

**CENTRE FOR PRIMARY HEALTH CARE AND  
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**THE IMPACT OF SCHOOL RETENTION AND  
EDUCATIONAL OUTCOMES ON THE  
HEALTH AND WELLBEING OF  
INDIGENOUS STUDENTS**

**A Literature Review**



**UNSW**  
THE UNIVERSITY OF NEW SOUTH WALES

### **Suggested Reference**

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### **Further Information on this Review**

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## 1. Introduction

### 1.1 Purpose

This review of literature was commissioned by the University of Sydney, Broken Hill Department of Rural Health, to inform a Social, Health and Wellbeing Impact Assessment (SHWIA) on the *Stepping Back, Looking Forward Program* (formerly the *Opening Doors and Breaking Down Barriers Program*). The purpose of the SHWIA is to identify the potential positive and negative health impacts that may result from the program. A scoping process for the SHWIA which included a scan of relevant literature and consultation with the HIA Steering Committee determined four areas of focus for the SHWIA – literacy and numeracy; cultural awareness and pride in Aboriginal identity; access to and uptake of post-secondary education and training; and employment and status of employment.

As part of the identification step of the HIA, the HIA Steering Committee recommended that a rigorous review of current evidence on the social, health and wellbeing impacts of educational participation and attainment be conducted. The questions that directed this literature review was: What is the impact of education on health and/or wellbeing for Indigenous groups? What are the characteristics of effective interventions to encourage school retention for Indigenous groups?

### 1.2 Background

The aim of the *Stepping Back, Looking Forward Program*, developed by the University of Sydney, Broken Hill Department of Rural Health, is to improve outcomes for Indigenous secondary students in Broken Hill and provide support to improve the educational experience for these students. The program also aims to increase the number of Indigenous secondary students who enter into TAFE, university and other post-secondary educational pathways.

Recent reports[1, 2] have identified that the current reduced level of recruitment of Indigenous students into university health-related degrees is a major issue that needs to be addressed in order to meet the present and future health needs of Indigenous Australians and their communities. These reports also highlight a number of barriers to improving the recruitment and retention of Indigenous students into health professional courses, namely:

- the significant educational and literacy issues affecting a large proportion of Indigenous communities;
- the lack of ongoing engagement with Indigenous communities within NSW, seeking to encourage individuals to take up university opportunities; and
- the potential confusion and lack of awareness within Indigenous communities regarding the career options and features of the various health disciplines.

## 2. Methods

### 2.1 The Review Process

The Centre for Health Equity Training Research and Evaluation (CHETRE) was contracted, by the University of Sydney, Broken Hill Department of Rural Health, to conduct the literature review for the SHWIA. The following review questions were developed by CHETRE to form the basis for this review. They reflect the key priorities of the *Stepping Back, Looking Forward SHWIA* in assessing potential impacts of the proposal on the determinants of health and wellbeing.

1. What is the impact of education on health and/or wellbeing for Indigenous groups?
2. What are the characteristics of effective interventions to encourage school retention for Indigenous groups?

## 2.2 Search Strategy

### Database Searching

Catalogues were searched to identify the published literature. The most widely used databases were searched in the fields of health (Medline), education (ERIC) and Indigenous education (AEI ATSI). A comprehensive interdisciplinary database (Web of Science) and an Australian database (APAIS) were also searched (see Appendix 1 for database citations). The combination of these databases provided the broadest cross-section of the literature across a range of disciplines and countries.

The following Boolean term searches were performed:

- (educ\*) AND (health OR wellbeing OR social) AND (Indigenous OR aborig\* OR “first nation\* OR “first people\*” OR maori OR “torres strait islander”)
- (intervention\* OR program\* OR strateg\* OR project) AND (school\* OR “high school” OR “secondary college” OR “educational institution”) AND (retention OR attain\* OR complet\* OR attend\*) AND (Indigenous OR aborig\* OR “first nation\* OR “first people\*” OR maori OR “torres strait islander”)

- ( ) indicates that the enclosed search is performed first  
 “ ” indicates that the retrieved records must contain the enclosed phrase  
 AND indicates that the retrieved records must contain both terms  
 OR indicates that the retrieved records must contain any of the terms  
 \* indicates unlimited truncation, e.g. inequalit\* would return inequality or inequalities

## 2.3 Screening References

Inclusion criteria were developed to screen the literature identified for inclusion in the analysis (see Table 1).

**Table 1: Inclusion Criteria**

Criteria	Details	Rationale
<b>Recent</b>	Published within the past ten years (1998 or later)	To ensure that the literature covers a long enough timeframe to be comprehensive but not so long as to be outdated.
<b>Relevancy</b>	Addresses either links between health and education, or effectiveness of educational interventions	To ensure that the article is focused on aspects relevant to the review questions and not alternate forms of inquiry
<b>English language</b>	Written in English	To ensure that the article can be assessed by the review team

## 2.4 Analysis

### 2.4.1 Document Analysis

Following the identification of the references to be included in the final document, the references were reviewed according to the questions developed. The data derived from this review was then imported into NVivo[3] for analysis.

### 2.4.2 Coding

The text in each reference review document was coded to facilitate the retrieval of text identifying themes and issues arising in relation to the review questions. These measures are designed to ensure that the answers to the review questions are grounded in the literature identified and that they are comprehensible across a number of contexts.

### 3. Descriptive Findings

This section reports descriptively on the range and nature of the references identified. The substantive review findings, which refer to the review questions, are addressed in the subsequent section.

#### 3.1 Search Strategies

Database searching yielded 94 references in total (see Table 2, full citation details may be found in Appendix 2).

**Table 2: Search Strategies by Exclusion Category**

	<b>Number of References: Database Searching</b>
<b>Total Identified</b>	1248
<b>Excluded: Not Recent, not English Language</b>	1082
<b>Excluded: Not Relevant</b>	60
<b>Excluded: Unable to Locate</b>	12
<b>Total Included in Final Review</b>	94

#### 3.2 Limitations

The literature identified and reviewed for this report focuses on the links between education and health, as was the intended purpose. However, it needs to be acknowledged that education is only one factor in improving the health and wellbeing of Indigenous youth, with other social and structural issues also playing a key role [4]. In addition to this, evidence gathered from the literature has been used to report national trends, which means that the diversity in geographic outcomes has not been explored. It was decided that there was an insufficient volume of evidence across the various contexts to enable this to be practical. A study investigating Indigenous educational disadvantage, completed by Bradley et al (2005), found that school and locality do not appear to be important determinants in the educational achievement gap between Indigenous and non-Indigenous students [5]. However, it is clear that further research into what is working for Indigenous students across the range of school environments is essential [6].

## **4. What is the impact of education on health and wellbeing for Indigenous youth?**

### **4.1 Health Outcomes**

The importance of social and emotional wellbeing for Indigenous youth can be linked to a range of outcomes including educational achievement, social development, employment opportunities and reduced rates of youth suicide [7]. Empowerment is increasingly recognised as a key social determinant of health and wellbeing, and education is viewed as an important avenue for empowering Indigenous youth with the knowledge, skills and attitudes they require to earn a living, and be respected and valued members of society [7, 8]. Therefore, improving overall levels of education will result in important social benefits, both for the Indigenous students and society in general, as it will increase these students' years of productive work and lead to longer and healthier lives [9].

In general, attendance rates for Indigenous students are significantly lower than non-Indigenous rates. Some of the difficulties experienced by Indigenous youth are directly attributable to their health status, particularly for those living in remote communities, as they experience higher rates of ill-health and disease compared with any other section of the Australian population [10]. There is agreement in the literature that poor health, including low birth weight, infant malnutrition, chronic infections, and neglect, hinders many Indigenous children's school attendance and adversely affects their ability to learn, thus resulting in long-term implications for educational outcomes [4, 11]. Two such health issues specifically identified as having a detrimental effect on the educational outcomes for Indigenous students are otitis media (infection of the middle ear) and poor nutrition [4, 12].

However, while good physical health and nutrition are important factors affecting educational outcomes, it is becoming increasingly evident that they are not the major factors influencing school performance for Indigenous youth [13]. The inter-relationship between health and education is complex. International research shows that the education levels of parents, and in particular of mothers, has a significant impact on infant and child mortality. In an international study conducted by Caldwell (1999) a linear relationship was found to exist between maternal education and infant and child mortality, with a reduction in child mortality of 7-9 percent for each additional year of maternal education, regardless of whether good health care facilities were available [4, 12]. Currently, Indigenous mothers are having their first child at increasingly younger ages, resulting in many of these young mothers leaving school and not pursuing further education [14]. There has been little specific research conducted to investigate the connection between years of schooling and health within an Indigenous Australian context [6], however, it has been argued that while the relationship reported by Caldwell is likely to apply in this context, it probably occurs in a less linear and more complex manner [4, 6].

