Teachers in early childhood education

The proportion of early childhood education teaching staff who are qualified and registered has been rising over time.

There is approximately 1 teacher for every 7 children aged two and over in kindergartens and education and care services.

Annual ECE teacher turnover is 19%, similar to the wider education and training sector, and higher than the national workforce turnover rate. ECE teacher turnover has been declining in recent years. Around 7% of ECE teaching staff left the sector in the last year.

Indicator Description

The following indicators are included in this report:

- Registered teaching staff – the proportion of early childhood education teachers that are registered with the New Zealand Teachers’ Council (NZTC).
- Qualified teaching staff – the proportion of teaching staff holding a qualification approved by the NZTC.
- Teacher-to-child ratio – the number of teaching staff in relation to the number of children attending education and care services and kindergartens.
Teacher turnover – two indicators are shown:

- the annual average turnover rate of permanently-appointed, paid teaching staff in teacher-led centre-based early childhood education services.
- percentage of permanently-appointed, paid teaching staff lost to the early childhood education sector each year.

Why This Is Important

Children benefit from participation in quality early childhood education. Quality is supported through the interaction of a number of factors such as the ratio of trained adults to children, the number of children (or group size) and the qualification level of teaching staff.

One of the ways to improve the quality of early childhood education is to increase the number of qualified and registered early childhood education teaching staff. Teacher registration ensures the quality of teaching staff because it shows that newly graduated teachers have completed suitable teacher education programmes and are supervised and supported through an advice and guidance programme. Gaining full registration and maintaining practice certificates assures currency of professional knowledge and practice.

For ECE to provide the most benefits, it must be of high quality. "High quality ECE means quality interactions and trust between caregivers and for children in teacher-led settings, and this requires investment in teacher qualifications and favourable teacher-child ratios". These enable teachers to respond effectively to children’s individual needs and interests (NZ Childcare Association, 2009). Maintaining appropriate teacher-to-child ratios helps provide high quality education and care, personal and dedicated attention for all children and favourable child development outcomes.

Currently there are regulations set around teacher-to-child ratios: in services catering to children under two years old, the regulated minimum ratio is 1:5, while for services catering to children two years old and over, the ratio is 1:10.

Sustainability of ECE services is also important if children are to gain the benefits resulting from participation in ECE and to continue to do so into the future. One indicator of a service’s sustainability is it’s rate of teacher turnover.

Services with high teacher turnover are more at risk of having fewer than the required number of registered teaching staff and of therefore jeopardising their licence. Higher turnover may also reflect fundamental problems in the service that result in teaching staff leaving or make the service less attractive to parents, resulting in a decrease in roll size and reduced sustainability.

Teacher turnover has been identified as a major factor undermining the quality of ECE programs. High turnover undermines quality in a variety of ways, including disruptions in teacher-child relationships and in the roles and relationships of teaching staff who remain at the centre. In these ways, program quality is negatively affected by turnover (Journal of Research in Childhood Education, July 2010).

In addition to teacher turnover within services, the number and proportion of staff resigning and not moving to another ECE service also indicates how sustainability within the sector is changing. A rise in the loss of teaching staff from the sector may affect system-wide sustainability, especially if there is no balancing gain or if those leaving tend to be considerably more experienced than those joining.
How We Are Going

Registered and qualified early childhood education teaching staff

Before teaching staff can become registered with the New Zealand Teachers’ Council (NZTC), they must hold a qualification approved by the Council. Once qualified, teachers can then apply for provisional registration with the NZTC as long as they are of good character and are fit to be teachers.

In 2013, 76% of teaching staff were qualified and 75% were registered. The proportion of teachers that are registered with the NZTC has increased from 35% in 2003 to 75% in 2013.

Since 2006, the proportion of teaching staff that are registered has been very close to the proportion that are qualified. This rise in registered ECE teachers could be due to the combined impact of:

- the requirement that all ‘Persons Responsible’ in ECE be registered
- additional funding incentives given to centres with more registered teachers
- teacher registration targets implemented in 2007

Previous to then, many qualified ECE teachers had not taken the additional step of becoming registered.

