Indigenous sign languages: a literature review

Presented by Curtin University

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Introduction

The Aboriginal and Torres Strait Islander people of Australia have the oldest living cultures in the world. One widely underappreciated aspect of this culture is the existence and use of traditional sign languages, a linguistic feature of Indigenous culture believed to have existed prior to European contact in the late 18th century (Butcher, 2015). There are several theories in relation to how the use of sign languages or ‘hand talk’ came to be. According to James et al., multilingualism may have been stimulated as a result of the ecologically and economically interdependent nature of the locality-based cultures (2020, 217). This is said to have provided ideal conditions for ‘bimodal–bilingualism’, a common practice in Australian Indigenous societies when members use both spoken and signed languages to communicate (James, 2019). Although still present, Indigenous sign languages, much like many Indigenous spoken languages, have been decimated, endangered, or altogether lost due to colonisation (D. Power, 2013). Yet, we recognise the work that Indigenous communities are doing to preserve and maintain their languages, as seen in the sign language projects addressed in this review.

This paper seeks to examine existing literature pertaining to the early colonial understandings of Indigenous sign languages, the contexts in which they have been used and shared, and the ways they can be an effective tool in present day mainstream environments. Within the exploration of Colonial observations of Indigenous sign languages, full quotations used in these colonial representations may present as problematic and culturally inappropriate. This retrospection forms only a small part of the discussion aimed at contextualising mainstream understanding and acceptance of Indigenous sign languages. It is our understanding that Indigenous sign languages belong to their respective Indigenous communities and it is the members of those communities who should lead the discussion in relation to understanding these languages. Finally, the paper considers two recent attempts to record and preserve Indigenous sign languages – *The Illustrated Handbook of Yolŋu Sign Language of North East Arnhem Land* and the Iltyem-Iltyem online dictionary.

The context of Indigenous sign languages

There are several types of sign language, distinguishable by the motivation behind their beginnings, the demographic that utilises them, and their relationship, if any, with spoken languages. Due to limited space, this literature review will only focus on two – primary and alternate – sign language systems.

Primary sign language is that which is predominantly used by those who have no access to spoken language, such as those who are Deaf (Kendon 2015, p. 6). Primary sign languages develop as a means for Deaf people to communicate and, in doing so, replace the spoken language. That is, the use of the term primary signifies the sign language in use is the vernacular of a group of people who do not use a spoken language with each other. Rather, they adopt a pure sign language, which is classified as “independent of the spoken language of the surrounding hearing communities” (Slegers 2010, 5.1). Examples include Auslan, British Sign Language (BSL) and American Sign Language (ASL).

In contrast, alternate sign language systems, tend to exist as an additional facet to a correlating spoken language. Used by both hearing and Deaf people, this type of sign language may share a similar syntax and structure to the corresponding spoken language (Adone & Maypilama, 2015; Kendon, 2015). However, there are exceptions to the rule, as is the case with Yolŋu Sign Language (YSL) which, despite being an alternate sign language, does not have a connecting spoken language, although sign and speech may still be used simultaneously (Butcher, 2015). In addition, most users of alternate sign languages will likely have had exposure to this language from birth but will also have had access to spoken language (Adone et al. 2015). Alternate sign languages have historically been viewed as 'half-way' languages, suggesting the languages do not need to be actively promoted (Bauer, 2014; Skutnabb-Kangas et al., 1995; Nyst, 2007).

Indigenous sign languages are predominantly classified as alternate sign languages rather than primary signs (Kendon, 2015). They have been defined as structurally elaborate due to their diverse use of contexts and intricate constructions and boast a vocabulary of more than 1000 words (Adone et al. 2015), such as YSL from Arnhem Land. Alternate sign languages are also used by other Indigenous groups such as the Indigenous peoples of the Americas. They may also be seen in non-Indigenous contexts where speech is considered unacceptable, such as within religious orders that embrace monastic silence as part of their worship (Kendon 2015).

Research into alternate sign languages has been limited in comparison with other sign languages and spoken languages (Kendon, 2015). The study of sign language was initially confined to sign language systems used for the Deaf, with other sign systems used in Australia presumed to be of limited interest by researchers, given their development occurred among speaker–hearers (Kendon 2021). As such, Indigenous sign languages have typically remained excluded from wider discourse and are notably absent from language policies and institutions (Sebba & Turner, 2021). This historical repudiation of Indigenous sign languages can be attributed to linguistic prejudice; a prejudice that has also denied many Aboriginals their traditional spoken languages (Skutnabb-Kangas et al., 1995; Slegers, 2010). The impact of colonisation, which continues to dispossess Indigenous peoples of their land, language, and culture, has further fuelled their demise (Bauer, 2014; Fesl, 1988, as cited in Skutnabb-Kangas et al., 1995, p. 246).

