



NEW ZEALAND COUNCIL FOR EDUCATIONAL RESEARCH
TE RŪNANGA O AOTEAROA MŌ TE RANGAHAU I TE MĀTAURANGA

Key facts summary of *Competent Children at 12* report, 2004

Background to The Competent Children/Learners Project

The Competent Children/Learners project, funded by the Ministry of Education, focuses on a group of about 500 Wellington region children. The study has charted these children's cognitive, social and attitudinal competencies from when they were close to 5 years of age and still in early childhood education.

The study's main aims are to explore the roles of home and education in the development of the children's competencies and to investigate if these roles change over time and as the children have other experiences. Information has been collected about the children's home resources and activities, experiences out of school, and school experiences. The five completed stages used material gathered when the participants were near age 5, ages 6, 8, 10, and 12. Findings from the sixth stage, when the study participants were age 14, will be available in 2005. In 2005, the field-work for the study will focus on what is happening in the children's lives as they turn 16.

The sample was drawn in relation to early childhood education types rather than the Wellington region population and therefore has a higher representation of children from high-income homes, whose mothers have a trade or tertiary qualification (other than university), and who identify as Pākeha / European. Similarly, the proportions of children engaged in, for example, sport or accessing the internet at home, and the mean levels on the cognitive competencies that we report probably differ from those if the sample had been taken for the country as a whole, particularly where activities and experiences relate to differences in family income and maternal qualification.

The information collected during the study provides rich and comprehensive pictures of the children's lives at each of the different ages. It also allows investigation into questions relating to the way that changes in children's lives affect them, and to look at the relationships between their experiences, resources and activities at home and school and their engagement and achievement in school.

Competent Children at 12

The 'at 12' study covers a wide range of the current activities, experiences and views of 12-year-olds in contemporary New Zealand including information from the study children's parents and teachers, whom we interviewed. At age 12, 53 percent of the study children were in Year 7 and 47 percent in Year 8.

As with the earlier stages of the study, we related the children's past and present experiences and perceptions to their competency levels. The nine competencies we chose to focus on at age 12 were:

- communication
- perseverance
- individual responsibility
- curiosity
- social skills with peers
- social skills with adults
- mathematics
- literacy (reading comprehension, reading age, writing, vocabulary)
- logical problem-solving.

The first six competencies were measured by teacher ratings, and the last three by tests / tasks. In addition to asking teachers to rate the children's competency in this area, we asked the children questions relating to bullying at school. At the time we interviewed the teachers, they had been teaching the children in the study for an average of 7.3 months, with a range of 1 month to 4 years or more. The average age of the children at this time was 12 years, with a range of 11.10 years to 12.6 years.

Key findings from Competent Children at 12

The following findings are summaries only. To be able to interpret them fully, we strongly recommend people refer to the summarised report or full report. These are available from the New Zealand Council for Educational Research or the Ministry of Education.

Teacher-rated competencies

? Communication ? Curiosity ? Perseverance ? Individual Responsibility

? Social Skills with Adults ? Social Skills with Peers

- Overall, the study children's classroom behaviour on these measures, as rated by their teachers, was much the same at age 12 as it had been when the children were ages 8 and 10.
- Around two-thirds to three-quarters of the 12-year-olds seemed comfortable in the class in their role as learners, with 15 percent or fewer receiving poor scores for individual items making up the six measures.
- The study children had higher scores for the listening items on the communication measure than for the speaking items.
- While many of the study children enjoyed new experiences, thinking laterally or "outside the square" was common for only around a third of them.
- Most children were getting on with their peers.
- The teachers did not consider peer pressure to be a major issue for most of the children. However, the children's responses to a hypothetical situation (being given a "hard time" in the school grounds) showed fewer of the children would respond assertively at age 12 than they would have at age 10 and a doubling across the two ages of the (albeit small) proportion of

children indicating they would respond with aggression. A greater number of the study children said they would seek their parents' help if their first response to receiving a hard time did not work.

