School enrolment and attendance

In his statement to the House of Representatives in February 2014, Prime Minister Tony Abbott proposed adding a new target to the existing Closing the Gap targets: 'namely to end the gap between Indigenous and non-Indigenous school attendance within five years' (Abbott 2014). He pointed out that 'it's hard to be literate and numerate without attending school', and that the most basic target of all is 'the expectation that every child will attend school every day' (Abbott 2014). However, lack of sound evidence remains an obstacle for achieving this target (Purdie & Buckley 2010; Daraganova, Mullan & Edwards 2014).

The *Footprints in Time* survey contains rich information on school engagement.[1] In this article we conduct a simple, descriptive analysis using *Footprints in Time* to understand the incidence of, as well as key reasons for, non-enrolment and non-attendance.

The analysis shows that

- Age is one of the most important factors for school enrolment—very few children are not enrolled in school by age 6—but age does not matter much for school attendance.
- Lower school readiness scores, poor parental education and having recently moved house are also associated with a higher probability of non-enrolment but not significantly related to absence from school.
- In contrast, health issues (other than long-term health conditions or disability) are a key influencing factor for school attendance but not significant for school enrolment.
- Financial factors matter for both enrolment and attendance but in different ways. Non-enrolment seems to be more related to ongoing disadvantaged financial status (e.g. low income and reliance on government benefits) whereas non-attendance is more associated with   day-to-day financial issues (e.g. experiencing financial stress).

School enrolment

In this report school enrolment is defined as enrolment in any preschool, kindergarten or school, which may be government, Catholic or independent/private. Enrolment information is available in all waves for the older cohort children and from Wave 4 onward for the younger cohort.

Table 26 reports school enrolment and main reasons for non-enrolment by child age. As very few children in the sample were not enrolled in school by age 6, we focus on ages 4 and 5.[2] It should be noted that children not enrolled in school were more likely to leave the survey before Wave 5, so enrolment at an older age is likely to be overestimated.

Obviously enrolment increases with age as shown in Table 26. Young age is also one of the most common reasons provided by the primary carers for non-enrolment. As expected, this reason becomes less common as the children get older.

Other main reasons for non-enrolment include: 'cost 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. 'Other' responses not included in the list of reasons become relatively more common at an older child age. These include such reasons as recent or

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[1] For brevity this article uses a general term of school to cover various educational institutions, including primary school and various other institutions offering transitional education to primary school, which are referred to differently by jurisdictions; for example, kindergarten and preschool. They can be specified for some children at some waves in the *Footprints in Time,* but not always. Education in Australia is compulsory from age 5 but different jurisdictions differ in the cut-off dates for enrolment.
[2] Only six children were not enrolled at age 6, none at age 7 and just one at age 8.

imminent family moves, waiting on documentation to enrol the child, and child being home schooled as the family is travelling. Health and disability are rarely identified as a consideration.

Table 26: School enrolment and reasons for non-enrolment, by child age

School enrolment	Age 4		Age 5		Age 6	
	N	%	N	%	N	%
Total sample:	1,504	100	1,070	100	604	100
Enrolled in school	1,075	71.5	992	92.7	598	99.0
Not enrolled in school	429	28.5	78	7.3	6	1.0
Main reasons for non-enrolment:	331	100	67	100	6	100
Child does not need it	34	10.3	4	6.0	–	–
Child has disability or special needs	2	0.6	1	1.5	–	
Child would be unsettled at school	33	10.0	1	1.5	–	–
Child is too young	94	28.4	10	14.9	–	–
Transport problems	3	0.9	5	7.5	–	–
Not available locally	13	3.9	3	4.5	–	–
Cannot get a place	17	5.1	3	4.5	–	–
Cost is too high	26	7.9	4	6.0	–	–
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	–	–
Don't feel comfortable dealing with school	4	1.2	–	–	-	–
Have decided not to send child yet	50	15.1	10	14.9	1	16.7
No other Indigenous children at school	1	0.3	–	–	–	–
Do not want child taught by non-Indigenous carers	2	0.6	–	–	–	–
No cultural program available	1	0.3	–	–	–	–
Too much paperwork to complete	1	0.3	–	–	–	–
Attends childcare (so doesn't go to school)	3	0.9	2	3.0	–	–
Other	41	12.4	22	32.8	5	83.3

Note: Since the observations of both cohorts at all five waves were pooled together for the analysis by age, the number of observations (i.e., N) in this table refers to person-wave rather than person. Statistics for age 6 (only 6 children not enrolled) are for reference only. Children without valid enrolment information were excluded.
– Data not available or no observations.

