

Australian Education Review



The Case for Change

A review of contemporary research
on Indigenous education outcomes

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A group of Years 1–5 students at Bamaga State School, North Queensland.

Foreword



On behalf of the members of the Advisory Committee to ACER, I am pleased to provide the foreword for *The Case for Change: A review of contemporary research on Indigenous education outcomes*. We welcome such important research. Research in the area of Indigenous Peoples has always been an emotional issue. Politically the Indigenous community has long held the view that we have been extensively researched for little outcomes. Indeed we have often claimed that we are the most researched group in the world. We have felt that many people, mostly non-Indigenous, have studied us and in the process produced many publications that have helped them advance their academic qualifications, professional standing and careers. These activities have not necessarily helped us advance as Indigenous communities and peoples.

The view that we are the most researched group is very debatable and only true in part. Many non-Indigenous people have indeed advanced their qualifications by doing research on us. We as an Indigenous community have only recently begun to produce people qualified at the postgraduate level, therefore becoming trained and available to become involved in research.

While our community still thinks that we are over-researched, the Advisory Committee and I do not agree, and we call for a substantial increase research in the area of Indigenous education. This review so excellently and objectively done by Suzanne Mellor and Matthew Corrigan, supports the contention that much more focused and longitudinal research is needed. We would add that it is essential that such research be done in conjunction with, and inclusive of, Indigenous people – both for the purpose of capacity building for our people, but more importantly for Indigenous knowledge to be incorporated.

This review of outcomes for Indigenous students is very detailed and raises many issues that we hope will spark controversy and debate. I comment on some of them as follows.

National data collection practices

The Indigenous community is not homogeneous, but data for national comparisons is collected and analysed as if we were. This does us a disservice because it does not compare ‘apples with apples’, and masks data on the real growth of our communities.

The National Aboriginal Education Committee (NAEC) in its 1979 submission to the National Inquiry into Teacher Education led by John Auchmenty, developed a Socio-Geographic Chart that distributed our communities in four ways:

Category 1 – Traditionally Oriented Communities, where the local Indigenous vernacular is the common daily language.

Category 2 – Rural Non-Traditional Communities, where the common daily vernacular is English, with a mixture of Indigenous words and Indigenous English.

Category 3 – Urban Communities, where the common daily vernacular is English.

Category 4 – Urban Dispersed Indigenous people, where the common daily vernacular is English.

The need to disaggregate the data from those communities where the daily language is not English, from those communities where English is the daily language, is important in comparing outcomes. When that disaggregation happens we can truly compare outcomes.

Government Indigenous education policy initiatives

‘It is important to recognise that regional and local variations in learning outcomes are not portrayed by such data.’

The Case for Change: A review of contemporary research on Indigenous education outcomes argues that policy initiatives are funding ‘top-ups’ to basic funding programs aimed at achieving social justice, with each provider left to work out how to do this. It further argues that there are a range of performance indicators that lack precise accountability because they do not arise from a coherent body of research that clearly articulates the most appropriate means of addressing Indigenous educational disadvantage. Put simply, future Indigenous education policy decisions must be based upon real research findings, and where these findings necessitate policy action, those actions must be taken.

Principles and standards for culturally inclusive schooling

We agree with the contention in the review that along with the obvious multiple factors of socio-economic status and language, cultural influences are obviously important to learning outcomes and that there needs to be much more research attention paid to exactly what is the influence of culture. Research data collected to date does not support the current policy contention that culturally inclusive curriculum and/or the presence of Indigenous teachers will automatically lead to an improvement in Indigenous student outcomes.

We are sure that the above will be debated by both the Indigenous and non-Indigenous communities.

Inclusion of Indigenous conversation and voice in research

The publication comments on the lack of Indigenous voices in research. In 1979 there were 72 qualified and practising Indigenous teachers in Australia and far fewer numbers qualified in all the other disciplines combined. So, up to the early 1980s our Indigenous communities had very few academic graduates to contribute to the development of us as a people and the nation as a whole. The National Aboriginal Education Committee (NAEC), which existed as the principal policy adviser to the Commonwealth government from 1977 to 1989, recognised this and made several policy decisions designed to correct the situation.

- It advocated the training of 1000 Indigenous teachers by 1990, as a way of quickly increasing our people’s involvement in the education of our communities.
- It advocated the development of programs that would advance the production of Indigenous graduates particularly in teaching, but also all other areas of university study.
- It supported the notion that our own people should engage in postgraduate research to obtain higher degrees.
- It argued that the involvement of Indigenous people in Indigenous research was paramount.

The result was that the numbers of our people enrolled in university programs began to grow.

For example:

- In 1992 there were 153 in higher degrees; by 2001 this had risen to 433.
- In other postgraduate programs there were 191 in 1992 and 283 in 2001.
- In Bachelor Degree programs there were 2780 in 1992 and 4629 in 2001.

What all of the above says is that the Indigenous community now has the beginnings of a critical mass qualified at the degree level. With some proceeding to the postgraduate level there are more of us with the skills and experience to be involved in research, thus advancing our academic qualifications, professional standing and employment opportunities for ourselves personally and our community. From here on there is every reason for our people to be involved in any new research agenda.

What is wrong with current research techniques?

The review makes the following comments on the characteristics of current research techniques in Indigenous Education. I quote (see page 46):

- 1 Research has generally been either testing without context or small case studies.
- 2 Research has generally focused on a specific set of the population.
- 3 Research findings have been equivocal, incomplete or unclear.
- 4 There has been a focus on the uniqueness of the Indigenous experience of education.
- 5 Indigenous education research has been to an extent isolated from the broader research discourses over teacher quality, ongoing professional development, class sizes, and social and emotional readiness for formal education.
- 6 Indigenous education has not been integrated with discourses in other disciplines such as developmental, cognitive and social psychology; paediatrics; sociology and public and community health.
- 7 Research has focused predominantly on 'problems'.
- 8 The relationship between cause and effect has been asserted rather than the inferences tested through research.
- 9 There is a tendency to adopt and promote the significance of single solutions.

I have no doubt that this section will be vigorously debated. However, we on the Advisory Committee believe that the above comments on current research need to be considered seriously. Research practices, and the reasons for which research is undertaken, need to change. There is, in our opinion, a need for research into Indigenous education to be brought into mainstream debates about education outcomes.

This publication highlights the discontinuity between research and policy in some areas and argues the need for more extensive research beyond the small case study paradigm to provide coherent and better-targeted policy initiatives. It argues for more qualitative and case study research along with a more rigorous evaluation of policy targets and indicators by quantified research into actual achievements.

Changes to policy and practice in the field of Indigenous education are required because we really do not know enough about improving Indigenous students' learning outcomes. The review paper has identified the kinds of methodologies this research needs to employ. It has also identified the range of issues applying to both mainstream and Indigenous education that need to be the focus of this new research. It proposes a significant National Research Agenda, arguing that only in this manner can the learning outcomes of all groups of Indigenous students be significantly raised.

If we as Indigenous peoples are to become full citizens, able to fulfil our full potential in this country, the need is manifest. More and better research is the key. We commend this publication as important background for all who may be involved in future planning, policy and research in Indigenous education.

Professor Paul Hughes AM, FACE

*on behalf of the ACER Aboriginal and Torres Strait Islander Education Advisory Committee
of Ms Isabelle Adams, Ms Wendy Brabham, Mr Peter Buckskin, Ms Dale Sutherland,
Mr Arthur Hamilton, Ms Maria Stephens, Dr Margaret Valadian, and Mr Shane Williams.*

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Introduction

This paper is a review of current policy and research in Indigenous¹ education. Evidence from a range of disciplines such as educational and developmental psychology as well as education more broadly, have been utilised in an attempt to shed light on why Indigenous peoples' educational disadvantage persists, despite extensive government and community effort and resources.

It is widely accepted that successful completion of secondary school is a necessary precursor to accessing the full range of further education, training and employment opportunities (Purdie, Tripcony, Boulton-Lewis, Fanshawe, & Gunstone, 2000). In the context of formal schooling, a number of writers have highlighted the importance of education as the key to alleviating the significant social disadvantages faced by Indigenous communities. Hunter (1997) found education to be the largest single factor associated with improving employment outcomes for Indigenous Australians and reducing rates of arrest. In addition, Malin (2002) argued that the extent to which Indigenous students are socially incorporated and supported within their classroom has implications for reducing poverty and stress and improving their health in the longer term. In contrast, Partington (1998) highlights the problematic nature of a western education for Indigenous people, which he characterises as a double-edged sword.

For centuries, education has been used as a tool of assimilation, and this has been the Indigenous experience of western education. Nevertheless, for those who successfully negotiate it, education provides the key to self-determination and active and equal participation in society. The common thread between writers such as Partington (1998), Malin (2002) and Hunter (1997) is the importance of education (which is necessarily culturally appropriate) to Indigenous people. The crucial, 'gatekeeping' nature of education underscores the importance of finding the means by which to alleviate educational disadvantage efficiently and effectively, so that Indigenous peoples are able to achieve equality of education outcomes, experience the benefits that it bestows and exercise the autonomy that it brings to recipients.

Current state of Indigenous educational disadvantage

Unfortunately for Australia, the full benefits of education have yet to be realised for the Indigenous peoples. At the beginning of the 21st century, ameliorating Indigenous educational disadvantage was presented as 'an urgent national priority' by MCEETYA (2000a, p. 1). Although the rate of Indigenous students' access to, participation in, and retention in education has shown improvement in some areas in recent decades, equitable outcomes are not being achieved (Hunter, & Schwab, 2003).

¹ In this paper, the term 'Indigenous' refers to the Indigenous people of Australia who are Aboriginal or Torres Strait Islanders.

Improvements in Indigenous education outcomes remain dwarfed by the magnitude of the discrepancy between Indigenous and non-Indigenous educational achievements (Ridgeway, 2002). According to the Commonwealth of Australia (2002):

serious gaps between Indigenous and non-Indigenous outcomes remain in literacy, numeracy, student attendance, retention into senior secondary education, Year 12 certificates and some completion rates in VET and higher education.

(Commonwealth of Australia, 2002, p. xviii)

Despite significant funding to Indigenous education (\$1.5 billion in supplementary funding across all sectors during 2001–04; DEST, 2000), the seemingly intractable gap in primary school level Australian Standard English literacy and numeracy achievement between non-Indigenous and Indigenous people remains great and is publicly acknowledged (see ABC, 2003, February 7.) While 77% of Indigenous students met the minimum benchmark for reading in 2000, this compares unfavourably with the 93% of non-Indigenous students who achieve the benchmark. With regard to numeracy, 74% of Indigenous children met the benchmark in 2000, whereas 93% of non-Indigenous students met this same standard. Of greater concern is the increase in the gap which grows to 25% in reading and 27% in numeracy by Year 5.

The greater absenteeism of Indigenous students compared to non-Indigenous students is subject to perennial attention. According to recent data (Commonwealth of Australia, 2002), Indigenous students' attendance at school varies, but can be below four days present a week during primary enrolment and as low as 3.5 days a week during secondary enrolment. While 76.2% of non-Indigenous students enrolled in Year 10 in 1999 were subsequently enrolled in Year 12 in 2001, the corresponding figure for Indigenous students was 43.6%. Of additional concern is that the proportion of Indigenous students enrolling in Year 10 was already 15% lower than for non-Indigenous students. Only one in three Indigenous students successfully complete Year 12. Indigenous students are less likely to enrol in pre-primary programs or participate in higher education courses (Commonwealth of Australia, 2002). The poor skill development in the key competencies of literacy and numeracy, when combined with the poor retention, is of particular concern. These data demonstrate the ways in which the educational disadvantage of Indigenous students compound. Interrelational effects are always present in the experience of education.

Caveat on national data

It has to be recognised that the data collected by the Commonwealth is presented as national data. It is this data that researchers use in their analyses, and that the authors of this review paper have considered. It is important to recognise that regional and local variations in learning outcomes are not portrayed by such data. In particular, the inclusion of data from remote communities can conceal improvements and successes in urban and regional communities. Analyses based on meta-analyses of state-wide assessment programs in literacy and numeracy by Ainley J. (1994) indicate that the differences between Indigenous students and other students are smaller in urban locations than rural and (especially) remote locations. These results are summarised in the discussion paper produced for the National Review of Education for Aboriginal and Torres Strait Islander People (DEET, 1994). These results are consistent with anecdotal evidence that significant regional and local differences in learning outcomes exist. But these important local and regional distinctions are not readily accessible to researchers or policy-makers, and the claims as to the cause of the variations also cannot be fully analysed.

Important distinctions exist, at the least, between two types of Indigenous community populations. These indicative distinctions need to be drawn, because these communities are more than socially different, they are also educationally different. The first Indigenous setting is in those generally traditional and remote communities, where the vernacular is the common daily language, and where English exists only in the schools. The second setting is those communities where English is the community and school language, even given that Aboriginal

English is part of the language mix. Data on students in the second, and much the larger, of the groups is rarely separated from that of other Indigenous students, yet their educational experience is more like that of other non-Indigenous Australian students than that of the first-named Indigenous community. Data collection methods need to be implemented that enable the examination of discrete populations.

The structure of this research review paper

In preparing this research review paper, the authors have been mindful of not underplaying the diversity of Aboriginal and/or Torres Strait Islander peoples. That diversity is reflected on many levels from relations between and within kinship groups (see Rowse, 2001), the extent of integration with the broader community, whether resident in a rural or urban environment and whether or not Indigenous people are in the majority or minority in their particular locality. All of these diverse circumstances and the interactions between them raise different educational issues and highlight the importance of an approach based on recognition of diversity and acceptance of individual difference.

One corollary of this diversity is the limitation of the suitability and applicability of research and policy that egregiously assumes an undifferentiated whole when considering Indigenous people. The authors are mindful of the need to distinguish between different circumstances and contexts, as they exist for Indigenous people in relation to access, participation, remaining in or returning to, education.

A further corollary of the homogenisation of much of the research and policy relating to Indigenous education is the loss of the differentiated Indigenous voices. Much of the work, especially the issues referenced and problematised in this review, are the subject of long-held conversations in the Indigenous social and research communities. The lack of formalisation of these conversations in the academic or policy research regimes and conventions means that they do not impact on the literature in the way that they should. Gaining credit for the conversation, and finding a means to include it in the wider policy and research literature are issues of which the authors of this review paper were conscious, but unable to effect in the course of the work.

This paper has four substantive sections. Section 2 examines the current policy² approach of the Commonwealth Government. Sections 3 and 4 examine current research in education, firstly from the perspective of key tenets of educational theory applicable to all students and secondly with a more focused consideration of pertinent factors affecting Indigenous students. Section 5 examines the relationship between policy and research and some of the methodological tools used in analysis. The purpose of this final section is to illuminate key lines of future enquiry that could provide the necessary research findings to underpin new policy initiatives to more effectively tackle Indigenous students' educational disadvantage.

² This paper reviews Indigenous education policies that are either still in use or may have been superseded but still inform current policy-makers' thinking.

Current Commonwealth Indigenous education policy initiatives

Introduction

Following the 1967 Referendum, the Commonwealth has had the power to legislate on issues directly affecting Indigenous peoples. From the early 1970s onwards, the Commonwealth has exercised its powers, instituting a range of policy initiatives and reviews in the area of Indigenous education. Often, policy initiatives have been run jointly with the states and territories through avenues such as MCEETYA. Such a structure implicitly recognises the need for both federal and state levels of government to tackle the issue of Indigenous educational disadvantage in a coordinated manner.

There is striking similarity and continuity between the policies of the 1970s and 1980s and those of today. While the underlying structures and conceptual frameworks (see Partington, 2002) may have changed, the actual means of tackling Indigenous education proposed by governments have remained the same. The focus remains on key initiatives, such as developing culturally appropriate pedagogical practice, developing culturally inclusive curriculum that incorporates Indigenous studies, improving attendance rates, increasing parental participation in school, the provision of Aboriginal and Torres Strait Islander Education Workers (AIEW) and increasing the number of Indigenous teachers (compare: Aboriginal Consultative Group, 1975; Commonwealth of Australia, 2002; House of Representatives Select Committee on Aboriginal Education, 1985; McRae et al., 2000; Department of Employment, Education and Training (DEET), 1989; Watts, 1981).

The National Aboriginal and Torres Strait Islander Education Policy (AEP) (DEET, 1989) remains the national policy on Indigenous education, despite being in place for 'over a decade' (DEST 2000, p. 8). The principal aim of AEP is to achieve 'better educational results' for Australia's Indigenous people (DEST, 2000; p. 8).

The key elements of AEP are:

- involving Aboriginal and Torres Strait Islander people in educational decision-making
- equality of access to educational services
- equity of educational participation
- achieving equitable and appropriate education outcomes

(DEST, 2000)

These four key elements are underpinned by 21 long-term goals (see DEST, 2000). Despite the longevity of AEP, there has been some change within Indigenous education policy (see MCEETYA 2000d; MCEETYA, 2000e). In recent years, the policy initiatives have become

less nebulous and more targeted. The recent policy strategy to achieve this has seen funding associated with performance targets and reporting processes (such as the IESIP and NIELNS initiatives).

This section of the research review paper describes the most recent policy initiatives in Indigenous education, recent policy documents by MCEETYA (2001) and their relationship to broader policy statements such as the Adelaide Declaration (1999).

Indigenous Education Strategic Initiatives Program (IESIP)

The IESIP, along with Indigenous Education Direct Assistance (IEDA)³, are the two key Commonwealth initiatives in the area of Indigenous education (DEST, 2003). At the core of IESIP is the delivery of supplementary recurrent assistance (SRA), on a quadrennial basis, to educational and training providers specifically for their Indigenous clients (Commonwealth of Australia, 2002; DEST, 2003). IESIP includes a range of program initiatives including ESL programs for Indigenous Language Speaking Students, the National Indigenous English Literacy and Numeracy Strategy (NIELNS) and the Away from Base for Mixed-Mode Delivery, which provides funding to universities and vocational education and training (VET) institutions to supply additional on-campus support to Indigenous students who study predominantly by correspondence (Commonwealth of Australia, 2002; DEST, 2000).

