**Australian Government**
**Department of Social Services**

# National Centre for Longitudinal Data

# School/preschool enrolment of Indigenous children

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This research uses *Footprints in Time:* The Longitudinal Study of Indigenous Children (LSIC) to understand the incidence as well as the key determinants of school enrolment of Indigenous children. The *Footprints in Time* data has been collected annually since 2008 from two birth cohorts of Indigenous children (1,759 children in total) and their parents and teachers. Children in the younger cohort (about 1,000) were mostly born between December 2006 and November 2007, and children in the older cohort (about 750) between December 2003 and November 2004.

'School' in this research covers various educational institutions, including primary school and other institutions offering transitional education to primary school, which are referred to differently by jurisdictions; for example, kindergarten and preschool. They are generally termed school hereafter for brevity.

This research uses the first five waves of the *Footprints in Time* data. The *Footprints in Time* study provides enrolment information for the older cohort children in all the five waves and for the younger cohort in waves 4 and 5.

Primary and junior secondary schooling (typically from age 6 until at least age 15) is compulsory in Australia. Consequently, the rate of school enrolment of 6 to 15-year-olds at the national level is close to 100 per cent. The enrolment rate of Indigenous children in this age group is also high, ranging from 97.6 per cent in 2008 to 103.6 per cent in 2010 (percentages greater than 100 are due to double counting caused by simultaneous cross-border enrolments).[i]

## School enrolment and main reasons for non-enrolment using *Footprints in Time* data

Table 1 reports enrolment rates and main reasons for non-enrolment by child age. While the compulsory age for school is either 5 (in Tasmania), or 6 years (in all other states and territories), most Australian children start school one year earlier. Preschool enrolment is not compulsory and is usually 15 hours a week.

### Table 1: School enrolment rates and reasons for non-enrolment, by child age

| | Age 4 | | Age 5 | | Age 6 | |
|---|---|---|---|---|---|---|
| | *N* | *%* | *N* | *%* | *N* | *%* |
| *Total sample:* | *1,504* | *100* | *1,070* | *100* | *604* | *100* |
| Enrolled in primary school | 1,075 | 71.5 | 992 | 92.7 | 598 | 99 |
| Not enrolled in primary school (may be enrolled in other education types) | 429 | 28.5 | 78 | 7.3 | 6 | 1 |
| *Main reasons for non-enrolment, asked where child is not enrolled in school/preschool/childcare/daycare:* | *331* | *100* | *67* | *100* | *6* | *100* |
| Child is too young | 94 | 28.4 | 10 | 14.9 | | |
| Have decided not to send child yet | 50 | 15.1 | 10 | 14.9 | 1 | 16.7 |
| Other | 41 | 12.4 | 22 | 32.8 | 5 | 83.3 |
| Child does not need it | 34 | 10.3 | 4 | 6 | | |
| Child would be unsettled at school | 33 | 10 | 1 | 1.5 | | |
| Cost is too high | 26 | 7.9 | 4 | 6 | | |
| Cannot get a place | 17 | 5.1 | 3 | 4.5 | | |
| Not available locally | 13 | 3.9 | 3 | 4.5 | | |
| Don't feel comfortable dealing with school | 4 | 1.2 | | | | |
| Transport problems | 3 | 0.9 | 5 | 7.5 | | |
| Attends childcare (so doesn't go to school) | 3 | 0.9 | 2 | 3 | | |
| Child has disability or special needs | 2 | 0.6 | 1 | 1.5 | | |
| Not flexible enough/unsuitable times | 2 | 0.6 | 1 | 1.5 | | |
| Concerned with quality of program | 2 | 0.6 | | | | |
| Family/partner does not approve | 2 | 0.6 | 1 | 1.5 | | |
| Do not want child taught by non-Indigenous carers | 2 | 0.6 | | | | |
| No other Indigenous children at school | 1 | 0.3 | | | | |
| No cultural program available | 1 | 0.3 | | | | |
| Too much paperwork to complete | 1 | 0.3 | | | | |

Note: Since the observations of both cohorts at all five waves are pooled together for this analysis by age, the number of observations (i.e. *N*) in this table refers to person-wave rather than person. Children without valid enrolment information are excluded. A cell is left blank if no information is available or there is no observation. Main reasons for non-enrolment were not asked if the child was not enrolled in school/preschool but in childcare, day-care or family day care.

As shown in Table 1, school enrolment increases quickly with age, reaching 99.0 per cent by age 6. Only seven children aged six or older (including one aged 8) were not enrolled in school; six of them had been enrolled at a previous wave and three were known to have moved recently. No doubt the compulsory enrolment policy plays an important role in achieving this high rate.