Table 27 lists by child age selected characteristics of children and their primary carers, which are all statistically significantly different by enrolment status:

- **Age** (in months): children not enrolled in school were significantly younger than those enrolled (by one month among the children aged 4 and by more than two months among those aged 5).[3]
- **Developmental measures**: children not enrolled in school had significantly lower Who am I? (WAI) and Renfrew vocabulary scores[4] than their enrolled peers of roughly the same age. Further tests show that among children not enrolled at a previous interview, those enrolled now have significantly higher Renfrew test scores than those still not enrolled (after controlling for age and previous scores), indicating school enrolment significantly improves the test scores. Among children not yet enrolled, higher Renfrew scores are also associated with a slightly higher likelihood of enrolment at the next interview, but the relationship is not statistically significant after controlling for age. As such, it seems that the causal direction is more likely to be school enrolment leading to higher test scores than the other way around.
- **Moving house**: children not enrolled were significantly more likely to have recently moved house than those enrolled.
- **Education and employment of primary carers**: children not enrolled in school were significantly more likely than those enrolled to have a primary carer with lower levels of education (Year 11 or below). They were also more likely to be not employed.
- **Family income**: for children not enrolled in school, family income after deductions was more likely to be less than $250 per week, more likely to be from government benefits, and less likely to be from wage or salary in comparison to children enrolled in school. This is consistent with the reported reason by primary carers that cost is too high.
- **Major life events**: compared to children enrolled in school, children not enrolled in school were significantly less likely to have a primary carer or close family member who had been badly hurt or sick in the last year.
- **Primary carers having clear rules and routines** (only available at Wave 5): the primary carers of children enrolled in school were significantly more likely to have clear rules and routines than the primary carers of children of the same age and not enrolled in school.

Other characteristics of the child, primary carer and family were also examined but were not consistently statistically significant across ages. Other child characteristics examined include: sex, health, disability, serious injury or sickness in the last 12 months, and being scared by other people. Other primary carer characteristics include: sex, age, partnering status, working full-time, experiencing financial stress in the last 12 months, and having concerns about children's behaviour or development. Other household/family characteristics include: household composition, and level of relative isolation (LORI) of area.

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[3] Age is based on age in months at time of interview.
[4] Refer to Appendix B for information about these two measures.

Table 27: Selected characteristics of children and primary carers by child age and school enrolment (E = enrolled, NE = not enrolled)

Characteristics	Age 4		Age 5	
	E	NE	E	NE
Total number of observations (person-waves)^	1075	429	992	78
Characteristics of child:				
Average age of child (months)	53.8	52.8	65.0	62.7
Average Renfrew word finding vocabulary score (0–50)†	21.3	19.1	26.3	22.4
Average Who am I? (WAI) score (short-form at Waves 1 and 4 (0–28)) †	15.4	14.4	18.9	15.1
Average Who am I? (WAI) score (long-form 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—wage/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 or sick 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: Both young and older cohorts in all five waves are pooled together. Children without valid enrolment information were excluded. All the pairs of statistics for 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 were only available for children at young ages. In particular, short-form WAI was used for the older cohort children at Wave 1 and the younger cohort children at Wave 4 (possible values ranging from 0 to 28), and long-form WAI was used for the older cohort at Waves 2 and 3 and the younger cohort at Wave 5 (values ranging from 0 to 44).

* Main source of income was asked at Waves 1 and 2 and all sources of income were asked at other waves: families may have income from both wage/salary and government benefits.

School attendance

Information about school attendance is from a question asked of the primary carer each wave since Wave 2 about whether the study child went to school every day he/she was supposed to go last week. The attendance rate refers to the proportion of children attending school every day they were enrolled for in the week prior to interview. In cases where primary carers reported school absences due to the school not being available or open (e.g. for holidays), children were treated as having attended school every day (about 140 observations in Waves 3 to 5 in total).