Over 90% of Indigenous students receive educational services from one of the 200 educational organisations that receive additional funding under the IESIP. This funding is in addition to that provided for Indigenous students by the states and territories (DEST, 2000). IESIP is structured and monitored across the preschool, school and VET sectors against five priority areas for Indigenous education and training as set by MCEETYA in 1995 and amended in 2002 (see Commonwealth of Australia, 2002). Those priority areas are:

- improving literacy
- improving numeracy
- improving education outcomes for Indigenous students
- increasing Indigenous enrolments
- increasing Indigenous presence, involvement and influence in education

(Commonwealth of Australia, 2002)

Despite the Commonwealth's (2002) recognition that these priorities are not independent but are interrelated, research has not been conducted to investigate and better understand the nature of any causal relationships between these priorities. Such research could improve the efficiency and effectiveness of any initiatives undertaken.

While MCEETYA sets the priorities and hence the national agenda, those service providers that receive additional recurrent funding from the Commonwealth under the IESIP Scheme 3 devise their schemes (in consultation with the Commonwealth) to achieve these priorities. Thus, the Commonwealth does not directly determine the methodology or tools for achieving the key priorities. Under IESIP, each education provider in the scheme has an Indigenous Education Agreement (IEA) with the Commonwealth that requires them to set targets for improved outcomes. For each funding period between 2001 and 2004, targets were established against performance indicators in each priority area. IESIP-funded providers submit performance reports showing their outcomes against the performance indicators.

According to the Commonwealth, the targets 'generally' aim, by 2004, to halve the current gap between Indigenous and non-Indigenous students in the areas of literacy, numeracy and attendance (Commonwealth of Australia, 2002, p. xviii). The word 'generally' is intended to convey the inherent flexibility of the Commonwealth in regard to the type of goals set by the service providers. While this approach might have the benefit of encouraging service providers to tackle more difficult initiatives, such as meeting literacy and numeracy benchmarks, it comes at the cost of reducing the strength of the performance tasks. This paper's authors would argue that there is, at the very least, the possibility with this approach that service providers might

³ IEDA provides funding for the following programs: Aboriginal Tutorial Assistance Scheme (ATAS), Vocational and Educational Guidance for Aboriginals Scheme (VEGAS) and Aboriginal Student Support and Parent Awareness Program (ASSPA).

use this flexibility to minimise the risk of failure (which presumably might have subsequent funding consequences). In the face of Indigenous peoples' education disadvantage the government should stick steadfast to achieving equality. It should not use the term 'goals' loosely lest researchers become less than rigorous in their definitions and accountabilities. If there is to be flexibility, it should be at the level of the range of initiatives and tools used to address the disadvantage, so as to meet individual needs, rather than at the level of program outcomes.

Of further concern to the authors of this review is that, according to the Commonwealth of Australia's publication (2002), IESIP data are not externally reviewed or validated and therefore 'some caution should be exercised when interpreting and using these data' (p. 4). While the Commonwealth has suggested that the reliability of the research data will improve over time, this caution is an explicit acknowledgement that the data from at least some IESIP funding recipients has not been consistent and is not verifiable.

Indigenous Education Direct Assistance Programs (IEDA)

Under the IEDA policy banner, one policy response (DEET, 1989) to a lack of Indigenous community involvement in schooling was the establishment of Aboriginal Student Support and Parent Awareness (ASSPA) committees in preschools, primary schools and secondary schools with five or more Indigenous students⁴. ASSPA are designed to provide the opportunity for Indigenous parents to become involved in decision-making and provide an evaluation of culturally appropriate resources being used in schools (Stewart, 1999). Stewart (1999) argues that the success of mainstream education providers in meeting the needs of Indigenous students depends on whether the Indigenous community perceives the education system is attending to their interests and goals. The ASSPA committees are one mechanism through which those interests and goals can influence the direction and implementation of initiatives within schools. Overall, the ASSPA Committee system has had mixed results, as success is dependent on the capacity of individual parents to assert education agendas. While in some schools ASSPA committees have been active and successful in giving Indigenous parents the ability to influence school policy, in other schools the committee has struggled to retain significant numbers of members and consequently had a largely peripheral impact on school policy (see DEST, 2000; Eckermann, 1994).

Strategic Results Projects

In 1997, the Commonwealth established a series of Strategic Results Projects (SRPs). The Commonwealth reported that the purpose of the projects, which focused on new initiatives to improve Indigenous learning outcomes, was to examine and report upon what are judged to be successful initiatives in Indigenous education. Such judgements would then guide IESIP providers in their own efforts to alleviate Indigenous educational disadvantage. A total of 83 SRPs were undertaken as part of the scheme covering the breadth of educational issues from preschool to VET. The projects were of one year's duration and they ranged from projects operating on a single site to those that covered the whole education system. McRae et al. (2000) reported on the results of the SRPs, identifying three 'key factors' that underpinned the successful SRPs. They were: cultural recognition, the development of necessary skills and improved participation.

The SRPs were structured along similar lines to the IESIP to the extent that the strategic direction offered by the government was limited, enabling those running each project to provide baseline data and then establish their own targets for improvement. McRae et al. (2000) reported that 60 SRPs provided largely self-assessed results, which showed 41 achieved their targets and 11 achieved at least one of their targets. It should be recognised that the project ranged in the level of their ambitiousness and, while the targets were meant to reflect the achievement levels of non-Indigenous students, there is little information on whether those who set the most difficult targets actually achieved them. Further, some initiatives were conducted at a single site (such as a school) thus limiting generalisability. Nevertheless, McRae

⁴ Where there are less than five Indigenous students, schools may voluntarily establish an ASSPA committee and may receive funding for the committee.

et al. (2000) distilled from the case studies ‘four fundamentals’ to achieve improvements in Indigenous education outcomes. They are:

- respect for self and others
- cultural respect, including cultural incorporation in schools
- best teaching practice, including good relationship with students
- good attendance

National Indigenous English Literacy and Numeracy Strategy (NIELNS)

NIELNS comes under the broad umbrella of IESIP and was launched by the Prime Minister in March 2000. It has the overall objective of ensuring that Indigenous students reach levels of literacy and numeracy comparable with other Australians (see DEST, 2000). This will be achieved by existing education providers ‘making more effective use’ of their available resources (p. 3). Under NIELNS, education providers work with the Commonwealth to establish Indigenous literacy and numeracy implementation plans, which clearly articulate what the education providers will do to achieve improved Indigenous student literacy and numeracy outcomes (DEST, 2000). Thus, NIELNS operates within a similar paradigm to IESIP; additional recurrent funding is provided to educational providers who establish strategies to meet targets – in this case, improving Indigenous students’ literacy and numeracy achievement.

According to DEST (2000), this objective can be met by focusing on six key issues (derived from the outcomes of SRPs; see McRae et al., 2000):

- achieving attendance
- overcoming hearing health and nutrition problems
- preschooling experiences
- getting good teachers
- using the best teaching methods
- measuring success, achieving accountability

(DEST, 2000)

The Commonwealth has set up this six-issue framework and suggests that the best way to address these six issues is to look to ‘key factors’ that are crucial to successful implementation. An example of such a factor is the fostering of high expectations of parents, teachers and the community (DEST, 2000). However, the service providers themselves (with varying levels of consultation with the Commonwealth) establish the particular elements of their strategy.

For the 2001–04 quadrennium, IESIP providers were required to design specific NIELNS implementation plans. These plans were to be a blend of new initiatives and improvements to former approaches. A total of \$76 million was directed to NIELNS and in 2003 there were 90 IESIP providers conducting 266 initiatives as part of this scheme (Commonwealth of Australia, 2002). When establishing NIELNS, the goal was that education providers would be accountable to the government for reporting the literacy and numeracy outcomes of their students (DEST, 2000).

The Commonwealth of Australia (2002) reported that it was ‘too early to determine causative links’ (p. 102) between NIELNS initiatives and Indigenous students’ literacy and numeracy skill development. Hence, it is *too early* to evaluate the success of NIELNS in addressing educational disadvantage. The Commonwealth provided information on the type of projects that were being conducted as part of NIELNS.

The particular strategies adopted indicate current practitioners’ thinking as to the best way to alleviate educational disadvantage and they provide a telling contrast to the broader-based educational researcher perspectives discussed in later sections of this paper. For example, in relation to improving attendance, the *most common approach* has been to provide transport to and from school (Commonwealth of Australia, 2002). A number of initiatives have been used

to address Indigenous student hearing and other health problems, such as conducting hearing and health checks and providing meals such as breakfasts and lunches. Professional development was seen as a necessary constituent of getting good teachers. Developing culturally appropriate resources supported *using the best teaching methods*. As these are predominantly not new initiatives, the authors of this review paper are unclear as to how the renewed application of existing strategies will foster significant change in Indigenous learning outcomes.

National goals for schools in the 21st century

The Adelaide Declaration (MCEETYA, 1999a) reveals a considerably broader vision for education than that indicated by the Indigenous education initiatives, such as NIELNS and IESIP, which focus on the need to improve achievement in specific core competencies. Despite the Adelaide Declaration being preceded by the Hobart Declaration (Australian Education Council (AEC), 1989), MCEETYA (1999b) argued that the Adelaide Declaration ‘represent[ed] a historic commitment to improving Australian schooling within a framework of national collaboration’ (p. 1). Further:

the achievement of the national goals is aimed to assist young people to contribute to Australia’s social, cultural and economic development and to develop a disposition towards learning throughout their lives so that they can exercise their rights and responsibilities as citizens of Australia.

(MCEETYA, 1999b, p. 1)

1999 Adelaide Declaration on National Goals for Schools in the 21st Century

- 1** Schooling should develop fully the talents and capacities of all students. In particular, when students leave schools they should:
 - 1.1** have the capacity for, and skills in, analysis and problem solving and the ability to communicate ideas and information, to plan and organise activities and to collaborate with others
 - 1.2** have qualities of self-confidence, optimism, high self-esteem, and a commitment to personal excellence as a basis for their potential life roles as family, community and workforce members
 - 1.3** have the capacity to exercise judgement and responsibility in matters of morality, ethics and social justice, and the capacity to make sense of their world, to think about how things got to be the way they are, to make rational and informed decisions about their own lives and to accept responsibility for their own actions
 - 1.4** be active and informed citizens with an understanding and appreciation of Australia’s system of government and civic life
 - 1.5** have employment related skills and an understanding of the work environment, career options and pathways as a foundation for, and positive attitudes towards, vocational education and training, further education, employment and lifelong learning
 - 1.6** be confident, creative and productive users of new technologies, particularly information and communication technologies, and understand the impact of those technologies on society
 - 1.7** have an understanding of, and concern for, stewardship of the natural environment, and the knowledge and skills to contribute to ecologically sustainable development
 - 1.8** have the knowledge, skills and attitudes necessary to establish and maintain a healthy lifestyle, and for the creative and satisfying use of leisure time.

2 In terms of curriculum, students should have:

2.1 attained high standards of knowledge, skills and understanding through a comprehensive and balanced curriculum in the compulsory years of schooling encompassing the agreed eight key learning areas:

- the arts;
- English;
- health and physical education;
- languages other than English;
- mathematics;
- science;
- studies of society and environment;
- technology;

and the interrelationships between them

2.2 attained the skills of numeracy and English literacy; such that, every student should be numerate, able to read, write, spell and communicate at an appropriate level

2.3 participated in programs of vocational learning during the compulsory years and have had access to vocational education and training programs as part of their senior secondary studies

2.4 participated in programs and activities which foster and develop enterprise skills, including those skills which will allow them maximum flexibility and adaptability in the future.

3 Schooling should be socially just, so that:

3.1 students' outcomes from schooling are free from the effects of negative forms of discrimination based on sex, language, culture and ethnicity, religion or disability; and of differences arising from students' socio-economic background or geographic location

3.2 the learning outcomes of educationally disadvantaged students improve and, over time, match those of other students

3.3 Aboriginal and Torres Strait Islander students have equitable access to, and opportunities in, schooling so that their learning outcomes improve and, over time, match those of other students

3.4 all students understand and acknowledge the value of Aboriginal and Torres Strait Islander cultures to Australian society and possess the knowledge, skills and understanding to contribute to and benefit from, reconciliation between Indigenous and non-Indigenous Australians

3.5 all students understand and acknowledge the value of cultural and linguistic diversity, and possess the knowledge, skills and understanding to contribute to, and benefit from, such diversity in the Australian community and internationally

3.6 all students have access to the high-quality education necessary to enable the completion of school education to Year 12 or its vocational equivalent and that provides clear and recognised pathways to employment and further education and training.

(MCEETYA, 1999a)

There is an emphasis apparent in the Adelaide Declaration (1999a) on the core skills of lifelong learning (see Bryce, Frigo, McKenzie, & Withers, 2000), such as problem solving and communication skills. Further, the goals reflect a desire to build the social and emotional skills of students. Thus, in the Adelaide Declaration, education is seen as fundamentally much more than simply improving employment prospects. Clearly, in this framework, education is seen as contributing to cultural reinforcement, the transmission of culturally and socially appropriate behaviours and ideals (Eckermann, 1994).

When education is recognised as having this broader focus, the particular cultural needs of Indigenous students become more urgent and the nature of the particular relationship between Indigenous peoples' cultures and the goals of schools becomes more acute. Importantly, the national goals explicitly recognise that social justice is predicated upon all students learning about Indigenous cultures and thus articulates a dual purpose for Indigenous studies in school, boosting Indigenous students' self-esteem (through cultural recognition) and making the broader community more knowledgeable about Indigenous peoples and their cultures.

More culturally inclusive schooling in the 21st century

According to MCEETYA (2000b) the Adelaide Declaration and the National Strategy for the Education of Aboriginal and Torres Strait Islander Peoples (DEET, 1989) and 'the work done over the last decade' provides the necessary structure 'for accelerating the achievement of equitable and appropriate education outcomes for Indigenous Australians' (p. 2).

MCEETYA established the *National Statement of Principles and Standards for More Culturally Inclusive Schooling in the 21st Century* (MCEETYA, 2000b). The National Standards are intended as a framework for action (MCEETYA, 2000b). In establishing the National Statement, the state, territory and Commonwealth ministers argued that these Principles and Standards provide a framework that will underpin the development of policies, which will lead to more culturally inclusive schooling than presently exists. The Principles and Standards make explicit that the ministers believe that being culturally inclusive is the remedy for Indigenous educational disadvantage (see p. 1). Such a claim is presumably premised on the belief that schools are currently culturally excluding of Indigenous culture and that this exclusion contributes significantly to Indigenous students' educational disadvantage.

Principles and standards for culturally inclusive schooling

Principles

Principles are described in terms of the right of all Aboriginal and Torres Strait Islander students to high-quality schooling and the rights and responsibilities of parents as the first educators of their children.

- 1** Schooling acknowledges the capacity of all young Indigenous students to learn;
- 2** Schooling acknowledges the role of Indigenous parents as the first educators of their children; and
- 3** Schooling acknowledges the close relationship between low levels of Indigenous education outcomes and poverty, health, housing and access to government services and infrastructure by developing cross-portfolio mechanisms to address these issues.

(MCEETYA, 2000b)

Standards

Standards are described in terms of the rights of Aboriginal and Torres Strait Islander students and their teachers and education workers to access the same level of government services as other Australians and to achieve equitable and appropriate education outcomes.

- 1** Schooling is socially just when education facilities and services are provided by governments to Indigenous people which are equally accessible and of the same standard;
- 2** Governments ensure that high-quality accredited and culturally inclusive education and training opportunities are provided in prisons, youth detention centres, and other juvenile justice programs for Aboriginal and Torres Strait Islander students;
- 3** Schooling will accelerate the achievement of equitable and appropriate education outcomes for Aboriginal and Torres Strait Islander students when all Indigenous students achieve National Goals in Literacy and Numeracy, attendance rates improve and participation rates in year 12 are comparable to the rates of their non-Indigenous peers.⁵

(MCEETYA, 2000b)

The Principles themselves reflect the kind of thinking that has predominated for much of the last two decades about how to address Indigenous educational disadvantage. However, there are a number of new distinctions contained in the documentation. The important intellectual and policy step forward revealed in the Principles and Standards is the explicit recognition that Indigenous parents⁶ are the first educators of their children, which necessarily obliges educators

⁵ A full version of the *National Statement of Principles and Standards for More Culturally Inclusive Schooling in the 21st Century* is available from <http://www.curriculum.edu.au/mctyapdf/principl.pdf>.

⁶ Indigenous people comment on the tendency of policy documentation to presuppose the nuclear family structure as the appropriate one for all Indigenous children, whereas in the experience of most Indigenous children a broader family unit is more likely to be the norm.

to recognise the knowledge that children bring with them to school as the basis for future learning. The provision of a set of standards further reinforces the rights of Indigenous students and their families to a minimum level of acceptable service provision.

In addition to the Principles and Standards, MCEETYA (2000c) also established *A model of more culturally inclusive and educationally effective schools*, which provides a companion framework for future government initiatives. In the model, the relationship between the community, school and classroom was presented as integral to improving Indigenous student outcomes. Thus, MCEETYA reinforces the importance of the following: productive parent and school relationships, effective school leaders, an understanding that learning involves requisite engagement, the contribution that a flexible approach to learning can make, and the need to establish standards for improving learning outcomes. In relation to teaching, MCEETYA argues that the key ability is 'to recognise that sound teaching practice reflects the ability of the educator to match an appropriate teaching practice to the needs and strengths of the Indigenous learner' (MCEETYA, 2000c, p. 4).

This policy document (MCEETYA, 2000c; MCEETYA 2000d) makes explicit that it propounds an approach to teaching that foregrounds individual differences. It asserts that teachers must be mindful of, and tailor their approach to, the individual needs of each student. Such an approach is congruent with the multi-ethnic and multi-language reality of numerous Indigenous students in many schools across Australia. It is also congruent with the needs of many non-Indigenous students for whom a multicultural and multilingual background is the reality (Eckermann, 1994).

