

# Qualifications for early childhood educators working with 0-to-2 year-olds

Centre for Education Statistics and Evaluation



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## Introduction

Recently in Australia there has been considerable debate about the level of qualification that early childhood educators should hold. The *National Quality Framework for Early Childhood Education and Care* (NQF), implemented in 2012, established a national requirement that all early childhood educators should hold or be working towards a minimum Certificate III in early childhood<sup>1</sup>. The NQF also requires that at least 50 per cent of educators hold, or be working towards, a diploma level qualification. More recently, however, the Productivity Commission, in a review of early childhood care and learning in Australia, has recommended that some NQF qualification requirements for educators working with 0-to-2 year-olds be lowered<sup>2</sup>. For example, the Productivity Commission recommends that a Certificate III be the only requirement for educators working with children aged birth to 36 months<sup>3</sup>.

The total number of children in early childhood education and care has risen since 2010. In 2010, there were 278,542 0-to-2 year-olds attending early childhood education and care services Australia-wide in an average week<sup>4</sup>, increasing to 306,732 in 2013<sup>5</sup>. This compares to 446,393 3-5 year-olds attending such services on an average week Australia-wide in 2013. Most of the 0-to-2 year-old children were in long day care (250,417) or family day care (49,753). In NSW in 2013, there were 96,947 0-to-2 year-olds in child care per week. Like the Australia-wide trend, most of these children were in long day care (77,381) or family day care (17,780). A small number of 0-to-2 year-olds also attend occasional care and in-home care.

This paper looks at the evidence regarding qualifications for early childhood educators working with 0-to-2 year-olds. It begins by discussing what defines quality early childhood education for 0-to-2 year-olds; best practice pedagogy for 0-to-2 year-olds; what the literature says about teacher qualifications for this cohort; and recommended qualification levels for early childhood educators working with 0-to-2 year-olds internationally.

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1 Australian Children's Education and Care Quality Authority 2012, *National Quality Framework for Early Childhood Education and Care*, Canberra.

2 The Productivity Commission also recommends the removal of the requirement for educators working with 0-to-2 year olds to have practical experience with 0-to-2 year-olds prior to employment.

3 Productivity Commission 2014, *Childcare and Early Childcare Learning: Draft Report*, Canberra.

4 Department of Education 2011, *2010 National early childhood education and care: Workforce census*, prepared by The Social Research Centre

5 Department of Education 2014, *2013 National early childhood education and care: Workforce census*, prepared by The Social Research Centre.

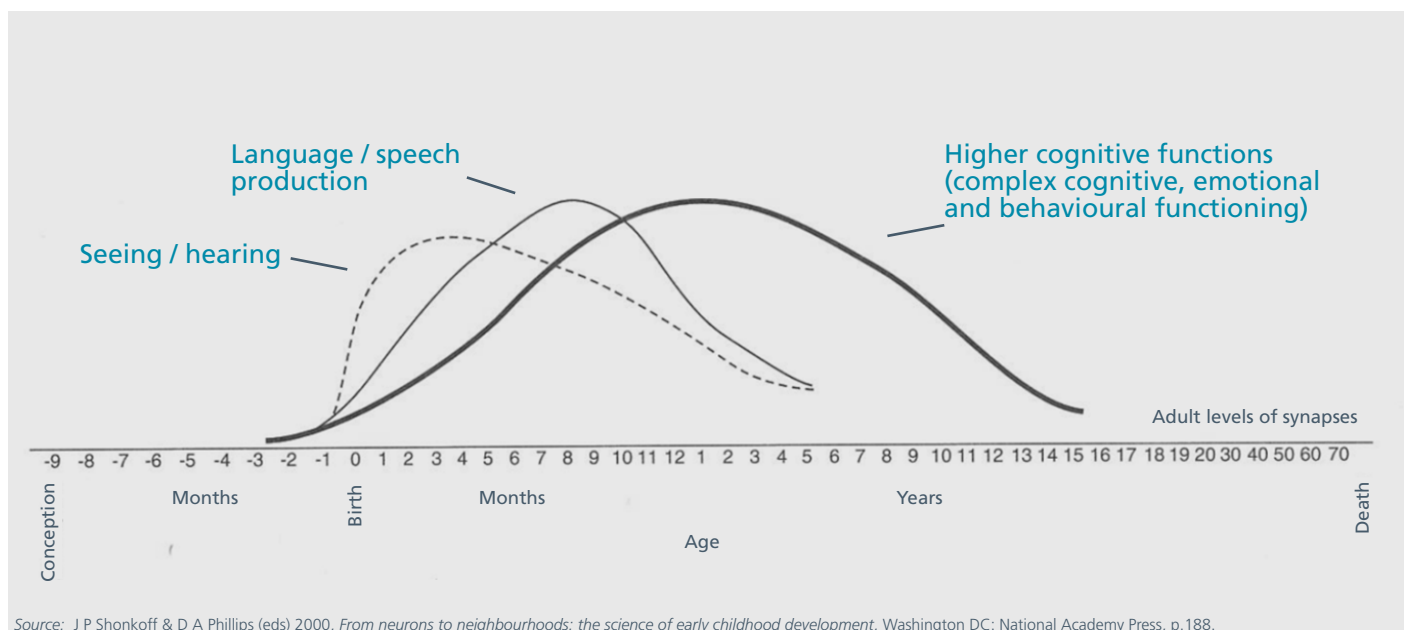
## What defines quality early childhood education and care for 0-to-2 year-olds?

