



Using television to improve learning opportunities for Indigenous children

July 2010

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Executive Summary

This report is based on a review of the literature on the importance of early childhood learning, the nature of Indigenous learning needs, and the role of educational television programs in improving learning outcomes for preschool-aged children. The report is intended to provide an evidence base for a proposal to develop an educational television program aimed primarily at Indigenous children from three to six years. (In this report the term ‘Indigenous’ refers to Aboriginal and Torres Strait Islanders.)

There is an extensive body of research that shows the critical importance of early childhood in children’s learning and development, including for long-term educational outcomes. Based on this research and contemporary theories about child pedagogy, Australia now has a national Early Years Learning Framework to guide educators in developing a foundation for future success in learning. One of the underpinning principles of the Framework is to respect diversity of cultural and linguistic traditions. This means recognising the importance of prior learning, and the role of family and community, in preparing Indigenous children for school. In addition, there are several dimensions that are generally recognised as being fundamental to school readiness, regardless of ethnicity, race or culture. These include physical wellbeing and motor development, social and emotional development, approaches to learning, language development, cognition and general knowledge. An additional dimension for Indigenous students is connectedness to community.

On a range of educational indicators, there is still a significant gap between Indigenous and non-Indigenous children. Of particular concern, is that by Year 3 Indigenous children have lower levels of literacy and numeracy than their non-Indigenous peers and that this gap becomes wider as children move through formal schooling. Participation rates in early childhood programs are lower for Indigenous children than for their non-Indigenous peers. Quality programs that promote engagement with learning at an early age, support home-to-school transition, and recognise the importance of cultural awareness are needed to maximise learning opportunities for Indigenous young people and to give them the solid foundation that early childhood research shows can make a difference in long-term outcomes.

In setting up a National Indigenous Television network (NITV), the Australian Government has followed in the footsteps of other overseas governments in countries with Indigenous populations. The primary motivation for these global efforts to establish Indigenous television networks is the strong desire to preserve and celebrate linguistic and cultural traditions and to provide positive representations of Indigenous people as a counterbalance to mainstream media representations. These television networks also provide employment opportunities for Indigenous writers, producers, directors, actors and other media professionals. Studies show that television is playing a critical role in revitalising Indigenous languages and encouraging a sense of pride among Indigenous viewers. There is evidence to show that Indigenous children are engaged by shows specifically targeting them.

There is a substantial body of research showing the cognitive, academic and social benefits that can come from a good quality educational program for preschool aged children. This experience can be enhanced for a child when viewing is shared with a parent or caregiver. Adult viewers can also gain in confidence and content knowledge from this co-viewing. While there is little, if any, research into the television co-viewing habits of Indigenous families, there is evidence to show that Indigenous

parents and caregivers already share a range of activities with their children, including watching television, videos and DVDs. As a visual medium, television is an appropriate educational tool to use with Indigenous children as can be seen from the popularity of existing television programs in New Zealand and Canada with their Indigenous audiences.

This proposal to develop a children's television program targeting Indigenous children in particular comes at a time when there is strong government support for initiatives aimed at improving educational outcomes for Indigenous children. With the new national curriculum being implemented in 2011, there is an excellent opportunity for the development of high quality educational resources, including a targeted television program, that will assist Indigenous preschool children in the successful transition from home to school, and give them the best possible start to their formal schooling.

The children's television initiative also offers an excellent opportunity to contribute to existing research on the ways in which a targeted educational program can help improve school readiness for Indigenous children, close the gap on literacy and numeracy, promote learning opportunities for Indigenous families through co-viewing, and enhance the cross-cultural understanding of young children. An evaluation could show the kind of learning that takes place as a result of the program and the long-term impact on Indigenous children of early exposure to a culturally specific television series.



1. Purpose of this report

The purpose of this report is to provide an evidence base for the Australian Council for Educational Research (ACER) and Australian Children's Television Foundation (ACTF) proposal to develop a high quality educational television program aimed primarily at Indigenous children aged three to six years. This report is based on a review of the literature associated with early childhood, the learning needs of Indigenous children, and the potential role of television in addressing these needs.

2. Objectives of the television program initiative

There is still a significant gap between Indigenous and non-Indigenous young people on a range of educational performance indicators. Noel Pearson (2010) has argued that '[t]here is a strategically important prerequisite to closing the gap on literacy and numeracy, and that is school readiness and attendance. You can't close the gap on literacy and numeracy unless you first close the gap on school readiness and attendance.'

The primary objective of the Indigenous children's television initiative is to improve school readiness for Indigenous preschool-aged children. School readiness includes the development of foundational literacy and numeracy skills, engagement in learning, and positive attitudes towards education and school.

Another objective is to strengthen the sense of connectedness that Indigenous children feel to their culture and to other Indigenous communities. Indigenous children entering school 'need to maintain their own culture, identity and self-esteem, as well as to incorporate a new set of cultural values' (Robinson et al., 2007, p. 16).

A third objective is to provide families and schools with a resource that will promote learning, and encourage interaction around learning, with young children as they view the program. Such a television program could improve learning opportunities for Indigenous caregivers and parents who would be co-viewers with their children.

A fourth objective is to improve the cultural understanding of non-Indigenous children in relation to Indigenous culture. An educational television program that shows cultural diversity can help foster better cross-cultural understanding (Gorn, Goldberg and Kanugo, 1976; Thakkar, Garrison and Christakis, 2006).

3. Rationale for a focus on early learning

'What and how [children] learn depends upon the nature and quality of the relationships they have with their parents and caregivers, and the richness and variety of the experiences they are provided [with] during their early years.' (Centre for Community Child Health, 2008).

The importance of early intervention in bringing about better health, social, educational and vocational outcomes is well established. Overseas programs such as the Perry High/Scope Preschool Program, Chicago Child-Parent Centres, Elmira Prenatal/early Infancy Project and other similar programs, which have targeted children in disadvantaged circumstances, show that investment in the early years leads to better health and social outcomes, a smoother transition to school, and better long-term outcomes for disadvantaged children (Hutchins

et al, 2007). Brain development research shows that children's 'neural architecture' remains open to environmental influences during their pre-school years (Farrar et al., 2007), meaning that the cognitive development of three- to five-year-olds can be impeded or enhanced by external factors, including exposure to television. Children enter school already with different levels of cognitive, non-cognitive and social skills and these differences are predictive of later educational and occupational success (Farrar et al., 2007).

A review of recent research into the impact of early childhood education on school success and life chances (DEECD, 2008) showed that:

- Significant learning occurs from birth to five years
- Learning outcomes and later life chances are maximised when adults have an active role in children's learning
- High quality early childhood experiences which focus on important concepts, such as literacy and numeracy, are beneficial
- Children benefit from environments that are engaging, responsive and stimulating
- Better outcomes for children occur when families and professionals work together.

Based on research evidence and current theories about children's learning and early childhood pedagogy, the Council of Australian Governments has developed a national Early Years Learning Framework to assist educators (COAG, 2009). The Framework is underpinned by the following learning outcomes, each with a sub-set of indicators:

- Children have a strong sense of identity
- Children are connected with and contribute to their world
- Children have a strong sense of wellbeing
- Children are confident and involved learners
- Children are effective communicators.

In addition, the Framework is underpinned by five principles, one of which is *respect for diversity*. The Framework recognises that respecting diversity means valuing the histories, cultures, languages and traditions of diverse communities and promoting greater understanding of Indigenous ways of knowing and being. When these differences, and community aspirations for children, are respected, educators 'are able to foster children's motivation to learn and reinforce their sense of themselves as competent learners. They make curriculum decisions that uphold all children's rights to have their cultures, identities, abilities and strengths acknowledged and valued' (COAG, 2009, p. 13).

Consistent with Noel Pearson's call to governments to make school readiness and attendance the focus of policies aimed at improving learning outcomes for Indigenous children (Pearson, 2010), a primary goal of the Indigenous children's television initiative is to help improve the school readiness of Indigenous children.

Studies show that a child's readiness for school is generally associated with the following five interconnected dimensions: physical wellbeing and motor development; social and emotional development; approaches to learning; language development; cognition and general knowledge

(Arnold et al., 2006; Robinson et al., 2007; Janus and Offord, 2007). Evidence-based programs that can make a positive difference in these areas help lay the foundations for more positive later outcomes.

Recent studies show that it is not only the child who must be ready for the home-to-school transition but the school itself, the child's family and the community (McTurk et al., 2008; Farrar et al., 2007). The literature suggests the need for a multi-dimensional approach that helps to build the capacity of children to thrive at school 'through developmentally appropriate instruction and support and by means that engage not only the child but his or her family' (Robinson et al., 2007, p. 9).

School readiness for all children means that schools recognise and build on the learning that has already taken place as a result of the child's interaction with their family and broader community. It means that different cultural and community contexts are taken into account and valued and that a wide range of people are involved in the successful transition from home to school. In the case of Indigenous families, it often means the involvement of elders or other respected community members in the transition process (Dockett and Perry, 2001). 'Ready schools' value the skills that Indigenous children bring and recognise the role that families and communities play in supporting a child's development (McTurk et al., 2008). Social skills are closely tied to Indigenous knowledge and ways of learning (McMahon et al., 2007).

