parent)

Kōhanga reo whānau emphasised language and cultural learning for children and families, and support of whānau through participation:

> She's more clearer with her Māori and sings a lot of waiatas. She's very helpful, sometimes too helpful, around younger children than herself. She hates to miss the kōhanga van.

> The kaupapa and tikanga. Parents are always encouraged to increase our language skills, and assist in our kids' homework etc. We are kept informed about everything our kids do and the kaiako offer us support for our kids.

> It is whānau based so I feel welcome and involved in my child's learning and development.

Playgroup parents emphasised parents making friends and children playing together:

> Close to home, meet other mums, children can play—have fun, not have loads of structured lessons.

Relationships with health and social services

Information was gathered on indicators of relationships with health and social services in 2006.

Overall, relationships with health services were "good" or "very good". This meant that in most services health professionals regularly visited to check children's health (once a term or more), health professionals talked to parents on a regular basis, and ECE services made referrals to health services. The kinds of services described by participants included:

- vision/hearing tests (from once a year to once a term), held at the ECE service. In one service these were for three- and four-year-olds only
- Plunket suggesting parents take their child to the ECE service

- a health clinic held in the local community once a week
- dental services available for families, and a dental education programme.

Relationships with welfare services were mixed, ranging from "very good" to "poor". In a "very good" relationship, the ECE service management understood the nature of welfare services, had information pamphlets about it, and welfare representatives sometimes visited the service. Welfare services referred children to the ECE service, and the ECE service made referrals where appropriate.

The most common reason for not having a close relationship with health and welfare services was insufficient time to develop these relationships. In a playcentre, this was exacerbated by reliance on volunteers to develop relationships, and difficulty in sustaining personal contacts because of parent turnover:

> The hindrance is availability of volunteers to initiate, develop and maintain these types of relationships. This is enhanced by the turnover of families at our centre, and outside pressures, circumstances our families face in their personal lives make them less available for this type of work.

It was helpful for services when the health and welfare services themselves initiated the contact.

One barrier to forming collaborative relationships with welfare services was the way these services had handled welfare issues in the past.

Kauri had the poorest ratings of any of the eight localities for relationships with health and welfare services. There was also a smaller range of welfare services that teachers knew about in this community. Ratings of ECE overall quality were also lower in this locality. In other localities, there were no clear patterns, suggesting it was up to individual service and organisation representatives to forge relationships in these services.

Value of MSD parent support initiatives

Only five ECE service managers were aware of MSD Parent Support Initiatives. Two were from Pasifika centres and regarded the initiatives as helpful in encouraging parent participation and understanding. A home-based service had used SKIP (Strategies for Kids—Information for Parents) and found it useful in helping parents use positive parenting. SKIP was launched on 6 May 2004 through the MSD. It develops resources for community organisations and parents/caregivers aimed at positive parenting.

Supports for and barriers to change in ECE service collaborative relationships

Teachers' comments about MOE professional resources, discussed in Chapter 5, suggest that these resources have supported teachers to engage parents and whānau in teaching and learning practices. The main challenge is for teachers to engage all parents in these practices. It may be a particular challenge for teachers to encourage engagement of parents who are hard to reach; for example, because they do not come to the centre during the day, are a noncustodial parent, have had negative experiences of education services themselves that inhibit participation, or experience language, cultural, or class differences with teachers. Whalley and the Pen Green Centre Team (2001) have discussed ways to work with these parents.

The main impediment that management raised to improving collaborative relationships with health and social services was insufficient time for this work.

The most common suggestion for enhancing collaborative relationships was for services to be offered from the ECE service site:

> We do collaborate with outside services. I would like to see more, i.e. pregnancy testing service on site. Programme for first time mothers. A programme for very young babies maybe once a week. To look at issues—development, learning. (Education and care)

> Regular visits with school new entrants teachers, network groups for local ECE providers; well child health checks done at centre at regular 'milestones', i.e. 2 years, 3 years, 4 years. Dental services as well. (Playcentre)

Several managers suggested the need for formal structures to organise better networking, especially in rural localities.

Cohesion of education 0–8 years

The strategic plan focuses on ECE and primary school teachers developing greater understanding about each other's pedagogical approaches and curriculum, and finding out about effective transition practices. Linkages between ECE services may also offer opportunity for professional support.

We asked management to fill in a questionnaire about their service's relationships with other ECE services and schools. Questions were asked by interview in 2004 and by questionnaire in 2006. Where we can, we have made comparisons with the 2004 evaluation data or the 2003/2004 NZCER national survey.

Relationships with other local ECE services

Sixteen ECE services (36 percent) in this sample had no or limited contact with other ECE services in their locality, the same percentage as in the NZCER national survey 2003/2004.

The main relationships were social contacts with other teachers (n=21, 46 percent), followed by sharing resources and offering mutual support (n=19, 42 percent), and sharing training and professional development (n=14, 30 percent). These were also the main relationships in 2004.

The strategic plan had helped some ECE services strengthen professional relationships with each other. Several managers commented that shared professional development, exemplar hui, and shared teacher education offered opportunities for teachers to work together. One manager commented on MOE *Pathways to the Future* hui bringing services together, and another had been involved in a Promoting Participation Project that had brought the service in touch with others in the locality. Two services commented that the COI initiative had brought them into professional contact with other teachers (one visited a COI, and the second was involved in information dissemination). These opportunities were not visible in 2004, when the main impetus for teachers working together was through the organisation of service umbrella organisations. Some managers commented on the value of having someone organise regular get-togethers within their locality.

Insufficient time and competition between services were barriers to forming collaborative relationships with other ECE services. Twenty-five percent of managers stated there was competition between ECE services.

Relationships with local schools/kura

Professional relationships with local schools improved from 2004 to 2006. Ten (22 percent) of the ECE services had no or limited contact with all the schools/kura in their locality, compared with 15 (33 percent) in 2004.

However, while more ECE services were having contact with local schools/kura, they were not able to have this contact with every school/kura. Seventeen (38 percent) of the ECE services had no or limited contact with some of the local schools, and all but one ECE service had no or limited contact with at least one local school. (This question was not asked in 2004.)

Thirty-one (68 percent) of the ECE services shared information about children with at least one of the schools in their locality, Twenty-three (50 percent) of the ECE services regularly visited schools and arranged transition visits, and 11 (24 percent) shared professional development with schools. These are much higher percentages than those found in the NZCER 2003/2004 national survey, where only 27 percent of ECE services shared information about children with local schools and only 5 percent shared professional development. However, the questions were somewhat different in this survey, which may explain some but not all of the differences. The NZCER survey asked about relationships with one, some, or all schools, while this evaluation survey asked about relationships with schools in general.

Many ECE managers thought reciprocal visiting helped sustain collaborative relationships with schools. Managers thought a good basis for collaboration occurred when school principals and new entrant teachers valued ECE, and both parties regarded good transition practices as important. Some managers had established liaison meetings and were sharing curriculum and student information with primary teachers. Examples included a meeting to discuss individual children and programme planning, and the joint development of transition practices and a shared transition booklet. One teacher had set her own appraisal goal as developing professional relationships with local schools.

Newsletters were commonly sent from schools to the ECE service. Some ECE services joined in with local schools in community events.

The main barrier to strengthening relationships was insufficient time, and not having enough adults to take small groups of children to visit schools while continuing to meet staff:child ratio requirements at the ECE service. A few said that attitudes of a school principal or new entrant teacher could be a barrier if that person did not have an interest in the ECE curriculum.

To what extent, in what ways, and how effectively has the plan facilitated the formation of collaborative relationships?

The strategic plan aims to enhance collaborative relationships between ECE and families/whānau, ECE and other family services, and ECE and schools. Strategic plan actions so far developed to support this goal are MSD parenting initiatives and assessment for learning exemplars and professional development. ECE services, within their own local communities, are expected to develop community relationships.

Relationships with parents

In 2006, two-thirds of the services had adequate or better ratings for their level of service–parent relationship. Ratings on quality of service–parent relationships improved between 2004 and 2006, with the number of those reaching a "good" or "very good" level almost doubling over the two years, largely due to improvements in parent participation in assessment and planning. It seems likely that the focus within MOE professional resources on engagement with parents (e.g., the early childhood exemplars, self-review guidelines, examples from COI of

"community of learners" approaches) contributed to strengthening these ratings. These relationships were strongest in some of the parent/whānau-led services which emphasise the roles and responsibilities of all parents and whānau for the ECE service.

A key challenge for teacher-led services is to form relationships with all parents. One particular challenge is how to develop reciprocal relationships with families for whom English is not a home language. The example of a centre for refugees employing bilingual staff from the children's home country illustrated the kind of communication and understanding that was made possible through the work of these bilingual staff.

Relationships with health and social services

Overall, relationships with health services were "good" or "very good". Relationships with welfare services were mixed, ranging from "very good" to "poor". There has been no change since 2004. This intermediate outcome goal is not supported with any particular strategic plan actions, and appears highly dependent on individuals, health and welfare organisations' policies, and available time.

Relationships with local ECE services

In 2006, 36 percent of these 46 ECE services had no or limited contact with other ECE services in their locality, the same percentage as in the NZCER national survey 2003/2004.

However, some closer relationships with other ECE services were beginning to be made through shared professional development and teacher education offered through strategic plan initiatives, and MOE hui. One of the values of meeting with other teacher/educators in such professional forums is likely to be that the focus on teaching and learning enables service participants to learn from each other within their own locality.

