What Attributes Make an Alternate Model of Education for Remote Indigenous Adolescents: A Systematic Literature Review

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Abstract

Education provides opportunities for adolescents to make developmental gains. Remote Indigenous adolescents not engaged in education programs need alternate learning opportunities to reach developmental goals. This review identifies attributes that contribute to an alternate model of education within the existing literature and reports on the quantity and nature of evidence. Thirty-seven databases and grey literature were canvassed using strict search criteria. Analysis of papers was conducted to find the enablers of alternate models by identifying the conditions, strategies and outcomes the intervention produced. Papers were categorised according to their nature by Canada's Hierarchy of Evidence and the Sanson-Fisher model. There was limited literature on alternate models of education for Indigenous adolescents in settings outside a school environment. Three papers were classified as descriptive and ten as intervention research. All papers were described as *"emerging"* and *"promising"* practices. The five attributes embedded within a model included 1) cultural connectedness and awareness; 2) being contextually designed; 3) fosters relationships with peers and adults; 4) specific teaching and learning strategies and; 5) holistic outcomes. The findings will contribute to the co-design of an alternate model of education for remote Indigenous communities. Gaps identified in the literature included examples of *"best practice"* models and highlighted the need for further research of innovative models that move from descriptive research to form an evidence base.

Keywords: Indigenous, adolescent, alternate model, learning, systematic review

Introduction

Alternate models of education exist to facilitate learning for adolescents whose needs are not met by mainstream education (Wilson, Stemp, & McGinty, 2011). They can provide opportunities for adolescents to gain experiences that reduce inequality and learn the required skills to live empowered, healthy and sustainable lives (WHO, 2014). With the many and varied forms that an alternate model of education can take, it is important to systematically determine what attributes make up an alternate model of education for a remote Aboriginal and Torres Strait Islander (hereafter respectfully Indigenous) adolescent and what is the nature and quantity of

the evidence that exists. The information in this review can inform the formation of an alternate model of education in remote Indigenous communities.

Background

Education reduces inequality and allows people opportunities to live empowered, healthy and sustainable lives and is recognised as a tool in meeting the developmental needs of individuals (United Nations, 2017; WHO, 2014). The United Nations and World Health Organisation partner with countries to see educational and health outcomes improved for remote Indigenous adolescents (Inter-agency support group on Indigenous peoples' issues, 2014). The Human Rights Declaration on education states that:

> Indigenous peoples have the right to establish and control their educational systems and institutions providing education in their own language and in a manner appropriate to their cultural methods of teaching and learning; that Indigenous peoples have a right to the same standard of education as all other peoples; and that those living away from home are given opportunities to education in their own culture and language (United Nations, 2008 p.7).

Despite the implementation of the Human Rights Declaration, there is still a disparity in educational outcomes for Indigenous adolescents around the world (Inter-agency Support Group on Indigenous Peoples' Issues, 2014). Australia's educational policies were historically, and continue to be, formed on the foundation of Australia's colonial lens, viewing Indigenous people as a homogenous group without recognising individual culture or autonomy (Churchill et al., 2016; Hogarth, 2017; Shay & Heck, 2015). Curriculum is taught and assessed nationally using the same methods with limited ability for teachers to plan for, or be influenced by, local Indigenous communities' way of knowing and being. The skills and attitudes that are required for an adolescents' development is influenced by the culture of the community in which they live (Kumar, 2018). For example, in a remote community the needs for living are different to that in a regional centre. The values and attitudes expected by family, communities and employment opportunities will differ and are unable to be met by a *"one size fits all"* national curriculum.

Any adolescent without opportunities for learning has limited prospects to obtain knowledge and skills, learn to manage emotions and relationships, and grow in attitudes and abilities that will help them to enjoy their adolescent years and later assume adult roles (WHO, 2014). Reasons for lack of attendance in a learning program are diverse and can be exacerbated in some remote communities as there is no provision of a secondary education program, thus requiring adolescents to board away from home or forego educational opportunities (Department of Education and Training, 2016). There are unique challenges for adolescents living and schooling in places with cultures and environments different to their own (McCalman et al., 2016; Redman-MacLaren et al., 2019). An adolescent not engaged in an education program often has no routine or daily tasks that afford opportunities to acquire literacy, numeracy and lifeskills. Time spent not engaging in meaningful activities increases the likelihood of an adolescent engaging in risky behaviours. Risky behaviours include substance misuse, theft, violence and sexual behaviours; the consequences of which can be significant and impact the long-term livelihood of an adolescent (Knight et al., 2017). For adolescents living in a remote location, challenges in accessing secondary mainstream education can encompass both individual or personal needs and systemic or structural issues. Withdrawal or exclusion from an educational program results in multiple complexities for the adolescent and thus requires an educational solution that is multifacited.

Alternate models of education offering programs separate to mainstream education can afford adolescents excluded from learning opportunities access to experiences that train them in skills appropriate to their community and for growth into adulthood. Within the program design, an

alternate model of education can have measures in place to respond to adolescents' involvement with multiple risky behaviours, rather than only addressing the basic educational needs (Knight et al., 2017; Wilson et al., 2011). Learning pathways for these adolescents require creative ways of working with the individual, their families and their community to meet the developmental needs and preparation into adulthood. Where the *"one size fits all"* approach of mainstream education is unable to meet individual needs, an alternate model of education has the potential to do so (Shay & Heck, 2015).

Alternate models of education exist across all spheres of rural, remote and urban areas and offer varying programs for the differing needs of the adolescents in each community. It is therefore useful to examine what these communities have put in place to educate and meet the developmental needs of their adolescents. The aim of this review was to identify common attributes of alternate models of education for remote Indigenous adolescents. The objectives were to:

1) Identify the quantity and nature/type of available evidence in the literature;
2) Articulate what enables an alternate model of education (What works for whom, under what conditions, through what strategies and what outcomes); and
3) Define the key attributes consistent across the identified alternate models of education.

This review was conducted as part of the lead author's PhD study where two Cape York Aboriginal communities were interested in finding out what other like communities offered their youth. The authors include the student and their supervisory team. The lead author is a non-Indigenous woman who has lived and worked in remote communities across a range of roles including teaching, supporting student transition into boarding and school Guidance Officer. The supervisory team includes Indigenous and non-Indigenous people with a variety of professional backgrounds in education or research, working with remote communities and using decolonising research approaches. The findings were used to assist with the analysis of data gathered in the PhD to identify how what the people wanted in an alternate model of education compared to the literature. The inclusion of the classification of the quantity and nature of research was conducted to inform future research projects. Findings in this review may be useful to families, practitioners and service providers as they respond to the needs of adolescents in remote Indigenous communities to inform the formation and development of alternate models of education within their local community.

