

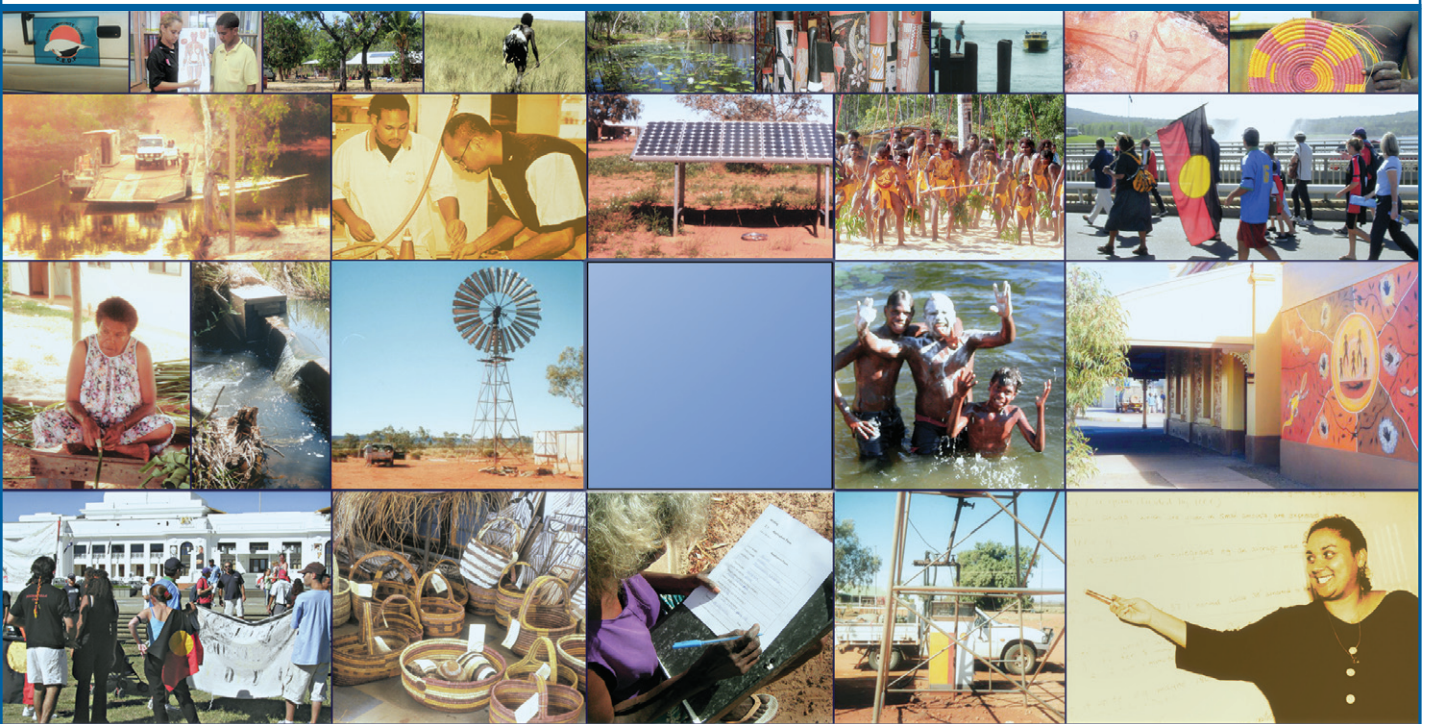
CENTRE FOR ABORIGINAL ECONOMIC
POLICY RESEARCH



Developing Measures of Population Mobility amongst Indigenous Primary School Students

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Ministerial Council for Aboriginal
and Torres Strait Islander Affairs



Developing measures of population mobility amongst Indigenous primary school students

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ABSTRACT

In the present era of evidence-based policy making in Indigenous affairs, where the monitoring and closure of socioeconomic gaps dominates the federal agenda, data have become paramount. Yet with regard to one of the cornerstones of the Labor government's 'Closing the Gaps' initiative—Indigenous education—the reliability of the evidence base has been repeatedly called into question. Further, existing educational administrative data, as they are conventionally reported, fail to elucidate some of the key structural drivers of Indigenous educational disadvantage. For example, reported enrolment and attendance data often present an incomplete picture of Indigenous engagement with the formal education sector because they are not collected or reported in ways that adequately illuminate the realities of Indigenous temporary mobility practices. Drawing upon textual analysis and interviews with relevant public servants, this paper summarises administrative data management systems in five State and Territory public education departments, as the basis for evaluating the relationship between existing data and the realities of student mobility. It argues that both enrolment and attendance collections have the potential to render these movements more visible to, and instructive for, educators and policy makers responsible for designing, implementing and evaluating the delivery of formal education programs to highly mobile Indigenous students. To this end, it canvasses a range of potential reforms. The paper concludes by calling for significant reconceptualising and adaptation from both practitioners and policy makers in order to leverage enrolment and attendance data as more meaningful evidence when evaluating Indigenous engagement with formal education systems.

Keywords: Mobility, Indigenous, school, education, attendance, enrolment, data, administration

CAEPR INDIGENOUS POPULATION PROJECT

This project has its genesis in a CAEPR report commissioned by the Ministerial Council for Aboriginal and Torres Strait Islander Affairs (MCATSIA) in 2005. The aim of the paper (published as CAEPR Discussion Paper No. 283) was to synthesise findings from a wide variety of regional and community-based demographic studies. What emerged was the identification of demographic 'hot spots'—particular Indigenous population dynamics in particular regions that give rise to issues of public policy concern. These trends spatially align with specific categories of place that transcend State and Territory boundaries. The 'hot spots' coalesce around several structural settings including city suburbs, regional towns, town camps, remote Indigenous towns, and outstations, as opposed to the more formal regionalised or jurisdictional spatial configurations that have tended to guide and inform Indigenous policy development.

Recognising that the structural circumstances facing Indigenous populations are locationally dispersed in this way, MCATSIA has established an enhanced research capacity at CAEPR to further explore the dynamics and regional geography of Indigenous population and socioeconomic change.

This research activity commenced in late 2007 and is constructed around four discrete yet overlapping projects:

- a detailed regional analysis of relative and absolute change in Indigenous social indicators
- an assessment of social and spatial mobility among Indigenous metropolitan populations
- case-study analyses of multiple disadvantage in select city neighbourhoods and regional centres
- the development of conceptual and methodological approaches to the measurement of temporary short-term mobility.

Working Papers related to these projects are co-badged with MCATSIA and released as part of the CAEPR Working Paper Series. It should be noted that the views expressed in these publications are those of the researcher/s and do not necessarily represent the views of MCATSIA as a whole, or the views of individual jurisdictions.

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INTRODUCTION

In the present era of evidence-based policy making in Indigenous affairs, where the monitoring and closure of socioeconomic gaps dominates the federal agenda, data have become paramount. Yet, as the government acknowledges, demographic and administrative datasets from which relevant information can be sourced are often incomplete or incomparable. Further, data and analyses that may render legible to the State some of the structural drivers of Indigenous disadvantage—such as inappropriate and administratively burdensome service delivery frameworks, governance structures and funding models (Dwyer et al. 2009; Hunt 2008)—are often obscured within the formal policy discourse. The outcomes of this unbalanced 'data' focus range from bureaucratic inertia to an entrenchment of deep colonising practices (Rose 1999).

Indigenous education is one of the arenas in which the 'evidence' has been consistently contested. In 2008, the federal government committed to halve the gap in literacy and numeracy outcomes for Indigenous Australians within a decade. Low enrolment and attendance rates amongst Indigenous students were identified as leading causes of these gaps. However, over the course of the past decade, numerous government and research reports have rigorously argued for the reform of existing systems for generating and analysing these data (Bourke, Rigby & Burden 2000; Collins 1999; Groome & Hamilton 1995; KPMG Consulting 2000a; Whyatt, Carbines & Robb 2004). These reports convey deep reservations about the accuracy and robustness of Indigenous attendance and enrolment data. The former is a key performance indicator for schools and student cohorts. The latter is the most pivotal consideration in how State and Territories allocate funding, staff and resources to their schools. As the summaries in the appendix of this paper attest, most States and Territories have moved to respond to these reports in the last five years by developing more streamlined and electronic systems for collecting and managing student administrative data. Consequently there is now greater potential to produce more robust evidence regarding Indigenous student enrolment, attendance and mobility.

An understanding of this mobility is important for positive reform because at present there is an incompatibility between the mode and style of formal education delivery in Australia and the residency practices of many Indigenous school-aged children. Formal education is delivered at fixed school sites using pedagogical frameworks that build incrementally upon foundations of knowledge. In other words, the education system is framed around assumptions that children reside within the school catchment area on a long-term basis and maintain an essentially continuous attendance record. However, Indigenous children and their families in many parts of the country, particularly the centre and north, maintain or access multiple residencies and traverse through and around these educational institutions with relative regularity.¹ These short-term population movements therefore have significant implications for how schools function. Scholars both nationally and internationally have documented the often pervasive impact of student mobility within education frameworks that do not accommodate it—from substantive additional administrative workloads, to classroom disruption and teacher burnout, to poor student outcomes (Aman 2008; Danaher, Danaher & Moriarty 2007; Danaher, Kenny & Leder 2009; Danaher, Wyer & Bartlett 1998; Franke, Isken & Parra 2003; Gray & Partington 2003; Hartman 2003; Henderson 2001; Malmgren & Gagnon 2005; Prout 2009; Rumberger 2003; Sorin & Ilsoe 2006). This literature also emphasises that such fractious educational experiences are often most acute for marginalised and minority populations who perpetually experience alienation within the formal school sector.