Relationships with schools

Professional relationships with local schools improved from 2004 to 2006. Twenty-two percent of ECE services had no or limited contact with all the schools/kura in their locality, compared with 33 percent in 2004. Schools and early childhood services were more likely to work together in respect to transition of children than in 2004, but it is unclear why, in relation to strategic plan initiatives. Perhaps the higher level of professionalism and focus on the importance of ECE has contributed to greater awareness of the importance of transition for both ECE and primary teachers.

7. Conclusion

The results of this evaluation, undertaken early in the implementation of the strategic plan, show that strategic plan initiatives are moving in the right directions to contribute to the plan's goals of improving quality, increasing participation, and supporting collaborative relationships.

Positive gains have been found on those intermediate outcomes that have been the target for the early strategic plan initiatives, particularly on four intermediate outcomes:

- More registered teachers in ECE
- Quality teaching and learning practices
- *Te Whāriki* effectively implemented
- Collaborative relationships between ECE and families and whānau.

All have been a sustained focus for MOE strategic plan initiatives.

These intermediate outcomes are likely to directly contribute to good quality outcomes for children and parents. Our evaluation found that higher levels on the intermediate quality outcomes were linked to higher quality ECE in services, and lower levels to lower quality ECE.

Siraj-Blatchford et al. (2003) have a useful explanation of how improved curriculum differentiation and formative assessment (aspects of two of these intermediate outcomes of the strategic plan) contribute to more effective teaching and learning. Their research into effective ECE settings showed that teachers who did well on these practices were better able to select activities to provide cognitive challenge and engage in "sustained shared thinking". Understanding more about the child's cognitive, social, and cultural world equipped them to build bridges between what the child knows and what the child is capable of knowing (Stremmel, 1993, p. 3).

The formative assessments being used by many ECE teachers were providing spaces for parents to contribute to the programme. Carr et al. (2001) stated that if the curriculum is "permeable" it enables teachers to learn and work with families' "funds of knowledge". This is likely to benefit children's learning outcomes, because understanding children's interests, experiences and knowledge can be a starting point for interactions that engage and extend children's thinking and learning:

> The more knowledge the adult has of the child the better matched their support and the more effective the subsequent learning. (Siraj-Blatchford et al., 2003, p. 145)

These practices can also enable greater consistency between settings of home and ECE service, so that the actions in both settings are reinforced and built on. The EPPE *s*tudy found that involvement in learning activities at home is closely associated with cognitive achievement in the early years. Teachers in effective settings regularly shared child-related information with parents and involved them in decision making about the child's learning programme. They communicated regularly with parents about the children's progress (Siraj-Blatchford et al., 2003).

Qualified staff, and other features of structural quality (e.g., low child:adult ratios, small group size, and staff professional development) are other intermediate outcomes linked in research evidence with child outcomes. These conditions have been shown to offer "facilitating environments" for teaching and learning approaches that support children's learning:

> Qualified teachers are likely to draw on their knowledge and experience of children and pedagogy to offer the kinds of cognitively challenging adult–child interactions that are linked with gains for children. The NICHD ECCRN study (2002) using structural equation modelling, found a mediated path from structural indicators of quality (teacher qualifications and staff:child ratios) through process quality to cognitive competence and caregiver ratings of social competence. These authors suggest that 'more caregiver training may lead to better interactions between children and adults, while lower ratios may lead to more interactions' (NICHD ECCRN, 2002, p. 206). (Mitchell et al., 2008, p. xv)

There is some way to go to get to very good levels of quality throughout New Zealand ECE services and our findings reinforce the importance of MOE continuing these strategic plan initiatives aimed at quality improvements. There are still inequalities in access to ECE services, suggesting that new initiatives around participation and planning could be useful. However, any initiatives should not be at the expense of quality. Otherwise, the Government will not reach its goal of every child having good learning foundations.

The take-up of MOE initiatives had some limitations, and some issues particular to localities, services, or children were not being addressed. This suggests that some targeting of MOE initiatives may be useful.

Quality

- *Services catering for over 20 percent of children under two* were lower in overall quality than services with fewer or no under-twos, and as a group these services were doing worse on each of the intermediate outcomes. Provision for under-2-year-olds is a growth area, and warrants close attention to standards for this age group, given the fast rate of development at this age and detrimental effects of poor quality. Provision for babies and toddlers also needs to be considered alongside other policies to support families with young children, including paid parental leave, which is more extensive in many countries than in New Zealand.
- *Services catering for children from non-English speaking families* needed support for working with these children and their families, especially from staff who are knowledgeable and understanding about the families' language and culture. In the Early Intervention Service, Education Support Workers play a key role in working one-on-one with children with special needs. Teachers in these services thought these specialist staff need to continue to be employed alongside qualified registered teachers, when the 2012 qualification targets are implemented.
- *Services in minor urban communities* that were distant from teacher education and professional development providers found it hard to participate in staff training and professional development opportunities. They also had a limited pool of qualified staff available in their locality. Solutions could be targeted to specific needs, e.g. for a pool of qualified relievers, registration supervisors, providers who will come to their locality.
- *Parent/whānau-led services* have had a lesser take-up of professional initiatives and lesser use of MOE resources. Professional support was not available to the puna and playgroup. The playcentres in the study were more likely than other services to be less sustainable than other ECE service types in all three aspects of enrolment, staffing, and financial sustainability.

- *Teacher/educator turnover* was an issue especially within education and care services, Pasifika services, playcentre, and kōhanga reo. In some of these services, high teacher turnover was linked to competition over pay and conditions. Many teachers thought that pay parity needed to apply throughout the ECE sector.

Participation

Changes in participation have occurred from 2004 to 2006 nationally: a slight increase in the proportion of children experiencing ECE prior to school entry, and of three-year-old enrolments in ECE. Low income affected participation. In the two localities in our study where the median family income was very low, only around three-quarters of children had ECE participation prior to children starting school. This compared with national data showing 86 percent of such children attending decile 1 and 2 schools had prior ECE participation. One locality, Kauri, stood out for having the lowest ECE participation rate for school entrants, as well as the lowest levels of all localities on ratings of quality, and several of the intermediate outcomes related to quality. Key features affecting Kauri were isolation from professional support and training opportunities, a limited pool of staffing, and limited access to registration supervisors. The ward-level data suggest it is in localities where planned ECE initiatives are happening that changes in rates of ECE enrolment are starting to occur, but also that reliance on national statistics for analysing participation rates is likely to mask what is happening locally. The finding points to the importance of locality analysis and local solutions for improving ECE enrolment prior to school.

Ward-level data showed a higher percentage of younger children enrolled in ECE from 2004 to 2006, and children enrolled for longer hours, especially under-one-year-olds. Taken together, these findings of a younger starting age, longish hours of ECE for some one- and two-year-olds, and lower overall quality of ECE provision in services catering for a higher proportion of under-two-year-olds, indicates that it would be timely to focus initiatives for improving quality on this age group.

Another participation challenge emerged from the finding that many parents (31 percent) are wanting more hours of ECE than is currently being provided, although most wanted up to four hours only. These were parents of children already participating in ECE. Percentages of nonparticipants could be different. The main reason why these parents could not get these hours was that the service/s their child attended did not offer them. Lack of suitable hours is one of the main barriers preventing parents from undertaking paid employment and training, and causes difficulty for some parents in juggling childcare and work/study commitments with childcare.

However, if services meet the needs of these families, it may be at the cost of other families. An unintended outcome of the free ECE policy may be a reduction in places if a sessional service switches to full-time, or one set of sessions rather than two each day. These could place pressures on existing services and could mean decreased participation if families are not able to get into the services they want.

Unlike our data for quality dimensions, where research evidence about benefits of dimensions of quality is clear, it is hard to make evaluative judgements about levels of participation because participation benefits depend on whether the service is of good quality, the educational aims of the service (e.g. language learning may require more hours of exposure), and family circumstances. In addition, we as a society do not have agreement about what might be good for young children in terms of ECE participation dimensions including starting age and hours of attendance, and the MOE has not suggested desirable targets for participation dimensions. These complex issues for ECE policy could be considered in relation to wider policy development around employment, parental leave, income assistance, and family support.

Collaborative relationships

There were two major challenges for services within the collaborative relationships goal of the strategic plan:

- Forming strong connections about children and their learning and development with all parents, including those who are hard to reach. This could usefully be a further focus for professional development.
- Having time and opportunities to develop reciprocal relationships with external organisations. Some participants suggested structures at local levels are needed to enable better networking to occur, and time is needed during the working day.

The main message from this evaluation of the early days of the strategic plan is that the initiatives implemented so far are being used as intended to improve teaching and learning.

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Appendix A: Strategic plan actions

The main strategic plan actions at April 2006 (when phase 2 data were collected) were as follows:

Enhancing teaching and learning

- Increasing the number of registered teachers in teacher-led services by setting targets[25] and providing initiatives.[26]
- Publishing MOE professional resources and funding professional development. The professional resources were *Kei Tua o te Pae. Assessment for Learning: Early childhood exemplars* (Ministry of Education, 2005c), sent to every licensed service, self-review guidelines sent to some services in late 2005 for consultation, and a COI publication (Meade, 2005), sent to every licensed service. MOE-funded professional development included "Inspiration Days" to help people understand and use exemplars, and professional development contracts on implementation of the exemplars.
- Establishing and supporting COIs to build the use of innovative approaches that improved early childhood teaching and learning based on *Te Whāriki*, and share the models of practice with others in the ECE sector. Sixteen COIs were operating at April 2006. Six of these had been operating for three years and were writing their final reports.
- Research to investigate quality in parent/whānau-led services had been undertaken, and was published later in 2006 (Mitchell et al., 2006b).