A child being 'too young' is one of the most common reasons provided by primary carers for non-enrolment.[ii] As expected, this reason becomes less common as the children get older. Other frequently cited reasons include: 'cost is too high', 'child does not need it', 'child would be unsettled at school', 'have decided not to send child yet', 'transport problems', and school availability/accessibility issues. A small number of 'other' responses not specified in the table included moving home, family travelling, waiting on a birth certificate to enrol the child, and parent wanting to look after the child at home.

## School enrolment and characteristics of Indigenous children and family

Table 2 lists by child age selected characteristics of children and their parents/family that are (statistically) significantly different[iii] by enrolment status. These significant characteristics are:

- **Child age (in months)**: children not enrolled in school were significantly younger than those enrolled at the same age in years (by 1 to 2 months).

- **Child developmental measures**: children not enrolled in school had significantly lower *Who Am I?* (WAI)[iv] and Renfrew vocabulary scores[v] than their enrolled peers of roughly the same age.

- **Moving house**: children not enrolled in school were significantly more likely to have recently moved house.

- **Education and employment of primary carers**: children not enrolled in school were significantly more likely to have a parent with an education level of Year 11 or below, or who was not employed.

- **Level and sources of family income**:[vi] For children not enrolled in school, family income was more likely to be less than $250 per week (after deductions), more likely to be from government benefits and less likely to be from wages or salaries. In addition, income management[vii] is found to be positively associated with school enrolment.

- **Major life events**: Specific major life events experienced by the study child, the primary carer or a close family member in the last year were examined. Only one event was found to be significantly associated with (higher) enrolment, that is, the primary carer or a close family member having been badly hurt or sick in the last year.

- **Primary care having clear rules and routines** (only available at wave 5): the primary carers of children enrolled in school were significantly more likely to report having clear rules and routines than the carers of children of the same age who were not enrolled.

**Table 2: Selected characteristics of children and primary carers by child age and school enrolment (*E* = enrolled, *NE* = not enrolled)**

| | Age 4 | | Age 5 | |
|---|---|---|---|---|
| | *E* | *NE* | *E* | *NE* |
| *Total number of observations (person-waves)^* | 1,075 | 429 | 992 | 78 |
| *Characteristics of child:* | | | | |
| Mean age of child (months) | 53.8 | 52.8 | 65.0 | 62.7 |
| Mean Renfrew word finding vocabulary score (0–50)[†] | 21.3 | 19.1 | 26.3 | 22.4 |
| Mean short-form *Who Am I?* (WAI) score at waves 1 and 4 (0–28)[†] | 15.4 | 14.4 | 18.9 | 15.1 |
| Mean long-form *Who Am I?* (WAI) score at waves 2, 3 and 5 (0–44)[†] | 21.4 | 19.6 | 27.8 | 21.4 |
| Child living at different address since last interview (%) | 20.8 | 29.3 | 21.8 | 39.7 |
| *Characteristics of primary carer:* | | | | |
| Primary carer having Year 11 or below education (%) | 35.6 | 46.4 | 37.1 | 62.7 |
| Primary carer employed (%) | 37.9 | 23.8 | 36.9 | 19.5 |
| Income after deductions less than $250 per week (%) | 13.3 | 20.8 | 14.5 | 25.8 |
| Source of income – government benefits (%)[‡] | 73.6 | 83.8 | 75.6 | 93.6 |
| Source of income – wages/salary (%)[‡] | 54.5 | 38.3 | 48.9 | 29.5 |
| Primary carer affected by income management (%) | 7.4 | 3.3 | 8.0 | 1.3 |
| Primary carer or a close family member badly hurt/sick in the last year (%) | 16.2 | 11.0 | 15.7 | 6.6 |
| Primary carer has clear rules and routines (wave 5 only) (%) | 95.0 | 86.8 | 91.9 | 79.3 |

Note: Children in both cohorts in all five waves are pooled together. Children for whom valid enrolment information is not available are excluded. All pairs of statistics for the enrolled (*E*) and not enrolled (*NE*) children in this table are significantly different at the 5% level (t-test).
^The actual number of observations varies by characteristic.
[†]Renfrew and WAI scores are only available at waves 1–3 for the older cohort children and at waves 4–5 for the younger cohort.
[‡]Main source of income was asked at waves 1 and 2 and all sources of income were asked at other waves. Either way, the categories of wages/salary and government benefits are not mutually exclusive.

## Significant influencing factors of school enrolment of Indigenous children

Multivariate analysis of the school enrolment of children aged 4–6 years (or 48–83 months) was conducted to take into consideration multiple (including unobserved) factors[viii]. Overall, the child characteristics (primarily age) explain greater variation in school enrolment than the characteristics of parent, family and location.

School enrolment increases significantly with age. Generally, holding other characteristics constant, one month of additional age increases the likelihood of school enrolment by 12–18 per cent.

The older cohort children, on average, had a lower probability of enrolment than younger cohort children of the same age, but the difference became smaller as child age increased.