It is understood that people who obtain poor educational outcomes are likely to have "poorer health, fewer life opportunities, lower income and are more likely to be unemployed" [9, pg 66]. Certainly within an Indigenous Australian context it is recognised that there is a strong relationship between educational attainment and unemployment [15, 16]. However, the effect of education on health for Indigenous Australians has been found to be independent of the effect of education on income and employment levels [17]. Of significance is the long-term effect of colonisation, which includes a history of low socio-economic status, racism and social exclusion for Indigenous Australians, which has been found to be negatively associated with health outcomes. Indeed, social exclusion alone has been found to limit people's access to resources, including access to health services, social networks and support, resulting in negative health outcomes [6, 18].

## **4.2 Social Outcomes**

Indigenous Australians remain the most severely educationally disadvantaged people in Australia [19]. In 2001, 29.8% of Indigenous males and 26.0% of Indigenous females were reported to possess post-school qualifications compared to 50.1% and 39.5% respectively within the non-Indigenous population [5]. Social disadvantage is known to be a major contributing factor to poor school performance, and performing poorly at school can entrench this disadvantage [15]. Despite the well-documented evidence of the disadvantage experienced by Indigenous youth, there has been limited research into the specific factors within the social environment that impact adversely on Indigenous attendance and achievement at school. These social factors include family background (including intergenerational patterns), family issues (including low income, violence), issues facing teenage girls (including child-care responsibilities, teen pregnancy) and high levels of illiteracy within the family [20]. There is a common myth within education that the school experience is equally valuable for all children, and that success is based on natural ability and levels of motivation. It needs to be acknowledged that this is not the case, that a child's ability when entering school is not solely a reflection of their natural ability, but is also a product of the life they experience within and beyond the classroom [11].

As previously mentioned the history of colonisation within Australia has resulted in low socio-economic status, racism and social exclusion for Indigenous people and has led to factors such as a lack of access to health services and poor standards of living. International studies have found that these factors have been negatively associated with population health. Colonisation has resulted in the marginalisation of Indigenous Australian Culture, with the domination by mainstream Australian culture within institutional structures, such as law, health, education and social services [6]. Hence, there is compelling evidence that the current nature of the education system, and the policies that support it, help to perpetuate Indigenous disadvantage [21]. While the negative consequences of current educational practices are largely unintended, having been developed to meet the needs of students within the mainstream culture, these practices can obstruct Indigenous students' opportunities to learn [6, 22].g

Malin (2003) argues that marginalisation and social exclusion creates trauma and leads to deprivation in people, and this in turn leads to stress. It is evident that Indigenous students experience many stressful situations on a daily basis both within the classroom and the community. Examples include the experience of both blatant and subtle forms of racism, frequent changes in schools due to the transience or mobility of families, unemployment and poverty issues within families, and the frequent experience of death and bereavement [6, 11]. This has important implications for school retention and achievement for Indigenous students. Results from the Western Australian Aboriginal Child Health Survey (2006) indicate that students, in families where seven to fourteen life stress events had occurred in the past twelve months, were almost twice as likely to be absent from school for 26 days or more, than students from families where two or less life stress events had occurred [13]. Factors have been found to moderate the severity of stress experienced by individuals and assist them in becoming more resilient, including an individual's temperament and personality, the level of emotional support received, and overall social integration and cohesion [6]. These factors are important to consider within the context of improving Indigenous educational outcomes.

Another important consideration is the incarceration rates of Indigenous Australians. Indigenous people constitute 20% of the Australian prison population, and Indigenous youth constitute 42% of juveniles in detention [11]. Australian and international evidence indicates that there is a link between low levels of education and the probability of being involved in crime [4]. There is also a belief that the progression to criminal activity commences long before students leave school, and hence it is of critical importance that students are not excluded or marginalised from schooling [4].

Education itself can't change society, however it can provide people with the means to empower themselves [11, 23]. Formal education is a key component in self-mobilisation, including upward social mobility [24, 25]. There is a need for Indigenous students to achieve success at school, especially in an era where education and certification have become necessary for entry into the labour market. This has had, and will continue to have, both economic and social implications for Indigenous people [22].

### **4.3 Opportunity Outcomes**

It is recognised that improvements in educational outcomes are key to improved results in the labour market [16, 26, 27]. Disproportionate numbers of young Indigenous Australians are unlikely to complete high school [28] nor successfully negotiate the transition from school to employment [29]. Barriers to school completion faced by Indigenous youth include the educational challenges posed by the forms of teaching, curriculum and assessment tasks used within the classroom, as well as broader social issues such as racism, poverty, poor health, remote location, and the absence of employment opportunities [13]. The ability to successfully complete high school is fundamental to continued success and quality of life [30]. In fact, it is argued that high school completion and educational attainment is possibly the only pathway for individual's to gain access to productive employment, liveable wages and social and economic advancement [27].

A study completed by Day (2004) found that Indigenous parents and students understand the value of education, and understand that educational achievement has a direct impact on future employment options [31]. However Indigenous participation and achievement rates in education continue to fall behind those of the non-Indigenous population [32]. This, in turn, has a negative impact on a student's post-school options, as it is generally acknowledged that successful high school completion is necessary in providing students with the full range of further education, training, and employment options, as consistent with their abilities [33]. Studies have shown that completion of Year 10 or 11 increases an Indigenous student's chance of employment by 40% and completion of Year 12 increases employment prospects by a further 13% [17].

It is argued that Indigenous educational participation rates may partly be influenced by the expectations Indigenous students hold regarding the economic benefits of education [28]. The reduction in employment opportunities over the past two decades has been particularly felt by Indigenous Australians [15]. The national average income for Indigenous Australians is half that of their non-Indigenous peers [31], with high rates of unemployment and higher levels of employment in unskilled occupations contributing to the lower economic status of Indigenous people [15, 31]. According to the Human Capital Theory, developed by Becker (1964), individuals choose a level of education which maximises their expected lifetime income [28], and overall, Indigenous Australians have matched non-Indigenous Australians recently in the positive trend in gaining educational qualifications. However, the outcomes stemming from post-school qualifications depend heavily on the type of qualification obtained, with university degrees resulting in the largest economic benefits in terms of employment and income, and Indigenous Australians are still securing proportionally far fewer university degrees than other Australians [28].

In addition to this, there is a mismatch between the supply of work opportunities, and the needs and aspirations of Indigenous youth, particularly within remote regions of Australia [34]. Recent data from the National Centre for Vocational Education Research (NCVER) reveals that Indigenous students are significantly under-represented in the fields of study which are most in demand within remote areas, such as mining, engineering and hospitality [34]. It is argued that Indigenous Australians, no matter how well educated, face racism within the job market, resulting in lower rates of labour force participation and higher rates of unemployment [35]. Results of studies show that the ability to obtain employment may indeed be the point at which the greatest discrimination occurs, rather than once an individual becomes employed [28].

A Commonwealth inquiry into Indigenous education (Senate Employment, Workplace Relations, Small Business and Education References Committee, 2000) found there was strong evidence that Indigenous parents were alarmed at the lack of educational progress their children appeared to be making, and in some cases felt their own educational experience had provided better outcomes than those experienced by their children [15]. Whilst poor educational outcomes are a major contributing factor to the socioeconomic disadvantage experienced by young Indigenous people, they also may result in negative implications for achieving greater self-determination in Indigenous affairs. Self-determination risks being undermined in the long-term if young Indigenous people lack the educational skill level required to assist in developing and managing any future economic and social programs introduced by government [14, 15].

## **5. What is the importance of context when considering school retention and educational outcomes for Indigenous youth?**

### **5.1 Home/Family Context**

Studies have found that academic achievement is associated with the type of relationship experienced between parent and child, parents' expectations of their child, and the educational values and standards held by parents [36]. Support can be provided by parents in a number of ways including emotional and intellectual encouragement and support (including modelling, family involvement in both school and classroom environment, and assistance with homework) and structural and material support (including provision of reading and writing materials at home, and provision of a dedicated study and homework space) [22].