Promoting participation

- Network analysis and development. Across the country the MOE was undertaking analysis of the current state of the network of ECE services. This analysis was to assist in identifying where investment may be needed in new services and where the existing network was sufficient to meet community needs. MOE facilitators were working with communities in areas of low participation to find solutions for access to quality and sustainable ECE. The Discretionary Grants Scheme had been expanded to increase funding for new ECE services in areas of low participation or high population growth.

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[25] Targets: 2005 all persons responsible are required to be registered teachers; 2007—50 percent of regulated staffing to be registered teachers; 2010—80 percent of regulated staffing to be registered teachers or services can count teachers studying for an NZTC approved qualification as up to 10 percent of the 80 percent requirement; 2012—all regulated staff to be registered teachers or at least 70 percent of regulated staff to be registered teachers and the remainder to be studying for an NZTC approved qualification.

[26] Range of initiatives: TeachNZ Scholarships; higher funding rates for services with more registered teachers; Loan Support; National and International Relocation Grants; Returning to Teaching allowances; Relief Teacher Pool; Ministry of Education & New Zealand Teachers Council (2007). *Towards Full Registration: A support kit.* Ibid: Wellington.; Recruitment Brokers; Incentive Grants; and Primary Study Grants.

- The Promoting Participation Project was working through contracted community organisations in areas of low ECE participation identifying families who do not participate and providing options for them to begin participating in ECE. One of the localities in this evaluation had a Promoting Participation Project.
- Land was being set aside for an ECE service on all new school sites.
- Advice and support for new services. MOE co-ordinators continued to be available to support community services to become licensed. The Design and Build scheme (on the MOE website) was offered as a resource to support services to select a good-quality early childhood building design.
- Advice and support for services to meet community need. Ministry facilitators were working with services in areas of low participation that needed support to meet the needs of their communities. This work included support for governance, management, and administration practices.

Funding

- Equity Funding was offered from March 2002 for community-based licensed services in low- income communities, isolated services, and services offering the programme in a language other than English. It is intended to reduce educational disparities between different groups, reduce barriers to participation for groups under-represented in ECE, and support ECE services to raise their levels of educational achievement.
- New funding system and funding rates. ECE funding increased significantly from 1 April 2005, as a result of the Government's decision to fund the main costs of the strategic plan. More funding rates enabled funding to be targeted to service types that face additional costs as a result of the plan. The Government intended that improved quality would not be more costly for parents, so participation would not decrease as quality improved.
- The Childcare Subsidy rate was increased and income eligibility threshold expanded over time from 2004.
- Free ECE had been announced for three- and four-year-olds for up to 20 hours per week in teacher-led services, effective from 1 July 2007.

Collaborative relationships

- Integrated services for children, families, and whānau. MSD work on early intervention included focus on parenting in early years. Assessment exemplars included how assessments include and construct a learning community.

Appendix B: ECE quality rating scale items

A   Adults responsive and extend children

1   Adults are responsive to children
2   Adults model—and encourage children to use—positive reinforcement, explanation, and encouragement as guidance/discipline techniques
3   Adults model/guide children within the context of centre activities
4   Adults ask open-ended questions that encourage children to choose their own answers
5   Adults encourage/foster children's language development
6   Adults participate with children in activities and play
7   Adults add complexity and challenges for children

B   Children complete work and concentrate

8   Children display purposeful involvement in learning episodes
9   Children are allowed to complete activities
10   Children can select their own activities from a variety of learning areas

D   Child: Child interactions

11   Children support and co-operate with one another in language and actions
12   Children co-construct learning with other children
13   Children display emergent leadership/leadership skills

E   Education programme

14   Tikanga Māori (culture) and te reo Māori (language) is evident
15   Non sex-stereotyped play among children is observed
16   There is evidence of recognition/acceptance of the cultures of children at the early childhood service. The ethnicity of the children at the early childhood service is taken into account and their cultures are represented
17   There is evidence that the setting is inclusive of all children
18   Children work on problems and experiment with solutions
19   Children are encouraged to explore mathematical ideas and symbols
20   Children engage in child-initiated creative play (e.g. storytelling, singing, pretend play, drama, making music)
21   Stories are read/told/shared
22   There is evidence of children's creativity and artwork
23   The centre is a "print-saturated" environment
24   There is evidence of opportunities for children to write

F   Resources

25   There are enough age-appropriate toys/books/equipment (resources) to avoid problems of waiting, competing, and fighting for scarce resources

26   Equipment and activities encourage fine motor skills development

27   Equipment and activities encourage gross motor skills development

28   Provision of space for children to explore the physical world

29   A balance of safety and freedom is achieved to ensure access to equipment, materials, and learning episodes

Appendix C: Analytic frame for outcomes and intermediate outcomes

The analytic frame was developed as a draft and discussed with MOE officials before being finalised.

For each intended outcome, except the outcome "improved learning foundations" (which is examined last), we followed similar steps.

1. We describe dimensions for each intended outcome. These dimensions have either been associated in research evidence with benefits for children, or are based on the strategic plan goals.

2. We describe indicators for each dimension that show how we measured that dimension. We also show whether the same measure was used in 2004, allowing analysis of the shifts on the measure between 2004 and 2006.

3. We developed rubrics which describe levels on each indicator, rated as "good", "adequate", or "poor". The rubrics were decided through reference to research evidence, government policy goals, or baseline findings. They were finalised after review and discussion with the MOE. The rubrics are given a numerical rating (maximum 3, minimum 1) and their importance is weighted (maximum 3, minimum 1). To get the indicator score, the weighted mean of the ratings for each item is calculated. The weighted mean = (total of each rating x its weight)/(total weights).

4. Where there was more than one indicator for each dimension, we combined the indicator scores to reach a dimension score and used a scale of "very good", "good", "adequate", or "poor" to describe the dimension rating. The mean was used to rate the dimension: "Very good": 2.5–3; "Good": 2.2–2.49; "Adequate": 1.7–2.1; "Poor": 1–1.6. Where there was only one indicator of a dimension, the indicator score was the dimension score. We describe the importance of each dimension ("very important", "important", and "desirable") with reference to research evidence where available.

5. The dimension scores were then combined, to provide an overall judgement of the level of achievement on each intended outcome. This overall judgement is categorised as "very good", "good", "adequate", or "poor".

Quality outcomes

Levels of quality: process quality

Table 48 **Rubric for determining value of process quality dimensions**

Rating	Description	Numerical rating	Weighting
Good	Adults responsive and extend children		
	Average 4 or more on rating scale items for this dimension	3	3
	Children complete work and concentrate		
	Average 4 or more on rating scale items for this dimension	3	3
	Children support, co-operate, and co-construct learning		
	Average 4 or more on rating scale items for this dimension	3	3
	Education programme		
	Average 4 or more on rating scale items for this dimension	3	3
	Resources		
	Average 4 or more on rating scale items for this dimension	3	1
Adequate	Adults responsive and extend children		
	Average 3 on rating scale items for this dimension	2	3
	Children complete work and concentrate		
	Average 3 on rating scale items for this dimension	2	3
	Children support, co-operate, and co-construct learning		
	Average 3 on rating scale items for this dimension	2	3
	Education programme		
	Average 3 on rating scale items for this dimension	2	3
	Resources		
	Average 3 on rating scale items for this dimension	2	1
Poor	Adults responsive and extend children		
	Average 2 or less on rating scale items for this dimension	1	3
	Children complete work and concentrate		
	Average 2 or less on rating scale items for this dimension	1	3
	Children support, co-operate, and co-construct learning		
	Average 2 or less on rating scale items for this dimension	1	3
	Education programme		
	Average 2 or less on rating scale items for this dimension	1	3
	Resources		
	Average 2 or less on rating scale items for this dimension	1	1

Importance of quality dimensions

We categorised the following dimensions as very important:

- *Adults responsive and extend children*. Evidence from the Competent Children, Competent Learners study found items in this cluster showed positive associations with children's competencies over five years later at ages 10, 12, and 14 years. These were: Adults are responsive to children; Adults guide children within the context of centre activities; Adults ask open ended-questions; and Adults participate with children in activities and play. The interactions and relationships that occur in an early childhood setting and shape children's learning opportunities and experiences are key to quality. In their longitudinal EPPE study of more than 3,000 children in England Siraj-Blatchford et al. (2003) also found that good outcomes for children were linked with adult-child interactions that involved "sustained shared thinking" and open–ended questioning to extend children's thinking. Items in this cluster include those used in the Competent Children, Competent Learners study and items new to this evaluation[27] that were based on evidence of adults scaffolding learning. Behaviour policies in which staff support children in rationalising and talking through conflict was linked to good outcomes for children in the EPPE study and was also an item in this cluster. This requires a more problem-solving approach.
- *Children complete work and concentrate*. Items in this cluster are: Children display purposeful involvement in learning episodes; Children are allowed to complete their work; and Children can select activities from a variety of learning areas. These are associated in research evidence with children being involved, developing perseverance and learning dispositions, and thinking for themselves. In the Competent Children, Competent Learners study, the item "Children can select their own activities from a variety of settings" had associations with some competencies at age 8 and 10, but not at age 12, and indicative associations at age 14.
- *Children support, co-operate, and co-construct learning*. Providing learning experiences where children are encouraged to learn with and alongside others, and where each child's contribution is valued is important. The exemplar project provides examples of how friendships and social interactions can provide entry to more complex learning such as communicating, joining in group discussions, and participating in collaborative projects. These items are related to the concept of "whanaungatanga", which is of key importance to kōhanga reo. "Whanaungatanga" draws on the importance of whakapapa or genealogical ties and the collective responsibility that this cultural pedagogy expects. All children are seen as important members of the whānau and able to contribute. The EPPE project found that in the most effective settings, neither adult-initiated activities, nor child-initiated activities dominated. The EPPE authors argued that adults therefore need "to create opportunities to extend child-initiated play as well as teacher-initiated group work, as both have been found to be important vehicles for promoting learning" (Sylva, et al. 2004, p.vi).
- *Education programme content* items are: The centre is a print-saturated environment; Stories are read, told, and shared; There is evidence of opportunities for children to write; Children are encouraged to explore mathematical ideas and symbols; Children work on problems and experiment with solutions; Children engage in child-initiated creative play; and There is evidence of children's creativity and artwork. Exposure to the written word (the item The centre is a print-saturated environment), where print is seen as meaningful and enjoyable, made a continuing contribution to children's competencies at ages 10, 12, and 14 in the Competent

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[27] New items are "Adults encourage/foster children's language development" and "Adults add complexity and challenge for children".