Summary: There is an extensive body of research that shows the critical importance of early childhood in children's learning and development, including for long-term educational outcomes. Based on this research and contemporary theories about child pedagogy, Australia now has a national Framework to guide educators in developing a foundation for future success in learning. One of the underpinning principles of the Framework is to respect diversity of cultural and linguistic traditions. This means recognising the importance of prior learning, and the role of family and community, in preparing Indigenous children for school. In addition, there are several dimensions that are generally recognised as being fundamental to school readiness, regardless of ethnicity, race or culture.



4. Rationale for a focus on Indigenous children

a) Current Indigenous education performance

The Ministerial Council for Education, Early Childhood Development and Youth Affairs (MCEEDYA) *Indigenous Education Action Plan Draft 2010-2014* notes that some gains have been made in recent years in Indigenous student performance, particularly in English literacy, numeracy, and retention to Year 12. However, on a range of indicators, including participation in early childhood education, literacy and numeracy, attendance, retention, and post-school transitions, Indigenous children's performance in relation to that of their non-Indigenous peers continues to be of concern (MCEEDYA, 2010).

Results from the Programme of International Student Assessment (PISA) indicate that Indigenous students have performed at a significantly lower average level in reading, mathematical and scientific literacy than their non-Indigenous peers across all PISA cycles (De Bortoli and Thomson, 2010). These findings are supported by 2008 and 2009 NAPLAN data, which show that Indigenous student achievement is significantly lower than non-Indigenous students in all areas tested and across all jurisdictions (NAPLAN, 2009). The gap in performance in reading, writing and numeracy becomes worse in later years of school (SCRGSP, 2010). For example, while 75 per cent of Year 3 students performed at or above the national minimum standard in reading for the 2009 NAPLAN tests, only 67 per cent of Year 9 Indigenous students were at or above the national minimum standard (NAPLAN, 2009).

Data collected as part of the *Western Australian Aboriginal Child Health Survey* indicate that, on average, the academic performance of Indigenous students was lower than that of non-Indigenous students from the first year of schooling, and that this difference widened significantly during the early years of school, making it difficult for Indigenous students to catch up academically (Zubrick et al., 2006).

The second National Assessment Program – ICT Literacy survey, conducted by ACER for the Commonwealth Government in 2008, showed that non-Indigenous students were more than twice as likely as Indigenous students to reach or exceed the proficient standard and that the gap in ICT literacy achievement between non-Indigenous and Indigenous students was greater in 2008 than in 2005 (Ainley, 2010).

Additionally, PISA results in relation to attitudes, engagement, motivation and beliefs show that, compared to non-Indigenous students, Indigenous students reported significantly lower levels of interest and engagement in reading and science, self-efficacy from a general point of view and also in relation to maths and science, and mathematics and science self-concept (De Bortoli and Thomson, 2010). These are important findings as attitudes, engagement, motivation and beliefs can enhance or impede student learning. The report highlights the need for educational environments that foster and encourage self belief and allow Indigenous students to be confident and successful learners.

Even given the problematic nature of school attendance data, such as the lack of consistency in calculating attendance across jurisdictions, research indicates that poor school attendance is a key factor in the gap in academic performance between Indigenous and non-Indigenous students (Zubrick et al., 2006). The 1996 *National School English Literacy Survey* results, for example, show

that Indigenous students were absent from school an average of 17.9 days per year compared with 6.2 days per year in the general student population (Management Committee for the National Schools Literacy Survey, 1997). The *Western Australian Aboriginal Child Health Survey* results indicate that the median number of days absent for Indigenous students was 26 days, with nearly half of all Indigenous students in the study having ten or more unexplained days absent from school during the year (Zubrick et al., 2006). The same study also showed that Indigenous students who had never attended child care were one and a half times more likely to be absent for at least 26 days, suggesting that '[e]arly developmental enrichment through good quality day care is an important mechanism in improving educational opportunities for Aboriginal children' (Zubrick et al., p. 164).

At the time of the 2006 census, 36 per cent of 32,100 Indigenous children aged three to five years were reported to be attending preschool while 21 per cent were attending primary school. School attendance rates for three- to five-year-olds overall were slightly lower than those of non-Indigenous children in the same age group (Australian Bureau of Statistics, 2006). However, school attendance rates for Indigenous students as they move through formal schooling are lower than for non-Indigenous students.

In a 2009 speech which formed part of Reconciliation Australia's 'Closing the Gap Conversations' series, Productivity Commission Chairman Gary Banks referred to the lack of engagement in school experienced by Indigenous young people, which can be seen in 'the sharp decline in retention rates from Year 10 for cohorts of Indigenous students who had enrolled in Year 7/8. By Year 12, only 43 per cent of those students were still in school. The picture has not improved over time (and helps put in perspective the slight improvement in Year 12 completion rates)' (Banks, 2009).

The Productivity Commission's 2010 *Overcoming Indigenous Disadvantage* report notes that there is a direct relationship between the number of days absent from school and academic performance. The report indicates that Indigenous children are less likely to be enrolled in school and, even if enrolled, less likely to attend regularly. (SCRGSP, 2009).

Educational disadvantage for Indigenous Australians is compounded over time with Indigenous students also being less likely to attain a Year 12 or equivalent qualification or participate in full time employment, education or training after leaving school (COAG, 2010).

In response to these key education indicators, the Council of Australian Governments (COAG, 2010) has agreed to a set of targets for improving outcomes for Indigenous students. These include ensuring that all Indigenous four-year-olds in remote communities have access to early childhood education (by 2013) and that the gap for Indigenous students in reading, writing and numeracy is halved within a decade (by 2018). For Noel Pearson (2010), this second goal of halving the gap in Indigenous reading, writing and numeracy by 2018 is a 'needlessly low' expectation, which accepts an unnecessary and avoidable rate of educational under-achievement.

Indigenous educational performance, as measured by international and national literacy and numeracy tests, shows the gap between Indigenous and non-Indigenous students to be already significant by Year 3. Prior (2010) suggests that Indigenous children 'are inadequately equipped when they begin school, to tackle reading. Without a strong scaffolding of knowledge of sounds, letters, words, and meanings in language, children struggle to cope with this new and strange task; they fall behind, see themselves as failing, and become discouraged and often resistant to the

whole literacy enterprise'. Such 'scaffolding' could help Indigenous children make a successful transition from home to school.

b) Qualities of an early learning program for Indigenous children

The *Indigenous Education Action Plan Draft 2010-2014* recognises that 'participation in culturally inclusive, high quality early childhood development and education programs can assist Indigenous children to get the best start in life'. Such programs:

- promote early engagement with learning
- provide a strong foundation for future educational achievement
- encourage the social, physical and mental development of children from birth; and
- support children in their transition to school.

Sleep-Coleman (cited in Hutchins et al., 2007, p. 33) identifies the following as being fundamental characteristics of culturally appropriate programs for Indigenous children:

- Indigenous terms of reference for time, space, talking together, safety, relationships, family
- the philosophy and practices handed down by ancestors to present and future generations
- children's learning and giving and getting messages from others.

Hutchins et al. (2007) note that although these characteristics are fundamental to any quality early childhood program, one obvious difference 'is the goal to nurture and sustain the Indigenous child's beliefs regarding the Dreaming and cultural heritage' (pp. 33-34).

In particular, culturally appropriate early learning and care (p. 47):

- acknowledges the child as strong and autonomous
- helps Indigenous children to build a strong identity that is based on their own traditions and values, and non-Indigenous traditions and values
- incorporates the child's extended family and community in their education and care
- supports 'culturally relevant learning environments where children are happy, feel powerful, can make choices, and which allows for their own routines'
- acknowledges the importance of literacy in Indigenous languages and competence in standard English
- pays attention to nutrition, health and wellbeing.

c) Indigenous children's preschool experiences

The data available on Indigenous children's participation in preschool programs is limited and also varies according to the source, which makes it difficult to draw conclusions about participation rates in preschool, childcare, playgroups or formal education programs. Preschool education is offered in a range of settings, including stand-alone preschools, preschools in schools, long day care centres, family day care services, and mobile preschools in remote communities. The Australian Government also supports culturally specific Indigenous childcare in the form of Multifunctional Aboriginal Children's Services and Aboriginal Playgroups.

MCEEDYA (2010) reports that, in 2005, only 46 per cent of Indigenous four-year-olds participated in preschool. Other data show that, of those Indigenous three-year-olds who do

attend preschool, 31 per cent are reported to be living in major cities while only 14 per cent of three-year-old Indigenous children attending preschool are reported to be living in very remote areas (Australian Bureau of Statistics, 2006).

In relation to childcare for children 12 years and under, Australian Bureau of Statistics figures for 2004 show that, of all Indigenous children in Australian Government supported childcare services, 51 per cent were in long day care centres, 16 per cent were in before and/or after school care and nine per cent were in family day care. In 2009, 2.2 per cent of Indigenous children aged from birth to five years participated in Australian Government approved child care services (Australian Bureau of Statistics, 2008a).

Information has been collected as part of the *Longitudinal Study of Indigenous Children* (FAHCSIA, 2009b) although the statistics around children's attendance at preschool, childcare and playgroups are based on a small sample of children. Of the 376 children whose parents/carers participated in Wave 1 of data collection and who reported that their child attended an early childhood education program, most (34 per cent) attended a preschool program in a non-school-based setting. Many parents and caregivers indicated their children attended either pre-year one (or kindergarten) at a school or preschool in a school (30 per cent and 29 per cent respectively).