Despite the significant implications of such movements for school functionality, as well as Indigenous students' experiences of schooling and their educational outcomes, existing administrative data systems are not designed to consider, measure, or report on student mobility. Memmott, Long and Thompson note the counterproductiveness of this reality in relation to administrative data more broadly:

Given that mobility patterns have significant implications for services and policy, the researchers were surprised to find that very few service providers recorded data concerned with Aboriginal mobility. Furthermore, few services were able to readily access data concerning the numbers of Aboriginal people that used their service, the home-community of those people or where people had travelled from to use that service. For a number of services one would have thought that such data were critical to the effective day-to-day operation of the service, as well as planning for service delivery in the future. One would have also thought that such information would be critical to ensuring ongoing funding, justifying expenditure or to support requests for additional funds (Memmott, Long & Thompson 2006: 106).

The statistical realities of Indigenous student mobility are currently obscured within existing education administrative datasets. Indeed a series of recent research projects on Indigenous mobility and schooling in northern Australia, most of which are not yet published, have all required the researchers involved to set up independent databases for capturing and analysing relevant student administrative data (Dunn 2009; Hill, Lynch & Navin 2009; Prout & Yap 2010). Further, while various State and Territory education departments collect some data regarding student mobility, the information is usually limited to snapshot indicators of the percentages of intercensal school change and is not widely reported.

Paradoxically, these population dynamics also compromise administrative data quality. Reported enrolment and attendance data often present a nebulous picture of Indigenous engagement with the formal education sector because they are not collected or reported in ways that adequately account for and illuminate the realities of Indigenous temporary mobility practices. However, as the following analysis demonstrates, both measures have significant potential to render these movements more visible to, and instructive for educators and policy makers responsible for designing, implementing and evaluating the delivery of formal education programs to Indigenous students. Generating such visibility will require significant reconceptualising and adaptation, from both practitioners and policy makers, in order to leverage enrolment and attendance data as more meaningful evidence when evaluating Indigenous engagement with formal education systems.

The following discussion is based on a textual analysis of relevant education policies and administrative data system documentation regarding enrolment and attendance data collection, reporting and storage systems for public primary schools in five jurisdictions: Western Australia, South Australia, Northern Territory, Queensland and New South Wales. The vast proportion of Indigenous Australians (89.9%) live in these five States and Territories. Four (Western Australia, Northern Territory, Queensland and New South Wales) were selected because they have Indigenous populations of greater than 50,000. South Australia was also included because of its porous border with Western Australia and the Northern Territory, and the similarity of its internal Indigenous population distribution—across urban, regional and remote areas—to the other four jurisdictions. The analysis also draws on informal interviews and expert review from public servants and specialists within each of these jurisdictions' education departments, as a basis for crosschecking and contextualising available information. The analysis does not present representative quantifications of Indigenous student mobility across the nation, but rather outlines the processes required to enable policy makers and researchers to do so. The paper firstly explores how enrolment and then attendance data are collected and used in the public primary schooling system, evaluating how student mobility intersects with these processes. It then canvasses a series of possible reforms in both the collection and reporting of these data to improve not only their individual accuracy, but also to provide a more robust statistical evidence base for reform in both policy and practice relating to highly mobile Indigenous students.

The paper focuses only on data management in the primary schooling system for two reasons. First, processes for recording administrative student data, particularly regarding attendance, differ between high schools and primary schools, and the former were beyond the scope of the present study. Second,

as Prout and Yap (2010) have indicated, engagement with the formal school sector amongst Indigenous youth of high school age is often mediated by a series of distinctive considerations compared to that of primary-aged Indigenous children. These factors must be considered within discussions about data collection, reporting and management with regard to Indigenous secondary students, but were again beyond the scope of the present analysis.

ENROLMENT DATA AND INDIGENOUS STUDENT MOBILITY

School enrolment data are the most direct and weighted measure used to determine how and where government education departments allocate their funding and personnel. Most public school systems in Australia allocate funding, resources and staffing according to a specific formula that considers and weights some combination of the following:

- a) Geographical factors such as the school's relative remoteness, and the socioeconomic indexing of the neighbourhood, town or community within which it is located.
- b) The number of student enrolments and the characteristics of those students. Characteristics considered and weighted differently may include their study status (full-time or part-time), Indigeneity, learning difficulties, or physical disability.

Enrolment data used to inform these funding formulas are usually derived from school censuses taken in the first week of each year (to inform any necessary adjustments in the second half of the year), and in the middle of the school year (to derive allocations for the beginning of the following school year). Some States and Territories require that any duplicate enrolments be identified and eliminated at census time. If, for example, two or more schools have the same student registered on their current roll, only one of them will be allowed to retain that enrolment unless the student is genuinely studying part-time across two schools. Duplicate enrolments give an indication of not only the quality of a school's regular record-keeping, but also of the potential size and make-up of the most mobile cohort of students. Students with duplicate enrolments are likely to be those who move most frequently between schools. In South Australia, for example, interviewees explained that census processes regularly reveal that students on the Anangu, Pitjantjatjara and Yankunytjatjara Lands in the north-west corner of the State often appear in the records of at least two school sites. Interviewees described frequent mobility within that region, consistent with past research that described temporary Indigenous mobility as an enduring feature of life in the region (Hamilton 1987; Palmer & Brady 1988). More recent, though still dated, research has indicated that such movement between schools has also been common in regional parts of South Australia (KPMG Consulting 2000b).

In such areas where many Indigenous students are enrolled at two or more schools simultaneously, likely indicating bi-locale or multi-locale patterns of residency as their norm, it seems potentially counterproductive that school census process should insist that all students be presented by the data as though they have a single 'home' school, and presumably residency. Here, the education system attempts to fit student spatialities into their model, rather than to use the data to better understand and adapt the system to Indigenous modes of residency. In areas where Indigenous student mobility is high, using enrolment snapshots as the primary basis for allocating resources will ultimately fail to adequately resource schools whose actual service populations exceeds those snapshot indicators. For example, data from Prout and Yap's (2010) study of 2008 enrolment and attendance data at four primary schools in the West Kimberley, showed that in each school, the total Indigenous enrolments for the year (i.e. the service population) were between 1.23 and 1.58 times as large as the enrolled population in the second week of

school when the census was conducted. Data from that study also showed that while the net change in enrolments from beginning to end of year was small at each school, the composition of students changed dramatically over the course of the school year. In case-study schools, Indigenous student turnover ranged from 68 per cent to 152 per cent in 2008. This is well in excess of the 0–20 per cent 'normal range' established by Dobson, Henthorne and Lynas (2000). This student turnover was also distributed amongst a significant proportion of the total school population (Prout & Yap 2010).

Of course, these data are not representative of the spatial realities of Indigenous students across all regions in Australia. Further, as one expert reviewer of this paper pointed out, the notion of an education 'service population' as the basis for funding allocation really only works when students move regularly between certain schools and establish a set of enduring shared enrolments. It does not fit as well in situations where a community or town is populated and/or visited infrequently and its school population is usually attended at levels far below the total number of students that may pass through during the course of the year. Nevertheless more robust data regarding both of these types of situations is required to be able to develop more suitable resource allocation formulae and to reshape the delivery of formal education where the population dynamics warrant.

In recognition of these dynamics, and their potential implications for school resourcing, South Australia has introduced a student turnover measure to their school funding formula. Since students who have left any time within the preceding 15 months cannot be included by schools in their census figures, the 'mobility index' is an alternative means for schools to 'count' students who were enrolled at some stage. This count of 'students left' serves as a measure of movement between schools and assists the South Australian Department of Education and Children's Services (SA DECS) to develop a picture of the direction of student flows. It is not, however, a comprehensive measure of student turnover such as that developed by Dobson, Henthorne and Lynas (2000), called Joiners Plus Leavers (JPL). The JPL is derived from the sum of all non-promotional enrolments and exits, expressed as a percentage of the school's total enrolment. Developing and reporting on this measure of student mobility, especially when disaggregated by Indigenous status, would render the realities of Indigenous temporary mobility more statistically visible. It would also provide a more robust evidence base for reform in education delivery where the structures clearly are not compatible with the residency modes of students. Such measures could provide a basis for justifying more innovative practice in delivering education to Indigenous students in regions where high mobility is the norm (e.g. Fogarty 2005). Enrolment data quality and comparability, however, continues to be a major impediment to accurately reporting on student mobility or turnover rates.

SA DECS:

South Australian
Department of
Education and
Children's Services

JPL:

Joiners Plus Leavers

DATA QUALITY ISSUES

There are several reasons for poor data quality and comparability with regard to Indigenous primary school enrolment data. First, and most broadly, different States and Territories have different systems and policies in place to govern the processes of enrolling and exiting students. Queensland and New South Wales, for example, have recently introduced real-time, transactional, web-based systems for creating and managing student enrolments. In these new systems, a student's enrolment record is automatically transferred from one school to the next when they move. However, school-based rolls are not necessarily linked to this system and are therefore not automatically updated when student enrolments and exits occur.

In Western Australia and the Northern Territory, enrolments are still managed on an individual school basis. Admitting or removing students from the current roll, therefore, usually takes place on an ad hoc basis. Most enrolment policies stipulate that a child should be removed from the school roll if they have been absent for more than 15 consecutive school days and all attempts to determine their whereabouts and reason for absence have failed. However, in contexts where a subset of the Indigenous population is

frequently mobile, principals are often reticent to remove a student from the school roll, even in the face of considerable and extended absences, in case they return. The primary objective here is to ensure that their school census data reflect the total service population as closely as possible. Enrolment policies in both Western Australia and the Northern Territory also stipulate that once a school has received official notification that a child has presented at another school, the enrolment should be transferred. However, because of the considerable administrative workload involved in record development and/or transfer, many schools are reluctant to enrol a student if they know the child is essentially 'just visiting'. Sometimes, the new school will place the presenting student on an external roll for attendance marking, and transfer their attendance records back to the enrolling school at regular or intermittent intervals. Here, the data constructs a student as having been continuously in attendance at their enrolling school, though they were not. Enrolment data will not reflect actual school turnover rates, or individual student mobility practices.