### We are only beginning to understand the unique needs of 0-to-2 year-olds

Recent advances in our understanding of childhood development have shown that 0-to-2 is a critical period in a child's development. It is now understood that children learn and develop more in this period of their life than at any other time, and that their needs in an education and care setting may be quite different from that of older children<sup>6</sup>.

Recent and rapid advances in neurological science are providing new insights into how the brain develops and functions, in turn providing important knowledge of how learning takes place in children. Critical aspects of the brain's architecture are shaped by experiences before and soon after birth, and many fundamental elements are fixed well in advance of a child starting school. A report from the Center on the Developing Child at Harvard University outlines the extreme vulnerability and opportunity for a child's brain development in the early years:

*The period of exceptional sensitivity to the effects of environment and experience is called a sensitive period for that circuit. Because it is far more difficult to alter neural circuits substantially after their sensitive periods have ended, experiences during these sensitive periods play an exceptionally important role in shaping the capacities of the brain. Some examples of behavioural capacities that have been shown to be affected by sensitive periods of underlying circuitry include vision, hearing, language and responses to social cues<sup>7</sup>.*



Source: J P Shonkoff & D A Phillips (eds) 2000, *From neurons to neighbourhoods: the science of early childhood development*, Washington DC: National Academy Press, p.188.

Thus the early years of a child's development are critically important for widening a child's future opportunities and capacity for development.

<sup>6</sup> S Mathers et al, 2014, *Sound foundations: A review of the research evidence on quality of early childhood education and care for children under three - implications for policy and practice*, University of Oxford and The Sutton Trust.

<sup>7</sup> National Scientific Council on the Developing Child 2007, *The Timing and Quality of Early Experiences Combine to Shape Brain Architecture: Working Paper 5*, Harvard University.

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## The quality of early childhood education and care for 0-to-2 year-olds is important

The positive impact of high-quality early childhood education and care on various aspects of a child's development for 0-to-2 year-olds is among the most consistent findings in developmental science<sup>8</sup>. For example, the Sydney Family Development Project (SFDP) showed that competence in learning (for example, task orientation, creativity, less learning difficulty) in the first year of school was linked to attendance at formal, regulated care, rather than informal, unregulated care during a child's first two and a half years<sup>9</sup>. Studies have also demonstrated the benefits of early childhood education and care for children who have, or are at risk of having, developmental delay because of their disadvantaged backgrounds<sup>10</sup>.