In relation to childcare, 21 per cent of parents who participated in Wave 1 of data collection indicated that their child attended a childcare or day care facility, two per cent attended family day care and 75 per cent reported their child did not attend any formal childcare service. Twenty-nine per cent of participating parents and caregivers indicated that their child had attended some form of playgroup in the preceding month. Allowing for the limited and incomplete nature of the data, it appears that there is still a significant proportion of young Indigenous children who are not currently attending preschool programs.

Summary: On a range of educational indicators, there is still a significant gap between Indigenous and non-Indigenous children. Of particular concern, is that by Year 3 Indigenous children have lower levels of literacy and numeracy than their non-Indigenous peers and that this gap becomes wider as children move through formal schooling. Participation rates in early childhood programs are lower for Indigenous children than for their non-Indigenous peers. Quality programs that promote engagement with learning at an early age, support home-to-school transition, and recognise the importance of cultural awareness are needed to maximise learning opportunities for Indigenous young people and to give them the solid foundation that early childhood research shows can make a difference in long-term outcomes.

d) The importance of culturally appropriate programs for Indigenous people

Overseas research provides some insights into the importance of connectedness to culture in developing a child's sense of belonging and pride. Ball and Simpkins (2004) examined how Indigenous knowledge was integrated into childcare and their findings have implications for Indigenous knowledge being transmitted through trusted presenters on television. They note the importance of teaching children at a young age their own traditions as well as the traditions of others. Their study of First Nations communities in rural areas of British Columbia highlighted the ways in which Indigenous knowledge has been integrated into early childhood training and practice. They found that Native American children 'need a careful

balance of teachings about their traditions, tribal values, and languages' and to recognise that their centre of strength and identity comes from understanding the sacred meanings behind their tribal practices (Rinehart, 2000, cited in Ball and Simpkins, 2004, p.18). Connectedness to community is seen as fundamental to the social and emotional development of First Nations children: 'Language, culture and the home environment tell children who they are and how to construct their meaning. It is from these incredible eyes that tribal children see and interpret their world' (Rinehart, 2000, p. 494).

In both New Zealand and Canada, as in other parts of the world, Indigenous peoples have been faced with the challenge of maintaining their cultures and languages in the face of dominant mainstream media values. This section of the report looks briefly at the importance of television as a critical tool in revitalising Indigenous languages, generating positive representations of Indigenous people, creating media industry opportunities for Indigenous people, and providing learning opportunities for Indigenous children in New Zealand, Canada and Australia.

i) New Zealand

New Zealand's national Indigenous broadcaster, Maori Television, was founded under the Maori Television Service Act 2003, which requires it to be a high quality, cost effective television provider that informs, educates and entertains; broadcasts mainly in reo Maori; and has regard for the needs of children participating in immersion education and all people learning Maori.¹ In 2008, a second channel, Te Reo, was established to better meet the needs of fluent Maori speakers and those wanting full immersion Maori language households. This second channel broadcasts in 100 per cent Maori in prime time viewing hours. Both stations are intended to promote Maori language and culture.

Maori Television is said to have given New Zealand viewers 'new insights into, and knowledge of, Maori communities, people and events and therefore our national identity' as well as being an important language development tool.² It has also provided many Maori people with opportunities to pursue careers within the television industry, helped grow skills across a range of professions, and created new opportunities for fluent Maori language practitioners.³

In a study of the impact of the television station on a small group of Maori women, Poihipi (2007) found that Maori Television was a 'very significant tool in helping Dunedin Maori women to establish or maintain positive notions of themselves as Maori' (p. 19). Maori Television has helped counterbalance mainstream representations of Maori culture, shown the diversity of Maori culture, and promoted positive images of, and pride in, being Maori. One participant in the 2007 study explained the role of Maori Television in her life as her 'speaking voice', while another stated she was 'hungry for anything Maori to feed my children, to feed myself' (p. 17).

Cooper (2004) argues that mass media, such as Maori Television, is a fundamental component of any language vitalisation program, playing a crucial role in increasing the profile and awareness of Maori language.

In her review of the literature as part of the Maori television pilot, Pihama (no date) notes that the level and type of representation that is accorded to minority or Indigenous children has an impact on

1 See 'About Us', Maori Television, at <http://media.maoritelevision.com/Default.aspx?tabid=262> (retrieved 15 July 2010).

2 See <http://media.maoritelevision.com/default.aspx?tabid=198&pid=385> (retrieved 16 July 2010).

3 See Maori Television Fact Sheet at <http://media.maoritelevision.com/default.aspx?tabid=198&pid=1598> (retrieved 15 July 2010).

all children, a finding supported by other studies. Pihama refers to Morris's study of Native American children which shows the benefits that could be derived 'from increased and improved television programming that would portray American Indians and their culture in a positive, or even neutral, manner'.⁴ Pihama also notes the lack of research related to Maori children's television programming.

A longitudinal study (by the New Zealand Council for Educational Research) of more than 100 children in Maori immersion education found that 94 per cent of these children watched Maori television programs and that the Maori program *Pukana* was the second most popular show with participants in the study (Cooper, 2004). The children said they enjoyed seeing and hearing songs, performances and the Maori language on television, and humorous plays, 'but importantly, they simply liked seeing Maori things on television'. Cooper suggests *Pukana* was popular with these the children because they could see their peers – other Maori students or students in Maori immersion schools – on television.

ii) *Canada*

In 1999, the independent Aboriginal Peoples Television Network (APTN) was established and became the first of its kind in the world (Baltruschat, 2003). The APTN gives First Nations, Inuits and Metis peoples an opportunity to share their stories via a national television network. It also provides a source of employment for Aboriginal producers, directors, actors, writers and other media professionals. Eighty-four per cent of APTN programming originates in Canada, with 56 per cent of the programs broadcast in English, 16 per cent in French and 28 per cent in a variety of Aboriginal languages.⁵ This multilingual approach is a critical element of APTN, providing an opportunity for Canada's Indigenous languages to be heard and spoken through television.

One of APTN's content priorities is 'to give a strong voice to our children and youth'. Children's programs in Indigenous languages 'allow for the continuation of linguistic traditions as new generations are exposed to ancestral voices' (Baltruschat, 2003, p. 5).

APTN programming themes include: stories of Aboriginal people, journeys reflecting Aboriginal concepts of hope, struggle, historic traditions; celebration of accomplishments; issues important to Aboriginal peoples, and stories that celebrate diverse approaches to spirituality. APTN was the first Aboriginal television network to broadcast live coverage of an Olympic Games, which was done in eight traditional languages.

An analysis of 563 children's television programs in Canada found that while the majority of human characters on these programs are white Europeans, 52 per cent of programs depicted interactions between people from different cultures and races. Four out of ten children's programs presented minorities and/or Canadian Aboriginal people and one in four programs stressed 'friendship with people from other races/cultures' (Centre for Youth and Media Studies, 2010, p. 13).

Of the programs examined, 59 per cent were animation, 26 per cent were live action, two per cent were puppets and 13 per cent used mixed genres. The study found that programs using primarily animation or puppets scored much lower than those using live action or mixed genres in terms of

⁴ This quote is taken from Pihama's literature review (which has no date or page numbers) in the section called Children's Programming. The quotation comes from Joann Morris, 'Television Portrayal and the socialization of the American Indian child', 1982.

⁵ See <http://www.aptn.ca/corporate/about.php> (retrieved 17 July 2010).

positive social values. For example, in live action mixture programs, visible minorities were evident in 49 per cent of programs but had less of a presence in animation/puppets.

iii) Australia

National Indigenous Television (NITV) was launched in 2007 to develop and produce television content for both Indigenous and non-Indigenous people and to commission high quality programming content, particularly from Indigenous contributors. In the original funding announcement, the Australian Government justified establishing NITV on the grounds that: 'This new funding will support the production and broadcasting of more diverse programming, such as Indigenous news, children's and drama programs that reflect the breadth of Indigenous communities. Indigenous culture will be presented in a positive light to Indigenous and non-Indigenous viewers' (Department of the Environment, Water, Heritage and the Arts, 2009).⁶

As part of its role, NITV is expected to:

- respect Australia's different Indigenous cultures, heritage and beliefs
- increase people's understanding of, and respect for, Aboriginal and Torres Strait Islander people and cultures and their role in Australia's history and future
- promote understanding of the different Australian Indigenous cultures and languages; the preservation of Indigenous languages and the teaching of language to new generations; and the continuing growth of Aboriginal and Torres Strait Islander cultures
- help record and preserve the history and culture of Aboriginal and Torres Strait Islanders
- raise awareness of Indigenous cultures from other countries
- broadcast programs in English as well as Indigenous languages, so the shows reach the widest possible audience.⁷

The initial funding of \$48.5m for the first four years of NITV was due to lapse in June 2010 but the Australian Government recently announced a further \$15 million to be invested for the next 12 months. The new funding will support the network until a national review into the government's investment into the Indigenous and media sector can be carried out.

A recent review of NITV by the Australian Government, after three years of operation, found that:

- around 200,000 Indigenous people watch NITV at least once a week
- NITV relies heavily on low-cost programs and repeat programming, with around 80 per cent of total air time taken up with repeats
- more use could be made of low-cost audience-generated programming.