Martin (2003) argues that while the role of family is central to all students in terms of motivation and achievement at school, this is particularly true for Indigenous students. The family background of Indigenous students, and the impact of this on attendance at school, needs to be considered within the context of past government policies, including those of assimilation and the forced removal of Indigenous children from their families. The Human Rights and Equal Opportunity Commission's *Bringing them home: the 'Stolen Children' Report* (1997) described the intergenerational patterns of family dysfunction that were created by the policy of forced removal [20]. In addition to this, Indigenous parents' own negative associations and experiences with schooling, and their experience of school as an alien environment, result in many feeling ill-equipped to provide assistance and direction in their children's education [13, 20, 22, 36]. Parents may also have relatively low levels of formal education themselves, poor literacy and numeracy skills, little experience with and knowledge of the processes involved in formal education, and little confidence in their ability to affect change [22]. This has direct implications for the socialisation of some Indigenous children towards formal education [20].

### **5.2 Community Context**

There is a recognised need to provide education that is relevant and meets the needs of the local community [17, 37]. Building partnerships between schools and the communities they serve helps to build community-level ownership and improve educational outcomes for students [38]. Therefore, within the context of Indigenous education, it is necessary to find common ground between local Indigenous groups and the education system, in order to develop a curriculum that is culturally inclusive [39]. Acknowledgement of the different, but valuable, skills and knowledge that Indigenous students are able to contribute within the classroom can help to foster better relationships between teachers, students and the local Indigenous community, thus assisting to integrate the school within the local community [40, 41].

### **5.3 School Context**

Schools are not independent of their communities [33]. Establishing strong relationships between schools and the communities they serve has long been recognised as a necessary component of education [40]. However, it is increasingly recognised that much of what occurs within schools reflects mainstream Australian culture [42, 43], and the current nature of the education system, and the policies surrounding it, help to perpetuate Indigenous disadvantage [21]. International statements on the rights of children and indigenous people emphasise the importance of parents being able to make decisions regarding the type of education provided to their children [44]. For ownership of the educational process to be realised, cultural perspectives must be valued and respected in both the management of the school and in the curriculum. It is widely accepted that Indigenous education should not be separated from mainstream education, however, in order to enable better education outcomes, trust needs to be developed between school systems, teachers, parents and students, with the development of meaningful partnerships, authentic accountability and empowering leadership [21].

## **5.4 Political Context**

Equitable education is recognised internationally as a right for indigenous people [21, 45]. It is argued that within an Australian context, the significant improvement in educational outcomes necessary within Indigenous education requires a whole of government approach, involving coordination both within and between different levels of government, adequate and realistic funding and an increase in the provision of educational infrastructure [45, 46]. Adopting a more integrated approach whereby discreet policy portfolios such as education, health and social services, work more closely to achieve outcomes, will also improve cost-effectiveness and sustainability. In addition to this, partnerships developed between governments, Indigenous communities, and health and education professionals, will ensure mutual understanding and to strengthen cultural inclusion within the school environment [12, 21]. Cultural values and knowledge need to be respected in both the curriculum and how schools are managed for there to be ongoing engagement with Indigenous communities and Indigenous students [45].

Developing policy options that enable partnerships between schools, families and communities does require acknowledgement of the political and historical context. Schwab and Sutherland (2003) argue that policy makers need to examine the historical legacy of Indigenous education that has helped to perpetuate the ongoing disadvantage experienced by Indigenous people in relation to educational participation and achievement. The political and policy context needs to shift in order to encourage and foster positive relationships between schools, families and communities to empower Indigenous people [22]. In addition to this, there is consistent evidence that socio-economic disadvantage contributes to attendance rates at school for Indigenous students. It has been argued that policy frameworks aimed at improving educational participation and achievement have not adequately addressed the underlying socio-economic factors, and consequently service provision remains largely reactive, under-resourced, uncoordinated and fragmented [20].

Improvements within the education system can be achieved, however Lea (2005) argues that they are currently impossible to sustain. This is due to the fact that school reform is complex, and strategies have not yet been adequately quantified, costed or evaluated [40]. It is also clear that solutions require action from many sectors, not just education [47]. As such, ongoing financial and political commitment is required from both state and federal governments, as they ultimately responsible for decisions made regarding priority areas for Indigenous education and for policy development and resource allocation [40, 47].

## **6. What are the issues relating to school retention and educational outcomes for Indigenous youth?**

### **6.1 Cultural Issues relating to School Participation, Retention and Educational Outcomes**

#### **6.1.1 Cultural issues relevant to Indigenous students**

Studies have recognised the difficulty that Indigenous students face at school in needing to negotiate two different cultures; their Indigenous culture and the mainstream school culture. It appears that a positive relationship with both cultures is most likely to lead to successful educational outcomes and provide the strongest foundation for good mental health [18, 48-50]. Whereas situations involving cultural conflict, in which there is a negative relationship between the culture at home and culture at school, can result in increased risk of poor mental health, suicide, violence and substance abuse [51, 52].

Part of the difficulty experienced by Indigenous students stems from the differences in cultural values. The classroom environment is not culturally neutral, there are differing perspectives relating to what counts as knowledge and what doesn't, how people are expected to interact, and the place of power in relationships [44]. To a large extent, and certainly historically, school environments have operated to assimilate Indigenous students into the dominant, mainstream culture [11, 53]. When cultural misunderstandings occur, and if cultural differences are viewed as being problematic by teachers, or if students perceive that there are significant barriers to being understood, the result can be one of alienation or resistance to the education process by the student [15, 53, 54].

Indigenous students are over-represented in data on suspensions and exclusions [55]. Partington et al (2001) argue that there are two principal explanations for the extent of Indigenous misbehaviour within the classroom. Firstly there are cultural differences in values regarding obedience, conformity, language and social relationships, and secondly there are structural influences evident within the classroom relating to power relationships and racism [56]. Other studies have also shown that racism exists within the classroom. Malin (2003) found there were subtle forms of racism operating, including the unequal distribution of emotional support and quality instruction by teachers, which disadvantaged Indigenous students and led to stress and social exclusion [6].

Effective education requires an awareness that cultural conflict does occur within the classroom, and concerted efforts need to be made to ensure that Indigenous students feel confident that their cultural identity is accepted and valued [53]. There needs to be a significant shift in attitudes in order for equity in education to be achieved. This includes recognising Indigenous heritage as part of Australian national heritage, and respecting equally the cultures and values of Indigenous and non-Indigenous Australians [57].

#### **6.1.2 Cultural Issues relevant to Indigenous families**

Developing links between families and schools has been recognised as crucial in the education of children. Within an Indigenous education context, links to culture is also viewed as a critical element in enabling successful educational outcomes for Indigenous students [58]. Interviews conducted by Allard and Sanderson (2003) found that parents felt frustrated with the schooling of Indigenous students, particularly with regard to the fact that there is “no consistent teaching of Indigenous languages, that cultural perspectives are not taught across the school and across subjects, that Indigenous knowledge is not acknowledged or accessed through schooling and that the skills and knowledge the children bring to school are not used as a basis on which to build wider understand and skill development” [58].

Central to engaging Indigenous parents or carers in education is the need to develop quality relationships, and to develop a sense of empowerment which enables each participant to feel valued and equal, and feel that they are able to be heard and can influence change within the school environment [22]. In contrast to the study by Allard and Sanderson (2003), the Western Australian

Aboriginal Child Health Survey (2006) found that while the majority of Indigenous students had fallen behind in their schooling, most Indigenous parents or carers reported feeling satisfied with the performance of both the school and their children. It was suggested that this displayed a degree of alienation of parents or carers from both the schools and the education of their children [13].

While it needs to be acknowledged that many Indigenous parents or carers have their own negative associations and experiences with schooling as a result of past government policies, it is also important to recognise exactly what is being required of Indigenous parents when they are asked to become involved within a school. Commonly, they are required to support the school's existing structure and program, over which they have little control, within a school system that still remains largely culturally mainstream and assimilationist. These differential power relationships make it difficult for Indigenous parents and community groups who want to access schools to become part of the school, or for the school to become integrated into the community [58].