The capacity of school-based enrolment data to accurately capture student turnover rates is further undermined when students move from their enrolling school, and either do not present at the school in their destination location, or the school in that locale is Catholic or independent. In the former instance, no transfer note is sent to the enrolling school, even though the student may have permanently relocated. The student's enrolment and attendance record may or may not be properly amended to reflect the reality. Because administrative data systems are not integrated across public, Catholic and independent school sectors, when a student presents at a Catholic or independent school, notification for record transfer rarely takes place. Many duplicate enrolment and attendance records are created as Indigenous students move between these sectors, and official moves are not registered within enrolment databases. The notable exception here is in South Australia, where all three sectors have signed an agreement on the transfer of student attendance and program information once the request is submitted by the enrolling school.

Instances of duplicate enrolments are theoretically reduced in jurisdictions that have unique identification numbers that move with a student across any public school in the State or Territory. Usually, a software program is used at enrolment to ensure that a given student's details are correctly matched to their existing record. The federal government recently announced that a new unique student identifier (USI) system would be rolled out nationwide. Recognising that student mobility was on the rise in Australia, the then Minister for Education indicated that this system would provide educators with a streamlined mechanism for better tracking students progress through their schooling, and for reconciling and distinguishing between school and student performance data (Gillard 2010). Such systems, however, are still vulnerable to the current complexities experienced in jurisdictions that do not use them. For example, one of the commonly cited scenarios that results in duplicate enrolment records for the same Indigenous child, particularly in northern and central Australia, is where a child uses different names depending on whose care they are in and in which community they are located. If this child does not carry their USI with them, the system used to match their personal information to an existing student number would fail. They would still likely generate two or more records within the centralised system.

Providing educators with a clear incentive to ensure that their enrolment records accurately reflect the actual movement of students through their school gate is arguably the most effective mechanism for improving the quality of school-generated Indigenous enrolment data generally. Perhaps the most attractive incentive for schools would be to introduce a mobility measure into funding formulas: a measure that includes entries and exits from both the current and external rolls. That is, students who were formally enrolled and exited from the roll, and those who were temporarily in attendance at a school while remaining officially enrolled elsewhere. Assuming that high reported student turnover rates result in additional funding for administrative support and/or developing and implementing innovative education programs for highly mobile students, school administrators would likely invest the necessary resources to record and report on student turnover rates.

USI:
unique student
identifier

ATTENDANCE DATA AND INDIGENOUS STUDENT MOBILITY

Mobility is, in fact, reported to be a major cause of non-attendance and to have serious consequences in relation to educational outcomes. Indigenous students not only move from one school to another more frequently than non-Indigenous students but, in traditionally oriented remote communities, family mobility associated with social and cultural obligations, which often entails lengthy student absences from school, is reported frequently in the literature (Bourke, Rigby & Burden 2000: 12).

The latest reported national attendance figures show that Indigenous attendance rates in government schools continue to be below those of non-Indigenous students, though the gap is narrowing. In 2006, Indigenous attendance rates at government primary schools varied widely in range but averaged at 86 per cent compared with 93 per cent for non-Indigenous students (Department of Education, Employment and Workplace Relations 2008). In their comprehensive review of Indigenous student attendance, Bourke, Rigby and Burden (2000) found that attendance rates were lowest in rural and remote areas and amongst older Indigenous students, with a trend toward decline in the last two decades. They also found that absences were more likely to be 'unexplained' for Indigenous students. The authors note, however, that there are many caveats to these generalisations. For example, data on Indigenous attendance in metropolitan areas are not always disaggregated, so comparing rates in cities with more sparsely settled parts of the country is problematic. This may skew the true picture of Indigenous attendance differences between remote and urban settings. Bourke, Rigby and Burden (2000) concluded that differences in the way absences are defined and recorded across jurisdictions were compromising in terms of developing an overall and robust picture of Indigenous student attendance. Though one might suspect these conclusions to be dated now in the face of more recent and widespread system overhauls, they remain essentially relevant. As States and Territories have introduced new data management systems, the recording of Indigenous attendance data at primary schools has improved. There are, however, still significant issues of process to be addressed in order for Indigenous attendance data to be comparable across jurisdictions. There are also fundamental limitations in the way that Indigenous attendance statistics are reported, in terms of their capacity to explain and be explained by temporary mobility practices.

There remains widespread variation even within jurisdictions and sectors regarding how and where attendance is recorded for particular students. As previously discussed, some schools place visiting students on an external roll and transfer the student's attendance record to the enrolling school. Here, school-based attendance data reflects actual student attendance rates, even though these do not reflect the location of attendance. However, because there is very little incentive for school administrators to manage external rolls—they receive no resourcing to manage these records—it is not necessarily common practice. Some schools do not transfer records because they lack sufficient clarity about which school would be considered the enrolling school for that child. In other instances students transfer between public, independent and Catholic sectors, where official exchanging of student records is less standardised. In these instances, where duplicate enrolments are established, a student's individual attendances are spread across more than one school site. Here, students are marked as absent for extended periods when they may in fact be attending elsewhere. If, for instance, their time is split equally between two schools, they will have an attendance rate of 50 per cent in both places, when their actual school attendance rate is 100 per cent. Regardless of the precise split, these dual enrolments have significant drag-down effects on school attendance rates and when reported in aggregated form, result in much lower Indigenous attendance rates reported than is actually the case. In Queensland, where all student records, including

absences, are stored in a central data pool, it is now possible for school districts to report Indigenous attendance rates from aggregated student-level data rather than from aggregated school-level data. These at least provide a marginally more accurate picture of overall Indigenous attendance.

Another significant limitation of current attendance reporting processes is the lack of longitudinal analysis. Often, reported attendance rates are derived from 1–4 week census periods during the year, rather than averages derived from complete, year-long attendance datasets. These snapshot attendance audits cannot provide any indication of how attendance rates change within that time, much less outside of the reporting period. Recent evidence shows that Indigenous attendance rates can change dramatically throughout the year, sometimes with peaks during the terms in which attendance audits are conducted (Prout & Yap 2010). These derived averages are therefore not necessarily accurate proxies of annual Indigenous student attendance rates.

In addition to refining the reporting of raw attendance data, there is also great potential to leverage attendance data to render Indigenous mobility practices more statistically visible. Most Indigenous temporary population movements take place over the short term, and are thus not registered within administrative data systems as official moves. They are more commonly 'hidden' within datasets as extended periods of unexplained absence when a child leaves their enrolling school and travels elsewhere on a temporary basis, even for several months. By the time the enrolling school has—*a*) removed the child from their roll after having exhausted all avenues for attempting to relocate the child; *b*) received notification for records to be transferred to another school; or *c*) is revisited by the child—they have usually accrued extended periods of 'unexplained absences'. Again, these prolonged absences can have a significant drag-down effect on overall school attendance rates, especially in communities with small student populations. Unsurprisingly, many of these smaller schools are located in the more sparsely populated centre and north of the country, where Indigenous student attendance rates are reported as lowest. It would be misleading to suggest that low reported attendance rates in remote areas are singularly the product of high mobility in those regions. Sufficient data do not exist to support such a claim and ethnographic analyses also indicate that many other factors lead to Indigenous disengagement with the formal school sector in many remote areas (Kral 2007; Schwab 1998). Nevertheless, some educators in these areas have expressed discontent that their performance is measured against low reported attendance rates, when the most common reason for non-attendance—student transiency—is, they feel, beyond their control.

Indeed reporting on absence-by-reason is something that few jurisdictions do as a matter of course. Yet these data would seem fundamental to developing effective policies for re-engaging 'at risk' students. For instance, non-attendance that is the product of student transiency, is markedly different from non-attendance that is the product of truancy. Each type of non-attendance will likely require different responses from schools. Reporting on the causes and patterns of Indigenous student absenteeism seems an important preliminary step in being able to develop meaningful and effective engagement initiatives.

Most States and Territories now have a list of official absence codes that are used to construct official records of student attendance. However, no State or Territory uses the same set of codes (see Appendix 1). In some jurisdictions, such as Western Australia and New South Wales, the codes are somewhat ambiguous and serve primarily to give an indication of the degree to which any absence is explained, rather than to describe the reason for absence. In other States, such as South Australia, there are probably too many codes for educators to realistically use. No State or Territory, however, has a code for student transiency or mobility. Generally, such absences are simply recorded as 'unexplained'. In fact, many absences that may not have been the product of student transiency are often left on records as 'unexplained' because schools lack the adequate resources to follow up with Indigenous families and determine the actual cause of the absence.

There is therefore no existing way to quantify what proportion of student absences are the product of short-term travels elsewhere. Were such a code introduced, schools, districts and education departments could begin to develop a more accurate picture of the proportion of Indigenous absenteeism that results from transiency, as opposed to that which is the product of other home, school, or psychological factors which militate against students attending school when they are in their town or community. Differentiating between these kinds of non-attendance within existing datasets would provide educators with a much clearer picture of the demographic and sociocultural dynamics at play for their students. It would also provide school administrators with a strong case (where it exists) for additional funding to respond effectively to high levels of student movement not captured within official enrolment records.

One education specialist interviewed to inform this analysis indicated that, in the region he worked, there were two types of Indigenous absenteeism that were closely associated with settlement type. The first, he referred to as truancy. Here he included all types of absenteeism that were not the product of temporary mobility. This was the most common type of Indigenous absenteeism in large towns and regional centres. There was also a group of students who came in and out of these locales from surrounding communities who never went to school. The second type of Indigenous absenteeism was student transiency. He indicated that in the remote communities of the region he oversaw, almost all Indigenous absenteeism was the product of transiency. Such spatialised patterns, if they exist, have important policy implications and could be quantified using existing administrative data systems if a mobility code was introduced.

PROSPECTS FOR REFORM

There are many possibilities for introducing reforms to existing education administrative data systems in order to improve the accuracy of attendance and enrolment datasets in relation to highly mobile Indigenous students generally, and to better capture the dynamics of these students' movements specifically. Some have been identified in the preceding discussion. In this section, those possibilities are set within the broader context of potential reform.