The MCEETYA discussion papers

In 2001, the MCEETYA Taskforce on Indigenous Education Employment, Training and Youth (IEETY) released a series of discussion papers. They were:

- *Education of Teachers of Indigenous Students in Early Childhood Services and Schools* (MCEETYA, 2001a)
- *Solid Foundations: Health and Education Partnership for Indigenous Children Aged 0 to 8 Years* (MCEETYA, 2001b)
- *Effective Learning Issues for Indigenous Children Aged 0 to 8 years* (MCEETYA, 2001c)
- *Exploring Multiple Pathways for Indigenous Students* (MCEETYA, 2001d)

The IEETY Taskforce includes two representatives from each state and territory, one representative each from the National Catholic Education Commission (NCEC) and the National Council of Independent Schools' Association (NCISA) and one observer from Aboriginal and Torres Straits Islander Council (ATSIC) (MCEETYA, 2003). The papers do not have author identification and are written with little referencing, thus making it unclear what research evidence underpins key claims. Nevertheless, these papers are discussed here as they provide an understanding of the current thinking supporting government initiatives at state and federal levels.

Education of teachers of Indigenous students in early childhood services and schools

The first discussion paper (MCEETYA, 2001a) has two main points: first, that good teachers are integral to ameliorating Indigenous student disadvantage; second, that effective relationships between parents and teachers are also critical. In relation to teachers, the paper claims that there is a direct link between teacher quality and Indigenous student learning outcomes. Specifically, this paper argues that:

teachers demonstrate their professional standards by their commitment to preparing all students for a productive and rewarding life as citizens in a democratic and multicultural Australia and by their commitment to achieving educational equality for Aboriginal and Torres Strait Islander students.

(MCEETYA, 2001a, p. 3)

The paper posits that one existing impediment to effective teaching of Indigenous students is that much teacher training does not specifically address issues for teachers of Indigenous students. In regard to the relationship between parents and educators, the paper argues that children learn best when there is an effective relationship between parents and teachers and, more specifically, when there is a semblance of consistency between home and school environments. The paper argues that an impediment to the building of such effective relationships is that most schools have little interaction with their Indigenous communities.

Solid foundations: Health and education partnership for Indigenous children aged 0 to 8 years

The second discussion paper (MCEETYA, 2001b) centres on nine health issues of concern to the IEETY Taskforce. It argues that these health issues present significant impediments to the educational achievement of Indigenous students and their capacity to take full advantage of their educational experiences. The focus on health is partly a response to recent neurological and psychological research highlighting the importance of neural development, not only prenatally but also during the first year of life. The paper postulates that later physical, mental, social and cognitive development depends on this network. Thus, it is suggested that inadequate neural development in the first year of life has ramifications for the quality of future cognitive development (McCain & Mustard, 1999; Eming Young, 1996).

This IEETY Taskforce discussion paper (2001b) identifies the following health issues of concern in Indigenous communities:

- *Lower life expectancy at birth.*
- *Low birth weight.* The particular concern here is the effect of malnutrition pre-birth and in the first year of life upon brain development (see also Kowalenko et al., 2000).
- *Poor diet.* The paper argues that this is influenced by a range of socioeconomic, geographical, environmental, social and government factors.
- *High disease rates, especially chronic ear and respiratory infections.* A paper was cited that found that, in geographically remote locations, up to 79% of Indigenous children had an educationally significant hearing impediment (see also McRae et al., 2000).
- *Mental health.* The central issue focused on here is the importance of child–mother interaction years from birth and findings that less interaction occurred between mothers who are depressed/stressed and their child (see also Osofsky & Thompson, 2000).
- *Substance abuse.* Reducing substance abuse is seen as the key to improving general mental health in Indigenous communities (see House of Representatives Standing Committee on Family and Community Affairs, 2000).
- *Adolescent pregnancy.* Of particular concern was the finding that one-quarter of Indigenous mothers are less than 20 years old, compared to one in 20 non-Indigenous mothers (see also Australian Institute for Health and Welfare, 1998).
- *Childhood trauma.* The key issues discussed here are the higher incidence of domestic violence, child abuse, forced separation and associated homelessness (see also Partnerships against Domestic Violence, 2000).
- *Childhood injuries.* The key issue presented is that injuries to children are relatively high in Australia and Indigenous children are at nearly four times greater risk of dying from their injuries than non-Indigenous students (see ABS, 1999).

Importantly, this paper reiterates that these nine health issues are not unique to Indigenous communities. These are matters of concern to both Indigenous and non-Indigenous communities, as they are present in both communities. The key difference between the two cohorts is that of prevalence. These health issues are of particular concern in the Indigenous cohort, given the greater frequencies of all the health issues in the Indigenous cohort.

Effective learning issues for Indigenous children aged 0 to 8 years

The focus of the third discussion paper (MCEETYA, 2001c) is on how children learn and, in particular, how children learn through their culture and the cultures of others, and how participation in those cultures shapes identity. This paper argues that the poor performance of Indigenous students in the statewide literacy and numeracy tests at Years 3 and 5 cannot be explained by socioeconomic status and English-language background and that culture is important, most especially the history of cultural marginalisation.

The paper appears to support the argument that socioeconomic status and language alone do not explain Indigenous students' disadvantage. This view is based on comparative data that indicates that Indigenous students are less successful than individuals from low socioeconomic backgrounds and are less successful than students from non-English-speaking backgrounds on Year 3 and 5 literacy and numeracy statewide tests. Arguably, such a comparison is simplistic. Whenever there are multiple factors contributing to an outcome (as there evidently are for Indigenous students' poorer education outcomes), each individual factor can influence outcomes in two ways. Factors act independently and in interaction with other factors; it is not simply a process of the addition of effects. However, the relative influence of the factors is not analysed or presented in the paper. Thus, what is neglected by the papers' argument is that it is possible that poverty and language may have a much greater contribution in interaction with each other and with other factors. Nevertheless, the importance of cultural differences cannot be discounted in its contribution to Indigenous students' current disadvantage.

Adopting the parameters that it nominates as 'mutual community capacity building', the paper identifies five issues as contributing to Indigenous students' educational disadvantage. According to the IEETY Taskforce, they are:

- The currently low levels of participation in high-quality early childhood education and parental enrichment programs.
- The continuing tension between, and uneven transition from, early childhood practices to the primary school curriculum. This concern raises the issue of readiness and, in particular, the need for policy-makers to learn more about how the 'mental, social, physical, spiritual, and emotional development of children in general, and Indigenous students in particular, interact with their learning' (p. 27).
- The need for educators to have better pedagogical understanding in recognition of children's diversity. Childhood services and schooling need to better reflect the cultural and linguistic diversity of Australian society. Interestingly, the focus of the paper is on the need to encourage Indigenous children to move fluently among and between cultures.
- The need to emphasise high expectations and code-switching strategies, which they argue can accelerate improvements in the education outcomes for Indigenous students.
- The need to build and develop links between schools and their students' communities in recognition of its importance to students' learning.

The particular focus of this paper is childhood development. Interestingly, the paper describes childhood development in terms of cognitive stages and claims that a cognitive shift occurs between the ages of five and seven (see p. 25). This appears to be based on Piaget's (1928) conceptualisation of childhood cognitive development. Piaget revolutionised developmental psychology; however, the interpretation of Piaget that conceptualises cognitive development as consisting of a series of stages, interspersed at certain fixed points in childhood with rapid cognitive shifts, has been largely discredited (see Case, 1998; Gelman & Williams, 1998). Research has found that all children do not function at the same level or stage for all cognitive tasks and are capable of much greater performance variability. Further, this variability in performance necessarily undermines the notion of a shift in cognitive thinking in which the child's 'logical structure' is transformed; for example, from pre-operational to concrete (see Case, 1998). The use of this particular interpretation of Piaget's conception of development in this paper is a

manifestation of a serious disjunction between research and government policy in the field of childhood development.

The paper also considers culture to be fundamental to development, which is consistent with theoretical conceptions of development (see Valsiner & Lawrence, 1997). However, when discussing the importance of culture, the paper slips into the vernacular of 'Indigenous culture' (see p. 45). With the use of this kind of terminology comes the implication that there exists one Indigenous culture that can be incorporated into the education of all young people – Indigenous and non-Indigenous. This would seem to understate the diversity of experiences associated with being an Indigenous person and consequently the complexity involved in incorporating Indigenous perspectives into classrooms. Nevertheless, consistent with the Principles and Standards (MCEETYA, 2000b), the paper highlights the importance of cultural 'inclusivity' in early childhood education. However, we would suggest that policy-makers should be mindful that the establishment of such practices has been advocated since at least the publication of AEP (DEET, 1989) and thus far has not led to an improvement in Indigenous students' education outcomes.

Exploring multiple pathways for Indigenous students

The central focus of the fourth discussion paper (MCEETYA 2001d) is the disproportionate representation of young Indigenous Australians having problems making the transition from school to social and economic independence. Arguably, it has to be recognised that such a transition is an important developmental task for all young people (see Ainley et al., 1998). According to the discussion paper, the key antecedents to achieving the transition successfully are the earlier successful transitions from primary to secondary school and from junior secondary to senior secondary. Such transitions are often more difficult for Indigenous students, since primary schools often do not equip Indigenous students with the requisite core competencies. This situation is affirmed by the Indigenous students' benchmark results from Years 3 and 5. In addition, the paper posits that many Indigenous students must move away from their communities to undertake secondary schooling, thus compounding the difficulties for many students.

The paper argues that, apart from building the skill levels of individual students, the school-to-work transition can be better negotiated by:

- providing extensive work experience placements
- increasing cultural support
- providing information about careers and developing individualised goals
- flexibility in course content and delivery to meet local needs

The paper does not make explicit the research that would support their advocacy of these initiatives. Nevertheless, it would appear to be based on a combination of small case study research, previous policy positions and common sense and not on evidence-based research (see MCEETYA, 2001d).

Underlying themes from MCEETYA discussion papers (2001)

The MCEETYA discussion papers provide insight into current state, territory and Commonwealth thinking on Indigenous education policy development. The papers provide an indication of how governments believe educational equality can be achieved. The papers suggest two broad key factors that will contribute to success: first, teachers who are committed to improving Indigenous outcomes and are able to tailor classroom experiences to meet individual and cultural differences; second, the need to create the best learning environments, which are both age and developmentally appropriate as well as culturally appropriate. The papers also suggest two impediments to success: the difficulties faced by Indigenous students in negotiating transition points, and Indigenous health. These papers highlight the existence of a discontinuity between research and policy in some areas, such as the conception of child development and the reiteration of the notion of a single Indigenous culture.

Concluding comments

The Adelaide Declaration underscores all Commonwealth, state and territory government initiatives in the education sector. The Declaration is a broad vision of education that includes social, emotional and cognitive development in a socially just context. MCEETYA policy statements reflect that state and territory governments believe making schools more culturally appropriate will lead to significant improvements in Indigenous education outcomes. The Principles and Statements provide a framework for how this is to be achieved.

The Commonwealth's initiatives, in the area of Indigenous education, predominantly take the form of providing funding 'top-ups' to a range of educational providers, all of which are tied to performance indicators. The overarching objective is social justice – the achievement of equality of education outcomes for Indigenous people. The precise means of achieving this equality is largely left to the service providers. This approach has the benefit of empowering those at the coalface, those who have intimate knowledge built up from extensive work with Indigenous people. It can encourage such persons to draw on their expertise in developing appropriate and effective educational initiatives. However, it also reflects that the Commonwealth may be limited in the extent to which it can implement Indigenous educational initiatives beyond establishing broad parameters. Arguably, this lack of precise accountability is the product of there not being a coherent body of research that clearly articulates the most appropriate means of addressing Indigenous educational disadvantage. Extensive research beyond the small case study paradigm is needed to provide that coherence and provide the basis of better targeted policy initiatives.

Key principles of effective education provision

Introduction

Section 3 of this research and policy review paper examines current research in Indigenous education from the perspective of some key precepts or principles of educational theory applicable to *all* students. The connection of this section to the overall intention of the paper is to identify and canvass the main discourses current in education and other fields, with a view to then, in Section 4, reviewing and setting the issues that *are* unique to Indigenous students into the context previously created in this section. Too often in Indigenous educational research, the general educational, social, political, economic, psychological, and cultural maxims and contexts are not referenced. The research is commonly decontextualised, and much is then made of the uniqueness of the Indigenous, without recognising the power of the broader, explicative knowledge that can be brought to bear on the Indigenous educational condition and experience.

Caveat on the importance of curriculum

We have not attempted to address the significant issue of curriculum content in this paper. Clearly it is of paramount importance. The extent to which cultural knowledge is relevant to any particular course of study is, in part, a pedagogical decision; one that will need careful planning and implementation by knowledgeable school professionals and systematic best practice from teachers. Effective curriculum integration is impossible without negotiation and cannot be attempted without community inclusion in the development of curriculum for any cohort. While we reference these issues in the course of our examination of policy and research practice, for this review, the methodology and processes of pedagogical delivery are more important than any curriculum content. This is because the methodology and pedagogy need to be predicated on a recognition and resolution of the issues that are the substance of this review paper.

Context for the key principles

The body of literature that covers the broad field of Indigenous education has become somewhat isolated from broader discourses within Education, Educational Psychology and Developmental Psychology. Of further concern, within Indigenous education research, is the tendency not to distinguish clearly between empirical research and theoretical perspectives. Arguably, this confusion is the product of much empirical research being based on *prima-facie* common sense, which has often preceded theoretical conceptions of the field. But theoretical considerations are now available and should be canvassed.

Indigenous education research often does not clearly distinguish between theories and principles that are of relevance and broad applicability to all students and those that are unique to Indigenous students. The authors of this review argue that taking a step back and considering this point is crucial to understanding Indigenous students' educational disadvantage. An examination of what are considered the important factors contributing to educational success for Australian students provides the necessary background and perspective for considering the circumstances of Indigenous Australian students. Without such a background, it is not apparent how the needs of Indigenous students are similar to or distinct from other students. This is especially important as the majority of Indigenous students attend schools in which they are but a very small minority (Commonwealth of Australia, 2002) and thus study in classes where most peers are non-Indigenous. The skewing of the research to remote and community-based schools is a feature of the field, and represents a disenfranchisement of the majority of Indigenous students in the nation's schools.

There are probably an infinite number of factors or necessary precursors that either encourage or impinge on the educational achievement of all students. The following seven *core tenets or precepts* are recognised as a *selection*; they do not 'cover the field'. Instead, they have been chosen because they are seen to be of particular relevance to all students and to cover aspects of education from pre-primary through to higher education and beyond into lifelong learning. Further, these factors are not limited to the current topics of media conversation; they reflect the current discourses within the education community. Topicality should not replace solid research. Moreover, the authors of this review argue that many of the key concerns in education are of equal importance and relevance to Indigenous and non-Indigenous students and there is much to be learned from the broader body of work. The burgeoning discussion of important concepts in education and related disciplines must be better integrated into the Indigenous education literature, which seems removed from the current debates within education research.

Key principle 1: The importance of health and nutrition in the early years

Introduction

From birth, cognitive development is sustained by not only good health and proper nutrition (Shonkoff & Marshall, 2000), but also by positive interactions with a primary caregiver (Doherty, 1997; Meisles & Shonkoff, 2000). Extensive neural development occurs in the first 12 months of life and much later cognitive development builds on this neural development (NRCIM, 2000). Adequate nutrition alone is insufficient; sustained, responsive and caring interactions with caregivers in the first 12 months, without which development is delayed and even damaged, is critical for brain development (see Meisles & Shonkoff, 2000). Parents who are unwell, stressed or afflicted with substance addictions (see Osofsky & Thompson, 2000; Werner, 1991) are not only unlikely to be able to provide good nutrition, but their interactions with the baby are likely to be infrequent and more often negative. Therefore the mother's health and stress burden are critical determinants of an infant's health in the early years (Osofsky & Thompson, 2000).

What is also clear from the research is that early intervention is best (see NRCIM, 2000). The 'risk and protective factors' research and policy perspective (see NRCIM, 2000; Osofsky & Thompson, 2000; Rutter, 1993) highlights the importance of early intervention. In this research paradigm, positive development is conceptualised as the successful balance of the risk factors; that is, vulnerability and protective factors (which are both constitutional and environmental). When this balance is achieved, vulnerability can be overcome to produce resilience. The risk and protective factors research characterises child development as a transactional process between the child and his/her environment. Poor health and welfare is highlighted in the literature as

a risk factor for delayed and less-than-optimal child development (see Sanson et al., 2002). Intervention that alters the nature of the transaction between the child and its environment (for example, by supporting parents and caregivers who are caring for sick infants) is important to boost the child's resilience and set the child on a pattern of productive development and learning (Werner, 2000). Thus, helping parents to develop positive infant-caregiver relationships in the first few months of a child's life can have lasting benefits. This finding applies equally to non-Indigenous and Indigenous mothers.

Health and readiness to attend school

The health status of a child is also an important determinant of a child's readiness for school and capacity while at school (see Collins, 1999). A child who has had adequate nutrition and has not been subject to extensive illness will have a greater propensity to develop the cognitive, emotional and social skills needed to successfully commence school (NRCIM, 2000). In addition, healthy children are more likely to have experienced constructive preschool experiences. While at school, basic nutrition is necessary for continued cognitive development (Doherty, 1997). From a basic needs perspective, children who are hungry and lack shelter will focus primarily on those needs, with little capacity to function at a higher level (Maslow, 1968) such as cognitive development.

Given the greater frequencies of health problems in Indigenous children, MCEETYA (2001b) have proposed greater cross-portfolio links between departments as the key to alleviating health and educational disadvantage in a coordinated fashion. Partington (2002) has questioned the extent to which greater coordination is possible and argues that, at a macro level, such a proposal is unworkable. He claims that such links are, in fact, likely to produce greater duplication and inefficiency. While health issues are frequently cited in the Indigenous education literature, especially in regard to the prevalence of Otis Media (see McRae et al., 2000; Smith, 2002), there is little quantitative evidence of the impact of this condition on Indigenous student learning outcomes.

Other research has highlighted the way that health and social factors are often put forward by schools to explain the poor performance of their students (see Sarra, 2003). While teachers need to be mindful of such health-related problems, Sarra argues that schools must take responsibility for student outcomes and must nevertheless expect their students to reach equal education outcomes. Clearly, given the emphasis in health research on early intervention being the best solution (NRCIM, 2000), the key policy response to health and welfare issues in Indigenous communities should be to address them before infants get to school.