### **6.3 Interventions/Recommendations**

#### **Cross-Cultural Teaching Strategies**

Implementing cross-cultural teaching strategies, such as building Indigenous perspectives into the curriculum, drawing on expertise of Indigenous community, linking with the home and community wherever possible, has been found to communicate cultural sensitivity and result in improved behaviour and achievement of Indigenous students [36, 56, 59]. Purdie et al (2003) conducted a study investigating the relationship between school outcomes and self-identity for young Indigenous Australians. Based on information gained from both an extensive literature review and through consultations with a national sample of Indigenous community members and non-Indigenous teachers, they argue that in order to develop a positive self-identity as a student, Indigenous students need to perceive that there is value for them in schooling. Factors influencing this include feeling a sense of belonging to school, having teachers who are supportive and who have positive expectations of students capabilities, a curriculum which has relevance, and support and encouragement from family, peers and the community [33].

Discipline issues within the classroom with Indigenous students can be approached by developing effective relationships between students and their teachers [54, 60]. Partington et al (2001) found, in a qualitative study conducted at a metropolitan secondary school, that many of the problems encountered within the classroom could have been avoided through the use of effective communication, the establishment of rapport with students, and the restrained use of power. The discipline skills exhibited by teachers who were observed to display a positive restrained use of power within the classroom, included identifying and acting against the correct offenders, providing clear prior warning that misbehaviour would result in specified action, acting against behaviour that was clearly breaking rules rather than reacting to marginal issues, and avoiding escalation. These strategies, when employed by teachers, helped to reduce the incidence of offences. The results of the study also indicated that there were potential benefits to be gained in shifting away from narrow definitions of classroom roles for students to a more collaborative framework, by developing greater student responsibility and more egalitarian teacher-student relationships [56].

#### **Peer Support**

Purdie et al (2000) found that Indigenous peer groups influenced how Indigenous students viewed and felt about themselves at school. They found there were differing opinions as to whether students were more likely to have positive self-identities as Indigenous people if there were large or small numbers of Indigenous students at their school. However, students generally agreed that having other Indigenous students at school, with whom they could identify, was a positive factor. Some students and parents acknowledged that problems occurred if Indigenous and non-Indigenous students did not mix successfully at school [33]. Kvernmo and Heyerdahl (2003) conducted a study exploring the effect of acculturation attitudes, and ethnic and national identity, on behavioural problems in minority adolescent populations in northern Norway. Based on information gained from questionnaires completed by students, they concluded that efforts should be made to improve both ethnic (indigenous) and mainstream network building, and to enhance bicultural coping skills. For indigenous students, this included increasing their cultural ties, and for non-indigenous students, it included enhancing multicultural acceptance and tolerance [18].

### **Involvement of Indigenous Elders**

It is recognised that building links and relationships with Indigenous elders can assist in fostering a sense of pride and belonging for Indigenous youth to the local Indigenous culture and community, resulting in improved education outcomes and improved wellbeing. An anthropological study conducted by Roue (2006) investigated how Cree elders in Canada were asked to assist in helping young indigenous people overcome problems related to delinquency and failure at school. The results of the study indicated that learning about their indigenous identity and culture, through returning to life in hunting camps and being guided by elders, assisted young indigenous people to develop personal skills and a positive identity as an indigenous person. This consistently resulted in reduced problems both at school and more broadly in daily life [48].

Lee et al (2008) conducted an evaluation of a community-driven initiative in an Indigenous Australian community in Arnhem Land, Northern Territory. The initiative was conducted by the Youth Development Unit who provided a range of training, recreational and cultural activities within a community development framework. These activities ranged from bush hunting excursions to the use of computers to record traditional music. Data was gathered for the study from community, staff and stakeholder interviews and through observation. The results indicated that in regard to improving respect for elders and culture, ten of the Indigenous participants believed the initiative had already contributed to this improvement, while the remaining three participants believed that an impact was likely. Non-Indigenous participants shared these views in similar proportions. Community members recognised that the initiative helped to foster young people's sense of purpose, pride and belonging to their culture, and to the community [51].

### **Involvement of Parents and Communities in Schooling**

Based on the results from Western Australian Aboriginal Child Health Survey (2006), Zubrick (2006) argues that strategic directions need to be set in order to address ongoing parent disengagement and alienation from schools, and to improve parent's awareness of their children's educational progress and their capacity to support their children's schooling. This requires more than simply creating a welcoming environment [13]. One strategy recommended was for schools to establish relationships with parents based on mutual trust and shared expectations. Allard and Sanderson (2003) conducted interviews with both teachers and Indigenous parents, and found that while parents expressed a desire to become involved in their child's schooling, and teachers saw a real value in parental involvement, the difficulty occurred in negotiating how and when this would occur. Within the interviews, teachers acknowledged that parents were often only consulted when there was a problem with their child, and that there was a need to speak more often about positive achievements in order to establish better relations with parents [58].

Other strategies recommended by Zubrick (2006) included addressing issues surrounding parent's own poor experiences at school and actively promoting the benefits of education [13]. Previous negative experiences of parents with the education system are known to result in parents being wary or nervous about becoming involved [31, 58]. Results gained through consultations as part of a Review Of Aboriginal Education within NSW (2004) found that many parents expressed frustration at their lack of knowledge of their children's secondary schooling and their inability to assist their children [4]. This is consistent with Allard and Sanderson's (2003) findings that parents felt they did not have the skills and social capital required to successfully engage in schools, nor understand the school structure and decision making process, which they commonly viewed as not culturally inclusive [58]. One positive method reported by parents as beneficial was the provision of seminars by schools which provided information regarding the requirements of secondary school [4].

In Queensland a project was trialled in Cape York called *Families as First Teacher'* (FAFT) which was developed following findings that families did not necessarily see the value of formal schooling and often found school environments daunting. The project involved teams of Indigenous community workers and non-Indigenous teachers starting weekly literacy and numeracy workshops within the homes of Indigenous families. The results from the project indicate that FAFT helped increase the school readiness of children, and families gained understanding of what was expected at school, of their own role in their child's education, and developed higher expectations of the school system [61]. Similarly, Schwab and Sutherland (2003) reviewed existing models and approaches aimed at uniting

families and schools, including a *Parent/Family Centre* originating from the United States. The *Parent/Family Centre* had a focus on providing a welcoming school environment and encouraging parental participation, within a philosophy based on empowering parents. Much of the activity centred on what parents could teach staff, and developing positive relationships between parents and teachers. Activities included informal gatherings between parents and staff, regular parent meetings, and a mentoring program for parents aimed at encouraging participation in a range of school activities. Initial evaluation of the program indicated that there were positive changes observed for parents including changes in self-perception, positive changes in relationships between parents and teachers, and overt improvement in student school attendance [22].

#### **Creation of shared vision and value systems**

Studies have shown that creating a shared vision for education and shared school value system between teachers and Indigenous families also results in positive benefits [62, 63]. Hewitson (2007) provided a case study of a school in an Indigenous community in Northern Territory, in which teachers, students and their families engaged in the process of defining the purpose of education for them, as the first step in shaping the model of education that would be provided by the school. Within these discussions a metaphor, "*Climbing the educational mountain*", was created to provide a framework and a common language between teachers, students, the school principal, school council, families and the media. The metaphor was viewed as providing a language of hope, truth and strength, and acted a vehicle for cultural change within the school. The school became the first Indigenous community school to produce Year 12 graduates within the Northern Territory [63].

Veel and Bredhauer (2006) also provided two case studies of schools which had explicitly negotiated school values through discussions with parents, students and teachers, and had incorporated these values into school culture and pedagogy using and *EsseNTial Learning* framework. Results from the study indicated that this resulted in a strong sense of pride, unity and emotional resilience within schools. The authors concluded that when shared values are supported by explicit teaching and learning across the curriculum, a school can build a sustainable culture irrespective of the cultural mix [62].

## **6.2 Personal Issues relating to School Participation, Retention and Educational Outcomes**

Adolescence is considered a crucial period for making decisions regarding education [24]. It is also the period in which a person's self identity is most subject to change [64]. In developing a positive sense of self, each person needs to experience a sense of autonomy, achievement and belonging [8, 57, 65]. A study by Herbert (2000) has shown that these factors play a crucial role for adolescent youth, particularly Indigenous youth, in remaining motivated to engage in education [57]. Indigenous students have considerably lower participation and retention rates at school than non-Indigenous students [33, 66]. The decision to leave school is influenced by how student view themselves, their community and their future [35, 66]. Hence, addressing factors relating to self, including the development of a positive self-identity, is important in enhancing educational outcomes for Indigenous students [67].