At the most broad level, the quality of Indigenous attendance, enrolment and mobility data will always be significantly undermined unless administrative data systems are standardised across the public, independent and Catholic school sectors in each State and Territory. Without consistent processes of communication and reporting across these systems, highly mobile Indigenous students regularly become 'lost' to each system, and their individual data are not reported accurately in aggregated form. In addition, considerable time is spent attempting to track or relocate students who move across these sectors. If these systems were standardised, fewer students would become 'lost', data gaps would dramatically reduce, and administrative workloads associated with tracking mobile students would decrease substantially.

There are also possibilities for constructive reform in terms of the way student administrative data are collected and reported. In canvassing these possibilities at district and State or Territory levels, policy discussions tend to circulate discursively around the concepts of adjusting attendance and enrolment collection processes to reduce the effect of student transiency on the data. This, for example, has also been the approach adopted in the developing Tri-border Attendance Strategy. This strategy was initiated as a result of recognition across the South Australian, Northern Territory and Western Australian governments that Indigenous students move regularly between communities along the State and Territory borders, often leading to high rates of reported school absenteeism. The aim of the strategy is to streamline data transfer processes and report on the actual attendance rates, across schools, for Indigenous students. Much like the OneSchool system in Queensland, the enrolment registration number (ERN) system in New South Wales (see Appendix 1), and new administrative arrangements currently being trialled in Western Australia's Ngaanyatjarra Lands, a centralised electronic warehouse is being developed where student

ERN:
enrolment
registration
number

enrolment data for all participating schools will be housed. Records will follow students wherever they go and attendance will be recorded into the system on an individual, rather than school, basis. Learning plans will also be transferable through the system. While these systems have clear administrative advantages, they do not generate explanatory or descriptive statistical data regarding the realities of Indigenous student mobility. It is possible, however, to both improve the quality of these data *and* render the dynamics of student transiency more visible through the way they are reported.

As we have seen, real-time transactional enrolment systems improve the quality of administrative data by reducing duplicate student records and manual tracking tasks. Because these centralised databases are not specifically linked to school rolls, however, data regarding the volume and patterns of student turnover through the individual school are not automatically constructed. So while individual student mobility trajectories can be tracked through this system, school turnover rates and shares are not. Yet such data are essential to being able to determine the size of the actual student population that schools are servicing, whether this increases or decreases at certain times of the year, if there are geographically patterned student flows between certain schools, and what areas or regions experience comparatively high and low rates of Indigenous student turnover. Recording these data in robust and comparable ways will require that jurisdictions agree on, and implement, a standardised process regarding the use of, and reporting of external rolls. Both enrolment and attendance data quality are fundamentally undermined when schools and districts employ different processes regarding the use of external rolls.² If jurisdictions decide to endorse the use of external rolls as standardised practice, these data on visiting students should also be included in turnover calculations.

Enhancing the capacity of enrolment information to be able to render student mobility more statistically visible will also require that school administrators make every effort to enter information into the 'source school' and 'destination school' fields of their student enrolment records. These data are critical to being able to map the geographical flows of students between schools. Once these data are available, schools can begin to report on not only how many students come through the school gate during the year (turnover rates and shares), but also which places fall within their student's mobility networks. This would allow policy makers to map the spatial dimensions of Indigenous student mobility. It would also provide educators with a clearer picture of which schools they 'share' students with and where they should consequently be focusing their efforts to build strong communication networks. Because recording these data at the school site involves a significant administrative input, educators require adequate incentive and support to maintain and report on these data. If annual turnover rates (by Indigenous status) were reported to central office and given consideration in funding indices, schools would be more likely to expend the necessary energy to ensure that their data reflects their demographic realities.

The same issues of data linkage and reporting requirements also undermine the quality of Indigenous student attendance data. Current school rolls (onto which attendance is marked) are uploaded into, rather than automatically linked to, centralised data management systems. Further, these data are reported in district and State or Territory collections on the basis of aggregated school-level data rather than aggregated student-level data. This is likely to have the effect of under-reporting actual Indigenous attendance rates in many parts of the country. Since some jurisdictions now upload individual student attendance data, these should now form the basis for aggregated rates by jurisdiction (across sectors), as is the case currently in Queensland, rather than aggregated rates taken from schools. This will give a more accurate indication of actual Indigenous attendance rates—especially for highly mobile students who may attend two or more schools regularly.

A second potential reform in the reporting of Indigenous attendance data, which would provide a considerably better basis for capturing the volume of Indigenous student transiency in any given region, is the introduction of a mobility code into existing absence code systems in each State and Territory.

Where attendance officers can determine through community networks that absences are the product of student transiency, school administrators could also record where the student is believed to have gone, in order to enhance geographical understandings of Indigenous temporary mobility practices. If schools received notification that a student had returned to their town or community, their absence should be changed to 'unexplained' to reflect this shift in circumstance. Moves identified using the mobility code might also be included in the student turnover calculations described above.

A mobility code has two important implications when it comes to Indigenous student attendance and transiency. First, having a mobility code would allow educators to report on what proportion of Indigenous absenteeism is a product of student truancy and what proportion is the product of student transiency. As with improving the management and maintenance of enrolment data, introducing this code would add a further administrative burden to schools. However, being able to report their attendance data in disaggregated form where transiency is distinguished from other forms of non-attendance would provide significant incentive to many educators who currently feel that their reporting does not reflect their reality. It would also provide policy makers with a more complete set of data regarding the actual nature of Indigenous engagement with the formal education sector. Second, a mobility code would enable the 'lag times' associated with Indigenous student mobility to be more accurately accounted for within the data. For example, code switching from 'mobility' to 'unexplained' when a student returns would allow schools to develop a clearer quantitative picture of the lag times between students returning their town or community, and then returning to school. Lag times between a student leaving their home community or town and presenting at a school in their destination location would also be accounted for within the data. Furthermore, if a student never presented at a school in their destination locale, their record would still reflect that their absence was a product of transiency.

CONCLUSION

The preceding analysis highlights a number of existing deficiencies and possibilities with regard to the capacity of Australian educators to more strategically collect and use student administrative data to better understand and engage with highly mobile Indigenous students. It has explored the way that existing systems often function to construct Indigenous students as more 'settled' than they often are. It has also demonstrated that existing data are rarely used to illuminate the incompatibility of fixed education delivery models with the fluid residency patterns of many Indigenous families.

It has advocated several reforms including standardised practice in relation to the use of external rolls, and the reporting of turnover rates, shares, and geographies as standard practice in each jurisdiction. It has also proposed that jurisdictions introduce a mobility code into their attendance marking systems and that, more broadly, attendance data be reported by Indigenous status on the basis of longitudinal aggregated student-level data rather than school-level data. There are two justifications for such reform. First, these enhanced data and measures could provide more effective and equitable means for allocating funding and resources to schools. Second, developing these measures would also provide a framework for analysing existing data in ways that provide a robust evidence base for positive educational reform.

In advocating for improvements to the way these data are collected and reported, this paper calls for a reflexivity in educational policy and planning. The chief end of collecting better data should not be to further discipline highly mobile Indigenous students or to entrench them within the plethora of existing deficits models of Indigenous education (KPMG Consulting 2002b). Rather, the aim is to provide a robust evidence base for increased creativity and innovation in delivering education to highly mobile Indigenous students. Interventions must move beyond the familiar terrain of simply raising awareness about the negative impacts of mobility, to examine where possible adaptations within educational practice might be warranted.

APPENDIX 1: SUMMARY OF PUBLIC EDUCATION DATA MANAGEMENT SYSTEMS IN THE FIVE CASE STUDY JURISDICTIONS

This appendix is intended to serve primarily as a reference point for policy makers and researchers seeking an overview of how enrolment and attendance data in public school systems are collected, reported and analysed in Western Australia, Northern Territory, South Australia, Queensland and New South Wales. These summaries are, essentially, the more detailed 'data' that inform the preceding analysis. Each section begins with a broad outline of the data management system in operation in each jurisdiction, followed by a specific account of how enrolment and attendance data are constructed and used.

WESTERN AUSTRALIA

Since 2004, administrative data in almost all Western Australian public schools has been electronically managed through the Student Information System (SIS) software package, located at each school site.³ The system has three streams: finance, curriculum, and administration. The latter is where all enrolment, attendance, and transfer records are entered and stored. SIS software stands alone on a school-based server but is connected to the central Student Administration Management System (SAMS) database in Perth, which harvests data nightly. This is a one-way communication process: schools cannot access the central database or the databases of other schools. Once in the SIS database, an in-house software program at central office collects and centrally stores all student-level enrolment records, histories, and performance data from each school site. This program also trawls nightly for new enrolments and investigates duplicates.

ENROLMENT

Though the Western Australian Department of Education and Training (WA DET) has a detailed policy regarding the required administrative considerations and process for enrolling and exiting students, different schools adopt different stances on whether or not they will accept enrolments for 'visiting' students. Some administrators exploit the maximum amount of flexibility within the enrolment policy to ensure that Indigenous families feel welcome at the school no matter how long they stay. Because of the potential effect on classrooms, other administrators are more concerned that guardians disclose the length of their intended stay, than that they produce the necessary proof of identity and residence. They stringently apply the full extent of the policy to insure against any waste of personnel resources and time on beginning an enrolment process that is never followed through. Indigenous families quickly become well versed in which schools might be open to temporary enrolments and which schools are not.

SIS:
Student
Information System

SAMS:
Student
Administration
Management
System

WA DET:
Western Australian
Department of
Education and
Training

The process of exiting students from the school roll is perhaps more complex and the policy more diffusely applied in contexts of high Indigenous mobility. The policy states that a student should only be moved from the 'current' to the 'former' roll if:

- the school receives notification that the student has legally transferred to another school or a recognised education or training program, or
- the school has not received any official notification but has 'reasonable grounds to believe they are enrolled elsewhere', or
- the student cannot be located after rigorous attempts to do so.

If a student has been absent from school for a noticeable period, without notification or explanation from a parent or guardian, the enrolment policy states that schools must notify their district attendance officer and refer the student to the Student Tracking System (STS—described later) at central office. If the student cannot be located within 15 days, they are to be removed from the school's roll and placed on the statewide Children Whereabouts Unknown (CWU) list, which is circulated on a monthly basis to all school principals in order to relocate 'missing' students (WA DET 2008).