Methods

This systematic literature review followed the PRISMA guidelines (Moher, Liberati, Tetzlaff, Altman, & The Prisma Group, 2009) and six principles espoused by Sanson-Fisher, Campbell, Perkins, Blunden, and Davis (2006). A protocol was formed to determine the appropriate terms to best elicit the required information from the literature.

In this review *"alternative education"* or *"alternate model"* are defined as a program that exists for learners whose needs do not meet the required structure of mainstream education. In Australia there are multiple names for this type of learning including alternate or flexi-school, youth program and open learning. In this review these are all termed *"alternate model"*. An accepted understanding of an alternate model (Wilson et al., 2011) includes six core principles integral for adolescent development: 1) meaningful and engaging activities that are not like being at school; 2) linking with government agencies and community supports; 3) making links beyond *"school"* towards employment pathways; 4) individual support tailored to the individuals needs and circumstances; 5) meaningful real world learning ensuring that alternate models cater to the holistic needs of young people; and 6) linking wider communities with the alternate model.

Eligibility Criteria

To be included in the review publications met the following parameters: 1) published in English between January 1994 and July 2018; 2) had a target population of Indigenous adolescents between the ages of 10-24 years who are disengaged from mainstream education; 3) showed models specifically focussed on the Indigenous cultural context of Australia, Canada, New Zealand and or the United States (countries were chosen as they have a similar colonial history to Australia) and 4) reported on approaches that fit the defined boundaries of an alternate model of education including those not attached to a school subject or part of a regular mainstream institution. Literature that described models attached to mainstream educational institutions or those that focused on a specific need such as drug and alcohol rehabilitation and did not address schooling were excluded.

Search strategy

Databases were chosen that included literature from Australia and International Indigenous educational contexts. Separate searches were conducted on each of the databases during two searches. Search one (April 2017) and search two (June 2018) used consistent search terms across the following databases: Scopus / Elsevier, PsycINFO / Ovid; ERIC / Proquest; Education Database / Proquest; Sociological Abstracts / Proquest; Australian Education Index -ATSIS / Informit; APAIS-ATSIS / Informit; AIATSIS: Indigenous Studies Bibliography/ Informit; Family-ATSIS / Informit; Families & Society Collection / Informit. Search terms were chosen to formulate the target populations, interventions, comparison, outcomes and setting (PICOS). Combinations of the terms were developed into search strings using Boolean operators resulting in large data sets. Truncation symbols were used (eg: educat* for educator, education, educating, educates) and the following search strings:

1. Indigenous OR Aborigin* OR Torres Strait Island* OR Inuit OR Maori OR First Nation* OR Metis OR Native American* OR American Indian* OR Native Hawaiian OR Native Alaskan* OR Tangata Whenua
2. Australia OR Canada OR USA OR New Zealand
3. adolescen* OR youth* OR young people OR young adult OR teen* OR child* OR juvenile*
4. educat* OR learn* OR student*
5. social innovation OR holistic education OR life skill education OR social sustainability OR entrepreneurship education OR alternat* education model OR alternative schools OR flexi school OR open learn* OR learner centred education OR learner centred education OR flexible education OR community engagement OR non formal education OR learning environment OR learning goals OR learning outcomes OR alternative schooling OR mentoring OR educational success OR educational achievement OR successful teaching OR humanistic education OR outcome based education OR student centred learning

Search one identified 760 results and search two, 377 results.

Grey literature search

Grey literature was manually searched using variations of the search terms above to meet the individual parameters of the search engines across 21 websites. Websites were found from Google searches of Non-Government Organisations (NGO's), professional expertise or reference lists. Websites that yielded results were Google Scholar, National Indigenous Television, Save the Children, World Vision, Dusseldorf forum and the Warlpiri Youth development Aboriginal corporation. Specific guidelines of Godin, Stapleton, Kirkpatrick, Hanning, and Leatherdale (2015) conducive to systematic literature review searches of grey literature were followed as each

website required different inputs. Search terms such as or like the following were used in the two searches:

1. Aboriginal OR Indigenous
2. Alternative education OR Aboriginal education OR Youth development OR Alternative models of education OR entrepreneur education OR Youth OR Flexi school

1008 records were identified across the websites searched.

Screening

Titles and abstracts of the 2104 publications were screened by the lead author applying the inclusion and exclusion criteria. A large quantity of papers found in the search were excluded as they were studies that described alternate models attached to mainstream educational
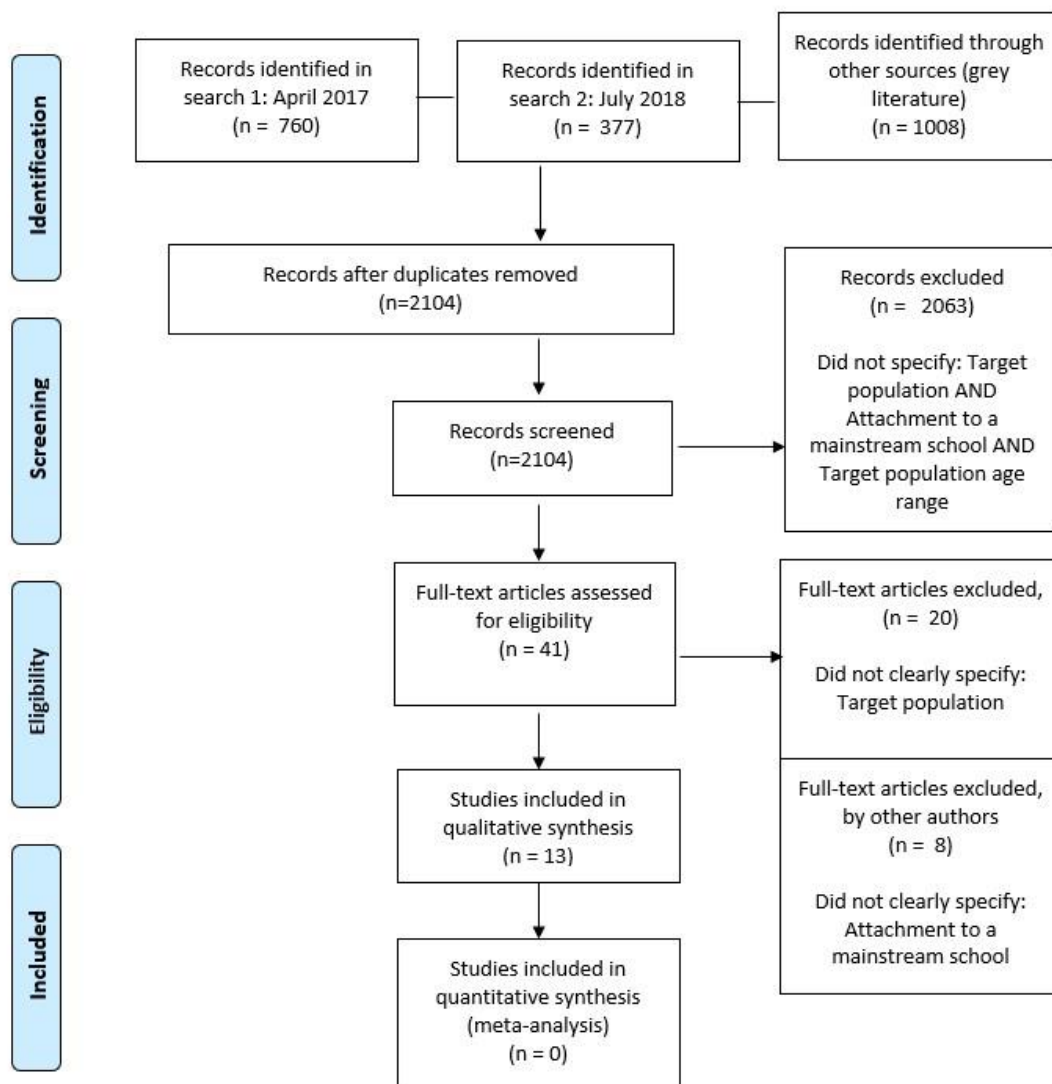