Children, Competent Learners study. The EPPE project found that practitioners' understanding of the curriculum area being addressed is vital.

We categorised the dimension Resources and environment as moderately important, since these provide tools and space for children to learn and experiment, offering framing conditions for learning to occur. Items are: There are Enough age appropriate books/toys/equipment; Equipment and activities encourage fine motor skills development; Equipment and activities encourage gross motor development; Space is provided for children to explore the physical world; and A balance of safety and freedom is achieved to ensure access to equipment, materials, and learning episodes.

To get a score for the dimensions, the weighted mean of the ratings for the items was calculated: "Very good": 2.5–3; "Good": 2.2–2.49; "Adequate": 1.7–2.1; "Poor": 1–1.6.

Overall quality rating (service level)

To get a score for *Overall quality*, the dimension scores were combined.

Intermediate outcomes

More qualified teachers in ECE

Table 49 **Rubric for determining value of more registered teachers in ECE (service level)**

Rating	Description	Numerical rating	Weighting
Good	Qualifications		
	70% or more of teacher/educators have a Diploma of Teaching (ECE) or higher and the rest are in training for this (teacher-led services)	3	3
	One or more kaiako have Whakapakari (kōhanga reo)	3	3
	One or more playcentre educators have Course 4 or higher (playcentre)	3	3
Adequate	Qualifications		
	50 to 69% of teacher/educators hold a Diploma of Teaching (ECE) or higher (teacher-led services)	2	3
	One or more kaiako are studying for Whakapakari (kōhanga reo)	2	3
	No playcentre educators have Course 4 or higher, but the number holding Course 3 is more than sufficient to meet requirements (playcentre)	2	3
Poor	Qualifications		
	The percentage of teacher/educators holding a Diploma of Teaching (ECE) or higher meets regulatory standards, but is not better (teacher-led services)	1	3
	No kaiako hold or are studying for Whakapakari (kōhanga reo)	1	3
	No playcentre educators have Course 4 or higher, and the number holding course 3 is just sufficient to meet requirements (playcentre)	1	3

There is only a single description for each dimension (differentiated by service type) so these did not have to be combined.

Quality in parent/whānau-led services

Some factors contributing to quality in these services are common to all services, i.e., good-quality resources, adult qualifications, participation in professional development/wānanga, access to a wide range of professional advice and support (including for special needs), and mutually beneficial relationships with other ECE services. In our study investigating quality in these services (Mitchell et al., 2006b), we found experience to be an additional factor and suggested this was because experienced parents who also had qualifications/skills could play a mentoring role and work alongside others.

The aspects that are investigated in this evaluation that contributed to child and parent outcomes and are not included with other services in kōhanga reo and Pasifika services are levels of language fluency and cultural expertise.

Reduced ratios and centre size

In this rubric we have kept the current bands (under two and over two) for ratios to provide comparison with regulated requirements. This is not meant to suggest that these bands are preferred. We used the average of field researcher counts of total number of teachers/educators divided by total number of children as a measure of ratios.

ECE centres are generally not organised into smaller groups of children, although groups tend to form and change informally through children following their interests. The MOE has put off considering group size and use of space until 2009. We used the average of field researcher counts of total number of children as a measure of centre size.

In interpreting results, we were informed by the NICHD Early Child Care Research Network (2002, 2006) which has used group size American standards developed by the American Public Health Association and American Academy of Pediatrics.

Ratios: 1:3 at 6 and 15 months; 1:4 at 24 months; 1:7 at 36 months.

Group size: 6 at 6 and 15 months; 8 at 24 months; 14 at 36 months.

However, these are hard to interpret for a New Zealand setting where individual teachers do not work with a "class" of children, but work co-operatively with larger groups.

Teaching and learning practices

Here we describe ratings made about assessment for learning, planning, evaluation, and self-review. The ratings are 1 "poor", 2 "fair", 3 "reasonable", 4 "very good". Services were placed in the category that **on the whole** best described their practices.

Assessment for learning

The indicator ratings are intended to gauge key principles about assessment from *Kei Tua o te Pae* (Ministry of Education, 2005c*)*. The emphasis is on assessment for learning, i.e., formative assessment.

Kei Tua o te Pae (Ministry of Education, 2005c) definition: Assessment for learning is described as "noticing, recognising and responding. . . . These three practices are progressive filters. Teachers notice a great deal as they

work with children, and they recognise some of what they notice as learning. They will respond to a selection of what they notice" (Book 1, p. 6).

Mary Jane Drummond's (1993) definition (cited in Book 1, p. 6): Assessment for learning can be further described as "[the] ways in which, in our everyday practice we [children, families, teachers and others] observe children's learning [notice], strive to understand it [recognise], and then put understanding to good use [respond].

Indicator ratings

1. **Poor**: Teacher/educators are unable to describe how they make either documented or informal assessments, and cannot show examples of these. Alternatively, if assessments are made, the assessments describe activities, e.g. sample of child's work or a checklist of what a child can do, but do not indicate recognition of learning progression or of factors to be taken into account for an individual child. The focus is on the activity. There is no evidence of recognition of how any learning has occurred or recognition of progression in learning over time. There is no evidence that assessments are put to good use in planning for/ responding to the child/children.

2. **Fair**: Assessments indicate some recognition of learning that is occurring, but this is limited to a narrow range of learning areas and the focus is predominantly on knowledge and skills, not learning dispositions. The context of learning is seldom or never included. There is limited understanding of how learning has occurred or of progression over time. Teacher/educators show some awareness of the need to recognise and support learning, but there is no evidence that assessments are analysed to decide on how this might happen. Assessments are made by teacher/educators without input from children, family, and whānau. Teacher/educators may "tell" parents and whānau about their child but do not invite contribution.

3. **Good**: Assessments are made on every child, although this may be infrequent, e.g. soon after starting and once a year. Assessments are generally linked to *Te Whāriki*, and include learning dispositions. Assessments include the context, but this may be limited, e.g. include child's exploration of her/his environment, but less about interactions with people. Teacher/educators analyse assessments to decide on next steps to enrich learning, but evidence of understanding of how and why learning is occurring may be limited. Children and whānau have access to portfolios but may have to ask for these. Parents and children sometimes contribute to assessment, but this is not a common practice.

4. **Very good**: Assessments are made on every child (as individuals and members of a group) and over time. There is evidence that assessments illustrate learning that is multidimensional (e.g. linked to a range of *Te Whāriki* principles and strands, and including the concept of learning dispositions). Assessments include the context: how the learning has occurred across people, places, and things. Teacher/educators analyse assessments in order to understand diverse learning, e.g. analyse learning progression, and interactions and environment contributing to learning. They use their analysis to decide on next steps to enrich learning that is valued. Documented assessments are accessible to children and whānau in style (e.g. through use of narrative styles and photographs that can be "read" by a range of audiences), and through their location (e.g. on a shelf where children can access them). There is evidence that children, parents, and whānau contribute to and use assessment, e.g. through inclusion of parent and child contributions, through children revisiting their own/group portfolios, children deciding what should be included in portfolios, through parents taking documented assessments home to share with whānau and add to.

Planning

Lawrence (2004) has described shifts in planning over the last two decades from "keeping children busy" with activities in the 1980s, planning activities and events from children's interests in the 1990s, to planning that nurtures the dispositional learning that is situated within *Te Whāriki*. She argued that teachers must know what a child is thinking about an interest (not simply that teachers think they have identified a child's interest) for planning to be child initiated and that planning is "reflectively responding to children's thinking". Then the teacher can plan how to support and resource learning.

Hatherly (2004) considered that a planning framework founded on *Te Whāriki* would provide for children and whānau to be involved in the planning process and would be viewed as continual (responsive) rather than expectations set out in advance. She noted that:

> Traditional planning frameworks have been strong on deciding and documenting intention but weak on recording the evidence of what actually happened or changed as a result. (p. 10)

She suggested that "planning stories" could be recorded over time. These would document how thinking, knowledge and participation (of children, parents/whānau, and teachers) have changed as a result of planning. In this way, evaluation sits within planning and is documented as such.