STS:

Student Tracking System

CWU:

Children Whereabouts Unknown (list)

The enrolment policy also makes provision for students who are temporarily away from their regular or 'enrolling' school. It states that if a student is to be away from their enrolling school for anywhere up to, or even exceeding four weeks, they can be placed on an external roll at the alternate school they attend and their performance and attendance records simply transferred back to their enrolling school (which retains their enrolment). The enrolling school, however, effectively retains responsibility for reporting that student's attendance and academic outcomes. Further, schools that cater to a large proportion of transient students are eligible to apply for a 'transiency factor annual requisition adjustment' which entitles them to some additional funding. Neither of these options, however, are standardised procedures. In other words, school administrators take them up on an ad hoc basis. Further, it seems unlikely that many administrators would take on the responsibility of managing external rolls when they receive no additional resourcing or incentives to do so.

Though school enrolment data are regularly harvested by central office, official censuses are still undertaken in February and August of each year. At this time, WA DET seeks to identify duplicate enrolments where they exist and to negotiate more accurate census returns. Technically, if correct enrolment processes are followed throughout the year, duplicate enrolments should not exist. However, interviewees indicated that they regularly do exist, particularly in instances where Indigenous students use different names depending on where they are and in whose care they find themselves. These census data are used as one of three key components of the Western Australian schools funding formula. They are also weighted according to particular student characteristics. Indigeneity, however, is not one of them. The other two factors considered in the funding formula are curriculum access (a small school allowance: how 'remoteness' is considered in the formula), and the socioeconomic index of disadvantage in the school's neighbourhood (which includes Aboriginality as one of the variables). No measure of student mobility is included.

ATTENDANCE

In Western Australian public primary schools, attendance is recorded twice daily (once in the morning and once in the afternoon) for each student, using the standard set of school attendance codes (Table 1).

Table 1. WA DET school attendance codes	
Code	Description
/	Present
L	Late
M	The student is present at school but in the sick bay.
W	The student is present at school but has been withdrawn from classroom activities.
E	Class excursion
U	Unexplained absence
X	Absent for an explained and unacceptable reason
T	Truant
R	Absent with reasonable cause
C	Absent for cultural purposes. Mostly applied in Indigenous contexts.
Z	Suspended

Source: WA DET 2009.

Classroom teachers usually enter the data onto their roll and into SIS. If absences are unexplained, the school administration is instructed to inquire further, contacting the student's guardians and attempting to determine a cause, then adjusting the attendance record accordingly (WA DET 2000). However, many school records still contain significant proportions of unexplained absences (e.g. Bourke, Rigby & Burden 2000; Prout & Yap 2010), indicating that schools lack either the resources or incentive to follow up on unexplained absences.

In the Western Australian public school system, attendance data are not considered in the school funding formula. They are, however, used as a measure for evaluating school performance. To assess attendance, schools are required to participate in an attendance audit over a four-week period at the end of the first semester of each school year. The data must be entered into SIS at each school and are then uploaded to SAMS at central office. Each student entry includes core demographic detail, such as Indigenous status, as well as their number of authorised and unauthorised absences, against their total enrolled days. From these data, individual attendance rates are derived and can then be aggregated to show school, district, and State attendance rates, as well as attendance rates by Indigenous status and geography. Central office then return these reports to schools along with comparisons of their attendance outcomes with other schools in their district, and with schools deemed to be similar to them in terms of several characteristics such as size and remoteness. In addition, schools can generate a number of attendance reports for their school within SIS. These summary reports cross-tabulate attendance categories with characteristics such as year level, gender, and Indigenous status.

STUDENT TRACKING

At present, there is no system for tracking the movement of individual students through Western Australia's public school system. There is an STS, but it is a centrally located browser-based database used to attempt to relocate students who have left one school inexplicably and not presented at another school. Once a school notifies the STS program staff that one of their students has been absent and cannot be located, they are registered as 'missing' and entered into the STS database. The STS interacts with school enrolment and other databases (e.g. child protection, remand authorities and vocational education and training databases), and using name and date-of-birth fuzzy logic, searches nightly for matches. If matches are found, the STS organises a transfer note between the two schools and takes the student off the 'missing' list. If the student cannot be located by the system within a given timeframe, they are placed on the CWU list.⁴ The updated registry is sent to principals in all three school sectors and to project officers in other government agencies (e.g. Department of Child Protection and Juvenile Justice). The system therefore works primarily to identify (albeit at a slow pace) students who have moved between education sectors for whom notification of transfer has not been initiated, or those who have become disengaged from the formal school sector. It can also locate students who are enrolled in more than one school at a time. It cannot locate children who have not engaged with the formal school system, nor can it account for cross-border moves. And because it is not designed to do so, it is not particularly useful for measuring the extent of, or easing administrative burdens associated with, teaching highly mobile Indigenous students.

NORTHERN TERRITORY

NT DET:

Northern Territory
Department of
Education and
Training

In the Northern Territory, Indigenous students make up a far greater proportion of the school-aged population than in any other State or Territory. Statistics provided by the Northern Territory Department of Education and Training (NT DET) show that in 2010 the Indigenous student population comprises 45.0 per cent of the total (NT DET 2010).⁵ The proportion of Indigenous students in each other State or Territory does not exceed 7 per cent. The current student administrative data management system in Northern Territory public schools was modelled on the Western Australian SIS. It is comprised of two main parts: the school-based SAMS, and the centrally-based 'Centris' system which receives SAMS extracts and stores the school-based data. Unlike SIS, however, school administrators can download student information from Centris directly into their school-based SAMS. And information from Centris, as well as the SAMS importer, is stored centrally in a data warehouse.⁶ Though all government schools are connected to the system, not all schools use it effectively. Many smaller schools in remote areas, with fewer administrative resources, fall into these latter categories of non-use. These are the schools whose student populations are mostly Indigenous and often highly mobile. Some, but not all, Catholic and independent schools are also connected to the SAMS.

In addition to this ongoing system of data management, NT DET also collects enrolment and attendance data from schools at eight times throughout the year—over one week periods in weeks 4 and 8 of each term, to encourage school compliance with data entry processes. In these collections, enrolments are reported as the number of students enrolled on collection day, and attendance is reported as the average rate over the four weeks preceding the collection date. In presenting these data, NT DET acknowledges that numbers and rates vary throughout the year, particularly in places where Indigenous student transiency is high (NT DET 2010). The data are reported for Northern Territory schools across all sectors, by Indigenous status and at the stage-of-schooling level rather than year level.

ENROLMENT

Each student who enters the Northern Territory public school system is allocated a Unique Pupil Number (UPN) which remains with them throughout their schooling in that system. When a student presents for enrolment outside of usual promotional transitions, school administrators begin the enrolment process by entering all available personal information the student and their guardian(s) can provide into a student tracker system which is connected to Centris. The system then attempts to locate any existing student record to prevent duplicate records from being created. It does this by searching Centris using fuzzy matching capabilities and multiple search fields to return a list of possible matches with names, UPNs and enrolment history. This process, however, does not prevent duplicate enrolments. It simply seeks to ensure against multiple UPNs being assigned to the same student. Indeed, NT DET views student enrolments in more than one school as legitimate in many instances, especially among highly mobile students. The department has observed patterns of mobility where students regularly attend two or three different schools sometimes within the same week.

If the correct UPN match is found, the administrator notes the student's last enrolling school and searches for any pre-existing record for that student at their school. If the student had previously been enrolled with them, and is registered as having left their previous school, they simply reinstate the student to their current roll with a new start date. In such cases, schools are encouraged (though not obligated) to contact the previous school to obtain the student record file to avoid the creation of multiple files for individual students. Given that schools are not required to transfer enrolments as part of this process, multiple enrolments are likely to be widespread for highly mobile students. If the student had no previous record at their school, the enrolling school contacts the student's last enrolling school to electronically transfer their student file. This student file includes the student's UPN, enrolment and attendance histories, as well as test results and performance data. If they are still enrolled at their previous school, the new enrolling school places the student on the 'admissions roll'. If they have left their previous school, the new enrolling school places the student on the 'current roll'. If no match is found on the student tracking system, the new enrolling school creates a new enrolment, with UPN, for that student and adds them to their current roll (NT DET 2008b).

The enrolment policy states that a student should be moved from the current to the former roll if the principal receives formal notification that they have gone to another school, has 'reasonable grounds' to believe they have, or can ascertain that the student has left the community permanently and will not be returning. If the school is unable to confirm any of the above, but a student has been absent for school for more than 20 consecutive days and all attempts to locate them have failed, then they are moved to a 'passive' enrolment status and reported as 'at risk' but not removed from the school roll. Given that actual 'exits' from schools are not recorded as a matter of course in many Northern Territory schools (as exits from enrolment records), any measure of student turnover that draws on enrolments and exits (e.g. the JPL index) would significantly under-enumerate the actual amount of turnover within schools.

UPN:
Unique Pupil
Number

Table 2. NT DET school attendance codes

Code	Description
/	Present
U	Unnotified absence
B	Attendance not required
C	School cultural activity
D	Non-school cultural activity
E	Excursion
F	Funeral/sorry business
H	In-house suspension (same as W in Western Australia)
L	Late
M	At school but in sick bay
N	Primary care-giver provides an explanation for absence (e.g. family dispute or business).
O	Student is outside of class for authorised reason.
Q	Sporting event off-campus
S	Notified as sick
T	The school has to be closed and cannot offer formal instruction.
V	VET activities
W	Work experience
X	Unacceptable reason

Source: NT DET 2009.

ATTENDANCE

Attendance is recorded twice daily by classroom teachers for all public primary school students in the Northern Territory. All unnotified ('U') absences (regardless of length) are to be followed up within three days of initial absence and replaced with an alternative explanatory code ('B' onwards in Table 2). The school principal is responsible for ensuring these data are uploaded to SAMS at the conclusion of each week for harvesting by Centris and storage in a data warehouse (NT DET 2008a).