Conversely, there is also evidence that poor-quality early childhood education and care for 0-to-2 year-olds can have negative impacts on a child's development. Structural conditions, such as large ratios of children to adults, less supportive relationships, and harsher adult-child interactions can lead to larger elevations of the stress hormones for children in low-quality care, compared to high-quality care<sup>11</sup>. Learning to cope with mild or moderate stress is an important part of healthy child development; however exposure to extreme stress in early, sensitive periods of neural development (as described above) can have long-term deleterious impact on brain development. Stress in the early years can cause overproduction in areas of the brain that relate to fear, anxiety and impulsive responses to the detriment of areas dedicated to reasoning, planning, and behavioural control, which may produce fewer neural connections<sup>12</sup>. The term 'toxic stress' describes situations where children are exposed to strong, frequent, or prolonged activation of the body's stress management system<sup>13</sup>. It is therefore crucial for their development and futures that children experience a high quality of care in the early years.

While a UK review notes that there is no single definition of quality, two broad dimensions are identified consistently in the literature as facilitating children's development and learning:

- process: the quality of the pedagogical practices, such as planning and implementing learning activities, and supporting children's emotional development through positive relationships
- structural: staff qualifications, adult-child ratios, group sizes and characteristics of the physical space<sup>14</sup>.

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8 P Shonkoff and D Phillips 2000, *From neurons to neighbourhoods: The science of early childhood development*, National Academy of Science Press, Washington; K Sylva et al, 2010, *Early childhood matters: Evidence from the Effective Pre-school and Primary Education project*, Routledge, London.

9 L Harrison and J Ungerer 2000, 'Children and child care: a longitudinal study of the relationships between developmental outcomes and use of non-parental care from birth to six', paper presented at the Commonwealth Family and Community Services Panel Data and Policy Conference, Canberra; J Love et al, 2003, 'Child care quality matters: how conclusions may vary with context', *Child Development*, vol.74 no.4, pp.1021-33.

10 K Sylva et al, 2004, *The Effective Provision of Pre-School Education (EPPE Project: Technical Paper 12 – The Final Report: Effective Pre-School Education*, DfES/Institute of Education, University of London.

11 National Scientific Council on the Developing Child 2005 (updated 2014), *Excessive Stress Disrupts the Architecture of the Developing Brain: Working Paper 3*, Harvard University.

12 National Scientific Council on the Developing Child 2005.

13 National Scientific Council on the Developing Child 2005.

14 Mathers et al, 2014.

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## Pedagogical best-practice for children's development in the years 0-to-2

There are three key areas of pedagogical practice that have been identified in reviews of the literature as critical for the 0-to-2 year-old cohort: support for communication and language development; play-based activities and routines; opportunities to move and be physically active<sup>15</sup>.

### Support for communication and language development

Research suggests that support for communication and language development in the first few years of life can influence a child's readiness for school. A longitudinal study of children<sup>16</sup> from across ten sites in the US, conducted by the National Institute of Child Health and Development (NICHD), found that early language competence was related to the quality of language stimulation. Higher overall quality of care, and specifically language stimulation, was linked to cognitive and language outcomes at 15, 24, and 36 months, after adjusting for maternal vocabulary score, family income, child gender, observed quality of the home environment, and observed maternal cognitive stimulation<sup>17</sup>. These results were correlated by later testing at age four and a half, suggesting robust associations throughout the preschool period at least<sup>18</sup>.

Children first need to represent their experiences, feelings and ideas as thoughts in order to be able to express them to others. Infants practise using their own voices at a very early age. Adults who are attuned to the specific and unique sounds and expressions of an infant can join in with their communication. These exchanges lay the foundations for developing language skills. They allow children to build their range of vocalisations, experiment with a larger vocabulary and learn about the conventions of conversation, including turn-taking, sensitive timing and responsiveness to others' behaviour and facial expressions. Repetition of songs and rhymes, including matched motions, can assist the development of language skills. By looking at texts together and talking about the pictures or pointing to familiar objects, adults can also promote early literacy skills in children<sup>19</sup>.