Principles for planning in developing these indicators are: planning sits within framework of principles of *Te Whāriki*; involves communication and collaboration with children and whānau; occurs over time; is based on assessment for learning and includes evaluation elements; includes teachers' ideas on resources, possible directions, interactions to extend learning/challenge thinking, and children's and parent/whānau contributions, e.g. what children want to know, how to find out. Planning is for learning goals rather than activities and is not predetermined for all children.

Indicator ratings for planning

1. **Poor**: Teacher/educators are unable to describe how they plan, and cannot show examples of this. Alternatively, if plans are made, these describe activities/themes to be followed, e.g. writing activities such as tracing letters on a letter board, seasons. The focus is on the activity or theme. Plans do not emerge from assessment or evaluation. Plans tend to be uniform for all children, or all children of a certain age group. Plans are formulated by teachers alone. Plans may be made for a whole term in advance.

2. **Fair**: Plans are rarely connected to assessments and evaluations, and are usually driven by issues. The plans sometimes use the language of *Te Whāriki* principles, strands, and goals, but linkages with these are made after the plans are decided, as a justification. The planning focus is on activities, resources, or issues of concern, e.g. children not settling well. Plans are formulated by teachers or team leaders (in playcentre) with little or no input from children, parents, and whānau.

3. **Good**: Planning is related to *Te Whāriki* principles, strands, and goals, but the selection of strands or goals seems to be somewhat arbitrary or simply a reference point. Assessment and programme evaluation are discussed as a basis for planning, but there is little or no critique of the teacher's role. The focus for planning varies, from activities, issues of concern, interactions, and experiences. Parents and children sometimes contribute to planning, but this is not a common practice.

4. **Very good**: Planning sits within the framework of *Te Whāriki* and is integrated with the practices of assessment, evaluation, and self-review. It focuses on enhancing dispositional learning, as well as skills and knowledge. Planning is driven by evidence-based formative assessment, for individual and groups of children, and programme evaluation. Teachers ask critical questions and critique their work during planning practices. Planning includes teacher/educators' ideas on resources, interactions, and/or experiences, and possible directions. Parents' and children's contributions are included.

Programme evaluation

The indicator ratings are intended to gauge key principles about evaluation, drawing especially on Carr et al. (2000) *Learning and Teaching Stories: Action research on evaluation in early childhood education.* This portrays evaluation as formative, with assessment being part of evaluation, and both part of curriculum implementation. Practices of effective evaluation include use of tools linked to children's learning dispositions, e.g. the child's questions from learning and teaching stories (Carr et al., 2000, p. 9). The process of evaluation includes reflective discussion about data that often challenges teachers' assumptions. Action research may be an effective process of evaluation. Evaluation includes consideration of the role of teachers in the programme as well as children's learning dispositions. In a cycle of evaluation, practitioners put in place "structures, systems, and processes as appropriate to improve the implementation of *Te Whāriki*, and consequently enhance the experiences of children" (Podmore, May, & Carr, 2001, p. 8).

Indicator ratings for programme evaluation

1. **Poor**: Teacher/educators do not undertake programme evaluation. Alternatively, if any evaluations are made these are largely informal ("on the wing"), and not linked to assessments. Where evaluations are written, these tend to be filed away and have no connection to assessment or programme planning. Evaluation may not involve all the teacher/educators.

2. **Fair**: Evaluations generally involve teacher/educators discussing how the programme went. Assessments are not considered within the evaluation and there is no analysis of the teachers' role. The focus is on evaluating how activities went and resources. Plans are made for a subsequent session/s—these are about activities.

3. **Good**: Teacher/educators make evaluations linked to *Te Whāriki* principles, strands, and goals. They make use of data generated from assessments for learning, but seem to lack a critical edge. The focus is on children's learning and there is only sometimes an emphasis on teacher/educators' role. Evaluations are used in planning and followed through in the programme where appropriate.

4. **Very good**: Teacher/educators make evaluations linked to *Te Whāriki* principles, strands and goals. Evaluations are made on the basis of data generated through assessments for children's learning and make use of tools that enable investigation, e.g. action research tools that encourage teacher/educators to collect data and reflect on their programme. Use of these tools creates challenge, e.g. observations of the programme by a "critical friend", a parent survey. Viewpoints of parents/whānau and children are sought and responded to. Teacher/educators may construct tools themselves to suit their ECE community. Evaluations highlight teachers' interactions and/or thinking that could be enhanced. Evaluation is followed through into planning and implementing structures, systems, and processes to improve the implementation of *Te Whāriki* and enhance children's experiences. There is evidence of teacher/educators' critical reflection during the process of evaluating.

Self-review

The MOE draft self-review guidelines (Ministry of Education, 2005a) describes some principles and practices for self-review in ECE services. Although the publication is draft, we have drawn from this to develop indicator ratings, as well as *The Quality Journey* (Ministry of Education, 1999), *Quality in Action* (Ministry of Education, 1998), and discussions with MOE staff.

Self-review is described as "a process of finding out how well we are achieving our shared vision for our tamariki" (Ministry of Education, 2005a, p. 9), and as improving practices to achieving positive learning outcomes for children and checking whether obligations set in regulations and legislation are met. Both the process of self-review and the outcomes are important. Self-review is evaluative. It should include an identified goal, generation of evidence, analysis, and synthesis to enable understanding of how well the service is doing in respect to the goal and how this is known. Self-review may make use of indicators, e.g. Teaching Learning and Development indicators in *The Quality Journey,* evaluation indicators for education reviews (Education Review Office, 2004) that enable the review to be focused. All members of the ECE service need to have opportunity to participate. The purpose is to improve practice, not just to be accountable. The key practices for self-review identified by the MOE (2005a) are:

- Learning and teaching
- Collaborative practice
- Professional practice
- Governance and management.

Indicator ratings for self-review

1. **Poor**: Self-review is either not undertaken in this ECE service or is carried out routinely on one or two limited aspects of practice, e.g. staff appraisal. It involves a top-down process and is carried out by one group within the service, e.g. management, without consultation.

2. **Fair**: A focus is set for self-review, and evidence about the focus is generated. Self-review tends to be across a narrow range of practices. Results of the review are filed, used to justify current practices, or take a course of action that had already been decided. Self-review may involve management and teacher/educators but rarely includes parents and whānau.

3. **Good**: Self-review is undertaken, although this is mainly done for accountability reasons and is regarded as of limited benefit to teaching and learning. The focus is stated, evidence collected about the focus, and decisions made from discussion of evidence. The process, however, seems to lack critical edge. Self-review involves management, parents, and whānau and teacher/educators, but the group of parents/whānau who participate tend to be committee members or often the same small group.

4. **Very good**: Self-review is viewed positively as of real value to enhancing teaching and learning. The focus is clearly specified and evaluative tools are used to collect evidence about the focus. ECE participants critically examine data, and decide on action, keeping open to a range of options. Self-review may be led by different groups within the service depending on the focus, and deliberate consideration is given to who should be involved in each and why. The outcome of self-review is action to improve practice. Self-review occurs across a range of practices.

Te Whāriki *effectively implemented*

Understanding and use of Te Whāriki

This indicator examines the level of understanding of the principles of *Te Whāriki*, and how these link into assessment, planning, and evaluation practices. The principles of *Te Whāriki* reflect a sociocultural approach to learning, informed by Bronfenbrenner's ecological model of human development (Bronfenbrenner, 1979).

Sociocultural approaches to curriculum practices should enhance children's sense of themselves as capable and competent learners. Practices and policies for inclusion and empowerment will be in place. The curriculum is provided in a context of meaningful activities and relationships, and treats learning as holistic, not foregrounding individual skills to be learnt. Curriculum practices should construct "communities of learners", e.g. Rogoff, Turkanis, and Barlett (2001)—children, families, whānau, and community will be included and engaged in authentic ways. There will be connections and relationships between early childhood settings, home, and other contexts involving the child (Bronfenbrenner, 1979, p. 847). Relationships with children and among adults will be reciprocal.

Principles of *Te Whāriki* underpin assessment, planning and evaluation practices (Ministry of Education, 1996b, p. 30).

Indicator ratings for understanding and use of Te Whāriki

1. **Poor**: *Te Whāriki* is not used in this ECE service. Alternatively, if *Te Whāriki* is used, teacher/educators are unable to describe the principles or theoretical base, are not confident about using it, and are uncertain about what they should be doing in practice to reflect *Te Whāriki*.

2. **Fair**: *Te Whāriki* is used mainly as a reference point to justify practice. Some teacher/educators can explain some limited aspects of *Te Whāriki*, e.g. learning outcomes, but do not refer to the principles or sociocultural theory.

3. **Good**: Teacher/educators describe the principles of *Te Whāriki*, and base practice on it. Some are knowledgeable and confident in using Te Whāriki, while others require guidance. The strands and goals are predominantly used as a framework for assessment, planning, and evaluation, but there is limited or no articulation of how these arise from the principles. There could be greater integration of these practices under the umbrella of the principles.

4. **Very good**: All teacher/educators are highly knowledgeable about *Te Whāriki*. They confidently describe the principles and theoretical base of *Te Whāriki*. The principles are described as the basis for the curriculum, and provide a guide and rationale for assessment, planning, and evaluation practices. Practices of assessment, planning, and evaluation are integrated within the principles.

Implementing a bicultural curriculum

Ritchie (2003) has analysed how *Te Whāriki* can be regarded as a guiding document for bicultural development. She examined the overview statement that "In early childhood settings all children should be given the opportunity to develop knowledge and understanding of the cultural heritages of both parties to the Treaty of Waitangi" (p. 9) and the explicit requirements to support the use of te reo Māori, tikanga Māori, and particular Māori content (activities, stories and events, and Māori ways of knowing and making sense of the world). Educators are expected to be aware of bicultural issues, and proactive in identifying racism. Critiquing practice

and programmes should include reflections about bicultural aspects. Finally, bicultural development should involve local Māori.