Future research

It could be argued that policy initiatives that target student health and welfare in schools as a first response indicate a failure to act sooner and prevent chronic health issues developing. The Commonwealth's growing awareness of the importance of the early years is reflected in the release of a consultation paper *Towards the Development of a National Agenda for Early Childhood* (Commonwealth of Australia, 2003a), which proposed a National Agenda based on an early intervention as the key to fostering healthy development and learning and minimising the number of infants that develop poor learning and developmental outcomes. Such an approach, if properly targeted, could lead to significant improvements in the health, and consequently in the learning outcomes, of Indigenous children.

Key principle 2: Managing educational transitions

Introduction

Traditionally, there has been a heavy focus in the educational literature on the importance of transitions and how navigating transitions, such as the move from preschool to formal school, is more problematic for some students than others (see MCEETYA, 2001d). We argue that examining issues from the point of view of difficult transitions is not the best approach. Instead, the focus should be to look at readiness and the importance of establishing when a child is ready to make the transition. Often, a transition is difficult because the child is not ready for a whole host of reasons. There is a need to explicate what are the necessary skills for making the transition and the identification of what makes a child ready. Transitions apply not just to starting formal schooling, but also to shifting from primary to secondary school and then moving from formal education out into the workforce or on to higher education.

Readiness for primary school

Readiness for primary school has been the focus of much recent media attention (see Gooch, 2003; Lancashire, 2003). Many families have apparently begun to delay sending their child to primary school by a year, as evidenced by the increase in the number of children beginning Prep/Year K in Victoria and New South Wales aged six years (see Dockett & Perry, 2002; Gooch, 2003). These issues have not directly translated into the Indigenous education literature. In the broader education literature, the critique is made that, while there is a focus on 'readiness', there is little analysis of what readiness actually means from the different perspectives of teachers, parents and children (Dockett & Perry, 2002).

Often, parents adopt a maturation perspective that considers the child unready for school due to him/her being too young (see Dockett & Perry, 2002). However, age alone is an insufficient determinant of a child's readiness for school. Five dimensions of readiness have been proposed in the literature:

- physical well-being and motor development
- social and emotional development
- approaches towards learning
- language usage
- cognition and general knowledge

(Dockett & Perry, 2002, p. 70; Doherty, 1997; National Education Goals Panel, 1995)

These dimensions form part of a 'whole child' approach to determining an individual's school readiness. While cognitive and physical skills are important determinants of readiness, social and emotional skills, such as the capacity to communicate with peers and adults and cope in unfamiliar environments, are also considered critical (see Gooch, 2003). For children to enjoy and be successful at school, they need to be able to take initiative, be confident in socialising and forming friendships (Cook, 2002). Students need to be able to sit still to listen quietly and to be able to socialise in a group. Biddulph (1997) has argued that boys take longer than girls to develop such skills.

There does not appear to be extensive research into Indigenous students' social readiness for school, and this must be of heightened importance, given that some will not have extensive experience in standard Australian English (see Malcolm et al., 1999). There is an urgent need for research to be undertaken into Indigenous students' readiness for school and the extent to which parents are aware of this issue. This issue is of paramount importance, given that research has highlighted that a successful transition to formal schooling is a critical determinant of the child's capacity to navigate subsequent transitions (see MCEETYA, 2001d).

Attending preschool has been consistently highlighted in the research as an important precursor to primary school (National Education Goals Panel, 1995). In a sense, preschools can be seen

as having the function of providing for young children and making them school-ready. The focus on socialisation, as well as pre-literacy and pre-numeracy skill development, makes explicit the type of skills that are deemed necessary for being school-ready (Raban, Griffin, Coates, & Fleer, 2002). The development of early numeracy skills has been the focus of Project Good Start, which examined these skills in the year before, as well as in the first year of, school (Doig, McCrae, & Rowe, 2002). The development of this project highlights increasing research interest in, and focus on, the cognitive skills developed before school through preschool programs, and their importance in the ease of transition to formal schooling.

It has to be questioned how well many Indigenous students are prepared for school, given that disproportionate numbers continue to have no preschool (52% of enrolled primary school students, compared to 43% of non-Indigenous children) (Commonwealth of Australia, 2002). Nevertheless, through community education and initiatives such as mobile preschools, increasing numbers of Indigenous students are enrolling in preschool. However, their attendance and the quality of the preschool experiences are not well reported (see Frigo et al., 2003).

Primary to secondary school transition

Most students view the transition to high school positively. Nevertheless, most 'expect and encounter some problems of adjustment' (Kirkpatrick, 1992). Making the transition from primary school to secondary school involves students negotiating a number of changes, some of them conflicting. On the one hand, entering secondary school involves dealing with greater autonomy and independence associated with an increasing number of classes, teachers and even limited subject selection. On the other hand, students must come to terms with the fact that, in their final years at primary school they were given additional responsibility, associated with being the oldest children, but they enter secondary school as the youngest cohort and are treated as the least mature cohort, having the fewest competencies (Yates, 1999). For some students, this loss of responsibility is associated with concern; for others, relief (Kirkpatrick, 1992). This also comes at a time when students are beginning to negotiate their own personal transition to adolescence (Reid, 2001).

In two studies, Kirkpatrick (1992, 1997) reported that students at the end of primary school expected high school to be academically challenging. However, many reported disappointment at the lack of academic challenge that they encountered in the first year of secondary school. This finding has implications for students' engagement with school and learning, with many students choosing to switch off in the face of undemanding academic study (Kirkpatrick, 1997).

While Indigenous students have the same developmental tasks at adolescence, they find the transition to secondary school particularly difficult (Buckskin, 2000; Groome & Hamilton 1995). Part of the difficulty is cultural. In many Indigenous cultures, males⁷ undergo initiation at around 12 years old and are subsequently treated as adults (see Groome & Hamilton, 1995). However, when these males attend secondary school, they are treated as immature and denied significant independence and autonomy, which they are allowed at home. In addition, many Indigenous students have to move away from their local community and family in order to attend a secondary school (Buckskin, 2001). This loss of support further compounds transition for those students (Smith, 2002).

Another academic component of the transition problem is literacy and numeracy competency (Long, Frigo, & Batten, 1999). We know from Year 5 literacy and numeracy results (Commonwealth of Australia, 2002) that disproportionate numbers of Indigenous students are not meeting the benchmarks and would, in all likelihood, have not improved significantly by the end of Year 6. Even acknowledging the imperfect nature of these indicators, many Indigenous students enter secondary school not ready for the cognitive demands of secondary education and find it increasingly difficult. A disproportionate number of Indigenous adolescents in Years 7 to 10 are not attending school and it is suggested that part of the reason for this is their failure to develop literacy and numeracy skills during primary school. The results of Long et al. (1999)

⁷ In many Indigenous cultures, both males and females undergo initiation around the onset of puberty.

indicated that low levels of literacy were contributing to the lower retention of Indigenous students in comparison to non-Indigenous students. In light of the 2000 benchmark results for Years 3 and 5, it has to be questioned whether many primary schools and school systems are successfully preparing Indigenous students for the rigours of secondary education and life beyond.

Education as preparation for employment

Preparing students for work is an important aspect of schooling, according to the Adelaide Declaration (MCEETYA, 1999a; see p. 8 above), Goal 1.5. Increasingly, VET programs have become an integrated part of school curriculum. Such programs have the dual purpose of increasing students' work readiness and also providing alternative educational avenues for those students who have not demonstrated a proclivity for more academic study (see Lamb, Long, & Malley, 1998). According to the Kirby Review (2000), each year around 11 000 students leave school without any qualifications. This failure to gain any formal qualification raises question as to the readiness of at least some of these students for work. The context for this is admittedly the significant decline in full-time unskilled work, which makes it increasingly difficult for early school leavers to obtain work, regardless of their work readiness (Kirby, 2000).

In recognition of the difficulty that many students face in making the transition from school to work, the Commonwealth established a Youth Action Plan Taskforce (see Eldridge, 2001). The Taskforce's report highlighted the importance of education and training, family support and strong and supportive local communities as the keys to improving students' capacity to successfully negotiate the transition from school to formal employment (see Eldridge, 2001).

Given that Indigenous students are disproportionately more likely to leave school early (only 43% of Indigenous students commenced Year 12 in 2001, compared to 76.2% of non-Indigenous students) (Commonwealth of Australia, 2002), they are more likely to suffer unemployment. This situation is further exacerbated by the greater likelihood of them having low levels of literacy and numeracy. There have been major initiatives in the provision of VET in schools and TAFE sectors, with a view to improving outcomes for Indigenous students. While Indigenous students are more likely than non-Indigenous students to be enrolled in VET and TAFE, they are also more likely to be enrolled in the lower level certificate courses, rather than specific job-related apprenticeship courses and/or higher-level diploma courses (Commonwealth of Australia, 2002; MCEETYA, 2001d). The Commonwealth of Australia (2002) has reported that there has been a policy of better integrating literacy and numeracy skill development within vocational courses in an attempt to improve Indigenous students' skills and hence improve their employment prospects (Commonwealth of Australia, 2002). This last topic is taken up further under the broader Core Concept Six.

Transition to higher education

Over the last few decades, the participation rate of young people in higher education in Australia has grown exponentially. Those who successfully complete higher education have a greater chance of stable employment and employment that provides real prospect of ongoing training and career advancement (Wooden, 1998). However, a significant minority of higher education students withdraw within the first year of study (Commonwealth of Australia, 2002). This may reflect that many students are not prepared for the independence of higher education.

Indigenous students are often given special consideration and gain entry through a range of community access programs (Mecurio & Clayton, 2001). In 2001, 70% of Indigenous students gained entry through special entry programs (Commonwealth of Australia, 2002, p. 90). Such 'special consideration' is recognition of, and a response to, the unique difficulties that Indigenous students face during their schooling and is an attempt to address the under-representation of Indigenous students in higher education (see Commonwealth of Australia, 2002; Mecurio & Clayton, 2001). However, such programs often have the unintended consequence of making such students feel unworthy of the place that they have gained,

because they were accepted even though they did not have the necessary marks (Mecurio & Clayton, 2001). Research is needed to investigate whether this perception has a significant bearing on the academic achievement of Indigenous students. Further, Indigenous students continue to disproportionately withdraw from their courses, as indicated by the Apparent Retention Rate of 0.59 for Indigenous students compared to 0.77 for non-Indigenous students.⁸ Research into the most effective means of supporting Indigenous students to complete their courses, and appropriateness of selection criteria, is needed.

Future research

The importance of readiness has not been extensively examined in research literature pertaining to Indigenous education. We argue that such research is necessary, firstly to determine what are the requisite skills for making each particular transition, and secondly, to measure whether each child has those necessary skills. This research is not only important for Indigenous students. Such research could ensure that students are sufficiently prepared for the developmental tasks that they will encounter at subsequent stages, and, as a consequence, could facilitate smoother transitions.

Key principle 3: Good teachers and effective teaching

Good teachers

There is an absolute plethora of research into the importance of teachers in determining the quality of student education outcomes. Of principal importance are the research findings that teacher effects account for much of the explained variance in school achievement (Rowe & Rowe, 2002). Student-level factors, such as socioeconomic status and gender, and school-level factors were found in this research to be less important than teacher quality (Rowe & Rowe, 2002). Lamb and Fullarton (2001) reported that, in addition to teacher effectiveness, the organisation of classrooms was important. Although quantitative studies are important because they highlight the importance of high-quality teaching, they are relatively vague as to what makes a high-quality teacher and what is best practice teaching. However, the Commonwealth Quality Teacher Program (2000) submitted that students' learning outcomes were directly dependent on teacher quality. Teacher quality was measured as knowledge of subject area and capacity to implement effective pedagogical practices. Rowe and Rowe (2002) argue that it is quality teaching supported by effective and integrated professional development that is the key. Moreover, they argue that 'Educational effectiveness whether it be evidence based or case-study based cannot be reduced to simple blueprints or recipes for improvements such as 'checklists' of strategies' (Rowe & Rowe, 2002, p. 16).

Such sentiments are echoed by Lovegrove and Lewis (1991), who argue that there is no simple guide to best practice. Nevertheless, case study research does illuminate practices and pedagogies that are seen as ideal. Such researchers do not argue that their conceptions of good teaching should become a blueprint. Importantly, they highlight important aspects of teaching, providing both researchers and teachers alike with an indication of what good teaching involves.

Teacher impact on students' goals and seeking high standards

Good teachers establish high standards, provide goal-oriented lessons, foster the development of warm and supportive relationships with students and demonstrate high expectations. McInerney and McInerney (1998) argue that being a good teacher is necessarily being a good all-rounder. Kutnick and Jules (1993) even argue that, as most teacher training courses continue to focus on curriculum content, it should not be forgotten that the relational factors are of equal critical importance (see also Clark & Walsh, 2002).

Nevertheless, the authors of this research review would argue that strong subject knowledge

⁸ Apparent Retention Rates indicate 'the proportion of students who are retained in a university course from the commencement of one academic year to the next' (Commonwealth of Australia, 2002, p. 96).

and a solid conceptual understanding of the subject area are critical teacher competencies. The act of teaching involves a dynamic interaction between the students and the teacher. Teaching and learning is not a static process; it involves both groups actively changing and interacting with each other. Teaching involves 'decision-making, experience, intuition, planning, experimentation and exploration' (Eckermann, 1994). From a cross-cultural and multicultural perspective, Eckermann (1994) argued that good practice involved adopting the following eight key elements:

- 1 Create a warm affective climate.
- 2 Establish clear and reciprocal rules in relation to rights duties and obligation in the classroom.
- 3 Consider the whole child in relation to their educational, emotional and cultural needs.
- 4 Emphasise and tolerate diversity.
- 5 Vary organisation and input to maximise student attention and interest.
- 6 Build on students' strengths and provide them with opportunities to expand these.
- 7 Plan and evaluate the teaching–learning process carefully.
- 8 Explore and experiment in order to maximise learning.

(Eckermann, 1994, pp. 90–91)

This list does not mention strong subject knowledge or solid conceptual understanding of the subject area being taught. It highlights the importance of knowing the student and fostering a warm and supportive environment. Researchers such as Eckermann (1994) and Malin (1990, 2002) have argued that, in a multicultural classroom, part of getting to know a student means getting to know their home environment and cultural practices. These arguments are supported by the recent empirical finding that students (in the first three years of school) for whom their parents' occupation was rated as unknown by their teacher did significantly worse than those whose parents' occupational status was known (Frigo et al., 2003). Such a finding indicates that knowing the child's background does influence the quality of learning and that a disengaged teacher is a poor one.

Another element not emphasised in the list above, but which the authors consider critical to teacher efficacy, is the establishment of high standards and challenging students to meet those standards. High expectations are critical for goal development and fostering a sense of purpose at school (Eckermann, 1994; Russell, 2000). A number of studies in the Indigenous education research have focused on teachers who have provided students with 'busy work' in response to the behaviour-management problems produced by setting challenging work (Hatton, Munns, & Nicklin Dent, 1996). While this distraction strategy has short-term success in that it reduces problem behaviours in the classroom, it contributes to students developing a sense that school is not providing them any direction and the sense that there is no purpose in them going to school. It is important that there is classroom discipline so that children can learn, and, importantly, so that children submit themselves to the demands and rigour of formal learning (Eckermann, 1994).

Teacher impact on academic self-efficacy

What is critical is a holistic approach to teaching and learning. Adopting such an approach is about taking a learner-centred approach, one that recognises that teaching involves more than simply imparting literacy and numeracy skills. This approach recognises that learning involves the whole person (Russell, 2000). Effective teaching influences not just what is learnt but also the child's 'personal and social development and their sense of well being' (p. 9). The learner-centred approach also focuses on engagement, encouraging students to become motivated and enquiring (Bryce & Withers, 2003).

A positive self-identity has been identified as one of the factors necessary for individual

educational success. While this might be considered an individual difference factor and not related at all to teacher quality, we would argue to the contrary. Individuals differ on the extent to which they have a positive sense of self; however, teachers directly influence the extent to which an individual develops a positive sense of self as a student, especially in the early years. Purdie et al. (2000) argued that, within the school environment, teachers have the most impact of students' identity as a student. In the school context, the relevant aspects of self-identity were the sense of academic self-efficacy and belief in their own capacity to succeed in the school environment. These factors are influenced by:

schools that actively attempt to build a sense of belonging, teachers who are warm supportive and have positive expectations, curriculum which is relevant and support and encouragement from family, peers and community

(Purdie et al., 2000, p. 39)

This research also found that there was insufficient data to explore differences between Indigenous and non-Indigenous students in terms of the factors that contribute to a sense of self (Purdie et al., 2000).

Cresswell and Greenwood (in press), however, found significant differences between Indigenous and non-Indigenous students in academic self-efficacy, with Indigenous students having lower self-efficacy. In addition, Scott (1992) compared differences between Indigenous and non-Indigenous students and found that Indigenous students reported poorer self-concepts and lower quality of school life than non-Indigenous students. He also found that non-Indigenous students had a more externally oriented locus of control than non-Indigenous students; that is, they tend to believe that people and forces outside themselves control their lives. Students who are externally oriented feel that they do not have the capacity to change things (or succeed). Thus, they also commonly feel that they are less able to be responsible for their own lives and do not take responsibility. Arguably, this may have sociohistorical and cultural roots rather than being an aspect of being an Indigenous person.

For both Indigenous and non-Indigenous students, Purdie et al. (2000) suggest a bi-directional relationship between a sense of self and learning. Education outcomes are enhanced by a positive sense of self and a positive sense of self is augmented by positive educational experiences (see also Sarra, 2003).

Teacher professional development

Teacher training is fundamental to the development of good teachers and has been the focus of recent media attention (see Ingvarson, 2003, March 7; Noonan & Doherty, 2003, March 6). According to Ingvarson (2003), student achievement can climb significantly in schools that support effective professional learning among teachers. This belief is shared by Crevola and Hill (1998) who argue that ongoing teacher professional development can and does deliver dramatic improvements in student learning. Ingvarson suggests that the development of a collegial relationship among teachers, based on a culture of continuous learning and professional development, is the key to developing teaching as a profession and improving the quality and accountability of teachers.