### A focus on play-based activities and routines

There is a wide consensus among researchers that play is an important mechanism for supporting children's development and learning during the first years of life and beyond<sup>20</sup>. Best practice indicates that caregivers should be attentive to a child's explorations, allowing children spontaneity of play, joining in and offering support and encouragement without interrupting the child's flow of thought and action. Studies show that repeating patterns of play allows children to take the lead and make choices, furthering their cognitive and social development<sup>21</sup>.

Floor-based play permits children to explore different objects and experiences, and symbolic play involves enacting familiar activities out of context, and using objects to represent other objects. Symbolic play comes gradually in the second year of life and engaging in this play with a caring adult may form a basis for developing speech and problem-solving skills<sup>22</sup>.

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15 Mathers et al, 2014.

16 The number of children varied between 595 and 856, depending on the assessment.

17 NICHD Child Care Research Network 2000, 'The relation of child care to cognitive and language development', *Child Development*, vol.71, pp.958–978.

18 NICHD Child Care Research Network 2002, 'Early child care and children's development prior to school entry: Results from the NICHD study of early child care', *American Educational Research Journal*, vol.39, no.1, pp.133–164.

19 M Whitehead 2002, *Developing language & literacy with young children*, 2nd edition, Chapman, London.

20 T David et al, 2003, *Birth to Three Matters: A Review of the Literature Compiled to Inform the Framework to Support Children in their Earliest Years*, Department of Education and Skills, London; M Casby 2003, 'The development of play in infants, toddlers, and young children', *Communication Disorders Quarterly*, vol. 24, no.4, pp.163-74.

21 T David et al, 2003.

22 M Watson and S Zlotlow 1999, *More than playing around*, Thinking Publications, Eau Claire.

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## Opportunities to move and be physically active

Once infants develop loco-motor skills, anything reachable becomes an object to explore, which helps to build children's perceptual and spatial awareness. For children who are not yet able to walk, guidelines emphasise floor-based play, such as crawling, rolling, pulling up, time spent on their tummy; opportunities to practise important movements like reaching, grasping and turning their head towards stimuli; and playing with other people, objects or toys<sup>23</sup>. For children who are able to walk, experts highlight the importance of opportunities for physical play and activities which use large muscle groups and further the development of loco-motor, stability and object control skills, within different environments, indoors and outdoors.

## Which level qualification should educators of 0-to-2 year-olds hold?

The ability to implement and develop effective pedagogy is a key determinant of early childhood education and care quality. This demands a sound understanding of child development, the ability to develop children's perspectives, be responsive and sensitive to children's needs and to elicit children's ideas<sup>24</sup>, in order to develop targeted lesson plans and implement effective pedagogy. While the evidence is not definitive due to the sparseness of research, there are findings that suggest consistent higher quality care for 0-to-2 year-olds can be linked to the formal qualifications of their educators<sup>25</sup>. Nonetheless, it is difficult to determine the precise level of qualification that teachers of 0-to-2 year-olds should hold. This is partly due to the lack of evidence on qualifications for 0-to-2 year-old educators, but 0-to-2 year-olds are also a very different cohort from 3-to-5 year-olds and it is more difficult to determine what outcomes are for this group and how they should be measured.

## The evidence supports higher qualifications for educators working with 3-to-5 year-olds

Many studies of early childhood education and teacher qualification for older children (3-to-5 years), make the link between teacher qualifications and outcomes for children. For example, in a critical analysis of 40 studies on the preparation of early childhood education teachers and the quality of their education programs between 1989 and 2004, Saracho and Spodek found that a strong relationship exists between the number of years of education undertaken by early childhood educators and the appropriateness of the educator's behaviour in the early childhood teaching environment. They go on to say that better outcomes for young children are the result of the educators' background and the quality of their education<sup>26</sup>. The Effective Provision of Pre-School Education (EPPE) Project which collected information on 3,000 children aged 3-to-7 in the UK, found that settings that have staff with higher qualifications have higher quality scores and their children make more progress<sup>27</sup>. In a recent Australian study, Warren and Haisken-DeNew found that Year 3 NAPLAN scores were higher for those children whose preschool teachers have a degree or diploma qualification<sup>28</sup>. Mathers et al in their review of the research evidence regarding quality in early childhood education and care, state that there is clear consensus among research reviews that staff qualifications and training are important for quality and have a direct impact 'on the ability of staff to provide sensitive, responsive and stimulating care and education, which in turn enhances children's learning and development'<sup>29</sup>. In work based on findings from the EPPE project, Sammons points out although it is not necessary for all staff to have high levels of qualification, the presence of highly qualified staff can have a positive influence on those who do not have the same high qualifications<sup>30</sup>.