Indicator ratings for implementing a bicultural curriculum:

1. **Poor:** Field researcher ratings of te reo and tikanga Māori within the service are 1 to 1.5. Teacher/educators are not able to say how *Te Whāriki* enables them to implement a bicultural curriculum, and do not see a bicultural curriculum as necessary.

2. **Fair:** Field researcher ratings of te reo and tikanga Māori are 2 to 2.5. Teacher/educators say they use some Māori words or phrases in their programme. They may comment on *Te Whāriki* being published in Māori and English as an example of how *Te Whāriki* helps them to implement a bicultural curriculum.

3. **Good:** Field researcher ratings of te reo and tikanga Māori are 3 to 3.5. Teacher/educators value whānau within their setting and the importance of making them welcome, including Māori whānau. Teacher/educators want to go further down the track of developing a bicultural curriculum, and recognise they need to learn a lot. They are starting to do some things to increase their knowledge and confidence, such as taking advice from the Māori community, reading about Māori concepts, undertaking professional development, and discussing issues relevant to a bicultural curriculum. They talk about some aspects of *Te Whāriki* that have helped them, especially the importance of Māori content.

4. **Very good:** Field researcher ratings of te reo and tikanga Māori are 4 to 5. Te reo is highly visible in art forms, books, posters, and tikanga Māori practices are upheld. Teacher/educators value whānau within their setting and the importance of making them welcome, including Māori whānau. Teacher/educators want to go further down the track of bicultural curriculum, and have done a variety of things to strengthen a bicultural curriculum within their centre, e.g. involved local Māori in the programme and in advising on bicultural goals, undertaken reading about Māori concepts, undertaken professional development relevant to a bicultural curriculum. Their philosophy includes a commitment to a bicultural curriculum and this is reflected in planning, assessment, and evaluation. Teacher/educators have a commitment to address issues of racism and other forms of prejudice. Teacher/educators are continuing to learn. They can describe how *Te Whāriki* is a bicultural document.

ECE services meet cultural and language aspirations

This intermediate outcome is relevant to all services, since aspirations for *Te Whāriki* are for it to be a bicultural curriculum, and for it to support the cultural identity of all children. It has distinctive additional relevance to kōhanga reo and Pasifika centres, and possibly those centres with a high proportion of children whose ethnicity is other than Pākehā. The outcome was analysed by the following types: kōhanga reo, Pasifika centres, and other ECE services, as follows.

Table 50 **Rubric for determining value of ECE services meet cultural and language aspirations in kōhanga reo**

Rating	Description	Numerical rating	Weighting
Good	On average, parents marking that having their child learn their own language and culture is important, have cultural aspirations met very well	3	3
	Rating of 5 on te reo and tikanga Māori is evident	3	3
	80% of kaiako or more can hold a sustained conversation in Māori with children	3	3
	80% of kaiako or more can initiate and participate in all Māori cultural practices	3	3
Adequate	On average, parents marking that having their child learn their own language and culture is important, have cultural aspirations met well	2	3
	Rating of 3 on te reo and tikanga Māori is evident	2	3
	50 to 79% of kaiako can hold a sustained conversation in Māori with children	2	3
	50 to 79% of kaiako can initiate and participate in all Māori cultural practices	2	3
Poor	On average, parents marking that having their child learn their own language and culture is important, have cultural aspirations met satisfactorily	1	3
	Rating of 1 or 2 on te reo and tikanga Māori is evident	1	3
	Less than 50% of kaiako can hold a sustained conversation in Māori with children	1	3
	Less than 50% of kaiako can initiate and participate in all Māori cultural practices	1	3

To get a score for the dimension *ECE services meet cultural and language aspirations in kōhanga reo* in the services, the weighted mean of the ratings for the items is calculated: "Very good": 2.5–3; "Good": 2.2–2.49; "Adequate": 1.7–2.1; "Poor": 1–1.6.

Table 51 **Rubric for determining value of ECE services meet cultural and language aspirations in Pasifika centres**

Rating	Description	Numerical rating	Weighting
Good	On average, parents marking that having their child learn their own language and culture is important, have cultural aspirations met very well	3	3
	Rating of 5 on evidence of acceptance of the cultures of all children		
	80% of teachers or more can hold a sustained conversation in their Pasifika language with children	3	3
	80% of teachers or more can initiate and participate in all Pasifika cultural practices	3	3
		3	3
Adequate	On average, parents marking that having their child learn their own language and culture is important, have cultural aspirations met well	2	3
	Rating of 4 on evidence of acceptance of the cultures of all children	2	3
	50 to 79% of teachers can hold a sustained conversation in their Pasifika language with children		
	50 to 79% of teachers can initiate and participate in all Pasifika cultural practices	2	3
		2	3
Poor	On average, parents marking that having their child learn their own language and culture is important, have cultural aspirations met very well	1	3
	Rating of less than 4 on evidence of acceptance of the cultures of all children		
	Less than 50% of teachers can hold a sustained conversation in their Pasifika language with children	1	3
	Less than 50% of teachers can initiate and participate in all Pasifika cultural practices	1	3
		1	3

To get a score for the dimension *ECE services meet cultural and language aspirations in Pasifika centres* in the services, the weighted mean of the ratings for the items is calculated: "Very good": 2.5–3; "Good": 2.2–2.49; "Adequate": 1.7–2.1; "Poor": 1–1.6.

Table 52 **Rubric for determining value of ECE services meet cultural and language aspirations in services other than kōhanga reo and Pasifika**

Rating	Description	Numerical rating	Weighting
Good	All parents, marking that having their child learn their own language and culture is important, have cultural aspirations met very well	3	3
	Rating of 4 or 5 on te reo and tikanga Māori is evident	3	3
	Teacher/educators' explanation of how they implement a bicultural curriculum rated good (this item to be discussed)	3	3
	Rating of 4 or 5 on evidence of acceptance of the cultures of all children	3	3
Adequate	On average, parents marking that having their child learn their own language and culture is important, have cultural aspirations met well	2	3
	Rating of 3 on te reo and tikanga Māori is evident	2	3
	Teacher/educators' explanation of how they implement a bicultural curriculum rated adequate (this item to be discussed)	2	3
	Rating of 3 on evidence of acceptance of the cultures of all children	2	3
Poor	On average, parents marking that having their child learn their own language and culture is important, have cultural aspirations met only satisfactorily	1	3
	Rating of less than 1–2 on te reo and tikanga Māori is evident	1	3
	Teacher/educators' explanation of how they implement a bicultural curriculum rated poor (this item to be discussed)	1	3
	Rating of 1–2 on evidence of acceptance of the cultures of all children	1	3

To get a score for the dimension *ECE services meet cultural and language aspirations in services other than kōhanga reo and Pasifika centres* in the services, the weighted mean of the ratings for the items is calculated: "Very good": 2.5–3; "Good": 2.2–2.49; "Adequate": 1.7–2.1; "Poor": 1–1.6.

Collaborative relationships between ECE services, with parents and whānau, schools, health and social services

Dimensions of collaborative relationships

We measured two dimensions reflecting the intermediate outcomes:

- **Cohesion of education 0–8 years**. Indicators are relationships with schools to support transition.
- **More integrated services.** This includes an assessment of service relationships with parents in the interests of children. In the baseline phase we also gathered some information from interviews with teacher/educators and management about the characteristics of relationships with health and social services, Māori communities/hapū/iwi, and Pasifika communities.

More integrated services

The focus here is on parent partnerships that support pedagogical aims rather than partnerships with parents for fundraising, management, working bees, and other activities that occur in an ECE setting. The rationale for focusing on pedagogical aspects is that children's learning and wellbeing can be reinforced when parents and teacher/educators share pedagogical aims, and each setting reinforces the other. *Kei Tua o te Pae. Assessment for Learning: Early childhood exemplars* (Ministry of Education, 2005c) demonstrates some ways in which this can happen.