Across waves among the 1,424 children whose primary carers ever provided school attendance information, 1,000 (70.2 per cent) had never been reported being absent from school in the week prior to the interview, 342 (24.0 per cent) had been reported absent at just one wave, 67 (4.7 per cent) at two waves, 14 (1.0 per cent) at three waves, and a single child at all the four waves from Wave 2 to Wave 5.[5] This seems to indicate that on the whole it is not the same children who are absent all the time. However, some caution should be exercised here as many children in the sample were not enrolled or had not participated in all waves of the survey. Further, the reference time is relatively short: the week before the interview.

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[5] The reported reason for this child's absence was illness or injury at all the four waves.

At any given wave primary carers reported more than 80 per cent of enrolled children attended school every day last week.[6] It is noteworthy that attendance defined in this way is not directly comparable with some other sources; in particular, it tends to be lower than using an alternative definition based on days attended/absent (e.g. total attended days divided by total enrolled days),[7] which is commonly used by states and territories (Daraganova, Mullan & Edwards 2014).

Parents play a key and often decisive role in the school attendance of a child, especially when the child is young. However, the child is not necessarily without influence; for instance, to avoid school they can pretend to be sick or just skip school without parental knowledge. As such, with respect to school attendance the child could be a joint decision maker. Teachers and peers at school are also among the potential key players in this matter.

According to the primary carers, the most common reason for non-attendance is injury or illness of the child, accounting for one-third to over half of the observations (see Table 28). Other main reasons include: the child did not want to go, family events, parent/guardian had illness or injury, lack of transport and cultural commitments. That some children were absent from school because they did not want to go is consistent with the conjecture of joint decision making and may also reflect the high importance that some Indigenous primary carers place on developing independence in their children (refer to the article 'Qualities valued by Indigenous primary carers').

Table 28: School attendance and main reasons for absence, by school year

School attendance	Preschool^		Pre-Year 1		Year 1		Year 2		Year 3	
	N	%	N	%	N	%	N	%	N	%
Total sample:	863	100	993	100	648	100	505	100	219	100
Attended school	728	84.4	812	81.8	548	84.6	430	85.1	191	87.2
Absent from school	135	15.6	181	18.2	100	15.4	75	14.9	28	12.8
Main reasons for absence:	133	100	179	100	99	100	75	100	27	100
Study child had illness/injury	65	48.9	96	53.6	54	54.6	35	46.7	9	33.3
Parent/guardian had illness/injury	5	3.8	11	6.2	7	7.1	4	5.3	1	3.7
Cultural commitments	3	2.2	4	2.2	1	1.0	–	–	2	7.4
Sorry business†	4	3.0	4	2.2	2	2.0	3	4.0	–	–
Study child didn't want to go	21	15.8	26	14.5	6	6.1	14	18.7	3	11.1
Family events	17	12.8	11	6.2	14	14.1	10	13.3	8	29.7
Lack of transport	1	0.7	8	4.5	1	1.0	3	4.0	–	–
Other	17	12.8	19	10.6	14	14.1	6	8.0	4	14.8

Note: Since the observations of both cohorts at all four waves with attendance information (i.e., Waves 2–5) were pooled together for the analysis by age, the number of observations in this table refers to person-wave rather than person. Only six children were attending Year 4.

^ Preschool refers to year before school.

† According to the Australian National Dictionary Centre, sorry business is a ceremony associated with death http://andc.anu.edu.au/australian-words/meanings-origins?field_alphabet_value=241.

– Data not available or no observations.

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[6] As the attendance is based on primary carer report, absences unknown by primary carers are not counted. However, considering the young ages of the *Footprints in Time* children in the current study, there are not likely be many such cases. Nonetheless, the attendance rates reported here may be slightly overestimated.

[7] The article "Keeping children at school" in this report examines attendance based on proportion of days attended as reported by the teacher.

While the reasons provided by the primary carers may be the direct causes of school absence, the reasons themselves and thus school absence may be affected by other more fundamental factors. For instance, why did children not want to go to school?