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23 M Tremblay et al, 2012, 'Canadian physical activity guidelines for the early years (aged 0-4 years)', *Applied Physiology, Nutrition and Metabolism*, vol.37, no.2, pp.345-356; UK Department of Health 2011, *UK Physical Activity Guidelines: Fact sheets; Making the Case for UK physical activity guidelines for the early years; Review and recommendations*.

24 OECD Encouraging Quality in Early Childhood Education and Care 2010, 'Research brief: Qualifications, education and professional development matter', Paris.

25 M Burchinal et al, 2002, 'Caregiver training and classroom quality in child care centres', *Applied Developmental Science*, vol.6, pp.2-11.

26 O Saracho and B Spodek 2007, 'Early childhood teachers' preparation and the quality of program outcomes', *Early Childhood Development and Care*, vol.177, no.1, pp.71-91.

27 K Sylva et al, 2004.

28 D Warren and J Haisken-DeNew 2013, 'Early Bird Catches the Worm: The Causal Impact of Pre-School Participation and Teacher Qualifications on Year 3 National Naplan Cognitive Tests', *Melbourne Institute Working Paper No.34/13*.

29 S Mathers et al, 2014.

30 P Sammons 2010, 'The EPPE Research Design: An educational effectiveness focus', in K Sylva et al, *Early Childhood Matters: Evidence from the Effective Pre-school and Primary Education Project*, Routledge, London, cited in OECD 2012, *Encouraging quality in early childhood education and care (ECEC) – Research Brief: Qualifications, Education and Professional Development Matter*, Paris.

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## The evidence is less clear on qualifications for educators working with 0-to-2 year-olds

For children under three, and particularly for 0-to-2 year-olds, the evidence is less consistent. A 1992 US study which interviewed and observed over 1300 teachers from randomly selected childcare centres, found that teachers of infants and toddlers are more likely to need specialised tertiary study than teachers of pre-schoolers<sup>31</sup>. An Australian study which surveyed 24 educators working with 9-20 month-old infants in a range of centres, suggested that formal qualifications were related to higher quality care across several measures<sup>32</sup>. The study recorded interactions between children and educators, finding that educators with qualifications were able to describe interactions with a higher level of interpretive complexity<sup>33</sup> after watching video recordings of their interactions with children. High levels of interpretive complexity were also correlated with the quality and sensitivity of educators' interactions with infants. However, the sample size of this study was not large and the author cautions that replication on a larger scale should be undertaken before drawing firm conclusions from the results. In contrast, in a comprehensive UK government evaluation looking at the relationship between qualifications and the quality of early years provision, as well as differences between sectors, it was found that while the presence of a graduate with specialist Early Years Professional Status had a positive impact on quality for pre-school children, no relationship was found in terms of quality of provision for children aged less than 30 months<sup>34</sup>.

Mathers et al say that the inconsistent research findings relating to teacher qualifications and 0-to-2 year-olds are a result of differences in the nature and content of different training programs, differences in practitioners' general academic qualification levels and the variety of contexts in which practitioners work once qualified. For example, some qualifications may prepare practitioners more effectively for working with 0-to-2 year-olds than others. They go on to note that there is a pressing need to understand more about the relationship between qualifications and quality for children under three<sup>35</sup>. The need for more research into the area of teacher qualifications and outcomes for 0-to-2 year-olds is also emphasised in a New Zealand report on quality early childhood education for under-two-year-olds<sup>36</sup>.