⁶ See the NITV Constitution at http://nitv.org.au/index.php?option=com_content&view=article&id=546&Itemid=100042 (retrieved 20 July 2010).

⁷ See NITV Content Charter at http://nitv.org.au/index.php?option=com_content&view=article&id=15&Itemid=100026 (retrieved 19 July 2010).

In setting up a national Indigenous television network (NITV), the Australian Government has followed in the footsteps of other overseas governments with Indigenous populations. The primary motivation for these global efforts to establish Indigenous television networks is the strong desire to preserve and celebrate linguistic and cultural traditions and to provide positive representations of Indigenous people as a counterbalance to mainstream media representations. These television networks also provide employment opportunities for Indigenous writers, producers, directors, actors and other media professionals. While research on the impact of Indigenous children's programs on their target audience is almost non-existent, there is evidence to show that these children's shows are popular with young children. There is also evidence to show that television is playing a critical role in revitalising Indigenous languages and encouraging a sense of pride among Indigenous viewers.

5. Rationale for choosing television as a vehicle for improving learning

a) Access to and use of television

While there are no specific figures on television ownership among Indigenous families, the Australian Bureau of Statistics (2001) reported that 99.2 per cent of Australian households in 1999 had at least one television in the home.

Researchers differ in their estimates of how much television children of varying ages watch. In one United States study, 96 per cent of respondents reported that their children watched television every day, with 81 per cent reporting that their children viewed television for an hour or more daily (Michael Cohen Group, 2007). Vandewater (2004) reported that children in the United States spend an average of 3–5 hours a day viewing television. A recent study of children's television programming in Canada found that Canadian preschoolers (two to six years) spend nearly 19 hours per week watching television (Centre for Youth and Media Studies, 2010).

Rideout et al. (2003) found that two out of three American children aged from birth to six years live in homes where the television is usually left on for at least half the time, even when no one is watching it, while one out of three children is in a home where the television is on 'almost all' or 'most' of the time.

The Australian Bureau of Statistics (2003) reported that watching television or videos out of school hours is the most common recreational activity of children aged five to 14 years in Australia. According to the *Longitudinal Study of Australian Children* (LSAC), a study covering three- to four-year-olds and seven- to eight-year-olds, 94 per cent of parents reported that their preschool child watched television for an average of one hour and 11 minutes per day. Thirteen per cent of parents reported that their three- to four-year-olds had a television in their bedroom (ACMA, 2007). Sixty-six per cent of Indigenous children aged five to 14 years spent more than two hours per day watching television, videos or DVDs (Australian Bureau of Statistics, 2010).

As part of the *Longitudinal Study of Indigenous Children* (LSIC), the parents and carers of two groups of Indigenous children, aged between six to 18 months and 3½ to 4½ years in Wave 1, were interviewed in 2008 (FAHCSIA, 2009a). Unpublished Wave 1 data show that, of the 434 parents and caregivers of children aged 3½ to 4½ who participated in the study, 25 per cent

reported that their child spent either an hour or ‘about an hour’ a day watching television while 24 per cent reported that their child spent two hours a day watching television. Fifteen per cent of participating parents and carers indicated that their child spent three hours a day watching television, 12 per cent reported their child watched television for four hours a day and 13 per cent reported their child watched television for five or more hours a day. When combined with other forms of visual media, in the same study, 98 per cent of parents and carers reported that their child watched television, DVDs or videos.

One of the first studies to examine the type of television programs watched by Australian children (Skouteris & McHardy, 2009) found that children watch informative/educational television on weekdays and television programs with no clear educational purpose on weekends, which is similar to trends reported in the United States (Huston and Wright, 1999).

In examining the changing nature of television programming for young children, Pecora et al. (2007) found that:

- Most children spend more time watching television than engaged in any other discretionary activity
- Many children begin watching at an early age, often less than 12 months
- Regardless of the age they begin watching television, children learn from it
- The amount of time children spend watching television and what they watch both affect learning and behaviour in important ways
- ‘If children watch programs that are designed to be educational, they learn what is taught.’

Moses (2009) also notes that children are not passive viewers of television but actively attend to programs and can thus learn from them (Huston and Wright, 1998).

b) Benefits of educational television programs

Studies have shown both positive and negative impacts on children’s development. The negative impacts are generally framed in terms of how much ‘entertainment television’ is being watched by school students to the detriment of school achievement, or what other activities, such as reading, might have been done instead of television viewing (Wylie, 2001; Baydar et al., 2008). The positive impacts found in many studies are generally associated with educational programs that are designed to engage pre-school children and enhance learning outcomes, such as letter recognition or other pre-literacy skills. Many of these studies have been conducted on *Sesame Street* and the impact on language and other cognitive and social skills gained by preschoolers through viewing *Sesame Street* is associated with improved grades in secondary school (Baydar et al., 2009).

The Children’s Television Act 1990 defines educational programming as programming that carries content intended to ‘further the positive development of the child in any respect, including ... cognitive/intellectual or emotional/social needs’ (Fisch, 2004, p. 8). Skouteris and McHardy (2009) distinguish between ‘child informative’ (educational) programs, ‘child animated’ programs, which have no clear informative purpose, and ‘child entertainment’ programs, which have neither animation nor clear informative purpose. Their study found that children spent more time watching ‘child informative’ television than any other type of children’s programs.

A substantial body of research shows the benefits of television for children. Much of this research has been based on experimental studies in which children view specific programs. Less frequent are studies of children's learning arising from programs they choose to view (Calvert and Kotler, 2003). Studies show that the impact of viewing educational television may be either direct, through learning specific cognitive or academic skills, or indirect, through motivational processes or modelled behaviours likely to enhance academic performance (Baydar et al., 2008).

Most studies on the benefits of television have found that good educational programming can help improve children's pre-literacy and literacy skills. (Samuels, 1970; Shapiro, 1975; Singer, 2002; Stipp, 2003; Sutherland, 2004; Hubbard, 2004; Kendeou et al., 2005; Bachrach et al., 2009, 2010; Moses, 2008, 2009; Linebarger et al., 2004; Linebarger and Wainwright, 2006; Linebarger and Piotrowski, 2009). The main types of benefits identified are cognitive skills, school readiness and academic achievement.

In their study of the impact of *Plaza Semamo*, a Spanish version of *Sesame Street*, on children aged three to five years in day care centres, Diaz-Guerrero and Holtzman (1974) found that significant gains in cognitive and perceptual areas were made by those children who viewed the program in contrast to those who did not, including even measures of cognitive ability that were 'seemingly unrelated to the main thrust of the curriculum' (p. 643).

In other parts of the world, children's television programs have been used specifically to inform families and preschool children about pressing social issues. For example, *Takalani Sesame*, a South African version of *Sesame Street*, teaches families and children about HIV/AIDS through the use of an HIV-positive Muppet character (Wartella and Knell, 2004). An Egyptian co-production of *Sesame Street*, *Alam Simsim*, promotes the need for girls' education through a female Muppet and teaches both Modern Standard Arabic and Egyptian Arabic.⁸

From earlier research aimed at determining whether television is bad or good for children generally, the research focus has now shifted to how particular programs affect particular aspects of children's literacy development (Moses, 2008). For example, *Barney and Friends* has been found to offer rich literacy experiences for children (Wan, 2000). *Sid the Science Kid* has been associated with increased science process skills and curiosity among preschool-aged children (Bachrach et al., 2009, 2010). A *Sesame Street* style Turkish program, *Will You Play With Me?*, was found to have enhanced school readiness among preschool children with low socioeconomic status (Baydar et al., 2008). A longitudinal study of children who watched *Blue's Clues* found the cognitive and social impact on children in the study to be both cumulative and durable (Anderson et al., 2000; Crawley et al., 2002). Preschool children who viewed *Super Why!* over an eight-week period (that is, at least 20 hours of viewing) demonstrated significant and sustained growth in early literacy skills (Linebarger et al., 2009). Over half of the viewing children reported learning new words from *Super Why!* and 48 per cent of these children could list the words and phrases learnt.

One children's television program that has been consistently associated with positive outcomes is *Between the Lions*, a series targeting four- to seven-year-olds that is partly funded by a Ready to Learn cooperative agreement with the United States Department of Education through the Public Broadcasting Service (PBS). The series, with the slogan of 'Get Wild about Reading', uses a combination of puppetry, animation and live action to stimulate interest in reading.

⁸ See http://muppet.wikia.com/wiki/Alam_Simsim (retrieved 20 July 2010).

The program is intended to help prepare children for school and supports early literacy skills by modelling reading, writing and speaking skills; motivating children to read and write; introducing children to phonemics and letter-sound relationships; and acquainting children with a wide range of texts in different media.⁹

The *Between the Lions* Mississippi Literacy Initiative shows what can be achieved when a high quality television program for preschool-aged children is integrated into the curriculum (Linebarger, 2009). Mississippi Public Broadcasting provided lessons, teachers' guides, books, and DVDs of episodes of *Between the Lions* to more than 1,500 economically disadvantaged children in childcare centres across that state. Linebarger found substantial evidence that *Between the Lions* helped young children gain early literacy skills, particularly those children potentially at risk of reading failure because of economic disadvantage. Young children who watched *Between the Lions* showed 'consistent gains across alphabet knowledge, phonological awareness, phonemic awareness, and fluency through simple exposure' (p. 3).