Figure 1: *PRISMA diagram of publications (Moher et al., 2009)*

institutions and the target population's age was under the age range for inclusion and they did not specify a target population of Indigenous youth. This indicated that the initial search terms may not have been sufficiently specific. 41 complete records were reviewed with a further 20 not meeting criteria predominantly around articles loosely identifying the target population as Indigenous youth. The remaining twenty-one records were screened by the other authors to

verify consistency. After this screening, the team excluded an additional eight records as the description of the study was unclear about the programs' connection to the mainstream education model. Thirteen records were identified as eligible to be included. The PRISMA diagram summarises the study selection process (Figure 1).

Assessment of the quantity and nature of publications

Research establishes the evidence for what works, and this information informs practice. It is therefore important to understand the quantity and nature of available evidence to ensure that practice is guided by a suitable evidence base (Sanson-Fisher et al., 2006). Systematic Reviews are typically conducted within disciplines like medicine and sciences which are heavily controlled research environments and the Sanson-Fisher et al. (2006) categorisation tool reflects this. They categorise three types of methods of research within Indigenous health. 1) Measurement studies that develop culturally appropriate reliable measures; 2) Descriptive studies that describe the size and nature of the issues; and 3) Intervention studies that focus on effectiveness of interventions. The most suitable evidence base would consist of Measurement studies.

The Canadian Hierarchy of Research offers an alternative measurement that "*aligns with established practice, but more effectively reflects the research and methods typically found within the homelessness sector*" (Canadian Homelessness Research Network, 2013, p8) and in the context of this review, alternate models of education where there is a limited research base. The hierarchy compares examples of research across four levels of practice and identifies three categories: "*emerging*", "*promising*" or "*best*" practice examples (exact descriptions of these levels are included in Figure 2). As represented in Figure 2, systematic reviews and randomised control trials are at the top of the hierarchy and considered as best practice because there is a high level of research to form an evidence base. Program descriptors and opinions are emerging practices at the bottom of the pyramid.
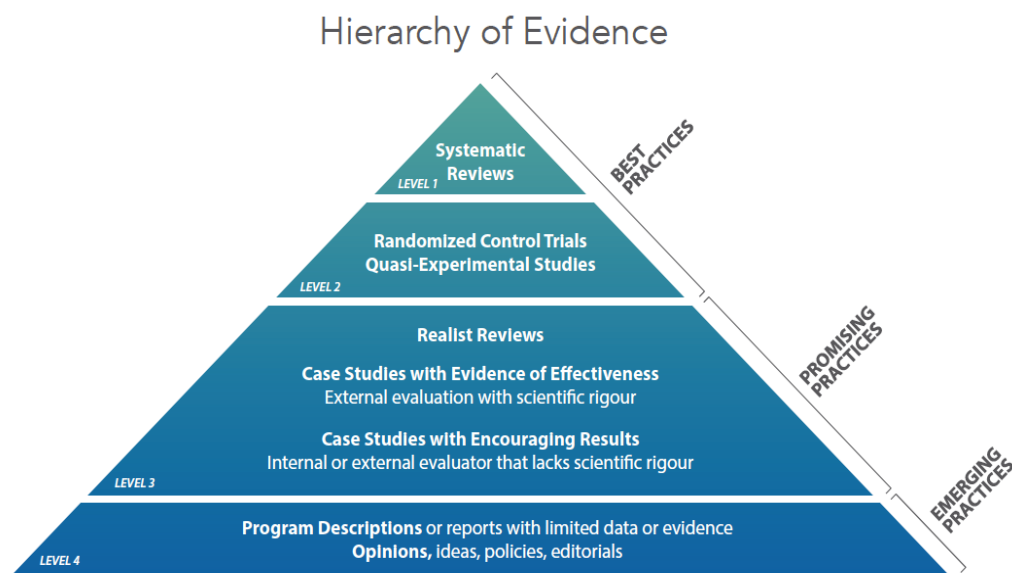

Figure 2: *Hierarchy of Evidence (Canadian Homelessness Research Network, 2013)*

In this review these two tools were chosen to provide a range of ways to describe the nature of the research about alternate models of education. The lens provided a rich inclusive description of the types of literature available. Using both tools provides a language framework to explain the nature and quality while retaining a comparative perspective of the discipline of health and social science

Data Analysis

The papers were reviewed according to two main areas: 1) assessment of the nature and quantity of available evidence using the two tools described above and; 2) identification of what works for whom, what are the conditions, strategies used, and the outcomes obtained. A thematic analysis was conducted that revealed five key attributes of an alternate model of education that were evident across each paper.