NT DET has attempted to clearly define what constitutes an unacceptable or unauthorised absence (code X) to avoid widespread variation in its interpretation and application. The attendance policy explains that absences must be marked as 'unacceptable' if no explanation can be obtained, or the explanation offered is one that community negotiations have so agreed. However, not all schools employ these attendance codes systematically. Others do not even enter complete data into SAMS. This is usually due to under-resourcing at the local school level—particularly where student populations are highly mobile, and significant time must be invested in managing student turnover. In these situations, the policy advises that schools which share students should develop strong communication networks in order to effectively track students. No additional resourcing is allocated to help with this process.

FUNDING AND STAFFING ALLOCATIONS

The Northern Territory is transitioning from a static 1970s model of funding allocation on the historical basis of look-up tables, to a more dynamic formula that considers evolving trends from current data. Staffing allocations for the beginning of the school year are assessed and determined in October of the previous year. Recalibration takes place during the school year if there is a sufficient shift in enrolment

and attendance patterns. Allocations are based on a weighted and longitudinal analysis of average enrolments and average attendance at each school. Additional resources and funds are allocated on the basis of adjusted enrolments (weighted to consider actual attendance rates), the socioeconomic status of the school's actual catchment area (mapped using the addresses of students), curriculum access, other institutional factors, and the proportion of students who have English as a second language.

This funding formula is more advanced than the Western Australian system in that it considers both enrolments and attendance and thereby encourages school administrators to maintain accurate records across both areas, to reflect the realities as accurately as possible, rather than valuing the upkeep of one kind above the other in order to ensure maximum possible resourcing. However, in weighting enrolments relative to attendance, it seems likely that schools with poor attendance rates will receive a lower level of resourcing, when in reality they probably require additional resources, particularly in the form of administrative assistance for creating individual attendance plans to improve student attendance.

STUDENT TRACKING

As in Western Australia, the language of student tracking in the Northern Territory is primarily concerned with relocating students who have been 'lost' to the system. NT DET claims that it will attempt to track all students who have been exited from school rolls without re-enrolling elsewhere, but does not outline the specific process for this, beyond indicating that the tracking system used by educators to locate existing enrolments maintains a 30-day 'download memory' which keeps a record of which students have been tracked over that period (NT DET 2008b). In terms of identifying and mapping the mobility of individual students, NT DET maintain a 'Student Activity' database which stores unit record-level student data. This allows the department to view enrolment and attendances by students across many schools and provides a picture of individual student mobility. Using this dataset, it is possible to calculate retention, student turnover and demonstrate student movements. Such analyses are beginning to be undertaken (e.g. Dunn 2009).

SOUTH AUSTRALIA

The electronic system for managing administrative data in South Australia is called the Education Department's School Administration System (EDSAS). Data records stored in EDSAS are managed through a series of data modules that include student information on enrolment, transfers and absences. These data are updated regularly by school sites and collected nightly through the Central EDSAS Data Store. Schools are not linked to each other electronically. However, a new electronic transfer process, known as the virtual transfer disc, is being implemented to move key student details between schools when a student transfers. Census collection procedures are conducted several times during the school year using the EDSAS student data. Aspects of a school's funding entitlement are calculated using the information from census collections.

ENROLMENT

Very little documentation is publically available regarding protocols governing when and how students outside of promotional years should be enrolled in South Australian public schools, except that schools are required to send a transfer notice to the previous school when a student presents for enrolment. A somewhat clearer picture emerges with regard to the policy for exiting students. If a student leaves a school with no parent information about the move, the student is marked as 'unexplained' for four weeks and notified to the Regional Student Attendance Counsellor for placing on the CWU list for central processing. If the school receives a transfer from another school, this must be followed up within five days. The 'temporary transfer process' enables transient students to attend a 'host' school for up to five

EDSAS:
(South Australian)
Education
Department's
School
Administration
System

weeks (after this period of time a normal transfer is recommended). The student is given a status of 'T' at the host school while their enrolment and attendance records remain with the original school. When the student has completed the short-term 'placement', the information is automatically recorded in the student history.

Though EDSAS updates enrolment information each night, it is populated by schools on an ad hoc basis. The only requirement is that teachers sign off on their roll book printout at the end of each term, to verify all student enrolments, exits, transfers, and absences (SA DECS 2009). Within any 10-week term, however, there may be wide variation amongst schools in how they maintain their records. It would therefore be extremely difficult, using SA DECS data, to construct accurate and comparable student turnover rates, and perhaps more importantly, the stocks and flows of such movement in South Australian public schools.

The best available mechanism for assessing the quality of these data is the twice-yearly public school census. For the census, each school must run several data checks in EDSAS to report on their current roll (SA DECS 2008). These data form the primary basis for staff and funding allocations, enrolment projections and forward planning. Here, schools are provided with specific parameters for which students must be included as current, and which students must not. Any student who has been continuously absent from the school for four or more weeks without explanation (or the reasonable expectation that they will return) must not be included in the census. In addition, if the school knows that a student has left their school without intention of returning, they must be excluded from the school census, even if they have been absent for less than four weeks. Once schools report their information to central office, duplicate enrolments usually become apparent and must be reconciled before the census process is completed.

ATTENDANCE

Attendance is recorded into a roll book once each day in the morning by a classroom teacher and then entered into EDSAS. Any absence must be recorded according to the relevant code (see Table 3). If the roll-marking teacher has not been informed of the reason, they initially mark the roll with a 'U' (unexplained absence). The South Australian attendance requirements policy is less prescriptive than other States and Territories in relation to managing unexplained absences (SA DECS 2009). It indicates that schools should seek explanations from the child's legal guardian and change the code if an explanation is forthcoming. It does not, however, detail specific timeframes for this process. It also notes that teachers should take note of extended periods of unexplained absences since such cases may need to be referred to a student attendance counsellor. The policy clearly therefore expects that not all unexplained absences can or will become explained through school process. It also states that for any student with 5–10 absences per term ('habitual non-attender'), or more than 10 absences per term ('chronic non-attender'), the reasons for absenteeism should be analysed (SA DECS 2009). Yet it provides no specific direction for how such analyses might be put to practical use.

South Australian public schools are required to report annually on student attendance by each of the codes listed in Table 3. Within EDSAS, they are also able to run reports of absenteeism by reason, and examine the dates of individual absences. In addition, the new Student Attendance and Behaviour Management datamart uses EDSAS data to assist educators in reporting on and conducting analyses on student absenteeism, student attendance and behaviour management. It enables administrators to view individual student data across all schools attended, year groups or geographies. It also generates standard reports and absences alerts for individual students. Much like Western Australia, however, longitudinal analyses of attendance trends cannot be conducted within EDSAS.

Table 3. SA DACS school attendance codes

Code	Description
C	Illness verified by health practitioner
E	Exemption
F	Family or social: Condoned by the guardian as being for family, social or cultural reasons.
I	Illness verified by family member
K	Sent home for disciplinary reasons
N	Truant: Absent without parental approval
S	Suspended
U	Unexplained
X	Exclusion
Z	Student who has been absent for an extended period of time with whom the school is in contact, and with whom they are attempting to re-engage.
A	School based apprenticeship
D	Used when school is closed for industrial action.
G	Offsite learning program managed through the enrolling school
H	Home study
M	Camps and excursions
P	Alternative placement: Offsite learning program for excluded students. The alternate provider manages their records and reports them back to the enrolling school.
Q	Approved medical program
R	Risk: Days where attendance may pose a risk to the students welfare or wellbeing.
T	School sports
W	Work experience
Y	End of year activities

Source: SA DECS 2009.

STUDENT TRACKING

The Indigenous Student Support System (ISSS) was first introduced in South Australia in 2007. The ISSS has been layered over the EDSAS database and as such, its effectiveness is dependent on how accurately and efficiently schools enter their enrolment data. Its function is to track the enrolment and attendance data stored within EDSAS to identify and create daily alerts regarding certain kinds of student scenarios. When the program identifies that:

- a student has been absent for more than 10 days,
- a student has left their school but not yet enrolled in a new school within five days, or
- a student enrolls in a new region,

it creates and sends a relevant alert within ISSS to the relevant contact officer based in each of the 12 education regions in the State. In essence, the ISSS is a streamlined mechanism for informing regional offices of students who may become or are currently 'lost to the system', as well as incoming students who may require additional support as they adjust to their new school. It is not a system for tracking the mobility of individual students. Nevertheless, it will eventually have the potential to provide indications of the schools or regions that students most commonly exit from for unexplained reasons. It is, however, a

ISSS:
Indigenous Student
Support System

relatively new system which is still being refined and its potential applications still being determined. The data have not been validated so they are not used for reporting purposes. No substantive analysis of the data has yet been conducted.

QUEENSLAND

SMS:
School
Management
System

Qld DET:
Queensland
Department of
Education and
Training

Queensland public schools are currently in the midst of a comprehensive, three-year transition from their existing School Management System (SMS) to a new information data management system called OneSchool. In the SMS, schools upload their administrative data onto the school server. At three census points throughout the school year, certain data are harvested from the school site to a corporate data warehouse. Schools can share limited information electronically. In OneSchool—which began being rolled out across Queensland public schools in 2008 and will fully replace SMS in 2011—all student data will be stored in a real-time, transactional, central pool (Queensland Department of Education & Training (Qld DET) 2010b). The system introduces the concept of a shared student record. Through a web portal, Queensland Education employees can access different kinds of data within the pool depending on their identity and status. Principals, for example, have access to more information than teachers, and school staff can only access the full records of students who are enrolled at their school. Because many schools are still in a transitional phase between the SMS and OneSchool, the following discussion draws on available information to describe enrolment, attendance, and student tracking processes within both systems.

ENROLMENT

In Queensland, each student is allocated a USI number that remains with them throughout their schooling and across all government schools. Students have a managed internet service account which stores documents they have created as part of their course work. This account is linked to their USI. Schools can therefore use the managed internet service to determine the correct USI of students who present at enrolment without this information. In addition, as part of the validation process in an enrolment census, schools are advised of the correct USI for any student where it is not apparent. While KPMG Consulting (2002b) found that many schools in Queensland have trouble reconciling individuals to their USI, another study of student mobility found that amongst their student sample, there were few cases of individual students acquiring multiple USIs (Simons et al. 2007).