Between the Lions has also been used successfully as part of a targeted curriculum to improve the literacy skills of American Indian children living in New Mexico. Linebarger (2006) found that children participating in the *Between the Lions* American Indian Head Start Literacy Initiative made significant gains in English literacy skills, including oral language, vocabulary, ability to name letters and phonemic awareness (a key predictor of later reading ability) (Linebarger, 2006). These studies focus on the benefits that have come about by incorporating *Between the Lions* into a structured learning program.

The Michael Cohen Group benchmark study (2007) found that the television shows which United States caregivers preferred their children to watch, and which they reported their children as enjoying, were almost identical. Of the top seven preferred programs for caregivers and the top seven for their child as reported by the caregivers, the most popular television show for children was *Sesame Street*. Other popular shows were *Dora the Explorer*, *Arthur*, and *SpongeBob*, all available to Australian children. The next section of this report looks briefly at a small number of popular children's television shows, watched by Australian children, which have also had some form of evaluation. These include *Sesame Street*, *Dora the Explorer*, *Arthur*, *Play School* and *Pinky Dinky Doo*.

i) *Sesame Street*

Sesame Street has been the focus of over 1,000 studies since it first went to air as a pilot in 1969 (Fisch, 2004). The program was aimed primarily at disadvantaged children between three and five years old and was to be evaluated according to both its popularity and its educational outcomes (Minton, 1972). Early studies of *Sesame Street* (Ball and Bogatz, 1970, 1971, 1972) found that children who watched *Sesame Street* outperformed children in those educational areas on which the program focused, such as letter knowledge and counting ability (Longoria, 2004). In its first season, *Sesame Street* showed that television can be an effective vehicle for teaching three- to five-year-old children 'important simple facts and skills, such as recognizing and labelling letters and numerals, and more complex higher cognitive skills, such as classifying and sorting by a variety of criteria' (Bogatz and Ball, 1971, p. 196). Low-income children who were encouraged to view *Sesame Street* at home gained in a range of skills considered important for school success (Ball & Bogatz, 1970; Bogatz & Ball, 1971).

⁹ See the *Between the Lions* website at <http://pbskids.org/lions>.

According to Fisch (2004), children who watched *Sesame Street* regularly also showed a better attitude toward school, relationship with peers, verbal readiness, and quantitative ability than children who did not watch *Sesame Street* regularly. These effects were consistent across socioeconomic status, native language, geographic location, and regardless of whether children watched the program from home or from school.

While the early evaluations of *Sesame Street* were criticised because they did not sample 'normal' home viewing without intervention, the Topeka study, which was longitudinal, provided evidence that natural home viewing of children's educational programs contributes to intellectual skills. 'Children who viewed *Sesame Street* often between the ages 3 and 5 showed more improvement in vocabulary than did infrequent viewers' (MacBeth, 1996, p. 54). This difference remained even when parent education and other social environmental variables were taken into account and controlled for statistically. Children who were heavy viewers of informational programs designed for children or for general audiences also performed better on pre-reading skills at age five.

Huston and Wright (1996) also refer to the Early Window study, which contained measures of school readiness, letter and number skills, and vocabulary. 'When performance on these measures at age 5 was analysed in relation to viewing between ages 2 and 4, *Sesame Street* viewers had higher scores than children who rarely or never viewed the show' (Huston and Wright, 1996, p. 54). This pattern occurred when controls were imposed for 'children's initial language competency, parent education, family income, primary language spoken in the home, and the HOME score (Wright and Huston, 1995).

Studies also show that the positive effects on children of watching *Sesame Street* were observed years after the initial viewing occurred (Fisch, 2004). Even when controlled for such variables as parent involvement in the viewing experience, the observed effects remained statistically significant. Subsequent studies (Wright, Huston et al., 2001; Wright, 2006) found preschoolers who watched educational programs, including *Sesame Street*, benefiting in a range of positive ways.

Linebarger, Wainwright and Mazzarella (2007) suggest that *Sesame Street* has had a profound influence, not only on the production of children's television in the United States but also on how children's television is regarded. By bringing together research on how preschool children understand and learn from television and the production of a program whose goal was to teach an educational curriculum, *Sesame Street* was able to show that a well-designed and age-targeted educational television series could be both entertaining and beneficial for children. The success of *Sesame Street* has led to children's cable networks like Nickelodeon and Disney and a plethora of other educationally oriented programs.

ii) *Dora the Explorer*

Dora the Explorer is a United States program aimed at children from preschool to seven years of age. The show was first piloted in 1999 and has been a regular series since 2000. *Dora* features a seven year old Latino girl who lives inside a computer and enjoys adventures with her pet monkey. Each adventure presents a problem which young viewers are invited to help solve. This interactivity is considered to be a critical feature of the show by the creators.¹⁰ The program is based on Howard Gardner's ideas about multiple intelligences and is designed to improve children's problem solving skills.

¹⁰ See the Meet the Creators section on the program's website at <http://www.nickjr.co.uk/shows/dora/creators.aspx?pg=1> (retrieved 10 July 2010).

Dora the Explorer also teaches basic or conversational Spanish words. The creators believed that exposing their preschool viewers to Spanish would ‘make them curious and interested in learning more, or simply make them aware of and comfortable with foreign languages’.¹¹ For their Spanish-speaking preschool viewers, seeing Dora use Spanish might encourage them to take pride in being bilingual. Ryan (2007) argues that the program signals a major shift in the way mainstream America views Latinos in commercial culture, with viewers of every race and ethnicity accepting Dora’s heritage and bilingualism. In their longitudinal study of language outcomes with infants and toddlers from six to 30 months, Linebarger and Walker (2005) found that elements in shows like *Dora the Explorer* – such as the onscreen character speaking directly to the child, inviting active participation, labelling objects and providing opportunities for the child to respond – were ‘positively related’ to spoken language and vocabulary in their study.

iii) *Arthur*

Arthur is an American-Canadian production that was first aired in 1996. This animated series is aimed at children aged between four and eight years old and is based on the children’s books by Marc Brown about an eight-year-old aardvark. The show is intended to encourage an interest in reading and writing and to help children develop positive social and problem-solving skills. The stories are realistic and told from a child’s point of view. As with many of the most popular children’s television programs, there are accompanying resources for teachers, librarians, and families, including resources, lesson plans and activities. Children can also enjoy the interactive website.

Uchikoshi (2005) examined the impact of *Arthur* and *Between the Lions* on the development of bilingual children’s narrative skills in their kindergarten year and found that viewing *Arthur* helped some aspects of language development in the bilingual children. On the basis of their longitudinal study of infants and toddlers, Linebarger and Walker (2005) suggest that *Arthur* potentially supports language development because of its similarity to storybook reading. Programs like *Arthur* ‘have a strong narrative, are visually appealing, and contain opportunities to hear vocabulary words and their definitions, see the visual representation of the vocabulary word, and see interactions between the characters modeled’ (p. 639).

iv) *Play School*

Mackinlay & Barney (2008) describe the purpose of *Play School* as being to stimulate learning; assist with language, psychological and cognitive development; enhance social skills; and encourage children’s imagination. First aired in July 1966, *Play School* is now viewed by over one million children each week (Hill, 2009).

Play School uses simple props, direct addressing of the child audience, simple technology that allows the child to focus without distractions, toys to act out stories, and glimpses of the external world ‘through the window’. The program seeks to show children the diversity of Australian cultural life by using toys like Meeka (a doll with Chinese features), presenters from a range of backgrounds, including multicultural and Indigenous faces, and pictures of people doing every day actions and songs. Indigenous presenters appear on the program on a regular basis. Mackinlay and Barclay note that everything on *Play School* is intended to relate as closely

¹¹ See above.

as possible to the developmental level of the four-year-old child, including the use of careful repetition, a theme, and approaching subject matter from a child's perspective.

While Mackinlay and Barney criticise *Play School* for not showing Indigenous office workers, dentists and other occupations in urban areas or shopping, they also acknowledge the effort that has gone into making the program culturally diverse and the importance of culturally appropriate messages that can be disseminated through children's programs.

v) *Pinky Dinky Do*

Pinky Dinky Doo is a United States 3D animated program aimed at preschool children. The show was first aired in 2006 and is currently appearing on the ABC. It was ranked 21st in the 50 most popular free-to-air television programs viewed by birth to four-year-olds in the period January-June 2006 (ACMA, 2007). The program is intended to promote reading by using storytelling to introduce narrative concepts, enrich vocabulary and provide opportunities for using effective listening strategies. Another goal of the program is to enhance children's creativity through exposure to funny and imaginative stories. In each episode, seven-year-old Pinky uses her imagination to help her brother find solutions to various problems.

An evaluation of the educational impact of *Pinky Dinky Doo* on 135 preschool children attending childcare centres in an economically disadvantaged area (Linebarger and Piotrowski, 2006) found that viewing *Pinky* was associated with higher scores in both code-related skills and oral language skills, such as identification of initiating events and solutions, story sequencing, and story construction. The evaluation showed that this particular program with its strong focus on storytelling helped support the development of early literacy skills in preschoolers.



vi) *Television shows for Indigenous children*

New Zealand

One children's program broadcast on Maori Television is *Miharo*, a curriculum-based television series aimed at five-to-eight-year olds, which was first aired in 2008. Each show is based around a particular theme, such as light, air, the human body, and food. The theme is explored in six curriculum areas (science, social studies, maths, health, arts and technology). The show has two Maori presenters, male and female, and Maori children who introduce interactive games and talk a little about their own schools. The program provides an opportunity for families to support the learning of their children through co-viewing.