Task-assessed competencies

? Literacy ? Mathematics ? Logical Problem-Solving

- Children in Year 8 had slightly higher scores on average than the children in Year 7 for the Burt Word Reading Test, writing task and reading age, but not for mathematics or the Progressive Achievement Test (PAT) in Reading Comprehension.
- The average reading age on the PAT Reading Comprehension was 12.0–12.6 years.
- The study children now recognised an average of 85 words out of the 110 on the Burt Word Reading (Vocabulary) Test.
- As at previous ages, the teachers' estimates of the children's reading age showed a median about a year above the children's chronological age, and they were increasingly aware of those who were lagging behind.
- The proportion of children estimated by their teachers to be reading below their chronological age had grown by age 12 to 27 percent (from 20 percent at age 10 and 16 percent at age 8).
- All but 14 percent of the children wrote more than 15 lines about something interesting they had seen or done, their favourite book or their favourite television programme.
- Most of the study children used correct punctuation and spelling within a simple range of syntax and provided an argument for their point of view that had at least some supporting ideas. Under half could vary sentence structure and order their ideas logically.
- The range of writing scores was wider at age 12 than at age 10, with slightly higher average scores for surface features than deep features.
- No clear patterns showing areas that were better or less understood than others emerged in the mathematics scores. Three-quarters of the children correctly answered a question asking for application of measurement; only 26 percent correctly answered a question seeking understanding of graphs.
- The study children now had a median score of 72 percent on the Standard Progressive Matrices task which we used to assess logical problem-solving, up from their median score of 63 percent when they were aged 10.
- The cognitive competencies were relatively strongly correlated, as were the social and attitudinal competencies other than curiosity.
- A path analysis showed relationships among the mathematics, literacy and communication scores. Communication—listening and speaking—was directly related to vocabulary, reading comprehension, writing and mathematics. Vocabulary performance contributed to performance in reading comprehension and writing; reading comprehension contributed to mathematics and writing.

Children's performance across time

- Overall, children's level of performance at age 5 was not a reliable guide to their level of performance at age 12 for literacy and the social and attitudinal measures.
- However, there was more consistency over time in the scores of children who were performing at high or low levels at nearly age 5, just before they reached school. For example, 77 percent of those who were in the top quartile of mathematics scores at age 5 had scores at or above the median at age 12, compared with 13 percent of those whose mathematics scores at nearly age 5 put them in the lowest quartile.
- Consistency firmed over time. Eighty-nine percent of the top quartile group for mathematics at age 10 scored at or above the median at age 12, compared with 4 percent of those in the lowest quartile group at age 10.

The contribution of early childhood education and of cumulative experiences at age 12

- Early childhood education quality was still contributing to the children's competency in mathematics and literacy at age 12.
- Family income levels when the children were nearly age 5 had more bearing than current family incomes on their competency at age 12.
- While high numbers of house shifts and changes of school disadvantaged some children, high levels of maternal qualification and family income appeared to be acting as buffers.
- Maternal qualification levels mattered more than family income for children's competency levels at age 12. (High parental qualification levels relate to the opportunities children have to use symbols and language from an early age. These experiences foster enjoyment, and enjoyment is associated with higher performance levels.)
- Competency levels at age 12 were not related to the kind of family a child was living in (i.e., one- or two-parent) or to whether the family had remained intact since the child was born.
- Age 12 competency levels were also unrelated to patterns of maternal employment from when the child was nearly age 5, or to current maternal employment.
- Few paths through school had run smoothly, with most children having experienced a problem that parents and teachers had resolved together, or a teacher they did not like. These experiences, however, did not influence competency at age 12 unless the problems continued.
- Children who had received consistent messages about the value of school from their parents' voluntary work at their school had higher average scores at age 12.
- The few children whose classes always numbered below 25 had higher scores at age 12 for mathematics, literacy and logical problem-solving.