In February of each year, the central office downloads aggregated SMS data from each primary school on (amongst other things) student enrolments and class size, and stores this information in a corporate data warehouse. Reconciliation of school rolls is undertaken to ensure duplicate enrolments are removed (i.e. students are only recorded against one enrolment and not any previous enrolments). This data collection forms the basis for allocating staff and funding to Queensland public schools, though efforts to obtain the precise funding formula as part of this research process were unsuccessful.

In the SMS system, individual student mobility trajectories cannot be tracked, since the corporate data warehouse only houses snapshot data from each of the three annual census collections. The only measure of student mobility captured is a snapshot of percentages of students who moved school between censuses: a relatively innocuous measure, particularly in parts of the State that experience regular movement of Indigenous students between schools. It should still be possible to measure school-based student turnover using enrolment data. However, because the schools must retain a student's enrolment in all circumstances unless they receive a transfer note, and because it is probable that duplicate enrolments exist, it seems unlikely that school-based student enrolment records would produce an accurate reflection of actual student turnover rates.

Table 4. Queensland SMS school attendance codes

Code	Description
/	Present
U	Unexplained absence
A	School activity (on campus)
C	School excursion (off campus)
E	Early departure
F	Off campus training or education participation
H	Holiday (guardian notified and approved by the school)
I	Illness
L	Late arrival
O	Other reasonable excuse provided ('reasonable' is determined in collaboration with the local community).
P	Suspension (1–5 days)
Q	Suspension (6–20 days)
R	Suspension—recommended exclusion
S	Sporting event
W	Work experience
X	Exclusion
Y	Student's enrolment has been cancelled

Source: Qld DET 2010a.

The incoming OneSchool system functions quite differently. In this system, when a new student presents and has not been previously enrolled in a Queensland State school, a new record is created and a USI assigned. Where a student has been previously enrolled in a Queensland State school, the school enrolment officer will perform a statewide search within the OneSchool database to locate the student's record. The enrolment officer can access limited information on the student to confirm the student's identity and enrol them without having to recreate the student's record. The transfer is automatic, thus dramatically reducing instances of duplicate records and multiple enrolments for individual students. Duplicates would only emerge in instances where a child's existing student record could not be matched to them. In addition, the administrative burdens associated with transferring records and tracking enrolments of highly mobile students are greatly reduced because student information moves freely and directly between the central pool and whatever school they are associated with at any given time.

The OneSchool system is a more individual-based record-keeping system than the school-based systems in other States and Territories. This system, in combination with USIs, seems to eliminate some of the key barriers to tracking individual student mobility trajectories and reporting actual Indigenous attendance rates. If school rolls become linked to this system of automated enrolment transfers, the quality of both attendance and enrolment data would be further improved. Each time a student moved in or out of a school (even if only for a matter of days), there would be an accurate, up-to-date record of their enrolment and exit, and their attendance. School-based student turnover rates could be accurately calculated and actual Indigenous attendance rates (based on aggregated individual records) could be reported.

There are two assumptions here though. The first is that school-based rolls are somehow linked to the OneSchool system, so that the process of maintaining up-to-date rolls by exiting students who have left is identical and automated across schools; and consequently, that administrators can and will re-enrol students each time they return to their schools by simply relocating their record in the student file and transferring the enrolment. The second assumption is that each time a student leaves a school, they present at another and are officially re-enrolled. In contexts of high Indigenous student mobility, such as in much of northern Queensland (e.g. Smith 2004), these conditions are rarely likely to completely align.

ATTENDANCE

In Queensland public primary schools, rolls are marked twice daily by the classroom teacher, indicating if a child is present ('/') or absent ('a'). The designated officer then follows up on any absences and enters the data into the SMS with appropriate codes (see Table 4). All unexplained absences must be followed up (Qld DET 2007).

While these data entry processes are unlikely to change significantly once the transition to OneSchool is complete, there will be adjustments to where the data are located and the types of analyses and reports that can be generated from them. Schools will be able to record roll information directly into OneSchool. Or, they may continue to use whatever process or third-party application they currently use to mark rolls. As with SMS presently, all student absences must subsequently be recorded in OneSchool. Unlike the SMS system, however, all student attendance information will be located in the central pool. Instead of taking attendance snapshots at one or two points over the course of the year as the basis for annual reporting, district- and centrally-based staff will be able to run regular attendance reports using real-time and longitudinal data. In addition, schools will be able to report at any time on the absences breakdowns (explained or unexplained) and patterns of individual students. They will also be able to produce absence report graphs by class. These graphics provide a picture of absence peaks and troughs for any given class over a specified period of time. Such data are invaluable in determining any temporal patterns to student absenteeism.

NEW SOUTH WALES

NSW DET:

New South Wales
Department of
Education and
Training

SRN:

Student
Registration
Number

In 2007, the New South Wales Department of Education and Training (NSW DET) introduced a new system for storing student records electronically.⁷ This ERN system functions similarly to Queensland's OneSchool system in that it uses a unique student identifier (referred to as the Student Registration Number—SRN), and is a real-time transactional database which stores each student's record in a central data pool that school administrators have varying access to through NSW DET's web portal (NSW DET 2007). Unlike OneSchool, however, the ERN is not a linked database into which school-based enrolment and attendance data are uploaded. Its function is to serve as a mechanism for ensuring against duplicate student records and multiple student enrolments.

As in Western Australia, Queensland and the Northern Territory, it is possible within the ERN to derive unit record-level information about student mobility. An individual student's enrolment records are stored centrally and from these, the network of schools between which they have moved, and the varying lengths of their enrolment at each site can be calculated and mapped. However, to date, no such analyses have been made publically available.

ENROLMENTS

When a student transfers to a government school in New South Wales, the enrolling school's administrative staff search the ERN for any possible SRN matches for that student (NSW DET 2009). If no record can be matched to the student after searching possibilities are exhausted, a new record is created for that

Table 5. NSW DET student absence codes

Code	Description
A	Unexplained or unjustified
S	Illness
L	Acceptable reason
E	Suspended
M	Exemption
B	Official school business: Excursions, work experience or school sport
H	Attending an alternative education program

Source: NSW DET 2010.

student. However, no new record can be created until significant proof has been provided that the student comes from outside the government system in New South Wales. If the correct SRN can be located and the student's record indicates that they are not currently enrolled at another New South Wales government school, the student is re-registered to that school and their records become active to the school's administration. If their record indicates that they are currently enrolled at another New South Wales public school, the enrolling school registers them at their new school. Once their previous school receives this notification, they can exit the student from their records, and at this point the new enrolling school will have full access to the student's record which can be updated to reflect their change in circumstances.

A student must be exited from the attendance register (roll) at their school if they transfer to another school, have been expelled, or have been marked absent for more than 10 consecutive days and are believed to have left the school. Schools must check the ERN database before they exit a student from their roll. They then report the student to the regional attendance branch for investigation (NSW DET 2010).

Enrolment data collected in February each year form the basis for calculating school funding and staffing allocations. A further mid-year census is also conducted in New South Wales schools and these data are used for annual reporting. For the mid-year census, duplicate records and enrolments are reconciled.

ATTENDANCE

In New South Wales public primary schools, attendance is recorded at least once a day in the morning onto either an electronic or manual roll. There is no one system that New South Wales public schools must use to record attendance, but hard-copy rolls are used as the official records of attendance. Only absences are marked on the roll and must be marked according to the codes outlined in Table 5.

If the student's absence is unexplained, schools must 'take reasonable measures' to follow it up with parents within two days of the occurrence. However, should a reason be forthcoming more than seven days after the original unexplained absence, the official roll cannot be amended to reflect the actual reason for absence (NSW DET 2010). Though no student may be enrolled at more than one school simultaneously, they can attend an alternative school for a period of up to one term without having to transfer their enrolment. In these instances, the host school maintains the student's attendance record on an external roll, and reports this information to the enrolling school at the conclusion of the student's visit.

All New South Wales government schools must complete 'Return of Absence' reports in June and November of each year. This process involves several data checks for schools, including ensuring that no grades have absences without enrolment and vice versa. The data are reported by Aboriginality, gender, and year level.

NOTES

1. See Prout (2008) for a comprehensive analysis of the scale of Indigenous temporary mobility practices across the country.
2. For a more detailed discussion of school discretionary processes with regard to student enrolments, see the 'Enrolments' section in the Western Australia discussion of Appendix 1.
3. Though a web-based 'Next Generation' system is in development, few details are available as yet and implementation is still some time away.
4. There were discrepancies within and between various policy documents and WA DET advice about the prescribed timeframes for various notifications of 'missing' students. This lack of clarity indicates that the system is not utilised particularly effectively by some of its stakeholders.
5. This includes all students from pre-compulsory to Year 12.
6. In recognition of some of the limitations of Centris, NT DET are developing a replacement system called 'Student Central' to better manage and store student records. It will have the capacity to collect information from systems other than SAMS.
7. NSW DET is now moving to an integrated Student Administration and Learning Management system within which student enrolments, absences and student records will be maintained on an individual basis. Data will be harvested, cleaned and validated for reporting.