Toro Pūkōpiko E! is a puppet show for children involving over 80 characters and storytelling, magical events and music. The program is in the Maori language and viewers are introduced to historical figures and a rich array of imaginative characters. The television show was first aired in 2004 and builds on earlier success first as a touring puppet show and, later, as a radio program.

A popular Maori language program, *Pukana*, is a visually energetic and interactive show that has been on air for more than ten years. It offers a variety of content, including music, comedy, celebrations, visits to external sites, sport and practical life skills. While aimed at Maori-speaking children between eight and 14 years of age, the actual audience is said to range from six to sixty.¹² The program effectively combines entertainment and educational intent. The New Zealand Ministry of Health noted the role of the show in promoting healthy eating habits and the Ministry of Economic Development has used the show to promote the Consumerkids website to children.¹³

Canada

One popular children's series is *Tiga Talk*, which is aimed at children two to five years old. The program first aired in 2008. The series, which uses live action and puppets, is about two First Nations children and their puppet toys who come alive when adults are not around. The show explores sounds, focusing on a new sound each show. Viewers get to see different locations in First Nations communities and hear stories as Tiga travels around with the storytelling grandmother, Kokum. Children are invited to join in the games and songs and practise the new Aboriginal words.

Another APTN children's program is *Wapos Bay*, an animation series about the adventures of three Cree children living in remote northern Saskatchewan. The children are guided by elders and their extended family and learn how to balance traditional ways with newer ones. The creators of the show wanted to provide positive role models for their own children. This is a light hearted series with each episode being voiced in both English and Cree.

For Aboriginal Canadians, APTN is an important means of connecting with culture. APTN is said to have broken down stereotypes and barriers and given Canadians a chance to learn more about Aboriginal culture. According to the APTN marketing director, 'when I do focus groups and speak to Aboriginal people, so many of them who have come from a difficult past of not being proud to say they're Aboriginal; suddenly, they are seeing brown faces on the television

12 See <http://www.scoop.co.nz/stories/CU0601/S00100/pukana-premieres-on-maori-television.htm> (retrieved 19 July 2010).

13 See <http://www.moh.govt.nz/moh.nsf/indexmh/heha-newsletter-issue8> (Ministry of Health reference); and http://www.med.govt.nz/templates/MultipageDocumentPage____14888.aspx (Ministry of Economic Development reference) (retrieved 20 July 2010).

screen ... Suddenly they're engaged with their culture, and seeing things in their own language. It means so much to them. They're proud. And that accomplishment, in itself, represents a major turning point'.¹⁴

Australia

There are few children's television programs in Australia aimed specifically at Indigenous children from three to six years old. NITV currently broadcasts five children's shows. Of these, only one directly targets the early years. There is little information available to show how many Indigenous children watch non-NITV children's shows, such as *Playschool* or other United Kingdom or American programs.

One NITV show designed for children is *Yarramundi Kids*, which is intended to teach children about the importance of family and friends, eating healthy food and caring for the environment.¹⁵ It does this mainly through the use of puppets as dynamic story tellers but also incorporates a range of other approaches, including location stories, animation and Indigenous language segments. In every episode, the puppets are joined by well known Indigenous role models. The Yarramundi puppets are presented as 'strong, smart and deadly'. The creative director of Gracie Productions, the company which makes *Yarramundi Kids*, has an extensive background as an educator working with children and families and the production company also uses puppets in developing training and resource packages to help families address domestic violence. The television program first aired in 2010, building on an already popular series of live puppet show performances in Australia, New Zealand and Ireland. Gracie Productions also runs training workshops and community education programs designed to tackle serious issues such as child abuse and domestic violence in innovative and informative ways. In March 2010, the Strong, Smart and Deadly puppet show visited several remote school communities in East Arnhem Land.

Waabiny Time (or *Playing Time*) is the first Indigenous Australian program specifically targeting an early childhood audience. This 13 half-hour episode series started in April 2010 on NITV and is broadcast daily. It targets children aged three to six years, has a strong educational focus, and includes original songs, animation, crafts and 'sand yarning' (stories). The aims of the show are to educate while entertaining, preserve Indigenous languages through storytelling, and showcase the richness and diversity of Indigenous talent.¹⁶ The program arose out of a concern that Indigenous languages are gradually disappearing and being lost to Indigenous children. The show teaches basic words in the Noongar language and features stories, songs and 'authentically Indigenous' interactive activities. The series is being re-screened because it proved so popular.¹⁷ From concept development to script writing, *Waabiny Time* has drawn on the expertise of early childhood educators and Noongar language specialists. An advisor on the program, a former Aboriginal languages consultant with the Western Australian Department of Education, refers to the positive feedback that has been received by parents and grandparents:

14 See B. Oswald, Dream catcher, Winnipeg Free Press, 29 August 2009 at <http://www.winnipegfreepress.com/entertainment/TV/APTN10thside.html> (retrieved 16 July 2010).

15 See http://nitv.org.au/index.php?option=com_k2&view=itemlist&task=category&id=163:yarramundi-kids (retrieved 20 June 2010).

16 See *Waabiny Time* website at <http://www.waabinytime.tv> (retrieved 20 June 2010).

17 See 'Television series *Waabiny Time* teaches Aboriginal language to kids', *Courier Mail*, 11 May 2010.

‘The kids want to see it over and over again. They’re singing the songs and saying the language and that is absolutely exciting’.¹⁸

vii) Qualities of effective programs

Defining excellence in relation to children’s television programs is problematic as opinions will vary according to the context in which the program is made and viewed (Harrison, 2004).

Calvert and Kotler (2003) report that the most popular television programs, and the most likely to provide vehicles for learning because of this very popularity, are ‘prosocial’, realistic in the issues and situations presented, and contain humorous elements. All of the favourite children’s programs in this 2003 study were stories with social-emotional themes. None were academic programs. The children in this study were from grade two to six (around seven to 11 years old).

Fisch (2004) identifies three characteristics of *Sesame Street* that have contributed to its success as an educational tool:

- Its interdisciplinary approach, which involves content experts, television producers and educational researchers at every stage of production
- Its appeal to children, which is based on formative research
- Its goal of maximising the educational benefits of the program.

Evaluations of *Play School* and other shows highlight the importance of enabling children to see themselves in shows. That is, there needs to be a sense that what is being depicted is relevant to the child’s developmental age and circumstances.

Anderson et al. (2000) reported that programs which are based on knowledge of child development, how children use and understand television, and systematic curriculum can be a very powerful and positive influence on children’s learning. Hill (2009) reports on research that associates good quality children’s television programs with being broadly instructional, having high production values, being age appropriate, inspirational, and recognising the ability of individuals.

Harrison (2004) identified several features that have contributed to *Play School*’s success with its target audience and its reputation as a high quality television program. In particular, the producers of *Play School* think of their audience as creative, intelligent and curious participants rather than as passive viewers. The show does not simply entertain but seeks to engage and empower children. Other programs referred to in this report share a focus on interaction between show and child/family viewers. *Play School* producers continue to explore new possibilities and directions and have a commitment to cultural diversity.

Not all of the programs referred to in this report have been evaluated (the Indigenous Australian ones, for example, have not been going long enough) but they all draw on early childhood and/or educational knowledge and expertise. The principles on which they operate are consistent with what is known about early years learning. For example, early literacy experts provided advice on specific skills and experiences (such as access to print-rich environments, time spent listening to stories, exposure to new vocabulary) for the curriculum development of *Between the Lions* (Rath, 2002).

¹⁸ See S. Jackson, ‘Indigenous language finds life through children’s TV’, *The Australian*, 10 May 2010.

Among key success factors identified for a curriculum program tailored to the needs of Indigenous children are the following: a strengths-based approach, dual learning and engagement focus, cultural inclusiveness, and family and community engagement (Doyle and Hill, 2008). These are also factors that characterise popular television shows for Indigenous children in New Zealand and Canada.

viii) Additional learning resources

Many of the more popular children's educational television shows have a range of online and other resources that are designed to extend the learning experiences of children. For example, *Arthur* has a companion interactive website, resources, lesson plans and activities for librarians, teachers and families. *Dora the Explorer* has a phonics reading program. *Play School* offers 'make and do' activities on the website and families can purchase storybooks featuring aspects of *Play School*. The puppets from *Yarramundi Kids* are taken out to remote school communities. Jordan (2005) reports that parents often cited books associated with television programs, such as *Dora the Explorer*, when asked about the 'last two books read to your child'.

Ready to Learn is an American outreach initiative designed to increase the potential of PBS television programs to improve the cognitive and social skills of children. Ready to Learn provides workshops for teachers, parents and childcare providers. These are intended to help extend children's learning by linking concepts from the PBS children's television programs to reading and other learning activities (Vogel et al., 2001).

c) Co-viewing

Valkenburg et al. (1999) identified three kinds of television mediation: restrictive mediation whereby parents set rules for what can or cannot be viewed; instructive mediation, whereby certain aspects of a program are explained or discussed with the child; and social co-viewing, in which parents simply share the television watching experience. Lumby (2010) notes that 'a medium like TV can bring families together ... Time in front of the TV is also, incidentally but importantly, the time when kids and even teenagers are most likely to have a cuddle with their mum or dad' (p. 18). The positive impacts associated with shared viewing in the literature seem to combine elements from both social co-viewing and instructed mediation.