Table 53 **Rubric for determining value of relationship with parents and whānau**

Rating	Description	Numerical rating	Weighting
Good	100% of parents feel welcome in the service	3	3
	No parents would like more opportunity to talk to teacher/educators	3	2
	Over 95% of parents talk to the teacher/educator about child's progress or behaviour in the centre	3	3
	Over 85% talk about what the child does at home	3	2
	Over 80% talk about what parent can do to help child's learning	3	2
	Over 95% of parents think teacher provides enough information about child's progress, interests, and abilities	3	3
	Parents rate as very useful or useful information about: child's learning programme (over 95%)	3	2
	child's progress, interests, and abilities (over 95%)	3	3
	how happy and settled the child is (over 95%)	3	3
	ECE curriculum (over 50%)	3	1
	Over 95% of parents contribute to assessment and planning for their child	3	3
	Over 95% of parents follow up on activities and experiences at home	3	2
Adequate	98 -99% of parents feel welcome in the service	2	3
	1–10% of parents would like more opportunity to talk to teacher/educators	2	2
	85–95% of parents talk to the teacher/educator about child's progress or behaviour in the centre	2	3
	50 -85% talk about what the child does at home	2	2
	40–80% talk about what parent can do to help child's learning	2	2

Rating	Description	Numerical rating	Weighting
	80–95% of parents think teacher provides enough information about child's progress, interests, and abilities	2	3
	Parents rate as very useful or useful, information about:	2	2
	child's learning programme (50– 95%)	2	3
	child's progress, interests, and abilities (50–95%)	2	3
	how happy and settled the child is (50–95%)	2	1
	ECE curriculum (30–50%)	2	3
	70–95% of parents contribute to assessment and planning for their child	2	2
	70–95% of parents follow up on activities and experiences at home		
Poor	Less than 98% of parents feel welcome in the service	1	3
	More than 10% of parents would like more opportunity to talk to teacher/educators	1	2
	Less than 85% of parents talk to the teacher/educator about child's progress or behaviour in the centre	1	3
	Less than 50% talk about what the child does at home	1	2
	Less than 40% talk about what parent can do to help child's learning	1	2
	Less than 80% of parents think teacher provides enough information about child's progress, interests, and abilities	1	3
	Parents rate as very useful or useful information about: child's learning programme (less than 50%)	1	2
	child's progress, interests and abilities (less than 50%)	1	3
	how happy and settled the child is (less than 50%)	1	3
	ECE curriculum (less than 30%)	1	1
	Less than 70% of parents contribute to assessment and planning for their child	1	3
	Less than 70% of parents follow up on activities and experiences at home	1	2

We have weighted items as "very important" that involve the teacher/educator talking with parents about their own child's progress, behaviour, and wellbeing, parents finding this useful, and parents contributing to assessment and planning for their child. Also rated as "very important" are parents feeling welcomed in the centre since this seems to be a basic prerequisite to positive relationships. The *Revised Statement of Desirable Objectives and*

Practices (DOPs) (Ministry of Education, 1996a) requires educators to provide opportunities for parents and whānau to have these discussions and feel welcome. *Kei Tua o te Pae. Assessment for Learning: Early childhood exemplars* (Ministry of Education, 2005c) provides exemplars of documented assessments that can invite the participation of children, families, whānau, teachers, and beyond (Book 5, p. 2), and the value of doing this.

To get a score for the dimension *Relationships with parents and whānau*, the weighted mean of the ratings for the items is calculated: "Very good": 2.5–3; "Good": 2.2–2.49; "Adequate": 1.7–2.1; "Poor": 1–1.6.

Table 54 **Rubric for determining value of relationship with health and welfare**

Rating	Description
Very good	Health
	ECE service makes referrals to health service, professionals regularly visit to check children's health (once a term or more), professionals talk to parents on regular basis
	Welfare
	Centre understands services, has info pamphlets, reps sometimes visit, welfare services refer children to ECE centre, ECE service makes referrals
Adequate	Health
	ECE service makes referrals to health service, professionals visit to check health, but only if a visit is requested, professionals talk to parents but this is infrequent
	Welfare
	Centre understands services, but has no info pamphlets/reps do not visit, ECE service makes referrals but welfare services do not refer children
Poor	Health
	There is no/limited contact
	Welfare
	Centre does not understand services available, and there is no/limited contact

The following criteria provide a rating for the dimension *Relationships with health and welfare*: "Very good": Both rated very good

"Good": One rated very good, one rated adequate

"Adequate": Both rated adequate

"Poor": One or both rated poor.

[To what extent, in what ways, and how effectively] has the participation in ECE supported parents' ability to engage in work or training?

We gathered the following relevant information:

Parents' rating of:

Question 5 (k) Why did you want your child to go to an ECE service?

Question 7 about hours that suit (these are analysed under the participation outcome);

Question 13 about why more than one ECE service or care arrangement is used

Question 32 about whether parent is in paid work or training

Question 33 about what parent usually does while at this ECE service.

The parent questionnaire was expanded with questions specifically about work and training.

Questions 37–43 asked respondents about:

- whether parent had taken part in work or training course in last 12 months

- usual childcare arrangements while in work or training

- whether services available at right times to meet needs

- where service located and whether this location is convenient

- whether disruptions have affected paid employment.

These data were collected for the first time in 2006 and treated as baseline in that year. Responses were described and analysed in relation to parent and service characteristics.

Appendix D: Vignettes of ratings for teaching and learning practices

Table 55 **Vignettes of "fair" and "good" assessment**

Rating	Description	Vignette
Fair assessment	Assessments indicate some recognition of learning that is occurring, but this is limited to a narrow range of learning areas and the focus is predominantly on knowledge and skills, not learning dispositions. The context of learning is seldom or never included. There is limited understanding of how learning has occurred or of progression over time. Teacher/educators show some awareness of the need to recognise and support learning, but there is no evidence that assessments are analysed to decide on how this might happen. Assessments are made by teacher/educators without input from children, family, and whānau. Teacher/educators may "tell" parents and whānau about their child but do not invite contribution.	We do [assessment] through Learning Stories but I'm finding that the Learning Stories and the "What next" aren't actually followed up. Teachers do the assessment but not every child has a portfolio as some staff only come twice a week. I like to take time with the Learning Stories and make it a good read but I've been told to rush through them. I think our parents struggle with the concept of parent voices.
Good assessment	Assessments are made on every child, although this may be infrequent, e.g. soon after starting and once a year. Assessments are generally linked to *Te Whāriki*, and include learning dispositions. Assessments include the context, but this may be limited, e.g. include child's exploration of her/his environment, but less about interactions with people. Teacher/educators analyse assessments to decide on next steps to enrich learning, but evidence of understanding of how and why learning is occurring may be limited. Children and whānau have access to portfolios but may have to ask for these. Parents and children sometimes contribute to assessment, but this is not a common practice.	We are doing Learning Stories—a series of Learning Stories with photos and "What's next" and that goes in the child's profile book. We also have forms with quick observations related to the strands and to other record. There's a lot we build up about the child using learning dispositions. The photos and things we write and say make it easy for parents to see what the child is doing.

Table 56 **Vignettes of "fair" and "poor" planning practices**

Rating	Description	Vignette
Fair planning	Plans are rarely connected to assessments and evaluations, and are usually driven by issues. The plans sometimes use the language of *Te Whāriki* principles, strands, and goals, but linkages with these are made after the plans are decided, as a justification. The planning focus is on activities, resources, or issues of concern, e.g. children not settling well. Plans are formulated by teachers or team leaders with little or no input from children, parents, and whānau.	We've just got our Operations Manual done up. The caregivers [plan] under my guidance. [The] planning is activity based and includes numeracy and literacy goals.
Poor planning	Teacher/educators are unable to describe how they plan, and cannot show examples of this. Alternatively, if plans are made, these describe activities/themes to be followed, e.g. writing activities such as tracing letters on a letter board, seasons. The focus is on the activity or theme. Plans do not emerge from assessment or evaluation. Plans tend to be uniform for all children, or all children of a certain age group. Plans are formulated by teachers alone. Plans may be made for a whole term in advance.	We have a programme book. [It] sometimes changes but we plan monthly and we plan by [the] yearly calendar [for events], e.g. Easter. The main purpose of planning was [so] you are prepared so you can teach the children.

Table 57 **Vignettes of "fair" and "good" self-review practices**

Rating	Description	Vignette
Fair self-review	A focus is set for self-review, and evidence about the focus is generated. Self-review tends to be across a narrow range of practices. Results of the review are filed, used to justify current practices, or take a course of action that had already been decided. Self-review may involve management and teacher/educators but rarely includes parents and whānau.	We've just got our Operations Manual done up. Probably just me has looked at it. But I am pulling out a few basic policies and will leave them around where parents can look at them when they come to sessions, read through them, and sign if it's okay or put down notes if things need to be changed. We haven't reviewed any policies for a long time. One of the admin people whipped up our Operations Manual for us.
Good self-review	A self-review is undertaken, although this is mainly done for accountability reasons and is regarded as of limited benefit to teaching and learning. The focus is stated, evidence collected about the focus, and decisions made from discussion of evidence. The process, however, may lack critical edge. Self-review involves management, parents, and whānau and teacher/educators, but the group of parents/whānau who participate tend to be committee members or often the same small group.	The management and self-review plan is tied in together. The last ERO review they wanted more documentation. I tried to find out what others were doing. Nobody said "This is a good system." I went on a professional development course and learnt this one. We like it and it is clear, simple, and useful. There are five areas: Health and Safety; Parents and Community; Professional Development; Repairs and Maintenance; and Equipment. We have just started this year. All five areas are looked at over a year. It keeps you on track and all areas are linked to the DOPs.

Table 58 **Vignettes of "fair" and "very good" evaluation practices**

Rating	Description	Vignette
Fair	Evaluations generally involve teacher/educators discussing how the programme went. Assessments are not considered within the evaluation and there is no analysis of the teachers' role. The focus is on evaluating how activities went and resources. Plans are made for a subsequent session/s—these are about activities.	End of the term we look through the planning and goals for children, what we have achieved and what we set out to do. If it's not been achieved we put it in the planning for the next term. We [do this in a] staff meeting, look at the resources, what worked and what is working. There is an evaluation of individual children when they leave. A lot of the evaluation is in our heads.
Very good	Teacher/educators make evaluations linked to *Te Whāriki* principles, strands, and goals. Evaluations are made on the basis of data generated through assessments for children's learning and make use of tools that enable investigation, e.g. action research tools that encourage teacher/educators to collect data and reflect on their programme. Use of these tools creates challenge, e.g. observations of the programme by a "critical friend", a parent survey. Viewpoints of parents/whānau and children are sought and responded to. Teacher/educators may construct tools themselves to suit their ECE community. Evaluations highlight teachers' interactions and/or thinking that could be enhanced. Evaluation is followed through into planning and implementing structures, systems, and practices to improve the implementation of *Te Whāriki* and enhance children's experiences. There is evidence of teacher/educators' critical reflection during the process of evaluating.	Evaluation is really all tied up with everything. [It's] a good point for discussion and reflection as to the possible changes. We tend to be quite holistic—including evaluation, assessment, and planning. Who is involved?—depends on what we are doing. It comes back to our bicultural journey and where we had come to "pre Māoriora", what that would look like and where we were now. Became a story for our parents, a resource that parents could see how we worked and for us to see if we had made any difference, any growth.