Hattam (2000) reported on findings from the *Students Completing Schooling* project, which focused on students own impressions about the factors that help to facilitate both school retention and success in post-compulsory schooling. Several themes arose from the interviews relating to identity formation, including: the effect of the power gap between teachers and students; how friendship and antagonism affect school completion; how family socio-economic status can undermine school completion, due to the demands being placed on students in their private life; how various sex roles may interfere with school completion; and the undermining effect of the continuing racism experienced by Indigenous students. Youth agency was seen as the way in which young people navigate these issues and develop a socio-cultural self-identity, whilst simultaneously gaining entry into the labour market [35].

Studies have shown that while a student may have a positive self-identity as an Indigenous person, this does not always translate into successful educational outcomes. Instead, it is the positive self-identity as a student or “*learner*” that is critical for school success [33, 67]. McInerney et al (1996) found that some children are more effectively socialised into what it means to be a student within a mainstream classroom setting [42]. Mainstream education may involve the need for Indigenous students to adopt patterns of thought and study that are foreign or in conflict with their Indigenous practices and values, and if the learning differences these students exhibit are viewed as problematic within the classroom setting, this can lead to the development of poor self-esteem or negative self-identity as a student [53]. Students, who develop a positive self identity as both an Indigenous person and student, are more likely to express an attachment and commitment to school, and experience school success [33].

The development of aspirations within students is also an important factor in enhancing self-esteem and self-identity. Lowe and Tassone (2001) argue that many Indigenous students fail to actualise either their personal aspirations or their education and career potential [68]. Being able to actualise these goals depends on the degree to which students feel they have agency in fashioning their own future within the wider sociological environment in which they live. Therefore, contextual issues such as social class, intelligence, sex, ethnicity, race and racism are important factors in understanding career aspiration [68]. Also, the degree to which a student achieves success as a *learner* can affect education and career aspirations. Indigenous students are consistently not achieving the same levels of educational outcomes as their non-Indigenous peers. Research demonstrates that there is a need to provide learning environments which enable Indigenous students to enhance their self esteem through achievement of real learning outcomes [68]. Teachers are crucial in this process, as it has been found that students will tend to assume behaviours that reflect their teachers’ attitude and actions towards them. Negative comments and labelling can lead to disruptive or disinterested behaviour in students, whereas, students who are encouraged and praised will tend to develop and grow as both learners and people [69].

Martin (2006) argues that in addition to the development of a positive identity, academic resilience is also an important factor in determining school engagement. Academic resilience is the ability of a student to deal effectively with academic setbacks, school-related stress and school-related pressure [67]. It is recognised that Indigenous students appear particularly sensitive to criticism, being singled out, and being shamed through failure, and this has implications for how willing they may be to participate within the classroom. Munns (1998) found that students report less feelings of shame associated with quitting school, than in not being able to read in the classroom, and this has significant implications for ongoing school retention. Also, avoidance of shame is often interpreted as misbehaviour within the classroom, leading to increased disciplinary measures [60].

### **6.2.1 Interventions/Recommendations**

#### **Personal or Life-Skill Development**

School-based personal development programs aimed at improving interpersonal problem-solving ability, assertiveness, academic achievement and peer popularity have been found to be beneficial. Tsey et al (2005) adapted the *Family Wellbeing Program* to a school context as a part of a pilot study and found that the tool had the potential to develop analytical and problem-solving skills in students, and enhance psychosocial development. Reported outcomes from the study included a greater ability for participants to think for themselves and set goals, less teasing and bullying experienced within the school environment, and an enhancement of friendships and social relatedness. The study concluded that through participation in the program, students were becoming more confident and were gaining a greater sense of mastery and self esteem within the school environment [7].

Sellwood and Dinan-Thompson (2005) conducted a community-based study aimed at examining the role that physical activity and sport can play in social and moral development and the enhancement of life skills for Indigenous youth. The study was a qualitative case-study investigating the success and effect of implementing the Australian Football League (AFL) *Kickstart* program within a remote Cape York community. The initial findings indicated that many of the students involved in the study reported positive behavioural changes in their attitudes towards school and an increase in self-esteem, pride and confidence. Students made a direct correlation between their positive changes in

behaviour and the *Kickstart* selection guidelines, which included attending school three times a week, having no involvement in substance abuse and no recent history of violence within the school or community. Positive changes were also felt by students to result from the experience of teamwork and of having the opportunity to represent their community. Teachers also noted the progress students were making at school due to these positive changes in behaviour, and felt that this was evidence of the success of the program [10].

### **Youth Resilience**

Participation in youth-focused community activities has also been identified as a way of building youth resilience. As mentioned previously, Lee et al (2008) evaluated a community-driven initiative based in a remote Indigenous community in Arnhem Land, Northern Territory. Participants in this study reported increased opportunities for recreation and training, skill development and improved connectedness. While further evaluation of the initiative is required, it was concluded that by increasing young people's connection to the Youth Development Unit, other agencies, community and culture, youth resilience was increased [51].

### **Development of Aspirations**

While the development of aspirations within students is seen an important factor in enhancing self-esteem and self-identity, there is little research into effective strategies to achieve this development. Lowe and Tassone (2001) reported on findings of a study investigating the effectiveness of *Aboriginal Career Aspirations Program (ACAP)* conducted as a pilot project within twelve NSW schools. The program's aim was to increase Indigenous students' attendance and retention through to Year 12 completion by developing an awareness of careers, pathways and the role of education and training in relation to employment later in life. Central to the program is aspiration development, viewed as a positive vehicle in which to build knowledge, self-esteem and identity in students, with students learning about themselves in relation to work, learning about the world of work, and learning to make career plans and pathways decisions. The program encouraged schools to provide opportunities for career education across the teaching curriculum, as early as possible and in a comprehensive fashion. It was argued that the reality for Indigenous students in terms of school retention means that schools need to start addressing career education as early as Year 7. While the program was quite well received by schools, the trial schools did indicate that they would have difficulty implementing the program again, especially without external support and/or funding. The understanding of many school staff relating to career education was reported as a barrier to the implementation of the ACAP career education initiatives [68].

Cummings (1999) reported on a case study that arose from the *National Coordination and Evaluation* component of the *Indigenous Education Strategic Initiatives Program (IESIP)*. The case study evaluated a program which aimed to develop supportive relationships between Indigenous secondary students and mature-age trainees, with a view to enabling the students to make a smooth transition from school to training and work. There was an emphasis on developing aspirations of Indigenous students, encouraging them to think beyond some of the more traditional vocational preferences, by raising their awareness of professional and para-professional opportunities in fields such as education, health and community services. This was achieved through the allocation of one teaching period per week, as negotiated with the local high schools, where the trainees could meet with Indigenous students in Years 7-12. The trainees met with students and provided information and advice about vocational options, and offered ongoing support to students while they were engaged in work experience and related activities. The reported outcomes arising from establishing relationships between trainees and students included the development of self-confidence in students, and an increased awareness and understanding of vocational education and training opportunities available in the local area [70].

### **Indigenous Role Models**

The presence of respected Indigenous mentors or role models at school, along with an appropriate proportion of Indigenous teachers is believed to help encourage pride, self-identity and reduce alienation from school for Indigenous youth [36]. In the study conducted by Purdie et al (2000), they found that students frequently mentioned family or community members as the people who they most admired or respected, and that they derived their Indigenous identity from their parents and grandparents, gaining a sense of pride and value from the stories they heard from their families

regarding their past. As such, it is argued that it is essential that family and community members play a greater role in schools, both for the development of positive Indigenous identities for Indigenous students but also to develop a greater understanding of both Indigenous and non-Indigenous cultures at school through a two-way exchange of knowledge [33].

Purdie et al (2000) found that many of the boys within their study aspired to careers in sports, such as football, basketball, soccer and boxing, and as such, many identified sporting identities as role models. However, it was argued that not every Indigenous student will excel at sport, and so schools should be encouraged to promote a range of local role models. These role models could also be encouraged to take on the additional role of mentor to individual students, especially those who have been identified as being at risk of leaving school [33]. Sellwood and Dinan-Thompson (2005) also found that while many within the community advocated for the provision of role models from outside the community to encourage young people to participate in sport, it was argued that sourcing local community role models may assist in both long-term sustainability and outcomes, due to the direct links to local cultural ties. This could include older students becoming role models for younger students, which could help develop positive relationships between older and younger students and enhance the self-esteem of those older children who were acting as role models [10].