The literature on co-viewing suggests that children learn more from television programs when caregivers view the programs with them than when children view the show alone (Rice et al. 1990; Moses, 2008, 2009). The implication is that a parent is more likely to interact with the child about the content of the program (Michael Cohen Group, 2007). In one study, a trained research assistant asked questions of children in the experimental group about the letters and numbers in pre-selected *Sesame Street* episodes (Moses, 2009). The study found that having an adult interact with three- and four-year-old children led to significantly higher post-test scores. Similarly, Longoria (2004) refers to studies showing that when a parent watches *Sesame Street* with a child and actively asks the child about the numbers and letters being shown in the program, the child is generally better able to identify letters and numbers than children who are not encouraged in this way by a parent. When preschool teachers watched the program *Barney & Friends* with young students, these students were found to have performed better on vocabulary, counting, and awareness of manners when the teacher later discussed the program with the children than when the teacher had not discussed the program.

In a study of co-viewing and cognitive development in Chinese children at a childcare centre, Jinqiu and Xiaoming (2004) found that most parents in the study considered co-viewing to be a means of educating and socialising their child. The most common parental activities while co-viewing were to explain the content of the program and tell their child what lessons could be learned. Other studies show adult co-viewers can enrich the child's experience by clarifying aspects of the plot or characters, helping children understand relationships between different parts of a program and/or by discussing values, beliefs, and moral issues (Jinqiu and Xiaoming, 2004; Huston and Wright, 1996).

The effects and value of television depend on the types of programs broadcast and the ways in which they are used by viewers (Huston and Wright, 1996). Studies show that while children are often cognitively active while they view, making choices about what they want to watch (particularly in the early years) depends on their families and that both parents or older siblings who co-view with children can make the experience worthwhile. Studies show that adult co-viewers who offer comments and interpretations of content improve the amount that children learn from educational programs (Jinqiu and Xiaoming, 2004).

According to the 2008 *National Aboriginal and Torres Strait Islander Social Survey* (NATSISS) (Australian Bureau of Statistics, 2009), the majority (92 per cent) of Indigenous children aged three to five years had parents or carers who watched television, videos or DVDs with them in the week prior to the reference period. Other informal learning activities in which parents/carers participated with their children included:

- Reading (85 per cent)
- Playing music, songs, dancing or other musical activities (75 per cent)
- Drawing, writing or other creative activities (72 per cent)
- Playing a game or sport (67 per cent).

Given that co-viewing television programs can potentially enrich a child's experience, and that a high percentage of Indigenous children already co-view with their parents/carers, then the proposed television program for Indigenous children would, ideally, appeal to Indigenous parents/carers. Although there is not much research on this aspect of co-viewing, it is possible that in this way, learning opportunities for adults could also be provided. An evaluation of *Sid the Science Kid*, for example, found that parents who viewed the show with their children were more positive towards, and more confident with, science content, and more comfortable and interested in engaging in science activities with their preschool aged children (Bachrach et al., 2009).

d) Indigenous ways of learning

While there is some disagreement among researchers as to whether Indigenous peoples have different, culturally specific, learning styles in comparison with non-Indigenous students, overseas studies suggest that there are culturally preferred ways of teaching and learning. Salter (2002) found that Maori children enter school with different views and expectations from their non-Maori peers and can be disadvantaged when Maori concepts and values are not recognised. Salter identified several features that are relevant to understanding Indigenous perspectives on education in both the United States and New Zealand, including that Maori education:

- has a strong spiritual component
- has a dual purpose of promoting Maori culture and providing skills for non-Indigenous society
- cannot be understood without historical analysis
- takes place in a culture that values collective bonds as well as individual freedom
- is service-oriented.

A successful curriculum model with Maori students involved use of Maori language, incorporation of Maori beliefs and values, and adherence to Maori-preferred pedagogies.

Fraser (2004) examined Maori values and secular schools and found that '[t]he ability to recite one's *whakapapa* (genealogy) is valued as it honours one's *tupuna* (ancestors), stresses one's connection to others and clarifies one's identity. Identity itself is not just a personal or social construct – it is a historical, cultural and genetic one that traces one's emergence from others, and as a corollary, one's responsibility to others' (p. 91).

Fraser also writes about the moral responsibility that is attached to the work of the Maori teachers she interviewed. Their actions affect not only the children in their care but have a flow-on effect to the wider families. Children are expected to take on certain responsibilities as they learn what it means to be Maori. In addition to the usual subjects studied in a school curriculum, Maori children learn the values of their people and this helps them to become more confident in their interactions while caring for and respecting others (p. 92).

Dyc and Milligan (2000) highlight the importance of visual literacy for Native American students whose cultures are steeped in visual metaphors. Swisher (1991) notes other characteristics of Native American learning styles while recommending that schools need to become familiar with the norms and values of the communities from which Indigenous children come and recognise the students' background and experience. Apthorp et al. (2003) found that teaching Indigenous language and literacy first, followed by instruction in English, helped improve opportunities for Native American students to meet standards, as did a focus on reading comprehension and peer interactions, and culturally convergent curriculum materials.

Glatzmaier et al. (2000) found storytelling to be an effective means of teaching and explaining Indian values and beliefs. Strand and Peacock (2002) refers to research in which students reported that being well grounded and connected to their tribal culture was the main reason for them staying on at school. Those students who were doing well shared three characteristics in particular: good self-concept, a strong sense of direction, tenacity. 'Feeling good about their culture was a consistent theme among these students'. Christie (2006) argues for the need to rethink notions of place so that national standards of literacy and numeracy and assumptions of 'lack' in relation to remote communities are balanced by recognition of local skills and knowledge systems.

Cross-cultural studies of attitudes and beliefs among Indigenous students in Australia, Norway and the United States show the critical importance of a sense of relatedness in the formation of engaged and confident learners (Lillemyr et al., 2007; 2008). A sense of relatedness and social skills were found to be fundamental to Indigenous students' self-concept and motivation, influencing their learning at school. Lillemyr et al. also report on the importance of play in school learning. Through play, children can interact with others, gain social skills and useful experiences that can in turn foster creativity and experimentation and teach learning strategies.

Indigenous ways of learning are fundamental to quality early learning and care, including ways of learning that are about connectedness to culture and community. Hughes (2004) defines 'ways of learning' as the cognitive processes and instructional settings that an individual may use while interacting with the learning environment and coming to understand the world. While cautioning against the danger of focusing on group characteristics rather than catering for individual learners, Hughes identifies several strengths of Indigenous learners, including 'visual-spatial ways of learning', abstract imagery and contextual learning or 'real life' learning. Spontaneous learning is favoured over structured learning. Concrete learning is a strength – 'Seeing, touching, and hearing may be all that makes an irrelevant learning task meaningful to some students' (p. 35). Hughes also suggests that Indigenous children who come from a background where images are used regularly are more likely to develop an 'imaginal learning strength'.

Overseas research shows the importance of providing young children with opportunities to learn about their culture, of valuing this culture, and of involving the community in decisions about how cultural values and beliefs are transmitted. The 2008 *National Aboriginal and Torres Strait Islander Social Survey* notes that '[t]he level of involvement in Aboriginal or Torres Strait Islander cultural events, ceremonies or organisations helps to provide an indication of a person's level of cultural attachment' (Australian Bureau of Statistics, 2008b). In 2008, 73 per cent of Indigenous children aged four to 14 years were involved in cultural events, ceremonies or organisations in the 12 months prior to interview. Seventy-one per cent of Indigenous children aged four to 14 years living in remote areas identified with a clan, tribal or language group, compared with 40 per cent of Indigenous children of the same age living in major cities. In this same period, 31 per cent of Indigenous children aged four to 14 years spent at least one day with an Indigenous leader or elder. The report noted that 66 per cent of Indigenous children living in major cities were not able to spend time with such a person or did not have access to an Indigenous leader or elder (Australian Bureau of Statistics, 2008b).

One of the *What Works* partnership resources for Indigenous parents and communities identifies four fundamental elements that must occur if outcomes for Indigenous children are to be improved:

- they must be given respect
- their cultures and the relevant implications of those cultures respected
- they must be taught well
- they must participate consistently.

In particular, the point is made that:

*'self-respect and respect from others is more basic to learning than any other factor. Concern about 'self-esteem', 'self-confidence' and 'pride' is no accident. They are the starting points for becoming an effective learner – more fundamental than literacy and numeracy skills'.*¹⁹

¹⁹ This quotation is taken from *Conversations, Relationships, Partnerships*, part of the *What Works* package, published by the Department of Education, Employment and Workplace Relations. See <http://www.whatworks.edu.au/dbAction.do?cmd=displaySitePage1&subcmd=select&id=398> (retrieved 12 May 2010).