Table 29 compares a few select characteristics of children and primary carers by school attendance status and may help understand the key influencing factors of school attendance/absence. The patterns are much more complex than those observed for school enrolment.

- The most consistent finding from Table 29 is that the primary carers of children having not attended school every day in the previous week were more likely to have experienced financial stress in the last year than the carers of children having attended school every day. The differences are statistically significant for all year levels considered except for Year 3, where the sample size is relatively small (191 children attended school and 28 children absent) and thus the results are less reliable.
- Differences are also observed, though not always statistically significant, in the primary carer's employment status and main source of income. Generally the primary carers of children having attended school every day last week were more likely to be employed and have their main source of income from wage or salary (rather than government benefits).
- We expect school-related factors such as bullying and relationships with teachers and other students to be important for school attendance (Purdie & Buckley 2010; Teasley 2004). Unfortunately these questions were not asked to all children at all waves in the same way, which makes the analysis difficult. Nonetheless, Table 29 indicates that school attendance is positively associated with good relationships with teachers and other students and negatively associated with bad school experiences such as bullying. This may explain why some children did not want to go to school.
- Table 29 also shows a few negative trends across school years. Firstly, school bullying tends to increase with school year. Secondly, in contrast to bullying, the proportion of children who like their teachers tends to decrease with school year although a vast majority of them like their teachers in all year levels (from 93.1 per cent at year before school to 84.3 per cent at Year 3). Thirdly, fewer children at a higher school year report their teacher is nice to them (from 88.7 per cent at pre-Year 1 to 76.7 per cent at Year 3). In addition, nearly one-third of children (ranging from 28.2 per cent at pre-Year 1 to 35.7 per cent at Year 2) thought other school kids were not nice to them.

Many other characteristics of children, primary carers and family have been investigated and their associations with attendance have not been found to be consistently statistically significant. While their statistics are not reported in Table 29, a few points are worthy of note:

- First, according to the reports of the primary carers, illness and injury of the child is the most common reason for school absence, and indeed we find children absent from school sometime in the previous week were more likely than those having attended school every day to have poor or fair health and to have been badly hurt or sick in the last 12 months. However, the differences were not always statistically significant. This result may reflect differences in the parental assessment of a child's general health overall and any particular injury or illness that affected school attendance in the previous week (e.g. catching flu). They are certainly correlated but still quite different. In most cases whether a parent/guardian has been badly hurt or sick in the last 12 months is not significantly different by school attendance either.

- Second, the level of family income is generally not statistically significant by school attendance status, even though having experienced financial stress in the last 12 months generally is associated with a significantly higher probability of school absence. Note that having a low income is neither sufficient nor necessary for financial stress to occur; financial management skills and the availability of assistance and support (either from friends/relatives or the government) are also important factors.
- Third, independent or private schools generally have the highest attendance rates (about 94 per cent), followed by government schools (about 84 per cent) and then Catholic schools (about 82 per cent), but the differences are not statistically significant.

Table 29: Select characteristics of children and primary carers by school year and school attendance (A = attended every day, NA = not attended every day)