Results

Quantity and nature of available evidence

Of the 13 papers that met inclusion parameters and were eligible for review, eleven were from Australia and two were from Canada all were dated from 2010. This number indicates that there is little published research about alternate models of education for remote Indigenous adolescents. Using Sanson-Fisher et al. (2006) criteria, the 13 papers were classified as measurement studies (n=0) descriptive studies (n=3) and intervention studies (n=10). The hierarchy tool classified papers as level 1 studies (n=0), level 2 studies (n=0), level 3 studies (n=4) and level 4 studies (n=9). See Table 1.

Table 1: *Classification of Publications*

Year	All	Measurement studies	Descriptive studies	Intervention studies	Systematic Reviews / Level 1 studies — Best Practices	Randomised control trials / Level 2 studies — Promising Practices	Realist Reviews / Level 3 studies — Promising Practices	Program Descriptions / Level 4 studies — Emerging Practices
2010	3	-	-	3	-	-	-	3
2011	2	-	-	2	-	-	-	2
2012	3	-	1	2	-	-	1	2
2013	1	-	1	-	-	-	1	-
2014	1	-	-	1	-	-	-	1
2015	1	-	-	1	-	-	1	-
2016	2	-	1	1	-	-	1	1
Total	13	0	3	10	0	0	4	9

These two findings suggest that the nature of the research papers found are *"emerging"* and *"promising"* practices and predominantly made up of descriptive and intervention studies. There were no *"best practice"* or measurement studies within the evidence base to show how alternate

models of education are implemented or evaluated. All papers were published between a six-year period to 2016 highlighting the relatively recent trend in publishing educational practices.

Table 2 outlines details of each publication.

Table 2: *Details of Publication*

Author/ Publication year/ Publication type	Method	Location	Population	Setting	Intervention
(Barrett & Baker, 2012) Journal article	Case study	NT, Australia	15 – 17-year-old male Indigenous youth	Juvenile Detention Centre	Informal music learning program
(Blignault, Haswell, & Pulver, 2016) Journal article	Evaluation	Remote Australia	16 – 24-year-old Indigenous youth	Multi-site national wellbeing program for Indigenous youth	14 sites implement the community development approach to Social emotional wellbeing
(Conrad, 2015) Journal article	Case study of a participatory action research project	Canada	10 – 25 First Nations youth working with their local community	Art project	A social innovation project to engage youth and community services for positive change in the community
(Hayes, 2011a, 2011b) Report and Book chapter	A project report	Urban, NSW, Australia	Marginalised young people in Grade 8 or 9 with a high Indigenous population	A Youth Service	A community-based collaboration between multiple community-based partners to reconnect marginalised youth to a learning pathway that could lead them back to school

(Keddie, 2011)	An interview-based case study	Suburban Queensland Australia	Indigenous girls in Grades 7 - 12	A non-traditional secondary girls' school	A non-traditional educational model that caters for the holistic and academic needs of the girls
(Keddie, 2014)	Case study	Australia	High Indigenous population in a low socio-economic area	A P-12 alternative school	An Indigenous governed school that educates students with cultural and Western values
(Kral, 2010) Working Paper	Research paper	NT, Australia	Indigenous youth	Community-based approaches	Youth learning and cultural production programs
(Kral & Schwab, 2012) Book	Research findings	NT, Australia	Indigenous youth	Community-based learning spaces	Learning spaces for young people disengaged from mainstream learning
(LeBlanc, 2012) Report	Case study	Canada	Aboriginal youth	Federal and Provincial education systems	Reports how two education systems implement a model of education alternate to the traditional Western subject centred approaches
(Lopes, Flouris & Lindeman, 2013) Journal article	Literature review	NT, Australia	Indigenous youth	Youth development programs	Activities and strategies used in youth development programs
(Shaw, 2010)	Description	NT, Australia	Indigenous Youth	Youth Link up service	A youth service that supports the needs of high-risk young people across remote communities

(Warlpiri Youth Development Aboriginal Corporation, 2016)	Website	NT, Australia	Indigenous Youth	Youth service at 5 sites	A youth service across multi-sites
(Wilson & Stemp, 2010) Journal article	Research findings	QLD, Australia	Indigenous male Youth disengaged from schooling	Edmund Rice Foundation outreach centre	A project within the local community to engage youth in learning through science and hands on activity

Conditions, strategies and outcomes of interventions

The 13 publications were reviewed to determine the features of the alternate models guided by the questions: a) What are the conditions to support the intervention? b) What strategies are used to implement the intervention? and c) What are the outcomes produced? The key points are reported in Table 3.

Table 3: *Summary of key points in the analysis of models*

What are the conditions to support the intervention	What are the strategies used to implement the intervention	What are the outcomes the intervention produces
Youth come from a variety of learning and environmental backgrounds with needs such as: a high level of substance misuse, domestic and family violence, depression, grief, neglect, suicidal ideation, criminal activity, lack of education and training, lack of work-readiness, participation and employment A variety of ages across programs (10 -25) Recognition that youth, families and community organisations all contribute and influence each other Young people are part of the solution to community problems Time spent developing culturally respectful	Student expectations of the program were sought The curriculum was designed and adapted to the specific learning needs and interests of the youth and their families rather than being subject based Indigenous ways of being and knowing incorporated into learning and teaching style Holistic approach to learning Learning activities included: film making, music creation, social enterprise activities, bush trips, cooking, music, art and crafts, science. Specific projects were based on real world experiences that taught skills like numeracy within the activities Hands on learning style where youth learnt through trial and error, observations, with peers,	Youth re-engage with learning Youth learn skills such as: music, science, art, literacy, numeracy or technology Social behaviours increased: confidence, communication, self-esteem, participation and a sense of achievement, hope, purpose, belonging, a strong identity, leadership skills, a sense of self and developing aspirations, teamwork and engagement in learning Youth feel connected through story, place and connecting with the Indigenous staff. They are learning about their culture and creating a new identity as they interact with Indigenous elders, role models and the community