In order to be ECE qualified, a teacher must hold a recognised ECE teaching qualification that leads to registration with the NZ Teachers Council. It is important to note that from November 2010, New Zealand qualified and registered primary trained teachers working in ECE services could be counted for funding purposes. Hence from 2011, all statistics on qualified teachers in ECE also include those working in ECE with primary teaching qualifications. This could explain the data where the number of registered teaching staff rose slightly above the number qualified. These may have been primary teachers that were not yet counted as being ECE qualified.

Figure 2 (next page) shows that Pasifika teaching staff have had the greatest percentage increase in registration levels, up from 18% registered in 2002 to 69% registered in 2013.

By 2013, 77% of European/ Pākehā teaching staff were registered, 76% of Asian teaching staff, 69% of Pasifika teaching staff and 66% of Māori teaching staff.

1 This section contains data on teacher-led early childhood services. This includes teaching staff in education and care services, casual education and care, kindergartens, hospital based services, the Correspondence School and home-based services.
Note that from 2011 onwards, the ethnic group that teaching staff belong to, counts teaching staff who identify with more than one ethnic group, in each group that they identify with. Data before 2011 is only available on a single ‘prioritised’ response basis. Figure 2 shows that this change in collection has not made a significant difference to the trends of registered teaching staff by ethnic group.

The trend of registered teachers is largely shaped by the trend for those in education and care services. These services employ 84% of early childhood education teaching staff.

All home-based service network coordinators are required to be qualified and almost all kindergarten teaching staff are qualified. By 2013, 72% of education and care service teaching staff were registered, while 95% of kindergarten teaching staff and 99% of home-based service network coordinators were registered.

While all home-based service coordinators are required to be qualified and registered, home-based educators are not. In 2013, approximately 3% of home-based educators were qualified (held a recognised ECE teaching qualification that allows registration with the NZ Teachers Council).

Figure 2: Percentage of registered teachers by ethnic group (2002 to 2013)

![Graph showing percentage of registered teachers by ethnic group]

Figure 3: Percentage of registered teachers by service type (2002 to 2013)

![Graph showing percentage of registered teachers by service type]
Teacher-to-child ratios

The minimum number of teaching staff required at a service is defined by Schedule 2 (Adult-to-child ratios) of the Education (Early Childhood Services) Regulations 2008. The number of children per teacher in education and care services that cater for under two year-olds only and operating all-day should be five (5) at the maximum. For education and care services and kindergartens catering for children two years old and over only or catering for both age groups and operating all-day, the maximum number of children per teacher should be ten (10). For sessional ECE centres, the ratio is 1:15 at the maximum.

Data on teacher-to-child ratios is collected using the ‘busiest time’ question on the Annual Census of ECE Services and asks for the number of children and teaching staff at the busiest time during the survey week. As such, the number of teaching staff includes day-to-day relievers as well as the usual teaching staff present at that time, and the number of children includes casual attendees as well as children on the regular roll.

Figure 4 and table 1 below show the teacher-to-child ratios for centre-based teacher-led ECE services. Across all centre-based teacher-led services, there was an average of 1 teacher for every 6 children in 2013. This ranged from an average of 1:3 for education and care services catering to under twos only to 1:13 for sessionally-run kindergartens.

Teacher-to-child ratios have largely remained constant between 2010 and 2013.

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*By definition ‘Centre-based teacher-led services’ includes education and care services, casual education and care, hospital-based services and kindergartens, however, for the purposes of this report only education and care services and kindergartens are included.*
Figure 4 shows the large range of ratios operating across the different types of services. All-day education and care services catering for under two year olds only are least dispersed, with 88% operating with 1 teacher to between 2 and 4 children. This is not surprising as the lower the ratio, the smaller the distribution possible.

The teacher-to-child ratios in the sessional kindergarten services are most dispersed. These range from 1 teacher to 5 children at a minimum to 1 teacher to 15 children at the top of the range.

Education and care services and kindergartens catering for only children two years old and over and operating all-day have to comply with the same regulations for minimum teacher-to-child ratios as each other (regulations described on previous page). Table 1 below gives the average teacher-to-child ratios by roll size for all-day education and care services and all-day kindergartens catering only for children two years old and over.