- Children who had consistently attended high-decile schools had higher average scores at age 12. Little overall difference was evident between consistent attendance at state, state integrated and private schools, but those who had attended state integrated schools had higher scores for social skills with peers, and those who had attended private schools, for writing.
- Staying clear of bullying behaviour over the years, whether as victim, bully or both, benefited children.

The children's home experiences at age 12

Family Situation

- Just under half the children's mothers were in full-time employment, and just over half their fathers were working more than 40 hours a week on average.
- Parents needing help were more likely to call on friends than on family or neighbours, and children were more likely to talk to their mothers than fathers about school or what they were reading.

Activities

- Playing sports, hanging out with friends and watching television were the children's favourite non-school activities, with the girls more focused on friends and reading and the boys on playing electronic games and watching television. The study children were watching more television on average than at age 10. Boys liked cartoons, and girls liked soap operas and sitcoms.
- Ninety percent of the children had a computer in their home and spent nearly four hours a week using it. Boys' computer time centred more on games, music and surfing the Internet, girls on word processing, seeking information and using email and online chat rooms.
- Around two-thirds of the children enjoyed reading at home, with 45 percent identifying reading among their favourite out-of-school activities. Around half enjoyed writing and 45 percent working with numbers.
- Just under half the children were receiving sports coaching or performing arts/music lessons outside school. Sports and performing arts were also the main extracurricular activities done at school.
- Most had some money (either given or earned), with boys tending to spend it on games and toys, and girls on clothes and make-up.
- The boys' greater focus on action-based activities and the girls' on language and communication fitted with the slightly higher scores that the girls achieved in literacy and their higher scores for the social and attitudinal measures.

Feelings about Life at Home

- The 12-year-olds were somewhat more positive than they had been at age 10 that they were listened to, treated fairly, and got help if they needed it. Most felt they had interesting things to do at home. However, sizeable minorities reported being bored or told off or felt that their family showed little interest in their school life or homework.

- The children's views that showed most associations (either positive or negative) with their competency scores were with doing interesting things, being bored, helping out at home, getting help if needed, getting told off at home, and expectations being fair.

Engagement with Parents

- All the parents of the study children shared some activities with their 12-year-old children, notably socialising with other family or friends and transporting the children to their activities. Favoured activities with boys were watching sport and transporting them to activities, and with girls, shopping and talking. Children whose mothers had no qualification or whose families had low incomes shared fewer activities with their parents.
- Children whose parents mentioned just one or two shared activities scored lower on mathematics; children whose parents mentioned five to seven activities scored highest.
- Most parents had expectations or rules relating to schoolwork, housework, language and media use. Parents usually dealt with disagreements (only 1 percent of parents said they and their child never disagreed) by negotiation. The next main response was the parent exerting his/her authority. Children whose parents negotiated with them had higher average scores than children whose parents let them win.
- Help around the house, self-esteem, and behaviour at home were the main areas of parental concern in relation to their 12-year-old. However, around two-thirds of the parents had no concerns about their child in terms of these factors or the child's friendships, interests or school. Children for whom parents held some concerns generally had lower average scores on the competency measures.

Relationships with Peers

- Friendships were very important to the children at age 12. Boys were much more likely to spend time with friends in physical activity or playing games, and girls to spend time talking and shopping. Just over half the study children identified something negative about their friendships, as well as their positive aspects. Around 12 percent had mainly aimless friendships, and 3 percent did not have good friendships.
- Bullying frequency at age 12 was much the same as it had been at age 10. Around a quarter of the 12-year-olds reported being bullied and 15 percent said they had bullied another child in the last few months. Most bullying occurred at school and was verbal. A child's main response to bullying was to ignore it or seek help from a teacher or parent.

Children's Values

- Enjoyment of life and doing well at school or sport were the most important values for the study children at age 12, followed by being with family, having lots of friends and being helpful or kind. A happy family life and then good health were deemed of most importance in their adulthood. Twice as many children saw having an interesting job in adulthood as more important than having lots of money.