What are the conditions to support the intervention	What are the strategies used to implement the intervention	What are the outcomes the intervention produces
partnerships between Aboriginal people and communities	practice and interactions with mentors	Connection with elders and cultural heritage which grows an ability to navigate a new contemporary Indigenous identity
Ongoing collaboration between community and staff	Activities are for everyone, not just those that might have an addiction and require rehabilitation	Students gained a positive view of learning and developed an identity in doing something productive and worthwhile
Realistic goals for youth to engage short or long term with school, training or employment pathway	Learning takes place in parks, libraries, PCYC and other community facilities.	Gained work readiness skills
Flexible timings: Weekly, individualised or group lessons across sites within the community	Small class sizes	A safe place for young people to spend their time
A safe environment that enabled risk taking	Explanations given were repeated to facilitate an understanding that was linked to the student's prior knowledge	Linking of families and youth services and communities together
Learning is a collective experience	Youth activities are engaging and integrated with other organisations. Relationships build rapport, resilience and confidence between the youth, community and other organisations	Community ownership over governance, meeting their identified needs and take part in the running of the program
Real life contextualised learning opportunities building culture and language	Students were valued by staff: There were positive, high expectations and relationships built between staff and students	The community values and supports the program
Flexible funding models reflective of community needs	Youth and adults engaged in activities together that built rapport and trust	Relationships and trust are built between staff, families and youth over time
Education includes facets of the whole person, including physical, emotional, spiritual and mental health incorporating both Indigenous and Western ways of knowing	Indigenous and non-Indigenous staff	Real world experience
	Local Indigenous knowledge is shared between elders and young people	Role modelling and mentoring with peers and adults. Youth become role models
Staff are a mixture of both Indigenous and non-Indigenous peoples	Older peers, relatives, non-Indigenous and Indigenous people teach skills	Linking with pathways beyond schooling such as work experience, traineeships and internships
	Links to the community with pathways for youth beyond the program: internships, work experience, paid work	Enterprise generation and employment opportunities for youth that also builds local economy

What are the conditions to support the intervention	What are the strategies used to implement the intervention	What are the outcomes the intervention produces
	Links with community support including: government, financial, accommodation, transport services and health and wellbeing supports to ensure student needs are met	Adults changed perceptions of youth and listened and involved them in decision making within community
	Staff had training to work with youth disengaged from mainstream education	A breaking down of institutional parameters as the learning environments become the real world
	Crèche for the girls who have babies	Mentoring of local staff by the non-Indigenous staff to ensure ongoing employment and community agency
	Case management with a case worker	
	Connections between remote communities and relationship-based practices that transfer across each location	Risky behaviours are decreased as youth are engaged in meaningful activities
	Different programs for different needs (eg: rehabilitation, holiday/diversionary programs, caring for country, development programs for daily needs)	
	Uses social media to engage youth	

Attributes that enable an alternate model of education

An analysis of the features of the alternate models of education in the 13 papers revealed themes that formed five key consistent attributes. Using Braun and Clarke's (2006) steps of thematic analysis the like elements were identified from the conditions, strategies used and the outcomes described. Elements from each paper were coded together using the software program NVivo and themes found. Themes were named as attributes consistent within each of the papers that enabled or were inherent aspects across the alternate models of education. Attributes are not something featured in isolation like specific disciplines might be taught within a mainstream education program, but rather influence and are connected to each other within the operation of a model. These five key attributes were then labelled according to the essence of the attribute.

The five attributes that were consistent across the alternate models of education described in the thirteen papers are those that:

1) Ensure cultural connectedness and awareness;
2) Are contextually designed;
3) Foster relationships;
4) Consider programming: teaching and learning strategies; and
5) Have holistic outcomes.

These key attributes are described further below. Examples of the way they work are drawn from one or more of the 13 papers.

Models ensure and embed cultural connectedness and awareness

Cultural Connectedness and awareness are attributes that had an impact for the adolescent, community and practitioners. Practitioners recognised the differences between Indigenous and Western worldviews and therefore became aware of how these differences impact upon the adolescent, their way of being, thinking and knowing and how the adolescent connects with their own cultural identity, community and the world around them. Nine papers explicitly made reference to the importance of understanding, knowing and practicing the differences between Indigenous and Western worldviews within the model and made observations to where this was not done well and how improvements could be made.

Each of the nine papers expressed and valued culture as integral to the identity of the adolescent, and not separate from the individual as something to be taught. Elders, families and adolescent voice were embedded into the design of the model. By including local voice, culture is central in the design of the model as it recognises Indigenous worldviews and the differing cultural ways of knowing and being within individual communities (Blignault et al., 2016; Kral & Schwab, 2012; Lopes et al., 2013). Implementing models that reflected the differences in the two worldviews, provided opportunities for growth, development and a sense of belonging in the world for adolescents and their communities. One model noted how the beliefs, attitudes and thoughts held by non-Indigenous education professionals and the Western learner-centred curriculum impacted upon the Indigenous adolescent and the development of their individual identity. Practices were reviewed to make them more holistic in nature to recognise culture as a part of the adolescents' identity (LeBlanc, 2012).

Models that are contextually designed

All papers presented models that were designed or modified for the local context in which they were situated. In each of these cases local people, families and practitioners unique to the context were drawn upon in various levels to provide governance, create, support and implement the model. Most papers drew on local expertise and elder knowledge to inform and provide governance, decision making in planning and implementation, imparting cultural knowledge and or providing role model support. In two models that had been operating for five or more years in their communities, this served as providing strong heritage, collaboration, relationship building, employment opportunities and realistic understandings of the needs in communities (Shaw, 2010; Warlpiri Youth Development Aboriginal Corporation, 2016). Papers showed how a contextually relevant approach to the model affords links for the adolescent to the wider community and beyond resulting in increased access to role models, employment options and the passing on of cultural knowledge (Blignault et al., 2016; Kral, 2010). Other models connected the adolescent with local community health and wellbeing supports. A model designed within the community was able to utilise and link an adolescent to care within the local context as well as link with future job opportunities.

Models that foster relationships

An emphasis upon fostering relationships was another common attribute across papers. The need to spend time building meaningful relationships between an adult and adolescent was clear. The literature showed that through mentorship by an elder or adult that had a specific skill the adolescent learned skills such as conversation, confidence and work readiness (Kral, 2010; Wilson & Stemp, 2010). The power imbalance found in traditional teacher-student relationships was reduced and a safe space to encourage learning through conversation and trial and error was built through mentoring and role model type relationships (Barrett & Baker, 2012; Wilson &

Stemp, 2010). This was best established in natural environments such as gardening and film production where the teacher was not seen as an authority figure but rather someone conversationally teaching and guiding on a subject (Kral & Schwab, 2012; Wilson & Stemp, 2010).

Trusting relationships take time to build. The high turnover of staff within Indigenous community youth programs and educational facilities has a negative impact upon building trusting relationships (Lopes et al. 2013). In the case study of the Juvenile justice centre in the paper by Barrett and Baker (2012), rapport with the music teacher was what sustained the participants through the challenging art of learning a new activity. Success for the participant who had a history of poor success at learning was achieved in a supported and scaffolded, respectful and boundary filled environment. In the models that involved community members from the local context, people of all ages were involved in the planning and implementation of activities. This approach afforded natural opportunities to build rapport between adolescents and peers, or adolescent and adults which created meaningful or role model type relationships that extended beyond the model into the wider community (Blignault et al., 2016; Conrad, 2015).