REFERENCES

- Aman, C. 2008. 'Aboriginal students and school mobility in British Columbia public schools', *The Alberta Journal of Educational Research*, 54 (4): 365–377.
- Bourke, C., Rigby, K. and Burden, J. 2000. *Better Practice in School Attendance: Improving the School Attendance of Indigenous Students*, Commonwealth of Australia, Canberra, viewed 16 September 2010, <www.dest.gov.au/sectors/indigenous_education/publications_resources/documents/attend_synth_pdf.htm>.
- Collins, B. 1999. *Learning Lessons: An Independent Review of Indigenous Education in the Northern Territory*, Northern Territory Department of Education, Darwin, viewed 16 September 2010, <http://www.det.nt.gov.au/__data/assets/pdf_file/0005/7475/learning_lessons_review.pdf>.
- Danaher, P., Danaher, G. and Moriarty, B. 2007. 'Subverting the hegemony of risk: Vulnerability and transformation among Australian show children', *Educational Research*, 49 (3): 211–224.
- , Kenny, M. and Leder, J. (eds) 2009. *Traveller, Nomadic and Migrant Education*, Routledge, London.
- , Wyer, D. and Bartlett, V. 1998. 'Theorising open learning for researching home school and itinerant settings', *Open Learning: The Journal of Open and Distance Learning*, 13 (1): 9–17.
- Department of Education, Employment and Workplace Relations 2008. *National Report to Parliament on Indigenous Education and Training*, 2006, Commonwealth of Australia, Canberra.
- Dobson, J., Henthorne, K. and Lynas, Z. 2000. *Pupil Mobility in Schools: Final Report*, Migration Research Unit, University College, London.
- Dunn, B. 2009. Student Movement 2007 and 2008: NT Government Schools System Level Summary, School for Social Policy and Research, Charles Darwin University, Darwin.
- Dwyer, J., O'Donnell, K., Lavoie, J., Marlina, U. and Sullivan, P. 2009. *The Overburden Report: Contracting for Indigenous Health Services*, Cooperative Research Centre for Aboriginal Health, Darwin.
- Fogarty, W. 2005. "'You got any Truck?'" Vehicles and decentralised mobile service-provision in remote Indigenous Australia', *CAEPR Discussion Paper No. 30*, CAEPR, ANU, Canberra, available at <<http://caepr.anu.edu.au/publications/working.php>>.
- Franke, T. D., Isken, J. A. and Parra, M. T. 2003. 'A pervasive school culture for the betterment of student outcomes: One school's approach to student mobility', *The Journal of Negro Education*, 71 (1): 150–157.
- Gillard, J. 2010. *Delivering the Education Revolution*, Address delivered to the National Press Club, Canberra, 24 February, viewed 3 March 2010, <http://www.deewr.gov.au/Ministers/Gillard/Media/Speeches/Pages/Article_100224_143429.aspx>.
- Gray, J. and Partington, G. 2003. 'Attendance and non-attendance at school', in Q. Beresford and G. Partington (eds), *Reform and Resistance in Aboriginal Education: The Australian Experience*, University of Western Australia Press, Perth.
- Groome, H. and Hamilton, A. 1995. *Meeting the Educational Needs of Aboriginal Adolescents*, National Board of Employment, Education and Training Commissioned Report No. 35, Australian Government Publishing Services, Canberra, viewed 16 September 2010, <http://www.dest.gov.au/sectors/training_skills/publications_resources/profiles/nbeet/educational_needs_of_aboriginal_adolescents.htm>

- Hamilton, A. 1987. 'Coming and going: Aboriginal mobility in north-west South Australia, 1970–71', *Records of the South Australian Museum*, 20: 47–57.
- Hartman, C. 2003. 'Introduction and overview: Student mobility: How some children get left behind', *The Journal of Negro Education*, 72 (1): 1–5.
- Henderson, R. 2001. 'Student mobility: Moving beyond deficit views', *Australian Journal of Guidance and Counselling*, 11 (1): 121–129.
- Hill, A., Lynch, A. and Navin, F. 2009. 'Coming to grips with student mobility and policy implications: A case study from regional Queensland', Refereed paper presented at the meeting of the Australian Association for Research in Education, Canberra.
- Hunt, J. 2008. 'Failure, evidence and new ideas', *CAEPR Topical Issue 2008/01*, CAEPR, ANU, Canberra, available at <<http://caepr.anu.edu.au/Publications/topical.php>>.
- KPMG Consulting 2002a. *Changing Schools: Its Impact on Student Learning*, Commonwealth of Australia, Canberra, viewed 16 September 2010, <<http://www.dest.gov.au/NR/rdonlyres/2DA9C037-5A44-47B9-9316-F4905C363F83/1571/mobilityreport.pdf>>.
- 2002b. *Changing Schools: Its Impact on Student Learning—Appendices*, Commonwealth of Australia, Canberra, viewed 16 September 2010, <<http://www.dest.gov.au/NR/rdonlyres/65D6B19E-5E09-4810-BFC0-DA7ED993F765/1569/mobilityappendices.pdf>>.
- Kral, I. 2007. *Writing Words – Right Way! Literacy and Social Practice in the Ngaanyatjarra World*, PhD Thesis, ANU, Canberra.
- Malmgren, K. W. and Gagnon, J. C. 2005. 'School mobility and students with emotional disturbance', *Journal of Child and Family Studies*, 14 (2): 299–312.
- Memmott, P., Long, S. and Thompson, L. 2006. 'Indigenous mobility in rural and remote Australia: Final report', *AHURI Final Report No. 90*, Australian Housing and Urban Research Institute, Queensland Research Centre, Brisbane.
- New South Wales Department of Education and Training (NSW DET) 2007. *Enrolment and Registration Number*, NSW Government, Sydney.
- 2009. *Enrolment and Registration Number (ERN) Training Guide Version 3.0*, Information Technology Directorate, viewed 7 June 2010, <https://products.schools.nsw.edu.au/ern_help/training/ERN%20Training%20Guide.pdf>.
- 2010. *Student Attendance in Government Schools – Procedures*, Student Welfare Directorate, NSW Government, Sydney.
- Northern Territory Department of Education and Training (NT DET) 2008a. *Policy: Student Absenteeism*, viewed 5 June 2010, <http://www.det.nt.gov.au/__data/assets/pdf_file/0016/727/student_absenteeism.pdf>.
- 2008b. *Policy: Student Enrolment Process*, viewed 5 June 2010, <http://www.det.nt.gov.au/__data/assets/pdf_file/0017/728/student_enrolment.pdf>.
- 2009. *Attendance Codes*, Northern Territory Government, Darwin.
- 2010. *Enrolment and Attendance Statistics*, viewed 14 September 2010, <<http://www.det.nt.gov.au/students/at-school/enrolment-attendance/enrolment-attendance-statistics>>.
- Palmer, K. and Brady, M. 1988. *The Diet and Lifestyle of Aborigines in the Maralinga Region, South Australia*, Maralinga Rehabilitation Studies, Adelaide.

- Prout, S. 2008. 'On the move? Indigenous temporary mobility practices in Australia', *CAEPR Working Paper No. 48*, CAEPR, ANU, Canberra, available at <http://caepr.anu.edu.au/publications/working.php>.
- 2009. 'Policy, practice and the 'revolving classroom door': Examining the relationship between Aboriginal spatiality and the mainstream education system', *Australian Journal of Education*, 53 (1): 39–53.
- and Yap, M. 2010. 'Indigenous temporary mobilities and service delivery in regional service centres: A West Kimberley case study', *CAEPR Working Paper No. 66*, CAEPR, ANU, Canberra, available at <http://caepr.anu.edu.au/publications/working.php>.
- Queensland Department of Education and Training (Qld DET) 2007. *SMS-PR-029: Managing Student Absences Version 1.0*, viewed 7 June 2010, <http://education.qld.gov.au/strategic/epr/students/smspr029/>.
- 2010a. *Absence Reason Codes for Reasonable Excuses*, viewed 20 September 2010, <http://education.qld.gov.au/strategic/epr/students/smspr036/table2.doc>.
- 2010b. *OneSchool*, viewed 7 June 2010, <http://education.qld.gov.au/oneschool/>.
- Rose, D. 1999. 'Indigenous ecologies and an ethic of connection', in N. Low (ed.), *Global Ethics and Environment*, Routledge, London.
- Rumberger, R.W. 2003. 'The causes, and consequences of student mobility', *The Journal of Negro Education*, 72 (1): 6–21.
- Schwab, R.G. 1998. 'Educational "failure" and educational "success" in an Aboriginal community', *CAEPR Discussion Paper No. 161*, CAEPR, ANU, Canberra, available at <http://caepr.anu.edu.au/publications/discussion.php>.
- Simons, R., Bampton, M., Findlay, A. and Dempster, A. 2007. 'Student mobility, attendance, and student achievement: The power of implementing a Unique Student Identifier (USI)', Paper presented at Association for Research in Education Conference, Fremantle.
- Smith, B. 2004. 'The social underpinnings of an "outstation movement" in Cape York Peninsula, Australia', in J. Taylor and M. Bell (eds), *Population Mobility and Indigenous Peoples in Australasia and North America*, Routledge, London.
- Sorin, R. and Ilsoe, R. 2006. 'Moving schools: Antecedents, impact on students and interventions', *Australian Journal of Education*, 50 (3): 227–241.
- South Australia Department of Education and Children's Services (SA DECS) 2008. *Census Guidelines and Data Dictionary Ver 9.0*, Data Management and Accountability Unit, Government of South Australia, Adelaide.
- 2009. *Attendance Requirements*, Child and Student Wellbeing, Department of Education and Children's Services, Adelaide, viewed 7 June 2010, <http://www.decs.sa.gov.au/docs/documents/1/AttendanceRequirements.pdf>.
- Western Australia Department of Education and Training (WA DET) 2000. *Attendance: Version 1.1*, Department of Education and Training, Perth, viewed 5 June 2010, <http://www.det.wa.edu.au/policies/detcms/navigation/school-management/attendance/?oid=Category-id-3458017>.
- 2008. *Enrolment: Version 1.2*, viewed 5 June 2010, <http://www.det.wa.edu.au/policies/detcms/navigation/school-management/enrolment/?oid=Category-id-3457117>.

— 2009. *Improving Attendance – A Support Package for District Attendance Staff*, Government of Western Australia, Perth.

Wyatt, T., Carbines, B. and Robb, L. 2004. *Best Practice in Student Data Transfer*. A report to the Commonwealth Department of Education, Science and Training, viewed 16 September 2010, <http://www.dest.gov.au/sectors/school_education/publications_resources/profiles/best_practice_student_data_transfer.htm>.