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31 C Howes et al, 1992, 'Teacher characteristics and effective teaching in child care: Findings from the national child care staffing study', *Child and Youth Care Forum*, vol.21, no.6.

32 S Degotardi 2010, 'High-quality interactions with infants: Relationships with early-childhood practitioners' interpretations and qualification levels in play and routine contexts', *International Journal of Early Years Education*, vol.18, no.1, pp.27-41.

33 High interpretive complexity is defined as being able to give a detailed and coherent narrative of the interaction, including the ability to think from the infant's perspective.

34 S Mathers et al, 2011, *Evaluation of the graduate leader fund: Final report*, UK Department of Education.

35 S Mathers et al, 2014.

36 C Dalli et al, 2011, *Quality early childhood education for under-two-year-olds: What should it look like – A literature review*, Ministry of Education, New Zealand.

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## Current recommended qualification levels in various jurisdictions

Among early childhood educators working in early childhood settings, types and levels of education, qualifications and training vary widely both between and within countries<sup>37</sup>. While qualification requirements vary between countries from no formal education to specialised bachelor or master's degrees, and different systems may require different qualifications for different kinds of educators, it appears nonetheless that most OECD countries require at least some level of qualification for 0-to-2 year-olds<sup>38</sup>. There are a number of countries where early childhood educators working with 0-to-2 year-olds have either a tertiary or vocational qualification, including Finland, Germany, Japan, Sweden and New Zealand. The OECD notes, however, that governments often fear the funding consequences of raising staff qualifications. Higher qualifications can be followed by increased wage demands and thus increasing costs for services, meaning that some countries may opt for less-than-optimal qualification levels in order to keep costs lower<sup>39</sup>.

### Australia/New South Wales

Currently in NSW, all educators in a centre-based or family day care service must have or be working towards at least an approved Certificate III level education and care qualification. According to the Australian Qualifications Framework, graduates at this level will have factual, technical, procedural and theoretical knowledge of a specific area of work and learning<sup>40</sup>. At least 50 per cent of educators in centre-based services must have or be working towards an approved diploma level education and care qualification and a certain number of early childhood teachers need to be present depending on numbers of children. Family day care coordinators must also have at least an approved diploma level education and care qualification<sup>41</sup>.

The justification for this level of qualification, according to the *Regulation Impact Statement for Early Childhood Education and Care Quality Reforms*, is that the level of qualifications held by early childhood education and care workers has been associated with positive outcomes for children including improved learning environments and more sensitive care. Children under the care of more highly educated workers also perform significantly better in tests of language and cognitive development<sup>42</sup>. A Certificate III qualification is also increasingly seen both in NSW and Australia as being the minimum standard qualification for any industry. For example, *NSW 2021* states that 90 per cent of 20-to-24 year-olds should have attained a Year 12 or AQF qualification at Certificate III or above by 2020<sup>43</sup>. COAG has also agreed to halve the proportion of working age Australians (20-to-64 year-olds) who do not have a qualification at Certificate III or above by 2020<sup>44</sup>.

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37 S Mathers et al, 2014.

38 OECD 2012, *Encouraging quality in early childhood education and care (ECEC) – International Comparison, Job Titles, Qualifications and Requirements*, Paris.

39 OECD 2012, *Encouraging quality in early childhood education and care (ECEC) – Research Brief: Qualifications, Education and Professional Development Matter*, Paris.

40 Australian Qualifications Framework Council 2013, *Australian Qualifications Framework Second Edition*, South Australia.

41 Australian Children's Education and Care Quality Authority 2012 *National Quality Framework for Early Childhood Education and Care*, Canberra.

42 Early Childhood Development Steering Committee 2009, *Regulation Impact Statement for Early Childhood Education and Care Quality Reforms*, Department of Education, Employment and Workplace Relations, Canberra.

43 NSW Government 2011, *NSW 2021: A plan to make NSW number one sets the Government's agenda for change in NSW*, Sydney.