About 87 per cent of the *Footprints in Time* children are Aboriginal, slightly less than 7 per cent are Torres Strait Islander, and the remaining 6 per cent are both Aboriginal and Torres Strait Islander. The Aboriginal children had a higher enrolment rate than Torres Strait Islander children with similar characteristics, especially compared to those who are both Aboriginal and Torres Strait Islander.

Low income (i.e. family income less than $250 per week) and having other child(ren) in the household are both associated with a lower probability of school enrolment, and the probability is even lower if a low income household also has one or more additional children. This is consistent with the parental report that high cost was a main reason for non-enrolment (see Table 1).

A lower level of education (i.e. having Year 11 or below education) on the part of the primary carer is associated with a significantly lower likelihood of school enrolment, as is the receipt of government benefits. By contrast, parental employment predicts a higher enrolment.

The odds of enrolment are estimated to be three to four times higher if the primary carer is affected by income management. One objective of the income management policy is to improve school enrolment and attendance.

As with the descriptive analysis reported above, the multivariate analysis finds a significantly positive association between school enrolment and serious injury or sickness of a family member in the last year. Informal care available at home may be negatively affected by the injury or sickness, which in turn may encourage the parent enrolling the child in school.

Location also matters for school enrolment. Level of Relative Isolation (LORI) is a remoteness classification indicating the relative distance from population centres of various sizes, originally designed for the Western Australian Aboriginal Child Health Survey.[ix]

At the first interview (that is wave 1 for most children and wave 2 for a few late entrants), about a quarter of the *Footprints in Time* children were living in urban areas, about half in areas of low isolation, 16 per cent living of moderate isolation, and 11 per cent in areas of high/extreme isolation.

Children living in areas of low isolation (the largest category in the sample) had a significantly lower likelihood of school enrolment than those living in other areas.

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[i] Australian Curriculum, Assessment and Reporting Authority (ACARA) defines enrolment rate as the proportion of the 6 to 15-year-old population enrolled in school. Due to cross-border enrolments and migration (interstate/international), the reported rate can sometimes exceed 100 per cent. In particular, the Indigenous statistics are subject to a higher dual-enrolment occurrence across multiple schools, government and non-government school sectors and jurisdictions (ACARA 2012, *National report on schooling in Australia 2010*, ACARA, Sydney).

[ii] Since in most cases the primary carer of a study child is their parent (usually their mother), in this paper the two terms are used interchangeably.

[iii] If not otherwise specified, in this paper statistical significance is at the 5% level.

[iv] *Who am I?* (WAI) (de Lemos M & Doig B 1999, *Who Am I? Developmental Assessment Manual*, Australian Council for Education Research (ACER), Melbourne) is a developmental assessment that requires the child to write their name, copy shapes, and write letters, numbers and words in a small booklet, with simple instructions and encouragement from the interviewer. WAI is not language dependent and is suitable for children with limited English. Short-form WAI was used for the older cohort children at wave 1 and for the younger cohort children at wave 4; long-form WAI was used for the older cohort at waves 2 and 3 and for the younger cohort at wave 5.

[v] The Renfrew Word Finding Vocabulary Test (Renfrew C 1995, *The Renfrew Language Scales: Word Finding Vocabulary Test*, Speechmark Publishing Ltd, Bicester, UK) assesses children's expressive vocabulary. It assesses the extent to which pictures of objects, arranged in order of difficulty, can be named correctly.

[vi] Family income refers to income the primary carer and partner usually receive per week from all sources, after deductions are taken out for tax and quarantined payments (available at all waves except for wave 3).

[vii] Income management is a government policy aimed at helping benefit recipients manage their money to meet essential household needs and expenses such as rent, bills, food and education; for more information, refer to the website of Department of Social Services at *https://www.dss.gov.au/our-responsibilities/families-and-children/programmes-services/income-management.* Across the five waves, about 12 per cent of the parents reported being affected by income management in at least one wave (about 4 to 8 per cent at each wave).

[viii] Logit models with robust standard errors and logit models with random effects are estimated.

[ix] Zubrick SR, Silburn SR, de Maio JA, Shepherd C, Griffin JA, Dalby RB, Mitrou FG, Lawrence DM, Hayward C, Pearson G, Milroy H, Milroy J & Cox A 2006, *The Western Australian Aboriginal Child Health Survey: improving the educational experiences of Aboriginal Children and Young People*, Curtin University of Technology and Telethon Institute for Child Health Research, Perth. One distinctive feature of LORI is that it takes account of Indigenous language and other culturally specific geographic characteristics in its design.

A more complete version of this research is available in: **Yu P 2015, School enrolment and attendance of Indigenous children: an analysis using *Footprints in Time* data, National Centre of Longitudinal Data, DSS, Canberra.**