The estimated teacher-to-child ratio for all-day kindergartens catering only for two-year-olds and over, is higher than the ratio for the same age group in all-day education and care services; 1 teacher to every 8 children for all-day kindergartens, compared with 1:6 for all-day education and care services.

Table 1 shows that for both education and care services and kindergartens, the larger the roll size, the more children to each teacher on average. For all-day kindergartens, the table shows an incremental increase in the teacher-to-child ratio which follows the incremental increase in roll size.

There has been no significant change in the teacher-to-child ratios by roll size between 2011 and 2013.

<table>
<thead>
<tr>
<th>Operational structure</th>
<th>Roll size</th>
<th>Teacher-to-child ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>All-day education and care services catering for 2 year olds and over only</td>
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<td>1:3</td>
</tr>
<tr>
<td></td>
<td>11-20</td>
<td>1:6</td>
</tr>
<tr>
<td></td>
<td>21-30</td>
<td>1:6</td>
</tr>
<tr>
<td></td>
<td>31-40</td>
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<tr>
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<td>1:7</td>
</tr>
<tr>
<td>Total</td>
<td>1:6</td>
<td></td>
</tr>
<tr>
<td>All-day kindergartens catering for 2 year olds and over only</td>
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<td>1:8</td>
</tr>
<tr>
<td></td>
<td>21-30</td>
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<td>1:9</td>
</tr>
<tr>
<td>Total</td>
<td>1:9</td>
<td></td>
</tr>
</tbody>
</table>

Note: The table does not include all roll sizes, only those where there were greater than 10 services representing that roll size. This ensures a more reliable estimate of the teacher-to-child ratio.
Teacher turnover³

In 2013, the rate of annual teacher turnover for centre-based teacher-led service types (education and care, and kindergarten) was 19.4%. Turnover rates have ranged between this 19.4% and 25.6% since 2005, with the highest rate occurring in 2008.

Between 2007 and 2008, teaching staff turnover increased noticeably, by 9% (2.1 percentage points), this could be the result of a few factors:

- The introduction of 20 Hours ECE which provided fully funded early childhood education for up to 6 hours per day, and up to 20 hours per week for all three and four year olds. This change, supported by already strong underlying population growth at these ages, led to a 10% growth in licensed services between 2007 and 2009.
- The Education (Early Childhood Services) Regulations 2008 which stated that 50% of required staff in teacher-led licensed services must hold a recognised qualification.
- Kindergartens started moving to an all-day model and therefore required more teaching staff. As these teaching staff may have transferred from education and care services, this would explain the higher turnover for both types of service.

It is important to note that turnover rate is affected by both loss to the sector and the appointment of new staff. High or increasing turnover, as occurred in 2008, can be a positive indicator where it represents an expanding workforce. Alternatively it can reflect increasing losses as occurred with unqualified staff in 2012.

Sources: ECE turnover (Ministry of Education); Education & Training and national rates (Statistics New Zealand).
Note: The national education and training turnover rate for 2010 from SNZ was unexplainably high so has not been included here.

³ Statistics New Zealand worker turnover rate, and the rate used in this report, is the ratio of the average of the total new staff and staff who have left in the reference year to the average of the total staff in the reference year (t) and the previous year (t-1), as represented in the formula: (Accessions + Separations)/2
(Staff (t) + Staff (t+1))/2

Figure 5: Average annual rate of teacher turnover for teacher-led centre-based ECE services (2005-2013)
Teaching staff turnover across all centre-based teacher-led ECE services is similar to turnover rates for the wider education and training sector, and higher than the national workforce turnover rate. The national annual average turnover rate as at March 2012 was 16.3% and the annual average turnover rate for the education and training industry as a whole was 22.1% (Statistics New Zealand, 2013).

Kindergarten turnover has been consistently lower than education and care services (15% compared with 20% in 2013). Apart from the increase in turnover in 2008, total turnover for kindergartens and education and care services has closely followed the rate for the education and training industry as a whole.