44 COAG Reform Council 2013, *Skills in Australia 2012: Five years of Performance*.



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Nonetheless, the Productivity Commission draft report into early childhood education and learning in Australia released in July 2014 notes, in regard to teacher qualifications for early childhood educators, that qualification requirements in the National Quality Framework (NQF) have made it more difficult for services to attract and retain sufficient staff and have created staff shortages in parts of Australia, including New South Wales. The draft report states that one solution may be changing the NQF staff ratio and qualification requirements. It recommends that:

- all educators working with children aged birth to 36 months are only required to hold at least a Certificate III, or equivalent
- the number of children for which an early childhood teacher must be employed is only assessed on the basis of the number of children in a service aged over 36 months.
- the requirement that persons with early childhood teacher qualifications must have practical experience for children aged birth to twenty four months is removed<sup>45</sup>.

## United Kingdom

The UK review into quality early childhood education and care for under-threes, recommends that all staff working with two-year-olds be qualified to at least Level 3<sup>46</sup> and have support from a graduate-level practitioner. The reasoning behind this minimum qualification according to the UK review, is that two-year-olds, particularly those from disadvantaged backgrounds, require an intellectually stimulating as well as a nurturing environment, which is best provided by well-qualified practitioners.

## New Zealand

Currently in New Zealand, the minimum qualification requirement for educators working with 0-to-6 year-olds depends on whether they are working in a play centre<sup>47</sup> or a kindergarten<sup>48</sup>. A kindergarten teacher must have a bachelor level degree, whereas a play centre leader is only required to have completed Year 12<sup>49</sup>. The New Zealand review into quality early childhood education for 0-to-2 year-olds undertaken in 2012, does not recommend a minimum qualification for educators of 0-to-2 year-olds. Nonetheless, it does state that enablers for high-quality early childhood education for under-two-year-olds include high levels of training of educators – both pre-service and in-service<sup>50</sup>.

## Conclusion

The research indicates that 0-to-2 is a critical period in a child's life and that quality early childhood education and care is crucial for these children. Quality early childhood education and care for 0-to-2 year-olds means an environment where children are not subject to stress and have adequate time to play, develop language and communication skills and move around. Australia currently has moderately high standards for early childhood education and care educators for the 0-to-2 year-old cohort, requiring at least a Level III certificate for early childhood education and care educators. However, it is difficult to determine the optimal training qualification for early childhood educators working with 0-to-2 year-olds. This is because there is a lack of evidence in regard to training qualifications for educators working specifically with 0-to-2 year-olds and the needs of 0-to-2 year-olds are different from those of older children, which makes defining outcomes more difficult. While the research points to higher qualifications being important for the 3-to-5 year-old age group, the findings for the 0-to-2 year-old group are not consistent. The inconsistency in the evidence base is reflected in international policy regarding qualifications for educators of 0-to-2 year-olds, where qualifications vary from completion of secondary school to bachelor level qualifications.

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45 Productivity Commission 2014, *Childcare and Early Childcare Learning: Draft Report*, Canberra.

46 Level 3 in the UK is A-Level standard, which in NSW would translate to Year 12 equivalent.

47 Play centres are parent-led early childhood centres which offer high quality education for children in small mixed-age groups. A typical play centre session will have children from birth to school age playing together with their parents and the other adults, engaged in a wide range of learning experiences.

48 Kindergartens predominantly cater for children between the ages of three and five years although increasing numbers of kindergartens are taking children from a younger age.

49 OECD 2012, *Encouraging quality in early childhood education and care (ECEC) – International Comparison, Job Titles, Qualifications and Requirements*, Paris.

50 C Dalli et al, 2011, *Quality early childhood education for under-two-year-olds: What should it look like - A literature review*, Ministry of Education, New Zealand.



Centre for Education Statistics and Evaluation  
Office of Education  
GPO Box 33  
Sydney NSW 2001  
Australia  
T 9561 1211

[cese@det.nsw.edu.au](mailto:cese@det.nsw.edu.au)  
[www.cese.nsw.gov.au](http://www.cese.nsw.gov.au)

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