Martinez and Mackay (2002) argue that critical reflection is an integral part of professional practice, which can be fostered through professional development. The key element of any professional development program is that it be 'ongoing' or 'continuous'. Not all research is sanguine about the efficacy of professional development, with the OECD reporting that much of the existing professional development is poorly integrated and piecemeal (OECD, 2001b).

Sim, Wyatt Smith, and Dempster (2002) argue, in relation to literacy training, that, in effect, there is very little empirical or case study evidence on the extent, nature and quality of teacher education. They argue that, instead of a focus on professional development, there is an explicit reliance on literacy tests to 'lever improvement and as a means of measuring quality' (p. 2). This study concluded that there was, in fact, a great deal of variability in the type and quantity of pre-service and in-service professional development. In fact, some teachers reported no

experience in pre-service and in-service training in literacy. Sim et al. (2002) argue that, if current education policy initiatives are to have an influence in classrooms and improve the level of educational attainment, questions about the extent and effectiveness of professional development must be asked.

Despite the current convictions about the efficacy of ongoing professional development, there has been little recent research evaluating the effectiveness of professional development in altering teachers' pedagogical approach or in students' learning outcomes. Evaluation of the effectiveness of professional development, in terms of improved teacher practice, is required. If current professional development is not adequately equipping teachers to confidently and effectively teach literacy and numeracy, as Sim et al. (2002) suggest, it is little wonder that there is a lack of consensus as to the best strategies for teaching a marginalised group such as Indigenous children. All of this suggests considerable further research is required into the role of professional development in advancing the competencies and effectiveness of teachers with a view to influencing learning outcomes.

Class size

Many researchers have outlined the benefits of smaller class sizes, especially in the early years of schooling (Nye, Hedges, & Konstantopoulos, 2002; Sawyer, Horsley & Watson, 1997). During these early years, the foundations of the core competencies, on which subsequent learning is based, are developed. Researchers have argued that small class sizes make the transition from kindergarten to school easier and enable teachers to be better attuned to the individual needs of their students (Vinson, 2003). Other researchers have argued that the evidence that small class sizes significantly improve education outcomes is at best equivocal (Marginson, 1992; Buckingham, 2003).

Nevertheless, there is some evidence that students from minorities and low socioeconomic backgrounds do benefit from small class sizes (Nye et al., 2000). What is clear is that the argument has credence among politicians. In Victoria, for example, the government has capped class sizes for the first three years of school, reflecting a shift in policy towards the first years of schooling and an acceptance of the positive effect of smaller classes in the early years. What has been established by research is that small class sizes do not reduce the importance of quality teaching and the need for teachers to establish best practice pedagogy in their classroom (Buckingham, 2003; Marginson, 1992, Sawyer et al., 1997).

Creating school environments conducive to good teaching

Much has been written about teacher efficacy, but much less is known about the relationship that is needed between the teacher and the school in which they operate. The research has been more interested in the school as the leader in the job of educating students, the kinds of curriculum and other programs it delivers (see the next section of this paper).

Further research

The authors of this paper believe that it is incumbent on all researchers to recognise that teachers operate within an environment not entirely of their own making. The school environment is not synonymous with their classroom environment. They are different places and teachers cannot control a leakage of school values (or even broader social ones) into their classrooms. The relationships that they have with their students are mediated by the school's general stance on teacher–student relationships, plus a range of other relationships; for example, student–school, school–parent, student–siblings–family, school–community, school reputation and history. Good school leaders and administrators understand these limitations on teacher effectiveness and researchers need to recognise the impact of the contexts in which teachers do their daily business with 'their' students.

Key principle 4: Broader relationship of the school with its community

Introduction

Traditionally, most educational philosophies recognise that education is a partnership between parents and teachers (Allen, 2001). For this to be a productive partnership, it must be grounded on open and effective communication. This partnership is integral to student commitment to school and the engagement with learning (Malin, 1990).

The importance of the school–community partnership is reinforced by the OECD report on the results of its study Programme for International Student Assessment (PISA). PISA is conducted in 32 countries and measures how well 15-year-olds ‘are prepared to meet the challenges of today’s knowledge societies’ (OECD, 2002, p. 14). OECD reported that a range of school and home factors influenced the reading literacy achievement of Australian students:

- home educational resources
- the amount of time spent on homework
- time spent reading for enjoyment
- students’ perception of classroom discipline
- teacher enthusiasm
- the average student Socio-economic Status (SES) at the student’s school

(from MCEETYA, 2000e; see OECD, 2002, p. 128)

Arguably, the interaction between home and school positively influences each of the above factors. For example, parental expectations about the importance of completing homework in addition to a school’s policy of setting and enforcing the completion of homework influences the time a student spends on homework.

The role of school leaders in constructing community relationships

Integral to the development of a productive relationship between a school and its community is the school’s leader (Russell, 2000). Successful school leaders communicate a vision for improved student learning, conduct ongoing discussions with teachers about professional practice, develop and undertake concrete practical initiatives to enable successful implementation of the vision, model the expected student learning behaviours and outcome, and build a climate of trust between the school leadership, teachers, students and parents (Russell, 2000). Integral to success is explicit communication with parents of the vision, values and beliefs of the school. Parents must be given the opportunity to contribute to, and construct an understanding of, the desired student learning outcomes (Russell, 2000). Sarra (2003) also highlights the importance of a school leader going out into the local community with the purpose of building relationships and selling the school’s vision.

Selling the vision will only be successful if it meets what the parents perceive to be the needs of their children (Eckermann, 1994). Parental participation in preschools and schools is important and schools must always be mindful that they will best meet the needs of their students if they remember that schools are there to serve the community and as such should not undermine the wishes of parents and communities (Heitemeyer, 2001). Ovando and Collier (1985) argued that the strength of the relationship between parents and teachers was based on the balance between two sets of needs and power. It is to be expected that tension between the dominant and the supplicant groups (that is, schools and parents) will manifest itself as unfulfilled goals, if consultation with the home community is not undertaken. Post-colonial policy, in any place, can create this tension, as Prior, Mellor and Withers found in the South Pacific:

Many parent stakeholders had an ambivalent attitude to the curriculum in the primary schools ... and commented on what they saw as an inappropriate balance between teaching and learning of core community values ... and 'new western knowledge'.

(Prior, et al., 2001, p. 45)

Eckermann (1994) conducted case studies in 14 Australian primary schools across three sectors, metropolitan state schools, metropolitan Catholic schools and rural state schools. The study highlighted the difficulty in getting parents involved in schools. As many parents work at least part-time, they are unable to become involved in activities during normal school hours. Eckermann highlighted that it was nevertheless important for schools to continue to actively solicit parental involvement.

Future research

Teachers and schools need to learn about their communities, including language use, values and education goals, whereas parents need to learn about school procedures and need to reinforce academic development at home. Parents and caregivers have the power to determine the form and content of school programs so that community needs and aspirations are met. In contrast, schools have the power to prescribe the appropriate form and content of curriculum based on their professional training and expertise. The successful negotiation of these competing needs and powers will lead to the development of a relationship based on reciprocity. Such a relationship is said to be conducive to improving students' learning outcomes (Ovando & Collier, 1985). We would argue that such relationships could only occur if there is mutual trust, a consensus about role validity and commitment to students' learning outcomes. The foregrounding of a conversation about what are the agreed goals of education for all parties allows for goal clarification and the establishment of agreed benchmarks, against which school and individual success can be measured.

Key principle 5: The impact of regular attendance

Introduction

Western educational systems are premised on the explicit notion of incremental growth that forms part of a linear trajectory. All formal learning is premised on the regular sustained attendance of each student. Time on task is critical (Collins, 1999). When learning is formal and conducted in groups, the cumulative pattern to learning is irrevocably broken by absences (Groome & Hamilton, 1995). Bourke, Rigby, and Burden (2000) reported that teachers believe that school attendance is essential for educational success. Regular and high levels of attendance are important for all students – to maintain a similar rate of learning as their peers, to achieve sufficient knowledge and skills to reach the required standards for each level and to be able to move on to the subsequent higher level. Recent ACER research indicates that Indigenous students' education outcomes suffer from high absenteeism (Frigo et al., 2003). Indigenous students have consistently attended school less frequently than non-Indigenous students from the same age cohort (Commonwealth of Australia, 2002).

Absenteeism

Traditionally, the educational literature treats absenteeism as an indicator of student disengagement (Batten & Russell, 1995; Brooks, Milne, Paterson, Johansson, & Hart, 1997; Russell, 2000). In the Indigenous education literature, absenteeism is commonly presented as the *cause* of Indigenous student disadvantage (see McRae et al., 2000; Collins, 1999). Arguably, absenteeism and poor learning outcomes do go together; however, simply casting absenteeism as the cause of poor learning outcomes reflects a failure to consider deeper, more prescient, causes of both absenteeism and poor education outcomes.

Another under-researched reason for non-attendance is the mobility of Indigenous students with their families. According to Groome and Hamilton (1995), mobility is 'the single most frequently reported characteristic of Aboriginal families' (p. 27). These families are hard for educational systems to track, and therefore it is difficult for schools to provide any semblance of sequenced learning to the students. Because the research has not been conducted, there is no verifiable quantitative evidence of the effect of mobility on learning outcomes. Thus, it is only possible to speculate on the impact that this student discontinuity of educational experiences has on Indigenous student learning outcomes, but the authors would expect that it contributes to poorer outcomes.

Disengagement

Some researchers (Groome & Hamilton, 1995) have argued that, instead of being a causative agent, poor attendance should also be seen as a symptom of broader problems, reflecting a generalised dissatisfaction with school.

At a more basic level, absenteeism could also reflect a lack of social incorporation (Malin, 2002) or disengagement with school learning (Russell, 2000). It also reflects a lack of encouragement and support of academic activities at home. In their research into attendance Herbert, Anderson, Price, & Stehbins (1999) found that many Aboriginal parents and caregivers were not aware of the extent of their child's non-attendance until there was a serious academic problem. Like others, Herbert et al. (1999) were unable to obtain adequate and accurate data to reflect the attendance rates of Indigenous students at a school-based and district level.

Key antecedents of engagement are curiosity (Ainley, M., 1993) and interest (Ainley, M., Hidi & Berndorff, 2002). There is a concomitant relationship between emotional and behavioural indicators of engagement and measures of interest (Corrigan, 2002). Similarly, research has highlighted the importance of sparking students' interest in the early years as the key to getting students engaged in lifelong learning; fostering a sense of enquiry and problem solving (Bryce & Withers, 2003). In fact, engagement with learning has been seen as a legitimate and desirable outcome of schooling (OECD, 2001b).

A lack of interest may foster poor of engagement with schooling and consequently a pattern of intermittent attendance. A range of research studies has highlighted the apparent success of initiatives that increase students' engagement, such as extracurricular activities (e.g. Fullarton, 2002). Such activities improve commitment to school. Further, 'in almost all countries students who report that school is a place to which they want to go, perform better' (OECD, 2001b, p. 108).

Future research

Research to investigate a possible relationship between Indigenous students' lack of engagement and interest and its relationship to attendance needs to be undertaken. If the hypothesised relationship exists, this would suggest that Indigenous students' lack of attendance is a symptom of school ineffectiveness. But there are many factors potentially at play here, and the relationships between them need clarification. Only then can policy to manage their impact be developed.

Most importantly, a finding that absenteeism is a function of poor engagement as well as a significant cause of poor learning outcomes would raise serious concerns about policy initiatives that simply focus on the latter notion. A number of studies have reported the success of reducing Indigenous students' absenteeism through the provision of transport to and from school (see, McRae et al., 2000; Batten, Frigo, Hughes, & McNamara, 1998). However, the success has been reported only shortly after the program has been established. Given that the deeper reasons for the lack of engagement, as hypothesised, have not been considered in this research, it has to be questioned whether these initiatives (such as providing transport) will be the most successful in the longer term. Further research should establish the effectiveness of tackling absenteeism through stopgap measures and reflect whether tackling engagement and interest may be a more efficient and effective approach to increase attendance.

What would also be interesting would be research into the relationship between Indigenous students' external locus of control (see Scott, 1992), interest and choice. The research has highlighted the importance of choice to the experience of being interested (Deci, 1992, 1998). If students have an external locus of control, they may feel unable to exercise the educational choices available to them and this may have important ramifications for the level of interest they experience.

These interrelationships need to be researched. At the very least, the research purview must enlarge to include as significant, the study of parent, caregiver or community disengagement with what the school is currently offering its students. Students do not decide on attending school in total isolation from their family or community. The educational experience of parents and caregivers is likely to be a significant factor in their support of the school attendance of children for whom they have responsibility, during the school years. This research needs to take into account that most Indigenous communities and parents lack an educational history or experience in education. Therefore, it is to be expected that there will be a significant educational cultural gap. Such interconnected relationships need to be teased out to enable a more complete understanding of the relationship between engagement, attendance and achievement.

Key principle 6: Influence of schooling on social, emotional and moral development

During the 1990s, there was a sense that schooling had been reduced to vocational outcomes, which was driven by economic imperatives (Marginson, 1992). More recently, a broader focus has been evident. The Adelaide Declaration (MCEETYA, 1999) is a clear manifestation of this broader vision for education; one based on citizenship, cultural, social, and moral development as well as the fostering of lifelong learning. The shift towards lifelong learning reflects the importance of students developing core competencies, such as problem-solving skills, that will enable them to cope with necessary career changes in the ever-changing 21st century. Under such an approach, students are taught the tools of learning rather than specific content (Bryce, Frigo, McKenzie, & Withers, 2000). The lifelong learning approach is principally about life-skilling rather than simply preparing individuals for a specific career.

VET in schools is an important part of lifelong learning and critical to keeping many students (especially boys) at school (see Bryce & Withers, 2003). VET in schools enables students to apply their learning in practical and work-related settings. It reinforces the practical virtues of education and improves interest and engagement in learning for those not academically inclined. While VET schemes may seem very much of the ilk of training people for jobs:

VET in schools ideally promotes the concept of life-long learning by presenting students with a picture of a world in which education and work are intertwined, providing them with opportunities to enter either work or tertiary education, or some combination of the two.

(Fullarton, 2001, p. 40)

Schooling also involves developing students' capacities to become active and constructive citizens who are able to make difficult moral, ethical and political decisions in the absence of certainty and stability (Beyer, 1997; Dalin & Rust, 1996; MCEETYA, 1999; Russell, 2000; Mellor, Kennedy, & Greenwood, 2002). Schooling also involves social learning, the capacity for pro-social behaviour (Covington, 2000), social reasoning (Turiel, 1989) and social competence (Ladd, 1999; see also Russell 2002). Schooling is important because it influences and encourages the development of social attitudes, values and self-perceptions (Ainley J. et al., 1998).

Schools and the staff within them are key players in passing on the mores of social behaviour from one generation to the next. Schools, in partnership with parents and the community, have the capacity to produce socially responsible students and this is conceptualised as a significant outcome in its own right (Doyle, 1986). However, this paper posits that it is important for researchers and teachers alike to recognise that what is considered socially responsible is

culturally bound. Teachers must be able to critically reflect on how their culture influences what they consider to be socially responsible and how other cultures may perceive similar thoughts and actions as more or less socially responsive.

Key principle 7: Role of education in life success and secure employment

According to Commonwealth of Australia (2002), the health of our economy depends on the quality of education and training provided and taken up by the population. The individual benefits are that a higher level of education and training leads to higher levels of employment. Dropping out of school increases the risk of lower paid work, underemployment, job insecurity, greater unemployment and financial hardship (Wooden, 1998). One of the strongest predictors of leaving school early is a low level of literacy (Commonwealth of Australia, 2002). In addition, literacy achievement levels predict employment success 'over and above what can be predicted from ... educational qualifications alone' (OECD, 2002, p. 162).

Thus, education that builds core competencies is critical for life success and the potential of achieving secure (and hopefully, fulfilling) employment in western societies.

In communities where there is a perception of a strong link between education and employment, there is likely to be higher educational attainment. Such communities include second-generation migrants who appreciate that their parents' lack of education limited their employment opportunities (Eckermann, 1994). In communities where the link between education and employment is less clear, such as those from low socioeconomic status backgrounds (see Travers, 2001; Marks & Ainley, J., 1999; Hunter & Schwab, 1998), the consequences are likely to be lower school retention and poor education outcomes. Basic goal theory suggests that individuals must have a tangible reason and potential reward for submitting themselves to the rigours of education. Individuals must see the current and future benefits for themselves of attending school.

Concluding comments

In Section 3 of this paper, the authors have argued that the key principles or precepts of effective education provision are:

- 1 good health, both as infants and while at school
- 2 ensuring students' cognitive and social readiness for each developmental task and transition
- 3 good teachers supported by extensive and ongoing professional development
- 4 regular school attendance, so learning can be managed by students, teachers and parents or caregivers
- 5 the development of productive and supportive relationships between schools and their communities and regular attendance

These five principles or precepts occur under the auspices of the final two caveat principles, which are that schooling needs to:

- 6 support moral, social and emotional development in the context of citizenship
- 7 be explicitly related to employment and life outcomes

Research has provided considerable cross-cultural bases for arguing that these are key principles or precepts to be addressed in the provision of education for *all* students. They remain core issues for all cultures, but between-culture variations to these seven tenets or precepts need to be distinguished in order to create cultural congruence. How they are played out in different cultures, especially in relation to principles 6 and 7, is an important aspect of the required research.

Issues of particular relevance to Indigenous learning

Introduction

This section considers those issues that the authors of this review regard as being of unique importance to Indigenous students' learning. We recognise that some of these issues are applicable to other students from other ethnic minorities and socioeconomic groupings within Australia. In Section 3 of this review paper, we discussed the specific implications, for Indigenous students, of each of the core principles or precepts of education that we identified. The distinction between Indigenous and non-Indigenous students was not a critical one in Section 3. The intention there was to set the examination of Indigenous learning outcomes in a broader, generalist context. However, in Section 4 we focus on those issues and factors that are unique to, or uniquely impact upon, Indigenous students. We identify and highlight the uniqueness of Indigenous peoples' educational needs, which in some instances need a specific pedagogy. Nevertheless, as we have previously argued, we believe that the Indigenous education research literature needs to draw upon, and be better integrated with, the broader educational and research literature.