### **Cross-Cultural Teaching Strategies**

The fear of failure and associated shame reported to be commonly experienced by Indigenous students present consistently as barriers to positive academic engagement and pose ongoing challenges to educators [54, 67, 71]. Munns (1998) found, through a qualitative study exploring the nature of the relationships between Indigenous students and their teachers in an inner urban school, that even though Indigenous students would take risks in other areas of their lives, they would not take educational risks. Munns argues that there is a need for pedagogical change, in which a curriculum is developed and implemented from the earliest years at school that aims to encourage educational risk taking amongst Indigenous students, particularly in the areas of literacy and language. It is also argued that teachers need to consider their own teaching practice, particularly how they check and assess students' work, and move towards eliminating practices which might threaten or shame Indigenous students [60].

Martin (2003) applied a motivational psychology framework to examine the factors that consistently emerge in literature on Indigenous education, including academic resilience and failure dynamics. He found that academic resilience can be conceptualised in terms of confidence (self-belief), control, commitment (persistence), coordination (planning) and composure (low anxiety). Martin argues that targeting each specific element within pedagogical practice and developing specific skills amongst students is a more effective teaching strategy than attempting to address resilience as a whole. In terms of reducing the fear of failure amongst Indigenous students, Martin suggests that teachers need to be careful with criticism, to not single out students within the classroom, demonstrate a constructive view of mistakes (i.e. that students can learn from mistakes), reduce the link between the worth of a person and academic failure/success, and promote a cooperative learning environment [67].

## **6.3 Interpersonal Issues relating to School Participation, Retention and Educational Outcomes**

For Indigenous children and adolescents, the quality of the relationships they have with people in a position of influence in their lives plays an important role in determining their sense of worth, and their resilience and coping capabilities [72]. Thus, within the context of the school environment, teacher attitudes towards students, and the nature of the interactions between teachers and students, are important factors in improving self identity and school engagement [6, 17, 56]. Studies have shown that low expectations held by teachers of the educational aspirations of Indigenous students remains an issue, often resulting in low self-esteem and poor educational achievement [73, 74].

Godfrey et al (2001) conducted a study aimed at investigating the attitudes of Indigenous students to the way they are treated at school, and their attitudes to school attendance. Questionnaires were completed with 473 Indigenous students between the ages of ten 10 to 17, living in Western Australia. The results indicated that the majority of students had a positive attitude towards schooling; they felt welcomed and believed they were treated fairly and with respect. However, despite these results, the number of student who reported relationship problems with teachers was high. Fewer students reported feeling listened to when in trouble, and the percentage who felt their teacher encouraged them to continue their education was also low. These results highlight the importance of specific teacher characteristics in the education of Indigenous students [74]. Continuing concerns have been raised regarding the low level of teacher preparation for teaching Indigenous students, and the low level of employment of Indigenous people as teachers [32].

It has been suggested that a 'deficit' belief is still pervasive within schools relating to Indigenous students' poor engagement at school and lack of classroom success. This belief attributes blame to the individual, through perceived lack of intelligence, or their family, with characteristics of the home life perceived to contribute to failure [15, 55, 60]. However, this fails to acknowledge the nature of the classroom context, the curriculum, and teachers' practices and how these influence classroom behaviour and academic outcomes. As mentioned previously, the classroom environment is not culturally neutral [44]. Teachers need to have an understanding of the part they play in the production of classroom practices, and recognise that their own culture and cultural values may clash with those of their students [11, 60].

Power within the classroom is not exercised solely by teachers; students are also able to exert considerable influence over teachers either individually or collectively. Partington (1998) provides the example, that either by active or passive resistance, or simply by absenting themselves, students have the power to withdraw their consent to be taught. This exercise of power by the student can be seen to challenge the authority of the teacher [44]. Munns (1998) argues that when presented with persistent oppositional behaviour, teachers are at risk of altering and compromising the curriculum, providing unproductive assistance and thus allow students to simply "survive" and get through school. However, these educational practices result in educational inequality becoming inevitable [60].

In focusing on improving the quality of their pedagogical relationship with Indigenous students, it is important that teachers re-examine their teaching methods, the organisation and relevance of the knowledge they present within the classroom, and the educational assessments used [44, 75]. Studies have shown that students who believe their teacher is caring, and who feel accepted by their teacher display better emotional, cognitive and behavioural engagement within the classroom. Also, teachers who support students' autonomy tend to facilitate greater motivation, greater desire to learn and to take on challenges [67, 76].

### **6.3.1 Interventions/Recommendations**

#### **Building capacity Amongst Teachers and Administrators**

Professional development is an ongoing process that should be integral to any school environment, with an emphasis on improving student learning and educational outcomes [8]. Purdie et al (2000) argue that teachers need to be better trained in awareness of Indigenous behaviours, cultures and expectations. It is recommended that teacher education institutions develop specialised learning modules within undergraduate, post graduate and professional development programs that focus on Indigenous education, so that teachers and schools are able to deliver relevant curriculum through the use of inclusive practices [33, 69]. This requires interaction between teachers, curriculum developers, administrators and Indigenous parents, community members and students, so that some knowledge and understanding of Indigenous cultures, societies, history and languages is transferred [59, 69] and strategies on how to work with Indigenous students, parents and the community are provided [33]. In addition to this, it was also recommended that all teachers appointed to remote Indigenous schools receive appropriate induction into the school and community, and receive support throughout their tenure [33].

An example of a teacher education program is *Our Story Program*, developed and conducted annually within any Western Australian school which has Indigenous students. The aim of the program is to

enable teachers to become more aware of Indigenous culture and history, thus improving their understanding of Indigenous students, improving communication between teachers and students, and assisting teachers to make the learning experience more positive for Indigenous students. Appleyard (2002) reported that information gathered from interviews with teachers within one rural town, indicated that while the program was found to be beneficial for newly graduated teachers it did not meet the needs of experienced teachers. Reported limitations of the program are that little input is sought from local Indigenous families when developing the program and that it did not enhance understanding and skills for experienced teachers. Appleyard's study suggested that the *Our Story Program* had potential benefits but needed to be further refined by both local Indigenous parents and experienced teachers so that the benefits could be maximised [31].

Cahill and Collard (2003) conducted an action research project *Deadly Ways to Learn* which aimed to facilitate and enhance the teaching and learning of Indigenous students. As part of this, teachers and Indigenous Education Officers (IEOs) were required to reflect on the language and culture of the school, compare these to their own personal language and culture, and develop ways to make the school structures, curriculum and pedagogy more inclusive and supportive. Results from the study showed significant improvements in the amount the IEOs were included in the planning and conduct of school and classroom programs, and increased use of teaching practices that were more inclusive and respectful of Indigenous language and practices, thereby decreasing the cultural divide experienced by many Indigenous students between home and school [77].

### **Indigenous Teachers**

The employment of Indigenous classroom teachers is recognised as having direct implications for achieving equitable education outcomes for Indigenous students. The *Report on the Review of Aboriginal Education (NSW)* indicated that schools who were establishing improvements in literacy and numeracy skills for Indigenous students acknowledged the importance of Indigenous teachers, Aboriginal Education Assistants (AEAs), Aboriginal Education Workers (AEWs) and literacy and numeracy tutors within this process. It was also reported that the presence of Indigenous workers at school assisted in promoting student wellbeing, by providing Indigenous students with appropriate support and strategies for coping. However, many Indigenous workers interviewed as part of this review, reported feeling undervalued and felt they were treated in a tokenistic manner [4]. It is clear that strategies related to the recruitment and retention of Indigenous teachers need to be further developed [69]. This may include the provision of more flexible pathways that enable articulation from lower level qualifications into teacher education, as well as incentive schemes to attract Indigenous people into a teaching career [33].

## **6.4 Transition Issues relating to School Participation, Retention and Educational Outcomes**

Engagement in primary and secondary education is crucial for gaining access to and success in post school education and training [34]. There is evidence, particularly within remote communities, that Indigenous children start school already behind, due to having poor Standard Australian English skills and growing up in low literacy home environments, and so they are not benefiting as other children do from passive exposure to spoken and written English [61]. The *Western Australian Aboriginal Child Health Survey* (2006) found that, on average, the academic performance of Indigenous students was lower than non-Indigenous students from the first year of school onwards, and that the gap continued to widen. It was argued that once children fall a year behind, it becomes extremely difficult to catch up, and it is therefore crucial to prevent this from happening both during the transition into primary school and within the early years of school [13].