Models that consider their programming: teaching and learning strategies

All papers considered the teaching and learning strategies and seven described models with a pedagogy that was transdisciplinary in nature. In these models, real world experiences were the foundation of the program as opposed to the teaching of a specific discipline such as literacy, numeracy or science. It was through these real-world experiences that the learning of specific disciplines occurred alongside relationship and mentoring. Learner-centred education was featured as adolescent needs were central to the design of programs and pathways. Two papers showcased social enterprise as a tool that created business, work readiness skills and relationship and cultural values of the local context that were naturally embedded into the program (Kral, 2010; Kral & Schwab, 2012; Wilson & Stemp, 2010). Internships or training pathways were other features in four papers where the models linked an adolescent with the wider community and beyond. Three papers described holistic pedagogies as the focus of the models where specific disciplines were taught and internships provided the real-world experience. Community and health practitioners were involved in supporting student needs through regular ongoing meetings to ensure support for adolescents who displayed multiple risky behaviours (Keddie, 2014; Shaw, 2010). Specific teaching strategies across all models were described as effective because of the strong relationships between teacher and student that were built through mentoring, respect and conversation.

Models that have holistic outcomes

Traditionally, schools measure aptitude across literacy and numeracy development with social and emotional wellbeing (SEWB) and lifeskills (here referred to as holistic) outcomes not measured. All papers in this review showed outcomes that considered the needs of the *"whole person"* through the needs of an adolescent. They recognised these skills were a key need for adolescents displaying multiple risky behaviours and part of the complex solution to meet those needs. Real world experiences drove the nature of the teaching and learning, and it was through these programs that holistic outcomes were gained. These observable but not necessarily measurable skills included communication skills, confidence, a sense of responsibility, social skills, identity building, resilience and the adolescent seeing themselves as a learner capable of success. In the wetlands project for instance, (Wilson & Stemp, 2010), students gained confidence, purpose and skills that they could not implement at the start of the project. In the paper, describing the juvenile justice program (Barrett & Baker, 2012), the confidence adolescents gained while interacting with adults in meaningful activities was seen by the very fact they learned the new skill of playing an instrument.

Figure 3 is an example of how the attributes work together within an alternate model of education. Each of the five examples show how cultural connectedness and awareness, being contextually designed, fostering relationships and considering the programming, teaching and learning strategies are one part or many parts of each of the five examples. The outputs are the holistic outcomes that were gained by adolescents throughout their engagement with the models.
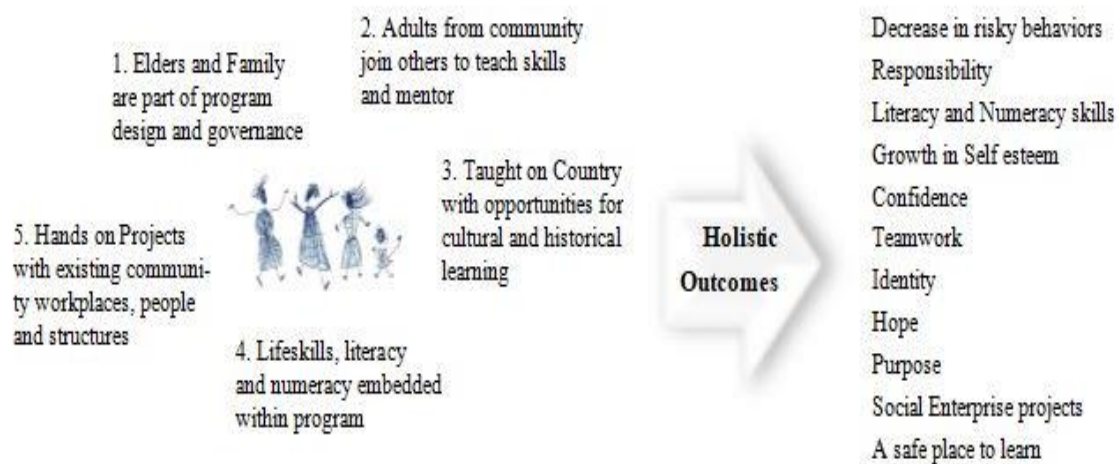
Figure 3: *Example of attributes working together within a model*

Discussion

Outcomes from implementation of alternate community-based models

An alternate model developed within a local community with its elders, families and youth is positioned to meet the many and varied holistic needs of its adolescents through providing teaching and learning opportunities that fit the learner, their culture and the context. This is of importance in remote Indigenous communities across Australia where there are diverse populations with many cultures and contexts that have similar but different needs, requiring similar principles and applications that are context specific (Kumar, 2018; Lopes et al., 2013). Remote communities are geographically diverse and kilometres from urban practitioners and government decision making. There are human and physical resources unique to individual communities that can position learner-centred solutions around the individual adolescent unlike mainstream secondary education programs delivering education from the dominant worldview and in many cases outside of the adolescents' home location. When a community has a sense of ownership, the model is more readily embraced by them and fits within an Indigenous worldview (Mander & Fieldhouse, 2009). The institutional barriers and power imbalances found in mainstream education are reduced for adolescents, and systemic barriers and personal needs can be catered for as they are locally understood.

Adolescents who are disengaged from school do not always have positive perceptions of the education system, therefore building and maintaining relationships within the local context enables trusting relationships to form. Trusting relationships afford the adolescent space to feel safe to try new things and opportunities to learn through trial and error and hands on activities. Flexible timings throughout the day create a sense of belonging and a platform for adolescents to learn skills and build hope and purpose for the future. Learning is an intentionally natural occurring experience taking place in the real world (Kral, 2010). When locations for learning are varied within the community such as indoors and outdoors, community hall and library, adolescents have a sense of control over their learning environments and the learning content within which they engage (Kral, 2010; Kral & Schwab, 2012; Wilson & Stemp, 2010). Having a sense

of control supports safety and security, and thus promotes a foundation for readiness of learning. The adolescent learns through the real-world experiences offered organically, by people they know and trust, in familiar contexts to grow in cultural awareness, relationships, identity, confidence and lifeskills to develop their skills and attitudes as they grow into adulthood. Social emotional outcomes are not the goal of an alternate model but become the platform from where empowerment develops to enable the learning of specific disciplines such as improved literacy, numeracy, creativity through art, music and media and scientific knowledge (Barrett & Baker, 2012; Blignault et al., 2016; Conrad, 2015). The five attributes identified in this review that enable an alternate model of education are: 1) Ensuring cultural connectedness and awareness; 2) Being contextually designed; 3) Fostering relationships with peers and adults; 4) Considering programming: Teaching and learning strategies; and 5) Delivering holistic outcomes. To consider the five attributes in isolation diminishes how they work together to enable an adolescent to access opportunities to meet their developmental needs.