Issue 1: Weak links between education and employment

It was argued in Section 3 of this paper that, in communities where the perception of a link between education and employment is weak, educational achievement and perseverance would be limited. Given the social and historical circumstances in many Indigenous communities, it is clear that in such communities the link between education and employment is not seen as self-evident. Social and cultural factors (such as marginalisation and poverty) influence the relationship between education and employment in such a way that the link between the two is not as strong as it is in non-Indigenous communities (Hunter & Schwab, 1998).

In fact, the relationship between education and employment is not strong enough for many Indigenous people to see a personal benefit from 'investing in education' (Hunter & Schwab, 1998). Where the hope of establishing that link is still alive, investment in a child's education is inhibited, not by parental lack of interest or ignorance of school protocols, but by their financial inability to resource the school attendance (Groome & Hamilton, 1995). Poverty means nowhere to study at home, lack of privacy for doing homework, and pressures on time. Poor Indigenous students experience the pervasiveness and social stigma of poverty in a manner where it is compounded by other social and cultural issues.

In conjunction with poverty, the principal factor inhibiting Indigenous people seeing the value of education is the lack of mainstream employment opportunities for Indigenous people, now and in the past. In 2001, the unemployment rate among Indigenous people was 22.% (Hunter, Kinfu & Taylor, 2003). The growth rate in Indigenous employment is currently higher than non-Indigenous employment growth. Nevertheless, Indigenous employment growth is not expected to keep up with the increase in Indigenous people aged over 15 years. The net result is projected to be an Indigenous unemployment rate of 31% by 2011 (Hunter et al., 2003). Indigenous people are also less likely than non-Indigenous people to participate in the mainstream workforce, with only 30.8% participating in 1996 compared to 56.4% of non-Indigenous people. In the late 1990s Taylor and Hunter projected that, by 2006, only 27.4% of Indigenous people would be participating in the workforce (Taylor, J. & Hunter, 1998). The 2001 census data confirms Taylor and Hunter's 1998 projection. According to those statistics 27.5% of Indigenous people are expected to be participating in the workforce in 2006. By 2011, only 25.8% of Indigenous people are expected to be participating (Hunter et al., 2003).

Even when Indigenous people graduate from TAFE, only 63.6% of them are employed, compared to 74.1% of non-Indigenous people (Commonwealth of Australia, 2002). Admittedly, the lower employment rate of Indigenous TAFE graduates is partly the product of Indigenous students enrolling in less vocationally orientated courses, such as remedial literacy and numeracy courses, rather than signing up for apprenticeships.

These participation figures exclude those who come under the auspices of the Community Development Employment Program (CDEP), which 'employs' one-fifth of all Indigenous workers.⁹ CDEP is principally a mixture of work and welfare and is unlike traditional employment since it is not reliant on the productivity of individual workers or their level of educational achievement (Hunter, 1997). Over the last 5 years, employment growth for Indigenous people was higher than for non-Indigenous people; however, most of this growth came from expansions in the CDEP scheme rather than increases in mainstream employment (Hunter et al., 2003). There has been no improvement in the overall position of Indigenous people in the labour market since 1996. The fiscal cost of Indigenous employment disparity is 'massive... 0.5% of Australian GDP' (Hunter et al., 2003, p. 20).

However, this lack of employment prospects has serious consequences for Indigenous people, beyond the economic, in terms of the social marginalisation of Indigenous people (see Travers, 2001). In particular, the lack of employment has been linked to the greater rate of arrests in Indigenous communities (Hunter, 1997). Further, given that many Indigenous children live in homes where few of the adults have ever experienced prolonged periods of work, it is much harder for them to foresee their situation being any different, and as such there would seem little to be gained from striving while at school (see Travers, 2001 for a discussion on the problem of non-working parents in the transmission of social and economic marginalisation).

Evidence of weakness in the relationship between education and employment in Indigenous communities producing less educational attendance and achievement was found by Hunter and Schwab (1998). Indigenous students from rural areas were 20% less likely than Indigenous students from urban areas to be in school. Arguably, this is because the rural students see less reason to be at school than their urban peers. Most students will spend their adult lives in these rural communities. In such communities, there is a very small link between education and employment, because there is very little mainstream employment available (Hunter, 2001).

While there is, in fact, a greater chance for an Indigenous male to be 'employed' in rural than urban areas, the principal source of employment is CDEP (Hunter, 1997). Successfully gaining employment in CDEP is not based on education (Taylor, A., 1995; Taylor, J. & Hunter, 2001) and hence in such communities there is not the strong link between education and employment that exists in non-Indigenous communities that rely on mainstream employment.

Long et al. (1999) argued that CDEP may act as a direct disincentive to education, with Indigenous youth choosing to leave school early so as to take up CDEP employment. Indeed, CDEP does have explicit educational aims in its brief and it appears that these have not been the focus of CDEP policy in recent years; rather, it has paradoxically diverted funds away from such educational aims.

⁹ Without CDEP it is estimated that 41% of Indigenous people would be unemployed.

Pearson (1999) has argued that increased welfare dependency had undermined attempts to encourage Indigenous students to strive towards educational achievement. Welfare had created a paradigm in which dependency had become so entrenched that individuals saw little point investing in education, and thus availing themselves of consequent mainstream employment opportunities.

While CDEP may be construed as contributing to this welfare dependency, the practical reality is that, without CDEP, Indigenous unemployment and welfare dependency would increase dramatically. In fact, as an alternative to mainstream employment, CDEP has been characterised as an important aspect of Indigenous peoples' individual choice, because it gives Indigenous people the choice of whether or not to participate in mainstream employment (see Rowse, 2001).

Further, underscoring the importance of CDEP is the finding by Taylor, J. and Hunter (2001) that, based on the rate of employment growth current in 2000, employment growth for Indigenous people over the next 10 years was not projected to keep pace with population growth in the cohort of Indigenous people aged over 15 years. An additional 25 000 jobs would be required simply to maintain the 1996 employment rate (Taylor, J. & Hunter, 1998). Such projections have been confirmed by recent data analysis (see Hunter et al., 2003). It is now projected that an additional 34 000 will be required by 2011 to maintain 2001 levels of Indigenous employment. However, to actually achieve real equality of employment between Indigenous and non-Indigenous would require the creation 101 000 additional jobs, almost doubling the size of the existing Indigenous workforce (Hunter et al., 2003).

"The key features of Indigenous employment status is that it remains firmly below the national average at less than three-quarters of the level recorded for Indigenous adults' (Hunter et al., 2003, p. 3). It is important to recognise the complexity of employment provision within Indigenous communities and recognise that there is no simple solution to Indigenous peoples' disadvantage. Education alone, while of inherent value, is unlikely to be successful in alleviating that disadvantage. In fact, Hunter and Schwab (1998) argue that increasing retention rates and education levels among Indigenous people may be extremely difficult where there is no attempt to address ongoing social inequalities, such as the lack of employment.

Issue 2: Culture and pedagogy

Cultural paradigms

As previously mentioned in Section 2 of this review paper, recent policy documents have highlighted the importance of cultural 'inclusivity' (MCEETYA, 2000b). Integral to cultural 'inclusivity' is culturally appropriate pedagogy. We argue that pedagogical practice is inherently about good teaching and the following comments should be considered within that context. Nevertheless, research within the Indigenous education paradigm has focused on how culturally inappropriate pedagogy has contributed to social exclusion (Malin, 2002), poor attendance and achievement (Munns 1998; Herbert et al., 1999). Thus, some discussion ensues of pedagogical issues of particular importance to Indigenous learning.

Culture is a shared system of meanings that influences believing, perceiving, evaluating and acting. It is learnt (Kashima, 2000). Culture is pervasive, influencing both interactions within and between cultural groups. Culture determines what is considered age appropriate, the development of social mores and the practising of rituals and traditions (Valsiner & Lawrence, 1997). Culture influences socialisation practices and cognitive style (Valsiner & Lawrence, 1997).

Critical to an appreciation of this examination of the interrelationship between culture and pedagogy is the recognition that there is not one Indigenous culture, just as there is not one Indigenous people in Australia. What is also critical to an appreciation of the complexity of adopting culturally appropriate pedagogical practice is the recognition that cultures change and evolve as a result of interactions between people, within the cultural group as well as a

consequence of influences outside the culture. For Indigenous cultures, such changes are not simply the result of colonisation (Cockayne, 2001).

One of the most extensive contributions of culture is in childrearing (Valsiner & Lawrence, 1997). Indigenous children from different Indigenous cultures will be raised differently from each other and differently from non-Indigenous children. Nevertheless, some commonalities are to be expected. Case study research has reported that, in some Indigenous cultures, Indigenous parents foster a greater sense of independence and autonomy in their children than do most non-Indigenous parents (Lawrence, Smith & Dodds, 1998). For example, Indigenous children are expected to be assertive and defend themselves. They are not encouraged to run to adults to have them resolve their arguments and they are expected to be emotionally resilient and physically tough (Malin, 1990). Further, case study research has found that those with an Indigenous culture generally emphasised independence, whereas those with a western culture emphasised politeness (Malin, Campbell & Aguis, 1996).

Teachers thus must avoid labelling as ‘incorrect’ the behaviours of Indigenous children, which diverge from what they expect or require, as a consequence of childrearing practices or other cultural expectations. Nevertheless, teachers need to teach appropriate classroom behaviour (Heitemeyer, 2001) to ensure that class time involves learning and not managing disciplinary issues. Explicit teaching of code deciphering and bicultural behaviours are pedagogic strategies that can be employed.

A range of researchers have highlighted over the last decade that, while Indigenous students come to school with a body of knowledge that is extensive and varied, this knowledge has little currency at school because the knowledge that is valued in school is derived principally from western society. Children are transformed from being valued, knowledgeable and acceptable to being novices within their new environment (Dodson, 1994; Hughes 1987; Heitemeyer, 2001). Anecdotal evidence suggests that familiarity with environment assists in learning and that this applies to non-Indigenous students, especially those who are the first-born, albeit to a much lesser extent than for Indigenous students. In a more moderate perspective, Batten has argued that, in fact, Indigenous students may simply not be used to the social conventions of school (Batten et al., 1998). Importantly, teachers must recognise the unique skills that all students start school with; those students whose skills are not recognised and legitimised begin school marginalised (Hughes, 1987; Malin, 2002).

Malin (1990) further argues that there is a tension between Indigenous home socialisation practices and teachers’ perceptions of appropriate classroom conduct. This often has a negative effect on the behaviour and learning of Indigenous students. Malin found that an inequitable distribution of teachers’ resources results from culturally based misunderstandings and incompatibilities. The teachers under study appeared not to recognise the Indigenous students’ talents and ignorantly perceived their culturally based classroom responses as signs of disrespect, which contributed to students being assessed as below average and troublemakers. Putting this into context, Henderson (2002) argued that schools struggle to cater for cultural diversity.

Appropriate pedagogical practice

Hudspith (1997), in a small study with urban Indigenous students, reported that a visible pedagogy in which both the roles and responsibilities of the teacher and the students were explicit was successful. The consistency of this pedagogical approach with the values and interests of urban Indigenous students led to the engagement of children and parents in the learning paradigm of her classroom. We argue that it has to be questioned, however, how effective such an approach will be in other contexts and other Indigenous cultures. The benefits of this study are not the prescription of a particular pedagogical practice, but instead in highlighting the importance of adapting pedagogy to the needs of the particular student cohort.

In contrast to Hudspith, Ladson-Billings (2001) argues that culturally relevant pedagogy involves teachers who are focused on academic achievement and cultural competence. Cultural competence is the explicit recognition and affirmation of a student’s cultural identity. Such

pedagogical practice requires teachers to be able to reflect critically on their own education and their own cultural identity. The outcome of such pedagogy enables students to use their culture to critically examine educational content and process and question their own position in society.

Interestingly, Greenwood and Cresswell (in press) report that Indigenous students and non-Indigenous students differ in their learning styles. Indigenous students are more likely to be cooperative learners, whereas non-Indigenous students are more likely to be competitive learners. This finding would suggest that appropriate and effective pedagogical and assessment practices for Indigenous students would be ones that build upon this trait, incorporating the Indigenous students' learning style.

While Indigenous and non-Indigenous students may adopt different learning styles, research suggests that their goal orientations are similar. McInerney et al. (1998) compared 'Aboriginal', 'Anglo' and 'Immigrant' students' goal orientations. All groups reported that satisfying a mastery goal, such as desire for understanding, made them feel successful at school. In contrast, both performance goals (such as winning against others) and social goals (such as helping others) were less important for all groups than feeling successful at school. The researchers concluded that Indigenous students defined success at school in the same way as other students and that educators should emphasise mastery goals for all students in their lessons. Where Indigenous students did differ from non-Indigenous was in their descriptions of others. Indigenous students were more likely to perceive other students as more mastery goal orientated than themselves. The research concluded that Indigenous students had less experience linking mastery goals to school success.

Osborne (1996) argues that the best approach for minority students including Indigenous students is to build a holistic rather than a reductionist approach to culturally relevant pedagogy. Culturally relevant pedagogy is grounded in *some fundamental understandings*, which include:

- Social, historical and political circumstances outside the school constrain relationships within the classroom and must be understood by the teacher.
- It is desirable to teach content that is culturally relevant to students' previous experiences. This fosters their cultural identity and empowers them with knowledge and practices to operate successfully in mainstream society.
- Culturally relevant teachers are personally warm towards and respectful of students. Importantly, they must be academically demanding of all students.
- Teachers need to spell out the cultural assumptions on which the classroom (and schooling) operates.
- Racism is prevalent in schools and needs to be explicitly addressed.

(Osborne, 1996, pp. 289–299)

These fundamental understandings apply to any non-hegemonic or marginalised group of learners.

Osborne (1996) is not the only researcher to claim that racism is prevalent in schools (see Gilbey, 1998). However, it is important to note that much of the evidence comes from secondary schools (see Osborne, 1996; Rigney, Rigney & Hughes, 1998) and as such this has policy implications. Recent developmental psychology research has highlighted that racism is not innate but is learnt and has generally not yet been learnt by the time children begin school (Witenberg, 2000). Such findings suggest that a primary school's approach to racism must be one of inhibiting the development of racism. Such a preventative approach in the early years would be more effective than any attempt in later years to redress racism that has already developed.

Overall, the research on 'culturally appropriate' suggests that teachers need to be reflective, they need to be able to reflect on their own cultural influences and culturally informed understandings before they can understand the culturally constituted behaviours of their students. Teachers' pedagogical practice must affirm each child's cultural identity. Rather than a child's culture being marginalised in teaching, it must be treated as an asset of real value to each child and to those who interact with them. Evidently, such practices are those adopted by good teachers. Getting good teachers supported by appropriate professional development may in and of itself partly address the issue of culturally appropriate pedagogy.

The question that has to be asked in relation to Indigenous students is: Are they getting the teachers who can best meet their needs? Anecdotal evidence favours the negative conclusion. When Chris Sarra became Principal at Cherbourg State School, he replaced nearly the entire school staff because he wanted teachers who were committed to achieving equitable outcomes (Sarra, 2003). The necessary inference there was that the existing staff members were not committed to that goal and hence were not the best individuals to teach those students. Many of the case studies reported in *First Steps* are also equivocal about the quality of teachers involved in many of the reported projects (Northern Territory Department of Education, 2000). Given that the evidence is consistent that teachers make a considerable contribution to academic outcomes, research into Indigenous education must examine teacher suitability, to determine whether teachers have a similar impact on these students' learning outcomes. If, as expected, this is the case, policy must direct initiatives and resources into the areas as a matter of priority consideration.

Issue 3: High teacher mobility

High teacher turnover has been cited as an impediment to Indigenous students' educational achievement, especially in the remote areas of the Northern Territory (see Collins, 1999, p. 75). Recent media reporting (Noonan & Doherty; 2003, March 6) has highlighted that, in discussions as to what indicators of school effectiveness should be publicly reported in New South Wales, one such measure proposed was staff turnover, including the incidence of removal of underperforming teachers. The suggestion appears to be premised on the belief that teacher turnover is a good measure of the 'health' of a school. The perception is that high teacher mobility results in teachers not being good role models for students (Eckermann, 1994). From this cognitive-behavioural perspective, teachers model, through their regular attendance, appropriate student behaviour in regard to attendance. They also indicate their support for the school and hence their concern for student welfare and achievement. In addition, of course, teachers who leave during the school year disrupt the efficient running of schools and high turnover inhibits effective planning and continuity.

The evidence of higher teacher mobility in schools that cater for significant numbers of Indigenous students is largely anecdotal. An exception was the Collins (1999) report, which examined teacher turnover in the schools they reviewed in the Northern Territory. Teachers' average length of stay was as short as 1.8 years in East Arnhem, and as long as an average of 3.4 years in the Darwin area. The averages do not provide a picture of the variability in length of stay and, in particular, the number of teachers whose leaving during the school year causes the greatest disruption to students. Further, no comparison is provided with the territory average or average retention in other states. By reporting only the average retention, a complete picture of teacher mobility is not available.

In the Frigo et al. (2003) longitudinal study, some students experienced multiple teachers in a single school year, reflecting a highly transient teacher population. This must reflect on the health of the school and its capacity to develop effective and integrated school programs that facilitate learning. Further, indications that teacher mobility is a problem comes from the report by the NT Education Department (2000) *First Steps across the Territory*, which includes a number of case studies in which comments are made about teachers leaving. At one school, it was commented that 'our staff is young and frequently changing' (p. 1).

Eckermann (1994) reports a discussion between a principal and students whose class teachers had left the school. In response to the Principal expressing concern as to who would be teaching them, a pupil responded 'What do you care? ... You won't be here next year!' Such comments indicate that some students in this school were aware that teachers who came to the school do not, and quite possibly do not want to, stay there very long. The quality of the relationships that can develop between such teachers and their students must be questioned. It is unlikely that teachers who are contemplating leaving a school are building cohesive and constructive relationships with their students.

There seems to be inadequate attention in the research literature to this issue. Given the previously mentioned research findings that quality teaching is integral to educational success, there can be little doubt that, if high teacher mobility is evident in a school, the students are not receiving quality teaching. Research must explicitly examine this from the objective perspective of examining teacher mobility patterns across schools, especially those in remote areas.