Since reaching a peak in 2008, turnover rates for the ECE sector have since fallen to below 2005 levels and are currently still declining. This decline, in part may be influenced by the change in 2011 to the subsidy funding rates for ECE services. The rates for services with 80-99% and 100% qualified teaching staff were removed and replaced with a single rate. This may have given qualified teaching staff less opportunities within the sector.

Turnover is influenced by whether teaching staff are qualified or not. Figure 6 shows that the turnover rates for education and care and kindergartens varies for qualified and non qualified teaching staff. Qualified teachers are those that have an early childhood education teaching qualification approved by the New Zealand Teaching Council. This includes teaching staff with primary level teaching qualifications for 2011 and 2012 as since November 2010 these teachers are included for funding purposes.

**Figure 6: Average annual rate of teacher turnover for teacher-led services by whether or not teachers were qualified (2005-2013)**

The average turnover rate for qualified teaching staff 2005-2011 was consistently higher than for non qualified teaching staff. It reached a maximum rate of 27% in 2008 when all turnover rates peaked irrespective of qualification status.

Since 2011 however, the turnover rate for non qualified teaching staff has risen, while the rate for qualified teaching staff has continued to decline. In 2012, the turnover rate for non qualified teaching staff exceeded that of qualified teaching staff for the first time since 2005. On 1 February 2011 the subsidy funding rates for ECE services were changed and this may have provided some services with less incentive to hire qualified staff once reaching the 80%
threshold, providing a limiting effect on the turnover of qualified staff.

As mentioned earlier, turnover rates are affected by both expansion and loss. The teacher turnover rate at a service is linked to the sustainability of the service and includes teaching staff who move to another ECE service (movements) and teaching staff who leave the sector completely (losses).

Figure 7 shows that the proportion of teaching staff lost from the sector has fallen from 9.4% in 2005 to 7.3% in 2013.

Turnover was highest in 2008 for both qualified and non-qualified teaching staff (Figure 6), however the percentage of teaching staff lost to the sector dropped significantly for non-qualified teaching staff and had only a slight affect on qualified teaching staff. This followed the introduction of 20 Hours ECE, which as stated earlier, supported by population growth, led to a 10% growth in licensed services between 2007 and 2009. Therefore although turnover was high in 2008 it was mostly due to staffing gains and not teaching staff leaving positions, or the sector in general.

The proportion of qualified staff lost to the sector went up 2.3 percentage points in 2011 and this is likely due to the change in funding bands for qualified staff. Qualified teaching staff leaving services may have not had the choice of ECE services that they had previously.

Figure 7: Proportion of teachers lost to the ECE sector by whether or not they were qualified (2005-2013)

The graphs in figure 8 are consistent with the teacher turnover rates shown in figure 6 and show that turnover rates peaked in 2008, especially in the case of small and medium-sized services. The graphs show that service size broadly made little difference to the trends in teacher turnover.

Figure 8 (next page) shows the proportion of services according to their rate of teacher turnover. Graphs are shown for all services and for small, medium-sized and large services, based on the number of teaching staff working.

The breakdown between the “no turnover” and “1–33% turnover” categories differs considerably by service size. A far higher proportion of small services have no teacher turnover compared with large services. This is hardly surprising and reflects the fact that the chance of a small service losing one teacher (a third of the teaching staff in the case of a three teacher centre) is less than the chance of a large service losing one teacher (a tenth of the teaching staff in the case of a ten teacher centre). Conversely, the impact of that loss will be considerably greater for a small service compared with a large service.
Where to Find Out More

Analysis in this indicator report has begun to explore changes in levels of qualified and registered teaching staff in ECE, teacher-to-child ratios and teacher turnover rates. More information about staffing in ECE can be found at http://www.educationcounts.govt.nz/statistics/ece2/staffing

A large range of other ECE statistics can be found at http://www.educationcounts.govt.nz/statistics/ece2

More can be found on other ECE indicators at http://www.educationcounts.govt.nz/indicators

The Education Counts website also provides a range of ECE related publications at http://www.educationcounts.govt.nz/publications/ece

For a large range of other information on ECE in New Zealand visit the ECE Lead website at http://www.lead.ece.govt.nz

References