Quantity and nature of papers: the "Emerging" Practices

Findings show the evidence base of alternate models of education for remote Indigenous adolescents is a limited and relatively new field of research. Papers that reported *"emerging"* practices and intervention studies were predominantly found across the database and grey literature searches. It is also important to note that other examples of *"emerging"* practices were rejected as they did not meet the inclusion criteria for this review but they do show innovative examples of models with attributes consistent to findings (Motroni, 2007; Orlando & Mohamed, 2016; Save the Children Australia, 2016). These models may be new in operation, show limited data or evidence of implementation, were based on *"word of mouth"* or are short-term delivery in nature. *"Emerging"* practices or interventions that do not have a strong evidence base like *"promising"* practices or measurement studies, show innovative, real-world solutions with examples of the attributes found in this review that enable the model to work in their context. *"Best"* practice examples of research can take years to produce meaningful results, whereas for practitioners the need is immediate, it is vital to include the innovative models as they consider current, complex and varied solutions across a wide range of contexts (Canadian Homelessness Research Network, 2013; Hoover, 2018). There is a need for the innovative and *"emerging"* models appearing in grey literature to be evaluated against a consistent framework.

The complexities and nuances of the individual remote Indigenous community context and the individual adolescents themselves contribute and influence the formation and delivery of an alternate model of education. Currently there is no record or accountability for consistency to identify the goals of a model, whether the implementation meets the aims of the model or what type is successful in advancing developmental goals for adolescents' maturation into adulthood. Knowing attributes that contribute to successes of alternate models provides Indigenous communities clarity for applicability in the development and implementation of their own alternate approaches. Knight et al. (2017) are developing a framework that sits around seven indicators or factors known to support Australian Indigenous adolescents who engage in risky behaviours. The seven indicators are: 1) engagement, 2) case management, 3) diversionary activities, 4) personal development, identity and team identity, 5) training and skill development, 6) healing through culture and country and 7) aftercare support (Knight, Maple, Shakeshaft, Shakeshaft, & Pearce, 2018; Munro, Shakeshaft, & Clifford, 2018). The five attributes that enable an alternate model of education found in this review fit within these indicators. This lens could prove helpful for Indigenous communities in matching the attributes of their alternate models of education.

Limitations

The authors acknowledge there are limitations to the information found in this review. It is impossible to screen all models as there are many examples of *"emerging"* practices within the grey literature, and it is likely that some of these have been missed despite extensive searching and use of expert networks. In addition, there is a lack of information about the duration of a model's operation or funding sources for each of the models. Short funding cycles is a significant factor in the success and longevity of alternate models of education. Further research about the nature and quality of the innovative examples of alternate models of education would be useful information for practitioners working with adolescents disengaged from mainstream education. This would go some way to ensuring implementation of models is consistent with an evidence base of *"best"* practice and or measurement studies that translate research into practice.

Conclusion

Thirteen models were identified in this review; all of which are identified as interventions or *"emerging"* and *"promising"* practices. Further evidence is needed to determine models that have moved beyond descriptive research to provide examples of best practice or measurement studies. However, the *"emerging"* practices should not be rejected as they provide examples of innovative real-world practice that can be used by practitioners in similar but different contexts. The findings revealed five consistent attributes that enable an alternate model of education to facilitate experiences that allow adolescents to learn new knowledge and skills, learn to manage emotions and relationships and grow in attitudes and abilities they need within their communities. The five attributes ensure that an alternate model: 1) has connection to the culture of the adolescent and community, 2) is contextually designed and relevant, 3) fosters relationships with peers and adults, 4) centralises appropriate teaching and learning strategies and 5) meets the holistic needs of the adolescent. It is vital for communities to be strategically and heavily involved from the onset of an educational program to ensure empowerment, cultural connectedness, sustainability and solutions for the individual adolescent.

References

Barrett, M. S., & Baker, J. S. (2012). Developing learning identities in and through music: A case study of the outcomes of a music programme in an Australian juvenile detention centre. *International Journal of Music Education*, 30(3), 244-259. doi:10.1177/0255761411433721

Blignault, I., Haswell, M., & Pulver, L. J. (2016). The value of partnerships: lessons from a multi-site evaluation of a national social and emotional wellbeing program for Indigenous youth. *Australian and New Zealand Journal of Public Health*, 40(S1), S53-S58. doi:10.1111/1753-6405.12403

Braun, V., & Clarke, V. (2006). Using thematic analysis in Psychology. Qualitative Research in Psychology, 3(2), 77-01. doi:10.1191/1478088706qp063oa

Canadian Homelessness Research Network. (2013). What works and for whom? A hierarchy of evidence for promising practices research Part 1. Retrieved from Toronto: http://homelesshub.ca/sites/default/files/PPFramework_Part1.pdf

Churchill, R., Shaw, K., Godinho, S., Johnson, N. F., Keddie, A., Letts, W., ... Moss, J. (2016). *Teaching: Making a difference* 3rd ed. Melbourne, AUSTRALIA: Wiley.

Conrad, D. (2015). Education and Social Innovation: The Youth Uncensored Project--A Case Study of Youth Participatory Research and Cultural Democracy in Action. *Canadian Journal of Education,* 38(1), 1-25.

Department of Education and Training. (2016). Primary to secondary school transition: Enhancing transition support models and outcomes in Queensland's remote Indigenous contexts. Unpublished report of findings. Department of Education and Training.

Godin, K., Stapleton, J., Kirkpatrick, S. I., Hanning, R. M., & Leatherdale, S. T. (2015). Applying systematic review search methods to the grey literature: a case study examining guidelines for school-based breakfast programs in Canada. *Syst Rev, 4*, 138. doi:10.1186/s13643-015-0125-0

Hayes, D. (2011a). Reconnecting marginalised youth to learning. In D. Bottrell & S. Goodwin (Eds.), *Schools, Communities and Social Inclusion.* Victoria, Australia: Palgrave Macmillan.