Issue 4: Specific and targeted teacher training and professional development

Teacher training and professional development for teachers in Indigenous education has been a fundamental tenet of Indigenous education policy for 15 years (DEET, 1989; MCEETYA, 2000). It is further supported by the requirements of the Adelaide Declaration (MCEETYA, 1999) that for our education system to be socially just, not only must Indigenous students' education outcomes improve so that they equal those of non-Indigenous students (Goal 3.3), but also non-Indigenous Australians should develop a knowledge and appreciation of Indigenous cultures (Goal 3.4). If teachers are to have the capacity to actively and constructively contribute to the achievement of the latter goal, they must have extensive knowledge of, and understanding of, Indigenous cultures (Malezer & Sim, 2002). Malin (1990, 2002) further argues that this is critical if schools are going to have the capacity to foster the necessary understanding between teachers and Indigenous parents and students.

Taylor, A. (1995) argues that including Indigenous studies as part of the teacher training curriculum raises broader issues as to what Indigenous students are being educated to achieve. What needs to be made explicit in teacher training is to question what society we are educating Indigenous students for. Is it to interact in a white social milieu, or is education designed to enable them to interact with other Indigenous communities, or is it to enhance their capacity to interact within their own Indigenous community? These purposes are not necessarily mutually exclusive. Such questions have not been asked widely enough. They raise issues as to the level of knowledge that teachers should have about Indigenous communities and issues that relate to what Indigenous communities themselves expect from a western education. Taylor argues that such discourses need to precede the establishment of Indigenous studies in the teaching training curriculum. It also necessitates an interaction with Indigenous communities as to what capacities and skills they expect the school to be developing in their children.

Of greatest concern is the quantity and quality of the current professional development in regard to Indigenous studies. This is consistent with the broader argument about the current piecemeal nature of professional development and the need to develop ongoing professional learning (Ingvarson, 2003; OECD, 2001). Malezer and Sim (2002) reported in their case study research that teachers had very limited professional development in Indigenous Australian studies. In fact, many teachers in this study had not even undertaken a single Indigenous studies course during their undergraduate education or teacher training.

Partington (2000) argues that teaching Aboriginal studies is not appropriate and it distracts Indigenous students from the core curriculum. He further argues that Greek and Chinese parents 'rightly' do not expect their culture to be taught in schools, since they send their children to school to learn English literacy and numeracy skills (p. 40). While the issue of distraction may well be correct, in these assertions Partington is drawing invalid comparisons. Migrants do not have the same history of colonisation and marginalisation in Australia as Indigenous people. But many of them do regard the retention of home language as a crucial aspect of cultural identity, and they send their children to 'Saturday school' in order to ensure the cultural outcome they desire. The use of such analogies with migrant experiences understates the important differences between Indigenous peoples and migrants (who are themselves very diverse). It also serves to reinforce a notion of similarity between all those who are not part of the Anglo-Saxon majority (see Partington 2000, p. 37), reinforcing the dichotomy between 'us' and 'them'.

However, the authors of this paper argue that Indigenous studies should be taught in all

educational institutions, to all teachers and students, because Indigenous people's history is an integral part of the history of Australia. A failure to acknowledge Indigenous history and culture as part of the formal curriculum further reinforces Indigenous peoples' invisibility. Indigenous studies should form part of both the teacher training curriculum and also of ongoing professional development.

Often, professional development for teachers has been held up as a panacea capable of undoing ingrained inefficiencies and cultural ignorance. The key question, however, is how teachers translate professional development into classroom practice. Much of the claimed success of professional development is reliant on case studies that highlight the positive evaluative comments of teachers on completion of such professional development. Arguably, there has been a failure in research to examine *how* professional development is to be transferred into the classroom by teachers. This does not just concern content, but also pedagogical practice, teacher management of individual differences, and issues of cultural sensitivity. Further research is also required into the quantity and quality of professional development courses in Indigenous studies, both pre-service and in-service, and should occur within a broader debate about teachers' training and professional development.

Issue 5: Language development

A central discourse within the Indigenous educational literature focuses on Indigenous languages and the dialects of Aboriginal English and Torres Strait Kreole and how they are recognised and taught in schools (see McRae et al., 2000). Within this paper, we do not intend to delve into the minutiae of language teaching, but regard it as self-evident that some methods are better than others, and further, that good and experienced teachers can choose the best methods for their students. The principal argument supporting language recognition and teaching is its importance to identity (see Purdie et al., 2000). Language use is an important element of culture; in particular, cultural identity and regulation.

Language and dialect recognition is an integral aspect of good teaching. As has been argued previously in this review paper, good teachers are aware of the individuality of each of their students and this includes awareness of home language or dialect use. Without such knowledge, there is a limited possibility of using each student's background as the basis of future learning, an approach that is seen as integral to effective learning.

The authors of this paper would suggest that a specific focus on language as an independent factor of concern is misplaced and an examination of language must in fact occur within a broader discourse of good teaching. For example, the finding by Frigo et al. (2003) that there was mixed acknowledgement of the dialect of Aboriginal English within and across schools, must raise the question of whether some Indigenous students were in fact getting good teaching. The failure to be aware that students' home language use was not Standard Australian English might lead to a questioning of the capacity of those teachers to teach such students effectively. While most Indigenous students speak Standard Australian English, recognising home language is an important part of good pedagogical practice.

Language use is one aspect of Indigenous peoples' cultures that is indicative of the diversity of Indigenous peoples. A small proportion of the total Indigenous population, predominantly those in some remote Indigenous communities, uses traditional language. Other Indigenous people, especially those in metropolitan cities and regional centres, use only Standard Australian English. Some other Indigenous people speak Aboriginal English. Many have a diverse repertoire of language skills across a range of dialects and languages. Such diversity makes policy in this area rather complicated and underscores the futility of simple or 'one model fits all' solutions.

Decisions about what languages are taught in school and decisions about the language(s) of instruction are ultimately questions that need to be negotiated between schools and their communities (see Collins, 1999). Whether or not Indigenous languages (and if so, which ones?) are taught in schools (to Indigenous and also to non-Indigenous students?) must be decided by the community and the school. However, teaching Indigenous language must be supported

with appropriate curriculum materials and appropriate pedagogical practice (Collins, 1999).

Many community schools have made the explicit decision that they do not want the school to teach anything other than English (see Collins, 1999). This decision seems to be based on two considerations. First, they see this strategy as preserving a primary role for the community in teaching Indigenous language and culture. The second consideration appears to be one of not detracting from the principal role of the school in teaching the core competencies of English literacy and numeracy that are necessary for mainstream community involvement.

Recasting language teaching as part of the negotiation between communities and their schools assumes great importance when considering the introduction of bilingual programs (see Department of Education (Cth), 1973) and their subsequent removal (see Collins, 1998). For success, such policy decisions require the ownership of local communities and an understanding of the diverse language use in many communities. Research into the successes experienced as a result of these programs is needed, in order to enable a proper evaluation of their effectiveness in reducing language impediments to Indigenous learning. Similar discussions about bilingual programs in schools have occurred within Indigenous communities and education systems in South and Western Australia.

We concur with Geoffrey Partington (2000) that developing Standard Australian English literacy is of primary importance to Indigenous students, since it provides them with the necessary skills to interact within mainstream society and avail themselves of the broadest range of civic, social, educational and employment possibilities. A combination of language usage is not precluded by this concurrence. Research that examined the magnitude of the contribution of non-English-speaking background to Indigenous education outcomes would provide useful data. This information would enable governments to better target resources towards the language options most important to Indigenous educational achievement.

Issue 6: Indigenous teachers

Consistently for many years now, both Indigenous Education literature and government policy have affirmed that training effective Indigenous teachers is critical for improving Indigenous students' learning outcomes (see NATSIEP, 1989; Commonwealth of Australia, 2002; Dodson, 1994). Such an argument explicitly suggests that non-Indigenous teachers are incapable of teaching Indigenous students effectively and, by implication, brings into question the broader issue of the validity and effectiveness of multicultural classrooms (see Langton, 1993; McConaghy, 1994).

Further, it has to be remembered that having Indigenous teachers teach Indigenous students would be impossible to administer, given that the vast majority of Indigenous students attend school where they are a small minority (Commonwealth of Australia, 2002). Of further difficulty would be ensuring a cultural match between the students and the Indigenous teacher. While this may have attractions, it is impossible to implement. It further emphasises the value of training all teachers to have a better grasp of Indigenous cultures and culturally influenced learning methods.

The evidence of the effectiveness of Indigenous teachers above and beyond that of non-Indigenous teachers is largely equivocal and is tempered by research indicating that non-Indigenous teachers can effectively teach Indigenous students (Osborne, 1996). Osborne and Tait (1998) have argued that it is necessary to 'distinguish between the legitimate political aspirations of Indigenous spokespersons and research findings, which show that some non-Indigenous teachers can successfully teach students from marginalised groups' (Osborne & Tait, 1998, p. 89).

It is nevertheless important to have positive Indigenous role models. Purdie et al. (2000) argue that, while Indigenous teachers are good role models of Indigenous people who have achieved academically, having former Indigenous students who have built successful careers regularly visiting the school offers just as effective models. Chris Sarra (2003), who taught in, and is the Principal of, a Queensland community school, argued that simple things like employing Indigenous persons as cleaning staff provided students with positive role models of constructive adult behaviour. What seems important is positive reinforcement that Indigenous people can and should achieve academically through exposure to successful Indigenous people.

Of further importance is the existence of a link between being academically successful and greater employability.

Obviously, Indigenous people should be encouraged to become teachers as they are severely underrepresented in the teaching workforce nationally (see Commonwealth of Australia, 2002). In addition, Indigenous teaching aides should be actively encouraged and supported if they wish to become teachers. If all students are to be served well by the education system, they should be taught by teachers who are representative of Australia's ethnic and cultural diversity.

However, in order to conclude that Indigenous students benefit in terms of improved education outcomes by being taught by Indigenous teachers, there must be empirical evidence. The current research evidence is inconclusive at best. We argue that, given the magnitude of the discrepancy between Indigenous and non-Indigenous students' education outcomes, policy must focus as a matter of priority on those issues that have been found by research to have a substantive and significant impact on Indigenous students' education outcomes. Currently, the issue of increasing the number of Indigenous teachers is not such an initiative.

Issue 7: Indigenous parents' involvement in schools

Indigenous parents are similarly unlikely to be involved in primary school activities and decision-making (see Eckermann, 1994). Herbert et al. (1999) found that Indigenous parents still had little input into the curriculum development process. This is a concern because, for example, fewer Indigenous mothers are in paid employment and thus work cannot be as significant a factor in their lack of school involvement (see Schwab, 1997). It is possible that distance and lack of transport contribute to the lack of involvement (Batten et al., 1998). However, it is more likely that historical, negative relationships between Indigenous people and western schooling continue to influence the current unwillingness on the part of many Indigenous parents to become actively involved in their students' school (Dodson, 1994; Hughes, 1987).

In fostering open communication between Indigenous students and their parents and communities, the main responsibility often falls to the Aboriginal and Islander Education Worker (AIEW) (Batten et al., 1998; Frigo et al., 2003). According to Sarra (2003), individuals in such positions often provide a bridge or link between the school and community and can foster productive relationships with important community members. Such relationships can be crucial for getting the community to support the school and even become involved in the school. However, it is important to remember that most Indigenous students would not have experiences with AIEW, since most attend schools in which they are a very small minority and hence AIEW are often not present (see Commonwealth of Australia, 2002)

Schwab (1996) reported the results of the 1994 National Aboriginal and Torres Strait Islander Survey (NATSIS) in which 86% of Indigenous parents indicated that they were satisfied with the education their children were receiving and 84% indicated that they felt welcome in their children's school. Interestingly, 29% reported being involved in decision-making at their children's school. This does not fit with other research, which suggests that Indigenous families are infrequently involved in their students' school (see Eckermann, 1994). Interestingly, despite the vast majority of families expressing satisfaction with their child's education, 33% responded that, if they were given the choice, they would like to send their child to a community school. Schwab (1996) suggests that such figures should be interpreted in a sociohistorical context in which Indigenous people have generally had negative experiences of schooling and in the context of a dynamic that offers Indigenous parents little choice or power. Schwab confidently interprets the expressed satisfaction in the light of a view that 'when people appear 'satisfied' with what they have got it may reflect resignation that their real preferences are never likely to be met' (Schwab, 1996, p. 87).

Rowse (2001) is critical of such speculation as to how 'Indigenous families may have been able to accommodate themselves to, and even come to prefer, a mainstream education' (p. 5). Further, Rowse (2001) argues that researchers such as Schwab (1996) appear to make the mistake of implying that 'public policy can shape both the options available to Indigenous people and

their choices from among those options' (p. 5).

Prima facie, Indigenous people appear satisfied with the mainstream education that their children are receiving, yet the vast majority are unwilling to become actively involved in schools and many are even unwilling or unable to support regular student attendance. Reference has previously been made in this paper to the negative, or lack of a positive, experience in education for most Indigenous communities or parents. Further, Sarra (2003) suggests that parents in many schools have become resigned to the poorer education outcomes achieved by their children. Research needs to unpack the reasons for Indigenous peoples' lack of involvement in schools and the ways that this can be fostered to a greater extent. This is important because a cooperative and consistent relationship between home and school appears to be critical to students' success in school and appears as a significant impediment to Indigenous students' educational achievement.

Concluding comments

In Section 4 of this paper, we have argued that, in addition to the key principles and precepts of effective education provision for all, there are some issues of particular importance to Indigenous students' educational success. They are:

- improving employment outcomes for Indigenous people
- adopting culturally appropriate pedagogy
- reducing teacher turnover, especially in remote areas
- improving the quality and quantity of teacher education courses in Indigenous education, both pre-service and in-service

We have argued that the demand for Indigenous teachers is not currently based on research evidence and, as such, is not a primary consideration. Indigenous people do have unique needs; however, it is important to place those needs in the context of the universal needs of all students (as we explicitly outlined in Section 3 of this paper). Such a context provides a better understanding of what research needs to be conducted in order to ascertain why Indigenous students have yet to achieve equal access, participation and retention.

The policy and research position: Synthesis and proposal

Introduction

This section of the review paper has three parts. Parts A and B synthesise the review paper's data and arguments outlined in Sections 1–4. Part C addresses the issue of future research and advocates a particular agenda for adoption.

A Current Indigenous education outcomes data

Despite improvements in Indigenous education outcomes, and substantial funding, there nevertheless has been no significant reduction in the gap between Indigenous and non-Indigenous students in the last decade. Summary data reported in tables below is from the National Report on Indigenous Education and Training 2001 (Commonwealth of Australia, 2002), which provides a range of baseline measures of Indigenous students' educational performance. The data sources are principally the Australian Bureau of Statistics, supplemented by data from the IESIP providers where necessary. The reader should remain cognisant of the caveat on national data that was expressed in Section 1 of this review paper. National data mask the variations that exist between regional and local cohorts. There is an urgent need to adopt data-collection methods that enable the examination of discrete populations.

Preschool data

Preschool enrolment rates

The proportion of persons aged 3 and 4 years enrolled at a preschool educational institution in Australia in 2001 was:

Indigenous	Non-Indigenous
48%	57%

Source: Australian Bureau of Statistics, Census of Population and Housing, 1996 and 2001

Preschool attendance rates

Information from IESIP providers suggests that Indigenous students' average attendance was approximately 75% to 90%. However, rates differed considerably between preschools, with reported attendance as low as 43% in some independent preschools that are frequently in remote areas.

School participation data

Enrolment rates

The proportion of persons aged 5–14 years attending an educational institution in Australia in 2001 was:

Indigenous	Non-Indigenous
87%	95%

Source: Australian Bureau of Statistics, Census of Population and Housing, 2001

Attendance rates

Indigenous students' poorer attendances has been consistently highlighted as a significant impediment to closing the gap between Indigenous and non-Indigenous students' education outcomes. The following figures represent the reported attendance of Indigenous students in IESIP provider schools that are funded to improve attendance.

Attendance rates: primary

Indigenous	Non-Indigenous
75–92%	85–95%

Source: IESIP performance rates, 2001

Attendance rates: secondary

Indigenous	Non-Indigenous
70–86%	86–92%

Source: IESIP performance rates, 2001

It should be noted that the Commonwealth of Australia (2002) suggests that these figures should be interpreted with caution because of measurement reliability. However, these figures are not consistent with other research evidence. In the study by Frigo et al. (2003), of the students for whom data was available, more than half were absent 20 or more days per year.

Retention rates

The apparent retention rates indicate the proportion of Year 10 students who enrol in Year 12 two years later. The proportion of Indigenous and non-Indigenous students who were in Year 10 in 1999 who in 2001 were studying Year 12 were:

Indigenous	Non-Indigenous
43.6%	76.2%

Source: Australian Bureau of Statistics, National School Statistics Collection, 2001

School achievement data

Achievement rates: Years 3 and 5

The percentage of Year 3 students achieving the reading and numeracy benchmarks in 2000 was:

Indigenous		Non-Indigenous	
Reading	Numeracy	Reading	Numeracy
76.9%	73.7%	92.5%	92.7%

Source: MCEETYA, 2002

The percentage of Year 5 students achieving the reading and numeracy benchmarks in 2000 was:

Indigenous		Non-Indigenous	
Reading	Numeracy	Reading	Numeracy
62.0%	62.8%	87.4%	89.6%

Source: MCEETYA, 2002

Year 12 achievement

According to the *Annual national report on schooling* (MCEETYA, 2001e), Indigenous students are less likely to obtain a UAI (University Admissions Index), or, if they do achieve a UAI, it is at a lower level than non-Indigenous students. Marks, McMillan and Hillman (2001) also found that the Indigenous students received ENTER (Equivalent National Tertiary Entry Rank) scores significantly below non-Indigenous students in their cohort. Even after the effect of differences in Year 9 achievement and socioeconomic status were accounted for, Indigenous students were found to perform at a significantly lower level.