Within secondary education, retention rates for Indigenous students show markedly decreasing numbers of students advancing to the next year, indicating that transition remains a significant ongoing issue for Indigenous students. Transition points are seen generally as a time of risk and opportunity for students, but are increasingly recognised as points of vulnerability for Indigenous students, with the transition between primary and secondary school being a particularly critical point [67]. At this point, students move from a primary school approach that offers more integrated

learning opportunities with a strong literacy and numeracy focus, to a more challenging and independent learning environment in a larger high school. Students also move from being taught by generally only one teacher, to needing to adapt to the teaching styles of up to ten different teachers, each teaching different subjects. It is argued that if retention rates for Indigenous students are to improve, the transition period to secondary school needs to be managed so that students feel supported and encouraged [4].

Strategies found to improve the transition from primary to secondary school include fully briefing students about high school, providing school environments which encourage the development of a positive self-identity for Indigenous students, establishing positive relationships between staff and Indigenous students, effective communication with Indigenous families, setting high standards for behaviour and achievement, and developing courses and pathways which are flexible [29, 67]. The current educational system is often criticised for remaining defined as a “pathway” to university only, rather than encouraging a broad range of alternative career and training options for students [24, 30, 35].

As previously mentioned, Hattam (2000) reported on the *Students Completing School Project*, which provided a forum for students to inform the education community of the factors that facilitate student retention and success in the post-compulsory years of schooling. The project found that to be a successful student, the student is required to have a life that can accommodate an almost unlimited expectation of commitment, including having the physical and emotional resources to concentrate on study, sufficient literacy and numeracy skills, they need to comply with variation in teaching practices and standards, have access to computer resources to complete assessment tasks, need to fit into a regime that provides little capacity to negotiate deadlines or to respond to life circumstances (e.g. death in a family). It is argued that early school leaving is a sign that not all students have the same opportunities and resources, and therefore schooling continues to contribute to the reproduction of inequalities within society [35].

The end of compulsory schooling is also viewed as another important transition point for any student. Due to the demands of post-compulsory schooling, students need considerable support from both school and home [67]. Indigenous students currently complete secondary education at about half the rate of non-Indigenous students, although are twice as likely to participate in *Vocational Education and Training (VET) in Schools* programs [78]. The growth of *VET in Schools* nationally has been significant, with increased numbers of schools offering VET programs [17]. Helme (2005) conducted a study, using both qualitative and quantitative data, to investigate young people’s experience with vocational learning, and the role of VET in addressing the needs and aspirations of Indigenous students. The study found that VET programs facilitate engagement with school and the curriculum in all aspects, including behaviourally, cognitively and emotionally, and is able to accommodate students who are struggling in mainstream education. However, it is argued that VET in schools should not be viewed as a “stand alone” solution to improving Indigenous educational outcomes, as this would deny many students opportunities for academic pathways [78].

There is a need for secondary schools, TAFE colleges and universities to work together to develop the career aspirations of Indigenous students, and prepare them adequately for participating in the work force [33]. Purdie et al (2003) conducted a qualitative study, involving consultation with a national sample of Indigenous community members, and reported that the reoccurring issue raised was the need for Indigenous student to feel confident that their education would lead to real job opportunities [33].

#### **6.4.1 Interventions/Recommendations**

##### **Better management of transition points**

Transition points are increasingly recognised as points of vulnerability for Indigenous students and preventing students from falling behind is viewed as crucial to improving educational outcomes and participation [13]. A first step is improving the readiness to learn of Indigenous students when they start school by providing early childhood education and readiness to learn programs for children in home care, day care, play groups and other settings [13]. One example of an initiative, cited by Schwab and Sutherland (2003), are *Aboriginal Family Education Centres*. These centres work with the

philosophy that education begins with the family, and that through focusing on the education of the young children, educational experiences for parents and communities can also be improved. The program provided opportunities for parental and family participation in learning activities with children, as well as community capacity building through parents' participation in the development and running of the centres. Reported outcomes for children included increased school attendance, more rapid social development and adjustment to mainstream school environments, behavioural improvements, and better academic progress, in comparison to those who did not attend the centre. For parents, the outcomes included better understanding of the educational process and purpose, and a greater involvement in school activities [22].

The transition from primary to secondary school involves a change in curriculum as well change in learning and teaching styles. This requires teachers to actively engage and support students to adjust to the changes. Some secondary schools have restructured the system to help ease transition and reduce the extent of change experienced for students, by reducing the number of teachers who teach Year 7 classes, and by attempting to timetable the majority of Year 7 classes within the same rooms. This appears to have positively assisted in this transition period [4].

In terms of the transition into post-compulsory schooling, Young and Guenther (2008) argue for the need to provide vocational education and training opportunities which are flexible and responsive to local demands and aspirations. Their study provides examples of learning opportunities occurring across sectors, particularly in desert regions of Australia, which are enabling the transition from education to employment within local communities. One example is the *Newmont Tanami Indigenous Training and Employment Program*, an industry-driven initiative aimed at providing Indigenous people, living near the Newmont's Tanami mine, with a pathway into employment. This training program included the development of job readiness skills and specific work skills, and the provision of mentoring, cross cultural training for non-Indigenous mine employees and family support programs. The success rate for local Indigenous people transitioning through the program and into full-time employment on the mine was reported to be very high [34].

Corbett (2007) conducted a three year study, *Where I Belong*, investigating education decision-making within a group of twenty-five young indigenous people from a rural coastal community in Nova Scotia, Canada. The study identified three main themes faced by youth in the community when considering their post-school education options: the notion that the local community is familiar and safe whereas the world beyond contains risks and threats; that the local community can not sustain youth throughout their working life; and that education is necessary for life outside of the community. It was recognised that for those students who were academically successful, leaving the community was almost inevitable. However, certain youth were better prepared for leaving due to conversations they had within their family regarding education options, exposure to travel, or extended family linkages outside the local community. Corbett referred to this as "mobility capital", and argued that this is an essential element in recognising the possibility of educational and career paths beyond school and outside the local community. Teachers were found to be influential in developing mobility capital, as they were often not local and so represented the notion of elsewhere, and hence interacting with teachers appeared to assist in developing the notion of mobility [24].

### **Career Education**

A major difference observed between Indigenous and non-Indigenous students in terms of identity formation, is the marked differences in students' self-perception of their career opportunities and aspirations [33]. Purdie et al (2003) found during consultations that non-Indigenous students tended to report definite future plans whereas Indigenous students were less decided and lacked detailed knowledge about what was involved in achieving their chosen career path. These results indicate that there is a need to focus on raising awareness among Indigenous students and their families regarding the range of options available to them [33]. This career guidance may need to be provided in a proactive manner, actively seeking out engagement with Indigenous students in developing career aspirations and educating students of the pathway options available to them at school and beyond school [66].

Herbert (2003) conducted a study investigating current areas of success experienced by Indigenous students and effective practices that promote such success. The study involved interviews and focus group meetings conducted in twenty-four schools and three non-school sites across Queensland. School initiatives identified included the *Aboriginal and Torres Strait Islander Tertiary Aspirations Program (AITAP)*, the *Aboriginal and Torres Strait Islander Career Aspirations Pathways (AICAP)* programs, and VET programs, each aimed at broadening the available pathways for students in learning and employment. In addition to these, the findings indicated that some schools had identified available employment opportunities within the local community and were attempting to provide educational subjects at post-compulsory schooling level which were in keeping with local employment options. Building partnerships with community, government and industry groups was found to be a new area of interest, with some initial progress being made, particularly in terms of schools engaging with Indigenous organisations. Another new initiative is the *Positive Links between Universities and Schools (PLUS) Program* involving the University of Queensland and Education Queensland. This program focuses on Indigenous students' numeracy and literacy skills, particularly at upper primary and lower secondary school level, with students attending classes on the University of Queensland campus [66].

## **6.5 Literacy and Numeracy Issues relating to School Participation, Retention and Educational Outcomes**

Education and specifically literacy have become critical as modern society is based on the production of knowledge rather than physical goods [79]. Hence reading, writing and arithmetic are basic outcomes expected from a school education. However national performance indicators are highlighting the achievement gaps faced by Indigenous students across all academic subjects [61]. Research has shown that the majority of Indigenous people speak a non-standard version of English as their primary language [77]. Annual testing shows that Indigenous students are not generally achieving the levels of literacy competency in standard Australian English that is required for satisfactory completion of school and successful pursuit of post-school education and employment options [53, 61, 68]. Even at 10 years of age, Indigenous students perform markedly worse on numeracy and literacy test compared to non-Indigenous students [5]. Results from 1996 *National School English Literacy Survey* showed that in Year 3, less than twenty percent of Indigenous students met the performance standards, and less than 30 percent met the writing standards, compared with 70% of all students combined [17, 53].