Hayes, D. (2011b). Glebe Pathways Project: Evaluation of program design and outcomes October 2009 - 2011. Retrieved from University of Sydney: https://www.researchgate.net/publication/308972984_Glebe_Pathways_Project_Evaluation_of_program_design_and_outcomes_October_2009_-_April_2011

Hogarth, M. (2017). The Power of Words: Bias and Assumptions in the Aboriginal and Torres Strait Islander Education Action Plan. *The Australian Journal of Indigenous Education, 46*(01), 44-53. doi:10.1017/jie.2016.29

Hoover, S. A. (2018). When We Know Better, We Don't Always Do Better: Facilitating the Research to Practice and Policy Gap in School Mental Health. *School Mental Health, 10*(2), 190-198. doi:10.1007/s12310-018-9271-6

Inter-agency Support Group on Indigenous Peoples' Issues. (2014). Education and Indigenous peoples: priorities for Inclusive education. Retrieved from http://www.un.org/en/ga/president/68/pdf/wcip/IASG%20Thematic%20Paper_%20Education%20-%20rev1.pdf

Keddie, A. (2011). 'Much more than a basic education': supporting self-determination and cultural integrity in a non-traditional school for Indigenous girls. *International Journal of Inclusive Education, 15*(9), 1001-1016. doi:10.1080/13603110903490713

Keddie, A. (2014). Indigenous representation and alternative schooling: prioritising an epistemology of relationality. *International Journal of Inclusive Education, 18*(1), 55-71. doi:10.1080/13603116.2012.756949

Knight, A., Maple, M., Shakeshaft, A., Shakeshaft, B., & Pearce, T. (2018). Improving the evidence base for services working with youth at-risk of involvement in the criminal justice system: developing a standardised program approach. *Health Justice, 6*(1), 8. doi:10.1186/s40352-018-0066-5

Knight, A., Shakeshaft, A., Havard, A., Maple, M., Foley, C., & Shakeshaft, B. (2017). The quality and effectiveness of interventions that target multiple risk factors among young people: a systematic review. *Australian and New Zealand Journal of Public Health, 41*(1), 54-60. doi:10.1111/1753-6405.12573

Kral, I. (2010). Generational change, learning and remote Australian Indigenous youth. Retrieved from Australian National University: https://caepr.cass.anu.edu.au/research/publications/generational-change-learning-and-remote-australian-indigenous-youth

Kral, I., & Schwab, R. G. J. (2012). *Learning Spaces: Youth, literacy and new media in remote Indigenous Australia*. Canberra: The Australian National University.

Kumar, S. (2018). Lesson 3 Culture and Education. Retrieved from https://sol.du.ac.in/mod/book/view.php?id=1449&chapterid=1335

LeBlanc, D. (2012). Public Policy and Governance Review, 3(1). Retrieved from https://ppgr.files.wordpress.com/2012/01/ppgr-full-text-vol3iss12.pdf

Lopes, J., Flouris, A., & Lindeman, M. A. (2013). Youth development programs in Central Australian Aboriginal communities a review of the literature.pdf. *Youth Studies Australia*, 32(1).

Mander, D., & Fieldhouse, L. (2009). Reflections on implementing an education support programme for Aboriginal and Torres Strait Islander Secondary school students in a non-government education sector: What did we learn and what do we know? *The Australian Community Psychologist*, 21(1), 84 - 101.

McCalman, J., Bainbridge, R., Russo, S., Rutherford, K., Tsey, K., Wenitong, M., Shakeshaft, A., Doran, C., & Jacups, S. (2016). Psycho-social resilience, vulnerability and suicide prevention: impact evaluation of a mentoring approach to modify suicide risk for remote Indigenous Australian students at boarding school. *BMC Public Health,* 16, 98. doi:10.1186/s12889-016-2762-1

Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & The Prisma Group. (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *PLOS Medicine*, 6(7), e1000097. doi:10.1371/journal.pmed.1000097

Motroni, S. (2007). The Winston Churchill Memorial Trust Churchill Fellowship 2006. Retrieved from http://nswcfa.churchilltrust.com.au/media/fellows/Motroni_Sheona_2006.pdf

Munro, A., Shakeshaft, A., & Clifford, A. (2018). Correction to: The development of a healing model of care for an Indigenous drug and alcohol residential rehabilitation service: a community-based participatory research approach. *Health Justice*, 6(1), 5. doi:10.1186/s40352-018-0061-x

Orlando, J., & Mohamed, M. (2016). EVALUATION_OF_THE_MOBILE_YOUTH_VAN_CLAYMORE_PROJECT_IN_NSW_.pdf. Retrieved from: https://www.researchgate.net/publication/322076808_EVALUATION_OF_THE_MOBILE_YOUTH_VAN_CLAYMORE_PROJECT_IN_NSW

Redman-MacLaren, M., Benveniste, T., McCalman, J., Rutherford, K., Britton, A., Langham, E., … Bainbridge, R. (2019). Through the eyes of students: The satisfaction of remote Indigenous boarding students' with a transition support service in Queensland, Australia. *The Australian Journal of Indigenous Education*, 12(1).

Sanson-Fisher, R. W., Campbell, E. M., Perkins, J. J., Blunden, S. V., & Davis, B. B. (2006). Indigenous health research: a critical review of outputs over time. *Medical Journal of Australia,* 184(10), 502 - 505.

Save the Children Australia. (2016). 2016 Annual Report Save the Children. Retrieved from http://www.savethechildren.org.au/__data/assets/pdf_file/0019/224470/2016-Annual-Report.pdf

Shaw, G. (2010). Support and advocacy for Indigenous young people on a regular basis: The CAYLUS model. *Dialogue*, 29(1).

Shay, M., & Heck, D. (2015). Alternative Education Engaging Indigenous Young People: Flexi Schooling in Queensland. *Australian Journal of Indigenous Education*, 44(1), 37-47. doi:10.1017/jie.2015.8

United Nations. (2008). United Nations declaration on the rights of Indigenous peoples. Retrieved from http://www.un.org/esa/socdev/unpfii/documents/DRIPS_en.pdf

United Nations. (2017). Sustainable Development Goals. Retrieved from http://www.un.org/sustainabledevelopment/education

Warlpiri Youth Development Aboriginal Corporation. (2016). WYDAC Overview. Retrieved from http://wydac.org.au/home/resources/

WHO. (2014). Health for the World's adolescence: A second chance in the second decade. Retrieved from decade/section2/page1/recognizing-adolescence.html

Wilson, K., & Stemp, K. (2010). Science education in a 'classroom without walls': Connecting young people via place. *Teaching Science, 56*(1).

Wilson, K., Stemp, K., & McGinty, S. (2011). Re-engaging young people with education and training What are the alternatives? *Youth Studies Australia, 30*(4), 32 - 39.