Post-compulsory education data

Vocational education and training

The proportion of vocational education enrolments that were at Certificate III level or higher in 2001 were:

Indigenous	Non-Indigenous
29%	44%

Source: NCVET National VET provider collection, 2001

The percentage of Indigenous and non-Indigenous module completion rates in 2001 were:

Indigenous	Non-Indigenous
65.7%	78.1%

Source: NCVET National VET provider collection, 2001

Higher education data

- ***Access rates***

In 2001, Indigenous students comprised 1.5% of the total number of commencing Australian students. The proportion of Indigenous and non-Indigenous students, with no formal pre-tertiary qualification, enrolled in higher education, upon entry to Bachelor's level or lower in 2001, was:

Indigenous	Non-Indigenous
31.9%	7.7%

Source: GCCA Graduate Destinations Survey, 2001

- ***Retention rates***

The apparent retention rates of Indigenous students in higher education, which indicate the proportion of students who are retained in a university course from the commencement of one academic year to the next, in 2001 were:

Indigenous	Non-Indigenous
59%	77%

Source: GCCA Graduate Destinations Survey, 2001

These retention rates represent a serious loss for the Indigenous community as a whole. Considerable individual and group struggle is required to have an Indigenous student reach tertiary study. When such a student fails to complete tertiary studies, the community loses a potential resource and a future role model. Such experiences reinforce powerfully negative self-images for Indigenous communities. It is a waste of human resourcefulness and hope, which the Indigenous and broader Australian community cannot afford.

Percentage of Indigenous and non-Indigenous graduates in full-time employment

The percentage of Indigenous and non-Indigenous graduates in full-time employment in the first month after graduation in 2000 was:

Indigenous	Non-Indigenous
84.8%	85.9%

Source: GCCA Graduate Destinations Survey, 2001

These post-employment rates for graduates indicate little difference in the success between the two cohorts. Such, it seems, are the similar capacities of the two cohorts. Interestingly, while the employment rates are roughly equivalent, Indigenous students are more likely to find public-sector jobs, often in Indigenous affairs. In contrast, non-Indigenous students are more likely to find jobs in the private sector (Commonwealth of Australia, 2002).

Concluding comments

The achievement and transition data in this part of Section 5 represent levels of engagement in learning, and the Indigenous level is significantly lower at all points. If the level of engagement in education is an indicator of advantage, as has been argued at points in this review, the picture of Indigenous life disadvantage depicted by this data is a bleak one indeed. This and the data from Sections 1 and 2 of this review also indicate little substantive progress having been made in the last 10 years to ameliorate the discrepancy between non-Indigenous and Indigenous education outcomes.

The charge can be laid that these data do not create a full or relevant picture of Indigenous engagement with learning, and thus cannot register improvements in Indigenous learning outcomes. However, even taking into account the reduced insight possible from such aggregated national data, and the fact that these achievement data refer only to the 'narrow' learning constructs of literacy and numeracy, and to 'formal' transitions in a 'rigid education system', these are crucial constructs in education outcomes. And there is no denying that the data indicate a serious lack of progress on these, albeit restricted, benchmarks. But they do constitute only a part of the 'big picture' goals that this review paper has sought to investigate. Our argument throughout this review paper has been that additional data, on a wider range of educational and non-educational factors need to be collected and presented in disaggregated form, to create a complex picture of educational engagement. Nevertheless, even if the anecdotal evidence about differential improvement across locations, especially in urban as compared with remote community outcomes, is correct, the cohort's education outcomes still is not dramatically improving.

This data, and the failure to collect it in such a way as to demonstrate the significant variation across locations, highlights the pressing need for a new approach to both research and policy into Indigenous outcomes. The emphasis cannot simply be one of reacting to the disadvantage just described. Research must be more holistic, broader-based, forward-looking and proactive, aiming to resolve issues, to achieve and support educational equality for Indigenous people. The solutions are not to be found in these data – they simply demonstrate the urgent need for sound and innovative research, on which to base policy initiatives that will contribute to a resolution.

B Characterisation of current research techniques in Indigenous education

It has been argued consistently throughout this review paper that research into Indigenous education outcomes is not explaining the rich and complex factors that are contributing to Indigenous students' poorer education outcomes. One reason for this failure is the research methodology generally adopted by the research currently being undertaken. Much of the research in this area has some of the following limitations:

- 1 Research has generally been either testing without context or small case study.
- 2 Research has generally focused on a specific set of the population.
- 3 Research findings have been equivocal, incomplete or unclear.
- 4 There has been a focus on the uniqueness of the Indigenous experience of education.
- 5 Indigenous education research has been to an extent isolated from the broader research discourses over teacher quality, ongoing professional development, class sizes and social and emotional readiness for formal education.
- 6 Indigenous education has not been integrated with discourses in other disciplines, such as developmental, cognitive and social psychology, paediatrics, sociology and public and community health.
- 7 Research has focused predominantly on 'problems'.
- 8 The relationship between cause and effect has been asserted, rather than the inferences tested through research.
- 9 There is a tendency to adopt and promote the significance of single solutions.

One of the more significant failures of the research has been the inability to quantitatively examine the interaction between factors. The interactions between poverty, poor health and social exclusion are as important as the existence of each of these factors. Little has changed since Ainley (1994) argued that:

there are few studies in the research literature which probe the ways in which various factors interact to influence the poor education outcomes for Aboriginal and Torres Strait Islander people. Given the magnitude of the differences, this is a major deficiency and there is a need for more thoughtful investigation of these issues.

(Ainley, 1994, p. 5)

C A national research agenda into Indigenous education outcomes

Further research into Indigenous students' education outcomes needs a significant national research agenda, such as have been adopted in other developed countries. Such studies' data and findings have impacted on policy formation and development. Australia should instigate a similar research agenda, one that would better support more effective and efficient policy development in the area of Indigenous education.

Key methodological issues for the national research agenda

Research characteristics and methodologies that support policy formation

- Qualitative research into Indigenous Education Outcomes has often provided insight into a range of factors that influence Indigenous students' education outcomes,

without providing an indication of the magnitude of the contribution of each individual factor. Qualitative and case study research can provide richer and more personalised data than other methodologies, thus leading to a more complex understanding of the many ways in which the factors impact and interconnect in the real lives of Indigenous people.

- Quantitative research is a tool by which the influences and contributing factors that have led, and continue to lead, to poorer education outcomes for individual students can be ascertained. Policies must also be rigorously evaluated, with their achievements quantified. There is not, in Australia, a research tradition of quantitative measurement in the Indigenous education literature. To ignore such measurement only continues to do injustice to the gravity of the problem.
- Good studies use both qualitative and quantitative research methodologies to get the best picture of data. The lack of such research in this field must be remedied.

Large-scale longitudinal research studies

Internationally, there have been studies, in the United Kingdom, United States and Canada, that exemplify some of the characteristics outlined above. For example, international survey studies have examined the transition from school to work, using large sample longitudinal studies (see National Longitudinal Studies of Youth [NLSY79, NSLY97] US; Youth In Transition Survey, Canada). These studies have included measures of educational achievement and attainment. They are large in size, for example NLSY79 had 12 000 participants, and utilised sampling techniques that ensured the sample was representative of the cohort under study. In Britain, the ongoing National Survey of Health and Development (1946 British Cohort Study) is one of the world's largest and most comprehensive longitudinal studies. The study aims to map biological and social pathways to health and disease from early life to later life. Through analyses of social, health and developmental variables, over the decades that it has been in progress, the study has made a significant contribution to social and health policy in Britain.

The studies from Canada and the United States do not have a particular focus on minorities, and the British study's sample and the sub-sample were drawn without specific reference to minority groups. In part, this lack of particular focus on minorities is unnecessary in these countries, since the minorities, especially the Indigenous minorities, in Canada and the United States are, proportionately, considerably larger than the Australian Indigenous population. Thus, their minority populations are relatively well represented in their national samples. Such is not the case in Australia. Over-sampling is required to achieve comprehensive data on 2% of the national population, and even then comparisons between groups can be unreliable. This is an additional but necessary strand to the methodologies required for the effective study of the Australian Indigenous population.

There have been no significant international studies of this scale and sophistication that have specifically targeted the Indigenous populations. In Australia, there have been a number of longitudinal studies that have included the collection of data on the Indigenous population, but they have also been unable to provide more extensive data on Indigenous students.

Existing Australian research that models these methodologies

In Australia, the Longitudinal Surveys of Australian Youth (LSAY) provides surveys of youth from the mid-teens to the late twenties of transitions between education, training and work using nationally representative samples of more than 12 000 young people. It focuses on educational, labour market and social outcomes, and has been conducting these surveys for more than 20 years.

The Australian Temperament Project (ATP), the predecessor to the Longitudinal Study of Australian Children (LSAC) has provided rich longitudinal data from the early years, although on a smaller scale than the international surveys mentioned above. The LSAC study has a large sample size, enabling complex factors and their interrelations to be researched with some confidence. LSAC is also longitudinal in nature, allowing across-time comparisons. Longitudinal

studies are important tools for ‘obtaining high quality evidence about the determinants of health and well being ... [and are] ... of value in addressing key policy issues’ (Sanson et al., 2002, p. 1). This study also adopts an interdisciplinary approach, with educators, sociologists, psychologists and paediatricians involved in both the conceptual modelling and the empirical focus.

The breadth of research expertise exemplified by the three studies mentioned above enables such studies to comprehensively research the determinants of successful outcomes. Studies such as these, which are underpinned by solid research methodologies, should provide the template for future research into Indigenous education from the early years. In the area of Indigenous education, a longitudinal study that has embedded in it qualitative and quantitative methodologies would enable researchers to target the antecedents of educational difficulty and success. Research into, and subsequent development of, policy that tackles those antecedents should lead to improved education outcomes.

Further broad-based research of the kind advocated in the Proposed National Research Agenda into Indigenous Education Outcomes should investigate successes as well as problems, as the former can, evidently, provide powerful indicators of what works. The orientation of research into Indigenous education outcomes must not simply adopt a deficit or reactionary approach. Research must be forward-looking, proactive and ultimately strive to obtain social justice – equal opportunity and equitable education outcomes for Indigenous students.

Key non-education factors for consideration in a national research agenda

The social and economic factors identified and itemised in this paper as having a negative impact on Indigenous education outcomes are:

- poor health of Indigenous people
- shorter life expectancy
- greater poverty
- higher incarceration
- lower employment rates

The factors that negatively impact on Indigenous people and on their education outcomes are not, individually, specific to them. Individuals in other social and ethnic groups in Australia experience them. However, this paper has reported that the research literature suggests that a combination of many of these factors is commonly, but not uniformly, the Indigenous experience. The scale and the patterns of the combinations of social, economic and educational factors are uniquely Indigenous. As such, they are a particularly damaging mix. The causes for the individual factors being appropriate to Indigenous people (when seen as a cohort) are complex. The combinations of factors, when they apply to the lives of individuals and communities, are serious and permanent. When the factors are in operation over several generations, the impact is a compounding one. This review paper has attempted to indicate some of these combinations, and the impact that they have on Indigenous education outcomes.

Altman and Hunter (2003) highlight the complexity of, and difficulty in, addressing the interrelated and dependent causes of Indigenous peoples’ continued disadvantage relative to non-Indigenous people. This disadvantage is manifest in lower educational attainment, less employment, lower income, poorer quality housing and poorer health (Altman & Hunter, 2003). They argue that in the second half of the 1990s Government policy has had reduced efficacy in terms of ameliorating Indigenous disadvantage.

The causes for the particular combinations of negative social and other factors in the lives of individuals and groups are so complex as to be almost beyond analysis, but a recognition that such combinations exist is essential for researchers and people who work with Indigenous educators and students. Some attempt needs to be made to unpack the complex interconnections of the factors. An alertness to the possibility that each and all of these factors are impacting on education outcomes is the very least that researchers in the field should bring to their work.

Key educational factors for consideration in a national research agenda

The argument put throughout the review paper has been that key educational factors, such as whole person, pedagogical and parental values, are significant to Indigenous learning and that it is important that they be considered in all research into Indigenous education outcomes:

- early intervention to promote good health
- readiness – cognitive, social, emotional (and, in later years, financial)
- good teachers are supported by ongoing professional development
- good teachers use culturally appropriate pedagogy
- good teachers are committed to their school and students
- supportive and mutually cooperative relationships exist between school and the community
- parental support for learning outcomes and good attendance
- schools foster good attendance by providing supportive yet challenging and interesting learning environments
- good employment prospects with articulated pathways between school and work

Some of these factors, through policy and the commitment of individual and system practitioners, are already operating in the field of Indigenous education. But we know too little of how they operate, either as individual factors or in combination, to be able to evaluate, generalise and form policy intervention strategies that could be profitably applied in other situations. These are the understandings that the research can provide us, when it has been conducted.

Formal inclusion of Indigenous conversation and voice in the research

At the start of the review paper, the authors commented that ‘the issues referenced and problematised in this review, are the subject of long-held conversations in the Indigenous social and research communities’. We also commented on our considerable frustration at not being able to make public more of that conversation, for we believe it to be an important resource – to a large degree, inaccessible and lost to the researcher (and certainly to literature reviewers). We referenced the importance of finding a means to include the Indigenous conversation and voice in the wider policy and research literature.

The rich oral tradition in Indigenous cultures makes talk an important formal exchange. It is not a tradition that easily connects with, or gains prominence in, a written culture, especially one as formal as that of the scholarly academic or policy research community. This has led to a relative silencing of Indigenous voice in the research literature. Case study research is a methodology that can access, and provide opportunities to express, voice. Case study research methodologies have been used extensively in these ways in this field, and its use confers a certain legitimacy and validation both to the voices and the research. However, case study does not, by its use, necessarily provide the voices with a hearing in the research literature. This is especially the case if the dominant language and processes are arcane or closed and do not empower the owners of those voices to engage in the policy-making that the conversation references.

Indigenous researchers such as Paul Hughes believe that Indigenous voices have been formalised over the last 20 years, that they exist in unpublished conference papers and form the basis of many a policy submission. These manifestations of Indigenous voices are written and shared within the Indigenous research and policy community. So, although the archive is known by the Indigenous community, it has not been exposed to the broader research community and does not inform policy as effectively as it could, were it more readily available. Locating and collating of papers documenting the engagement and use of Indigenous voice, especially over the last couple of decades, by the Indigenous research community, would be a useful contribution to the broader research work in the area.

There is a methodological and substantive urgency to the issues of how to hear and empower

Indigenous voices. If ownership by the Indigenous population of the issues outlined in this review paper is not engendered, no funding or policy initiatives are likely to be successful in improving the learning outcomes of Indigenous children. If the anecdotal evidence that asserts the interest and concern of Indigenous adults in the learning outcomes of their young people is proven correct, then the issue becomes one of hearing the voices and incorporating their perspectives in both the policies and research.

The first step, as with any other populations, is to research Indigenous views of the desired education outcomes. Some congruence of 'big picture' goals, between education systems and individuals will be located, and it will be informative to establish the differences in priorities. Reporting successes against the 'big picture' goals is essential, for the insight that it provides into the goals and into ownership. An investigation of the inhibitors and problems viewed as preventing the achievement of the nominated goals is also required.

This research needs to be included as a formal aspect of the National Research Agenda, for the data is not yet collected, and recognition of the important role of ownership is not without precedents. Accountability is much more likely to be achieved for policies that are developed and maintained by the population upon which they are being visited. Some of the factors referenced in this paper may not be ones that are of crucial importance to some Indigenous students, parents and communities, and there may be other factors that we have not referenced because they are not in the research literature.

Researchers can assist in developing congruence of educational goals by asking new and different questions of all schools; thus ensuring that policy and cultural perspectives of Indigenous students and the significant adults in their lives are foregrounded in their learning institutions, and in the research in them. We do not suggest that this, in itself, represents a radical new approach, but we do suggest that, when the methodological benchmarks and large-scale issues that we have referenced are built into the research agenda, new understandings will result. The integrity of the research will be enhanced by formally incorporating the Indigenous voice. The likelihood of achieving greater accountability in improving Indigenous education outcomes will also be much enhanced.

The disparate nature and location of the Indigenous population will make meeting these goals of inclusivity a research challenge. The modern technology available to research will play a significant role, but it is expensive and will require substantial funding. If the benefits of large-scale quantitative and qualitative research are to be achieved, undertaking new approaches should be seen in the context of expensive but limited delivery of success that has characterised the last decade.

Concluding comments



Changes to policy and practice in this field are required because education outcomes for all Indigenous students do not appear to be improving. Additionally, there has been no significant reduction in the gap between Indigenous and non-Indigenous students' learning outcomes over the last decade. The distressing, but inescapable, response to the question of why the existing policies and substantial funding are not generating a greater improvement in Indigenous learning outcomes is that we really do not know. While there are always those who will say that they know, such responses are not based on empirical evidence or disaggregated data of the kind that flows from large-scale quantitative and qualitative research.

Different kinds of research from that being currently undertaken are required to be conducted to provide us with those answers. This review paper has referenced the issues and factors that research should address in the quest for answers to the questions, and has modelled those approaches that should generate answers.

This review paper has identified the kinds of methodologies that this research needs to embody. It has also identified the range of issues, applying to both Indigenous students and more broadly, that need to be the focus of this new research. It is to be hoped that National Research Agenda into Indigenous Education Outcomes proposed in this review paper can be undertaken, for the need is manifest. The educational research community, teaching practitioners and the Indigenous community, with the support of governments, could make this happen. Only in this manner can the learning outcomes of all groups of Indigenous students be significantly raised. Only in this way can they become full citizens, able to fulfil their full potential.



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This review calls for change. Over the last two decades, a plethora of government policies have been developed to improve the educational outcomes of Indigenous students. These policies have, as yet, failed to reduce significantly the gap between the educational achievements of Indigenous and non-Indigenous students in Australia. This review examines the research evidence underpinning current government policy. It reviews and analyses existing educational research into the precursors and concomitant factors that contribute to educational achievement for students generally and for Indigenous students in particular. The review argues that current policy in Indigenous education is not sufficiently supported by comprehensive and substantive research evidence, and argues that changes to both research methodologies and content should be made. The authors propose a national research agenda that systematically identifies and supports policy change directed at significantly improving the educational outcomes for all Indigenous students. Only then can Indigenous students become full citizens, able to fulfil their full potential.

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