This pattern continues into high school, with many Indigenous students having very low levels of literacy when they enter high school. Some estimates indicate that many Indigenous students are between 30-36 months behind non-Indigenous students in their literacy learning [4]. The situation is reportedly worse still in remote communities [5, 61]. Studies have shown there is a positive correlation between Indigenous students performance in literacy testing and school attendance rates [80]. Poor literacy skills lead to reduced learning experiences in most subjects, resulting long-term in lack of achievement and failure. It is not surprising that Indigenous students with poor literacy skills are reportedly more likely to become frustrated and disengage from classroom activities, have high levels of absenteeism, and low levels of school retention, often leaving school as early as Year 9 which is a full academic year before non-Indigenous students begin leaving school [4]. This has long term effects on educational and career aspirations, with poor literacy reported to be the greatest single barrier to employment [38]. Without adequate literacy and numeracy skills, Indigenous people become almost unemployable outside their own communities, and even there they are largely employed in unskilled jobs [14].

### **6.5.1 Interventions/Recommendations**

#### **Evidence-based remedial skills programmes**

Effective teaching techniques can do much for improving the education outcomes for all Australian students, including Indigenous students. There are two teaching methods for literacy within Australia which have been recognised as best practice, due to being grounded in evidence-based research and having produced positive outcomes. The first method is *Scaffolding Literacy*, in which low achieving

children are taught, using scaffolding techniques, to read books that fit as closely as possible to what is normally expected for their age level, rather than books aimed at much younger audiences. The results of the first pilot programs in South Australia and Western Australia showed that the percentage of non-readers halved, and the percentage of children reading at Year 4 to 7 levels more than tripled [61, 81]. The other literacy teaching method gaining positive results is *Making Up For Lost Time (MULTILIT) Program*. This method takes an integrated literacy approach involving phonics instruction, whole language techniques, as well as teaching students the value of reading. The results from the initial pilot showed that in half a school year, the average student enrolled in the program progressed from more than three years behind, to one and a half years behind the age appropriate reading accuracy level, and from nearly four years behind to less than three years behind the aged appropriate reading comprehension level [61].

## **6.6 Structural Issues relating to School Participation, Retention and Educational Outcomes**

The United Nations Draft Declaration of Rights of Indigenous Peoples (2003) outlines the right for Indigenous people to self-determination, including the right to determine both their political status and their economic, social and cultural development. Much of this has focused on language and education and the clear desire for Indigenous people to have greater control over education, following a colonial history of cultural and linguistic proscription in which there has been loss of Indigenous language over time and a history of educational failure for Indigenous students [43, 82]. Within an Australian context, the process of reconciliation has been seen as central to Indigenous self-determination and to improving educational outcomes for Indigenous students. Part of this process involves promoting better understanding between Indigenous and non-Indigenous youth within schools, as well as a commitment to addressing the unequal power relationships that exist within the wider society and which get reinforced by what happens within schools [35]. Education can be viewed as a platform for revaluing Indigenous language and culture and enhancing every student's knowledge of Indigenous cultures and societies [35, 82].

However, it is acknowledged that the school system faces barriers to engaging in successful change to meet the needs of Indigenous students and incorporate Indigenous perspectives into the curriculum. Studies have indicated that there are a number of basic dilemmas that are likely to be faced in any process of implementing educational change, including: how and how far schools should adapt to the local cultural context; the extent to which national policies and guidelines should guide change; and how much flexibility is helpful given that too much can have negative implications. Educational change is a complex process, and can be difficult to implement and sustain [15, 37]. There tends to be differing perspectives also between stakeholders as to their expectation of change and adaptation. Foster and Goddard (2002) found that some stakeholders considered schooling as a means for Indigenous youth to integrate into the dominant mainstream culture, whereas others viewed schools as propagators of cultural and linguist knowledge of the local community [37].

These differences in perspectives can be seen in the debate around whether there should be more Indigenous community controlled education initiatives. May and Aikman (2003) argue that there is a need for alternatives to state-run formal schooling, and that equality for Indigenous students can't be achieved through homogenisation or standardisation of education [82]. Whereas Appleyard (2002) found within their interview data that the majority of people did not support Indigenous specific schooling, believing that segregation would exacerbate racial tensions within communities, and would not adequately prepare Indigenous students for integration into society once they graduated [31]. As governments embark on further initiatives to improve educational outcomes for Indigenous students, it is important that the complexities of educational adaptation and change are considered. It is also important to remember that teachers are crucial in any change process as they are the ones who make reform possible [15].

### **6.6.1 Interventions/Recommendations**

#### **Incorporation of Indigenous perspectives into the curriculum**

Teaching practices and attitudes need to be adopted that will result in school structures, curriculum and pedagogy being more inclusive and supportive of Indigenous culture and Indigenous students [82]. Genuine cultural incorporation requires teaching staff to acquire knowledge of the cultural matters that the local Indigenous community consider important, and to develop an effective relationship with local families and involve family members in their children's education whenever possible [6]. Improving education outcomes for Indigenous students is increasingly recognised as being linked to the process of reconciliation within Australia, and hence, all students in schools should be developing knowledge and understanding of Indigenous cultures and societies so that schooling promotes better understanding between Indigenous and non-Indigenous students [35]. As part of this, it is argued that Indigenous studies should be taught to all students, both as specific subjects, as well as being incorporated across the curriculum [33].

Herbert (2000) reported on *Keeping Our Kids at School Project* which investigated factors affecting the attendance, suspension and exclusion of Indigenous students in secondary schools. Responses from Indigenous participants indicated that recognition and acceptance of the need to embrace Indigenous Australian heritage as part of the national heritage, as well as respecting equally the culture and values of Indigenous and non-Indigenous students, was key to ensuring that Indigenous students experienced a sense of belonging and value at school. Achieving this requires a shift in attitude, to one in which being Indigenous is viewed as something positive, and delivering an educational program which is relevant to the needs of Indigenous students is considered possible. This is an essential element in changing the current situation within education [57].

While a number of teachers have been endeavouring to use more effective teaching practices with Indigenous students, Herbert (2003) found within a study in Queensland, that there was a significant amount of confusion in schools as to what constitutes a culturally inclusive curriculum. Some schools were found to offer Aboriginal and Torres Strait Islander studies as a board subject, but aside from this, there was found to be limited integration of Indigenous content within schools' broader curriculum, except for initiatives driven by individual teachers. Teachers achieving success appeared to be those who recognise the importance of both establishing effective teacher-student relationships and incorporating experiential learning [66].

#### **School leadership as a driver of change**

School principals are key players in determining whether school staff operate as a team with a clear sense of purpose, and are able to create and deliver the most effective teaching environment for Indigenous students. It is argued that influencing what teachers believe regarding culture and cultural differences is vital, because what teachers believe significantly influences their planning decisions, such as the selection of strategies and resources to use within the classroom, but also influences the spontaneous and incidental responses they make to the contributions and questions of students [77]. Principals are also critical in developing and driving meaningful engagement between schools and local communities. They can exert extraordinary influence through inspiring both teaching staff and the community to create and share a vision for improving Indigenous education and by their level of determination to bring this vision into reality [4]. Hence the ethos of the whole school, and the value placed on the culture of its students, is led by the principal [14].

## **Appendix 1: Methods**

### **Databases Searched**

**AEI ATSYS (2008)**

*Australian Education Index - Aboriginal and Torres Strait Islander Subset (AEI-ATSYS)*, Informit, accessed May 2008.

[http://www.informit.com.au/indexes\\_AEI-ATSYSUB.html](http://www.informit.com.au/indexes_AEI-ATSYSUB.html)

**APAIS (2008)**

*Australian Public Affairs Information Service (APAIS)*, National Library of Australia, accessed June 2008.

<http://www.nla.gov.au/apais/>

**ERIC (2008)**

*Education Resources Information Centre (ERIC)*, Cambridge Scientific Abstracts (CSA), accessed May 2008

<http://www.eric.ed.gov>

**Medline (2008)**

*Medline*, US National Library of Medicine (NLM), accessed June 2008.

<http://www.ovid.com/site/products/ovidguide/medline.htm>

**Web of Science (2008)**

*Web of Science*, Thomson ISI, accessed May 2008.

<http://www.isinet.com/products/citation/wos/>

## Appendix 2: Results

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