While there is limited research available currently to show the impact of television viewing in general, or Indigenous educational programs in particular, on Indigenous children, research suggests that many Indigenous learners respond well to visual media. This is supported by Indigenous experiences in New Zealand and Canada where children's educational programs offering rich learning opportunities in relation to culture and language on Indigenous television networks have been well received by children. The children's television initiative offers an excellent opportunity to contribute to the research on the impact that a well-designed and age-targeted, culturally specific, television program can have on Indigenous preschool-aged children.

Summary: There is a substantial body of research that shows the cognitive, academic and social benefits that can come from a good quality educational program for preschool-aged children. This experience can be enhanced for a child when viewing is shared with a parent or caregiver. Adult viewers can also gain in confidence or content knowledge from this co-viewing. While there is little if any research into the television co-viewing habits of Indigenous families, there is evidence to show that Indigenous parents and caregivers already share a range of activities with their children, including watching television, videos and DVDs. As a visual medium, television is an appropriate educational tool to use with Indigenous children as can be seen from existing television programs in New Zealand and Canada.



6. National imperatives and the timeliness of this initiative

Through their various evidence-based policies and programs, the Commonwealth and state/territory governments are seeking to provide the best start possible for all children. In 2009, COAG endorsed the *National Early Childhood Development Strategy – Investing in the Early Years* – to provide a more coordinated approach to early childhood development for children from birth to eight years. The Early Years Learning Framework has been created to assist early childhood educators. The Australian Early Development Index (AEDI) has been developed to help measure the health and development of children by the time they reach school age. Under the National Early Years Workforce Strategy, the Australian Government will invest \$126.6 million to train and retain a high quality early childhood education workforce.

In particular, there is a strong commitment to improving learning outcomes for Indigenous children. The national Parental and Community Engagement Program (PaCE) is designed to improve outcomes for Indigenous children by enhancing Indigenous parental engagement with schools. The Australian Government has invested heavily in the *Closing the Gap: Expansion of Intensive Literacy and Numeracy Programs for Underachieving Indigenous Students* initiative, which is intended to ‘identify innovation, evaluate the impact on Indigenous students and support the expansion of high impact strategies and programs’.²⁰ New bilateral funding arrangements require state and territory governments to achieve better educational outcomes for Indigenous students. Other Commonwealth funding is being used to support teachers in implementing Personalised Learning Plans for Indigenous students up to Year 10.

In developing the national curriculum, the Australian Curriculum, Assessment and Reporting Authority (ACARA) has sought to ensure that all Australian children ‘understand and acknowledge the value of Indigenous cultures and possess the knowledge, skills and understanding to contribute to, and benefit from, reconciliation between Indigenous and non-Indigenous Australians’.²¹ The national curriculum is being implemented in 2011. With this will come a significant demand for resources and materials that teachers can use with their K-10 classes to help students understand Indigenous Australian history and culture. The development of a high quality children’s television program catering primarily for Indigenous children has the potential not only to be a well-used resource in its own right but to stimulate the production of a range of other educational resources that can both inform and build on the good work that is already happening in schools.

Summary: The proposal to develop a children’s television program targeting Indigenous children comes at a time when there is strong government support for initiatives aimed at improving educational outcomes for Indigenous children. With the new national curriculum being implemented in 2011, there is an excellent opportunity for the development of high quality educational resources that will support learning in relation to Indigenous culture, traditions and language.

²⁰ See the Department of Education, Employment and Workplace Relations website at <http://www.deewr.gov.au/Indigenous/Schooling/Pages/LitNum.aspx> (retrieved 30 June 2010).

²¹ See ACARA website at http://www.acara.edu.au/aboriginal_and_torres_strait_islander_education.html (retrieved 30 June 2010).

Conclusion

A review of the literature on early childhood education, Indigenous learning needs, and the impact of educational television programs on children, indicates that children's early learning and development are critically important to subsequent educational and life outcomes. There is still a significant gap between Indigenous and non-Indigenous children in the areas of literacy, numeracy, science, and computer literacy. Despite some improvement, Indigenous students are less likely than their non-Indigenous peers to complete school, or to take up tertiary education, employment or further education. Fewer Indigenous children than non-Indigenous children attend preschool programs. Indigenous students miss more days of school each year than their non-Indigenous peers.

Studies show that television viewing is a popular activity for preschool-aged children and that educational television programs can help improve children's school readiness by building literacy and numeracy skills, cultural awareness, self-esteem and appropriate behaviours. Such educational benefits can last into secondary school.

Indigenous ways of learning are fundamental to quality early learning and care for Indigenous children and these ways of learning are grounded in connectedness to culture and community. Studies show that culture, language and identity are central to the development of successful Indigenous programs. Overseas experience indicates that educational television programs aimed primarily at Indigenous preschool children are an important vehicle for raising awareness around language and cultural identity. More research is needed to show the impact of these programs on learning.

Co-viewing has been associated with enhanced learning from television viewing. Indigenous parents and caregivers regularly share in activities with their children, including watching television, videos and DVDs.

With the advent of the national curriculum in 2011, and the implementation of a range of other government programs aimed at improving educational outcomes for Indigenous students, the proposal for a children's television program aimed primarily at Indigenous preschool children is timely and relevant. Nationally, and in each state and territory, governments are committed to improving outcomes for Indigenous children. The national curriculum provides an opportunity for the development of evidence-based resources in the form of a television program supported by a collection of innovative and engaging learning materials for Indigenous children and their teachers and families. Such an initiative also provides an opportunity to make a significant contribution to research on the impact of educational television on young Indigenous learners and their families.



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Appendix 1: Methodology

An initial search of the major databases was undertaken to identify relevant material. Preference was given to sources published in the past decade although useful studies earlier than this, such as evaluations of *Sesame Street* in the 1970s, were also considered. Search terms for television programs included ‘children’s television’, ‘Indigenous television’, ‘Indigenous viewing habits’. They also included ‘educational television’, and combinations of ‘program evaluation’, ‘evaluation’, ‘program effectiveness’, ‘television in education’, ‘educational television programs’, ‘television viewing’ or ‘television viewing pattern’, ‘preschool children’, ‘young children’, ‘kindergarten children’. Search terms for Indigenous learning styles included ‘Indigenous learning’ or ‘Indigenous learning styles’, ‘cognitive style’ and ‘Indigenous subjects’, ‘Aboriginal students’, ‘Indigenous peoples’, ‘First Nations’, ‘native Indians’, Maori, ‘Pacifica’ and ‘Inuit’. Some specific programs were also used as search terms, such as ‘Sesame Street’, ‘Arthur’ and ‘Between the Lions’. From the sources located, the most relevant were identified and then reviewed.

Concurrently with this review of the literature, ACER also gathered information about a range of television programs aimed at young children. This included a search for Indigenous television shows in other countries such as New Zealand, Canada, Taiwan, Norway and South Africa.

There are methodological limitations to some of the research that has been done. MacBeth (1996) identifies several variables that could potentially affect the findings generated by particular studies, such as the developmental stage of the viewer, family attitudes toward television (educational versus entertainment), ways in which the data have been gathered (for example, controlled laboratory conditions versus more naturalistic settings at home). Establishing causality is also a problem. How do we know television is making the difference when there are other variables that are also relevant, including ‘performance on IQ measures, amount of reading, attitudes in the home regarding reading and TV viewing’? (MacBeth, 1996, p. 17).

Longoria (2004) notes that while there is evidence to show that watching educational TV programs benefits young viewers, ‘all of the studies that have been conducted are correlational in nature and quasi-experiments in which different types of children are compared ... The conclusions drawn cannot with certainty, support a causal link between watching educational TV and learning’. The studies generally show that the amount of television watched by children is significantly related to particular skills or abilities shown by a group of children, or they show that children who watch educational programs outperform children who do not watch them. ‘In both types of studies, there may be unidentified extraneous variables that account for the results’, such as that only the strongest learners enjoy watching educational programs or only the strongest learners benefit from watching them. Children who learn more slowly may not enjoy watching, or benefit from watching, such programs because they are unable to keep up with this kind of dynamic format that is characteristic of television. Longoria suggests that ‘there are inherent differences in children from the start that lead to differences in the amount and type of TV viewed as well as how well children learn’ and that there has been relatively little research done on the profiles of children who do and do not watch educational programs regularly. Baydar et al. (2008) also point out that most previous studies evaluating the effects of educational programs are correlational, which makes it difficult to identify program effects because of ‘the confounding effects of factors that might predispose young children to watch such programs’ (p. 349).

Moses (2009) has identified particular issues relating to the impact of television programs on literacy development in young children. Of those programs that have been specifically evaluated with regard to literacy, there is often insufficient research attention given to the content of the programs and the contexts in which they are being viewed and in which literacy development is occurring. This research is often based on a narrow range of literacy measures and outcomes and grounded in an older concept of print-based literacy rather than taking into account current conceptions of multiliteracies.

Despite these qualifications, there is a significant and growing body of evidence to show that educational programs can provide children with cognitive, academic and social benefits.

Much of the research on the impact of children's television was undertaken in the 1970s and 1980s, with fewer studies in recent years. There has been a shift from studies seeking to identify whether television is good or bad generally to more focused studies on the impact of specific educational programs.

This particular literature search yielded few, if any, studies of Indigenous children's viewing habits or the impact of educational television on Indigenous children in Australia. There is a gap in the research in this area and a formative evaluation of the ACER-ACTF children's television initiative could make a significant contribution to the literature.