Characteristics	Preschool^		Pre-Year 1		Year 1		Year 2		Year 3	
	A	NA	A	NA	A	NA	A	NA	A	NA
Total number of observations (person-waves)	728	135	812	181	548	100	430	75	191	28
Characteristics of child:										
Average age of child (months)	54.5	53.9	65.4	66.0	77.8	77.0	91.3	91.8	99.8	101.6
Average Renfrew word finding vocabulary score (0–50)	22.6	21.4	26.2	24.9	30.3	31.1	23.5	32.0#	–	–
Average Who am I?(WAI) score (short-form at Wave 4) (0–28)	14.0	14.1	16.6	17.2#	14.7#	27.0#	–	–	–	–
Average WAI score (long-form at Waves 2, 3 and 5) (0–44)	21.7	21.3	27.9	27.4	34.1	32.5	32.9	26.5#	–	–
Characteristics of primary carer:										
Primary carer employed (%)	37.7	27.6	39.0	29.6	40.8	31.0	46.7	37.3	41.5	50.0
Source of income—government benefits (%)†	77.0	87.4	74.3	81.0	78.0	87.0	82.1	82.7	84.7	78.6
Source of income—wage/salary (%)†	54.4	43.0	53.1	41.9	56.3	50.0	57.9	49.3	53.2	60.7
Experiencing financial stress last year (%)	38.8	53.8	45.0	56.7	41.4	55.2	42.0	57.3	49.7	57.1
Primary carer affected by income management (%)	7.7	11.9	7.1	7.7	6.0	7.0	10.3	2.7	11.1	7.1
School related factors:										
Study child was bullied at school (%)*	–	–	19.9	27.7	24.8	31.6	32.1	35.7	29.3	48.1
Study child was bullied at school for being Indigenous (%)•	4.6	4.6	9.4	9.3	7.8	12.1	8.7	20.7	–	–
Study child likes teacher (%)	94.3	86.0	91.5	90.1	89.6	86.7	86.8	81.2	84.7	80.8
Study child likes school (%)	94.2	84.4	93.3	90.9	95.7	87.5	–	–	–	–
Teacher nice to study child (%)	–	–	88.6	88.7	83.6	80.5	81.8	70.8	78.8	61.5
Other kids nice to study child at school (%)	–	–	75.6	56.5	68.7	56.4	65.1	60.6	69.7	57.7

Notes: Both younger and older cohorts in all the four waves with attendance information (i.e., Waves 2–5) are pooled together; the attendance questions were only asked for the children enrolled in school. In the pooled sample only six children were in Year 4, so Year 4 is not included. A cell is left blank if no information is available or there are too few observations with non-missing values. Bold pairs of statistics for attendees (A) and non-attendees (NA) are significantly different at the 5% level (t test).
^ The actual number of observations varies for each characteristic; for instance, short-form WAI was only used for the older cohort children at
Wave 1 and the younger cohort children at Wave 4, so virtually no short-form WAI scores were available for children aged 7 or 8 years (mostly attending Year 2 or above).
^^ Preschool refers to year before school.
† Main source of income was asked at Waves 1 and 2 and all sources of income were asked at other waves; families may have income from wage/salary and government benefits.
* Only available for the older cohort children at Waves 3 and 5.
• Available for the older cohort at Waves 2 and 4, and available for the younger cohort at Waves 4 and 5.
Less than ten observations in total.
– Data not available or no observations.

It should be noted that these findings are indicative only. Caution should be taken before drawing any firm conclusions based on the results, as they are mainly based on bivariate analyses and some important (maybe unobserved) factors are not taken into consideration. While the results reported by child age for enrolment and by school year for attendance are certainly of interest, they hide differences between cohorts and across waves (years), which are left for further exploration with more complex techniques.

Finally, two relevant studies are particularly noteworthy. First, Biddle (2014) conducted multivariate analysis using Wave 3 of the *Footprints in Time* data and highlighted health as a critical determinant of school attendance. Main carer not being employed and family's main source of income not being wages or salaries were also found to be associated with a lower probability of school attendance but not statistically significant.

Second, using Waves 1 to 4 of the Longitudinal Study of Australian Children (LSAC) data, Daraganova, Mullan and Edwards (2014) found that Indigenous children, though under-represented in LSAC, were significantly (1.55 times) more likely than non-Indigenous children to be absent more frequently from school[8] at age 6–7 years (roughly the age of the older cohort *Footprints in Time* children at Waves 3 and 4). Other factors associated with school absence at age 6–7 years included: currently being enrolled in Pre-Year 1 (as opposed to Year 1), being bullied by classmates, being less school ready at 4–5 years old, having more emotional or behavioural problems, living in a family with a mother not working, living in a family on government income support benefits, and living in a regional area. This study recommended interventions targeting children's levels of school readiness, and supporting families with lower levels of education and children who are bullied at school in their early years.

For references and appendices cited in this research, please refer to the full version of the *Footprints in Time*: the Longitudinal Study of Indigenous Children Report from Wave 5.

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[8] Daraganova, Mullan and Edwards (2014) measure school attendance as number of days during which children of a particular age were absent from school during the relevant four-week period.