The children's school experiences at age 12

School Characteristics

- Most children had more than one teacher, and two-thirds were being taught in composite classes. The average class size was 28.
- Teachers thought that the general level of parental and peer support for the schoolwork of the children in their classroom was very high on average.

Enjoyment of School

- According to parents, 75 percent of the study children were enjoying school at age 12, with 77 percent liking their current teacher and girls slightly more enthusiastic than boys about school. Children's overall attitudes to school most related to maternal qualification and to a lesser extent to their current achievement levels, with lower average scores for children who were bored or unhappy.
- The children were generally positive about school. Seventy-one percent scored highly on a factor relating to engagement in school that drew together experiences of enjoyment, support, fairness and belief in the value of the work of school. However, 16 percent had medium-high scores on a factor related to feeling distress at school, and boys were somewhat less positive than girls about school and showed less engagement in it.
- Children who enjoyed reading and did not watch a lot of television were more likely to find school engaging. Distress at school, however, was unrelated to enjoyment of reading or amount of television watched. Some feelings about school were associated with maternal qualification and a few with ethnicity, but there were no associations with family income and school characteristics.
- The children's feelings about school were related to their competency levels. The feelings with the most associations were those about school work itself. Feelings about interaction with teachers, relations with peers and engagement with learning and achieving were also important. Feelings about their interaction with teachers were particularly related to mathematics scores.

Homework

- The children spent an average of 3.31 hours on homework, and 94 percent of parents said they or someone else in the house helped the child with homework. Around half the children had difficulty completing their homework, mainly because of out-of-school interests, the difficulty of the work or family obligations. Those children who spent at least an hour a week on homework and whose teachers said they always completed their homework had higher average scores for the cognitive competencies.
- Just under half the children thought it very important to do homework (49 percent). The children's views on this matter were unrelated to their competency scores.

Doing Well at School

- Children's ways of judging how well they were doing at school did not show clear-cut groupings in terms of attributions to either their own ability or effort or in terms of extrinsic or intrinsic indications.

Lower average scores were, however, evident for those children who equated doing well with not having anything hard to do.

- At age 12, teachers were more likely than they had been at the younger ages to describe the children as having a sense of humour and liking a challenge. They saw around half of the children as mature, reliable, kind or well-behaved, an increase from previous ages, and girls more likely than boys to exhibit these characteristics. Children whose mothers had a university qualification appeared to be more confident overall.
- Children who were seen by their teachers as making very good or excellent progress were those most likely to be described as having such attributes as maturity, confidence and liking a challenge, although some attributes (for example, kindness, having a sense of humour) were evident in much the same degree across all the achievement levels.
- The majority of the children had teachers who felt they could make a difference to the children's learning. However, 37 percent had teachers who felt they could make some difference, and 8 percent, teachers who thought they could make only a little difference. Teachers felt more confident working with children who are already working well than with children who are struggling.
- Most parents (88 percent) said they felt comfortable talking with their child's teacher about their child, but fewer were working with teachers to resolve any problems at age 12 than was the case at the earlier ages. Associations were found between academic problems and below-average progress, but not with social-emotional problems.
- The 30 percent of parents who had reservations or were dissatisfied with their child's progress at school was a somewhat larger proportion than at previous ages. While these parents were likely to work with teachers to solve problems, they were more likely to be uncomfortable talking with the teacher and to want to change something in the classroom, such as classroom resources. Parental satisfaction was unrelated to family characteristics, but was related to children not making progress or being bored.

Plans for the Future

- Decisions as to which secondary school a child would attend had been made or were being made for most of the children. Parents and children were tending to share the decision-making.
- Many of the 12-year-olds (59 percent) were looking forward to going to secondary school; only 15 percent (twice as many of whom were boys than girls) were definitely not looking forward to doing so. Those who were not looking forward to or who felt unsure thought the work at secondary school might be too hard or the social environment difficult.