Table 59 **Vignettes of "fair" and "very good" understanding of *Te Whāriki***

Rating	Description	Vignette
Fair	*Te Whāriki* is not used in this ECE service. Alternatively, if *Te Whāriki* is used, teacher/educators are unable to describe the principles or theoretical base, are not confident about using it, and are uncertain about what they should be doing in practice to reflect *Te Whāriki*.	Gives us prompts and ideas. Often when you open it you find it covers more than you realise. Don't know where it is right now—we use it for assistance but can't remember where it is.
Very good	All teacher/educators are highly knowledgeable about Te Whāriki. They confidently describe the principles and theoretical base of *Te Whāriki*. The principles are described as the basis for the curriculum, and provide a guide and rationale for assessment, planning, and evaluation practices. Practices of assessment, planning, and evaluation are integrated within the principles.	The principles are empowerment, holistic development, relationships, and family and community—they reflect our philosophy. Everything relates back to the way we teach. Gives us permission to design our curriculum around the four principles—it's the way to go. It's a strong curriculum—the benchmark remains—I think we are lucky to have it.

Table 60 **Vignettes of "fair" and "very good" implementation of a bicultural curriculum**

Rating	Description
Poor	Field researcher ratings of te reo and tikanga Māori within the service are 1 to 1.5. Teacher/educators are not able to say how *Te Whāriki* enables them to implement a bicultural curriculum, and do not see a bicultural curriculum as necessary.
Very good	Field researcher ratings of te reo and tikanga Māori are 4 to 5. Te reo is highly visible in art forms, books, posters, and tikanga Māori practices are upheld. Teacher/educators value whānau within their setting and the importance of making them welcome, including Māori whānau. Teacher/educators want to go further down the track of bicultural curriculum, and have done a variety of things to strengthen a bicultural curriculum within their centre, e.g. involved local Māori in the programme and in advising on bicultural goals, undertaken reading about Māori concepts, undertaken professional development relevant to a bicultural curriculum. Their philosophy includes a commitment to a biultural curriculum and this is reflected in planning, assessment, and evaluation. Teacher/educators have a commitment to address issues of racism and other forms of prejudice. Teacher/educators are continuing to learn. They can describe how *Te Whāriki* is a bicultural document.

Appendix E: Free ECE

The May 2004 Government Budget announced the Government would fund up to 20 hours free education a week for three- and four-year-old children attending teacher-led community-based ECE services. The funding for up to 20 hours free ECE was extended to all teacher-led services, including private services, in the May 2006 Government Budget. In this section, 2006 data on parent and management responses to free ECE are analysed.

The parent survey for this study explained the free ECE policy and asked parents how they thought this might change their child's attendance at their ECE service.

Managers were asked how they thought provision of free ECE would affect the proportion of three- and four-year-olds in their service, their hours of operation, enrolments, and sustainability.

This data were collected before full details were provided about free ECE funding and criteria. They do not provide evidence to answer the evaluation questions. They are useful as an historical record and to predict issues that may arise. They would offer a useful point of comparison with actual patterns of use.

Free ECE and proportion of three- and four-year-olds attending

Some managers from all types of service except playcentre, playgroup, and puna predicted an increase in the number of three- and four-year-olds they served. Pasifika ECE service managers (100 percent), education and care service managers (69 percent), and kōhanga reo whānau management (57 percent) were most likely to predict an increase. The main reason for predicting an increase was that managers thought cost was a barrier to participation in their service. Free ECE would attract families who could not afford to pay. Some kindergarten managers thought kindergarten participation might not change much, because kindergartens asked for a small donation only, i.e. cost was not a barrier.

Half the playcentre managements predicted a decrease in enrolments of three- and four-year-olds. The main reason was that some of these children would attend a teacher-led service when ECE was free to them there. Some felt the policy was a slight to playcentres because they thought it implied playcentres were not good quality.

Some education and care managers (23 percent) and kōhanga reo whānau management (14 percent) also predicted an increase in under-three-year-old enrolments. They did not explain why.

Free ECE and hours of attendance

In 2006, 36 percent of parents would like to increase the hours their child attended when ECE is free for three- and four-year-olds, and 15 percent were unsure. There were no differences in response by family income or ethnicity.

Table 61 **Parents' views of impact of free ECE on hours child attends**

View	Parents (excluding those whose child will be at school) (n=573) %
Nothing would change	44
Would increase the number of hours child attends	36
Not sure	15
Would reduce number of hours child attends	1

However, few service managers said they would increase their hours (14 percent). Of those that would increase hours, three were in one locality (Pohutukawa), and one each in Rimu, Kauri, and Karaka. Pohutukawa is a low socioeconomic, main urban locality, with high Māori and high Pasifika population, and a high unemployment rate. The other localities are all minor urban, varying in SES, population, and employment characteristics.

More kindergartens and kōhanga reo would increase their hours. Various changes were envisaged for kindergartens: operating a six-hour day; offering more flexible provision; and increasing the length of the afternoon sessions from 2½ hours to three hours five days per week. Some kindergarten management thought they would need to find out about community need:

> We will need to survey our community to ascertain from them how or if they wish to utilise the 20 free hours. If a parent is seeking full entitlement of 20 free hours and if we do not provide it, they may be lost to the service. In saying that, is there spare capacity at other centres to accommodate the parents? (Kindergarten management)

Free ECE and enrolments

Thirty-five percent of managers predicted more child places would be available in their service when ECE is free, and 14 percent predicted the number of places would be reduced. Pasifika, kōhanga reo, and education and care management were more likely to predict more child places.

Twenty-five percent of kindergarten management predicted fewer places because they would reduce the number of places to extend opening hours.

Fifty percent of playcentre management thought they would attract fewer families because children would leave to access free places in a teacher-led service. This would leave more spare places available in playcentres.

Free ECE and parental choice of service

We asked parents whether their choice of service type would change with free provision. Excluding those 220 parents whose child would be at school, 74 percent of parents (n=423) said they would not change their service type when ECE is free. Sixteen percent (n=92) were undecided, and six percent (n=36) would use a different service. In both this evaluation and the NZCER 2003/2004 national survey, playcentre parents were most likely to say they would change their service. Few (n=7) of the 20 percent of parents currently using two services would

use only one, reinforcing the view that cost is not a main reason for dual enrolment. We reported in Chapter 3 that parents' main reasons for using more than one ECE service were to fit with working hours and for the benefit of their child.

Table 62 **Impact of free ECE on parental choice of service**

Impact on parental choice of service	Parents (excluding those whose child will be at school) (n=573) %
No change in service	74
Not sure	16
Would use a different service	6
No response	3
Currently using two services and would use only one	1

Most of all the parents who would change their ECE service, would choose kindergarten (8 percent) or education and care (6 percent). Playcentre, home-based, and playgroup parents were more likely than others to say they would change.

Free ECE and parental employment and training

Free ECE is likely to have an impact on parental employment and training. Around 30 percent of parents with children who would still be of preschool age would make changes in their participation in employment or study, mainly by starting or increasing hours of paid employment, or participating in a training/education course.

Table 63 **Impact of 20 hours free ECE on how parents use their time**

Impact of free ECE for parents	Parents (excluding those whose child will be at school) (n=531) %
Nothing would change	56
Enrol in training/education course	11
Start paid employment	11
Increase hours of paid employment	10
More time for own interests	9
Unpaid voluntary work	4

Family income levels varied according to parental employment and study status, and were therefore related to the extent to which free ECE would affect paid employment and enrolment in study:

- Parents with higher family incomes were more likely to have participated in paid employment in the last 12 months than those with lower incomes.
- Parents with lower family incomes were more likely to have participated in training or study than those with higher incomes.
- When ECE is free, parents with incomes of less than $30,000 were more likely to start paid employment (18 percent) than those with incomes of $70,000 or more (5 percent), but were not substantially more likely to increase their hours of employment (12 percent compared with 9 percent).
- When ECE is free, parents with incomes of less than $30,000 were more likely to enrol in training or study (17 percent), than those with incomes of $70,000 or more (less than 3 percent).

Free ECE and service sustainability

Managers were divided about the impact of free ECE on their service sustainability. Pasifika and education and care managers were more likely to expect greater financial sustainability because they predicted more enrolments.

A high proportion of playcentre management (63 percent) thought free ECE would make their service less financially sustainable. This was because they thought three- and four-year-olds would move to teacher-led services to access free ECE, and their playcentres would have fewer enrolments and therefore less government funding.

Table 64   **Impact of free ECE on service sustainability**

Impact	Managers (n=46) %	Types differing markedly from overall proportion
Greater financial sustainability	30	Pasifika (50%), Education and care (46%), Playcentre (12%)
No change	21	Kōhanga reo (42%), Playcentre (0%), home-based (0%).
Less financial sustainability	19	Playcentre (63%), Kōhanga reo (0%), home-based (0%), Pasifika (0%).