As a result of this narrow vein in which Indigenous sign languages have been examined, attempts at understanding Indigenous sign languages has had to be drawn from the research pertaining to sign languages for the Deaf from Western cultures. However, research is starting to emerge into Indigenous sign languages in their own right, in particular regarding their multitude of cultural and pragmatic purposes and their use within traditional communities. For example, there is a high correlation between the use of sign languages in Indigenous communities in culturally significant events such as speech taboos, initiation ceremonies and mourning; however, their use is not confined to these contexts (Kendon, 2015). The text below outlines the highly representative relationship of signing as a spiritual connection to culture:

> *Arelhe ampwe mape [the old women], those old people still iltyeme-iltyemele angkerlte-aneme, they still talk with their hands. And sometimes they take it for a long time by talking with hands. There's a real, real, real, real gentle feeling in that*

> *when you're talking with hands, like that person would be just whispering if they were using their voice. People stop talking out loud in sadness time, because they don't want to make the same words or sound… that they used to when those loved ones were still alive. My mothers used to talk like that all the time* (Turner & McDonald 2010).

In addition, Indigenous sign languages allow for different forms of communication to take place based on the situation or circumstances at the time (Kendon 2015). For example, other social aspects of their use can be indicative of the continual negotiation within Aboriginal relationships and the need for a tentative initial approach; the objective and neutral character of the modality is particularly useful where kinship has not been established (Kendon 2015). Community members may also use sign as a method of improving other modes of communication; for example, to provide contextual emphasis or communicate privately where the signer may be disadvantaged by public expression. This may be due to social convention or in more practical situations such as during hunting to avoid startling the prey or when travelling in a vehicle and needing to give the driver directions as not to distract the driver (Green & Wilkins 2014). Other practicalities may include where reduced shared speech exists between parties, for example, when trading with a neighbouring Indigenous group, or it may be used in conjunction with spoken language to assist with communication over a distance (Green & Wilkins 2014). Lastly, sign languages may also be deemed necessary as a matter of respecting ancestral spirits. From a cultural perspective, sign languages may deter ancestral spirits listening in to private conversations (James et al 2020); therefore signing "not only saves unnecessary speech but has the added advantage that evil spirits cannot hear it," (D. Power 2013).

It is important, however, to note that each language community will have their own social norms. To therefore expand on the cultural rules in relation to Indigenous sign languages and the approved contexts for their use, or cultural limitations around certain signs, it is necessary to engage in a consultation with Elders or leaders of the relevant language group. According to D. Power:

> *The Warlpiri people in Aboriginal Australia treat their sign language and spoken language as equally valid, saying anything in one that they can say in the other; cultural rules indicate when it is appropriate to use each and who should do so* (D. Power 2013).

Similarly, in Yolŋu culture:

> *...shared cultural and social exchange practices have enhanced linguistic diffusion in those Yolŋu languages around the edges of the Yolŋu language boundaries. People regularly intermarry across these language boundaries. Linguistically broad and complex inter-clan marriage (connubial) exchanges continue to be an important arena for shared sign languages* (James et al. 2020, p. 204).

In an article written by E.O.G Scott, Jaralde men were observed using sign language as a means of communication with neighbouring tribes, namely those from the Yorke Peninsula and Upper Murray, and described these as "steps of moves calculated to evoke a response from another" (1941). This account supports Kendon's claim that geographically close

Indigenous communities may share contact signs that enable necessary communication around mutual interests such as trade-related signs (Kendon 2015).

Before moving on to consider some recent Indigenous sign language preservation efforts, the next section of the paper reports findings of a media analysis. This analysis of media representations, going back to the colonial era demonstrates shifting cultural understandings of indigenous sign languages in Australia.

Early colonial understandings of Indigenous sign languages

In Australia, early colonial media representations for Indigenous sign language were vastly different to the media representation seen today. Initially in the 19th century, representations were limited to settlers' unconscious notations of gestures made by Indigenous peoples within early intercultural interactions. However, post-WW1 media demonstrated significant strides in the European Australian understanding of the Indigenous use of 'gesturing' to be a prevailing form of communication and was marked by a curiosity to further understand its purpose. This increase of representation in media appears to have dissipated within post-WW2 society, coinciding with the assimilation policies instituted by the Menzies Government in 1951. A resurgence can be noted following the establishment of the Aboriginal and Torres Strait Islander Commission (1990-2005), where Indigenous issues had greater representation. The 21st century has seen not only increased representation of Indigenous issues and traditional sign languages, but Indigenous-led representation which focuses on the Indigenous perspective and experience rather than that of outsider observations. This can be clearly observed when taking a chronological approach.

An article, published in 1839, relates the use of gestures by Indigenous men as a means of engaging with English speakers with no recognition of these gestures as language nor that they existed as a bimodal form of communication (The Sydney Standard and Colonial Advocate 1839). The gestures were noted as pointing, holding up fingers and imitation and the article indicates the gestures were taking place in conjunction with traditional spoken language. While there was an attempt on part of the European Australians to decipher the traditional language, the gestures were not viewed as a legitimate form of Indigenous communication and were merely regarded as an attempt to bridge a language barrier. They were certainly not considered to be a language form. However, from 1874 onwards, reports emerged about sign language in some isolated Indigenous communities (Kendon 2015).

The first known report was from Gason and Issacs who observed the Dieri peoples in South Australia signing:

> *Beside the spoken language, they have a copious one of signs - all animals, native man or women, the heavens, earth, walking, riding, jumping flying, swimming, eating, drinking and hundreds of other objects or actions, have each their paticular (sic) sign, so that a conversation may be sustained without the utterance of a single word* (Gason & Isaacs 1874).

In 1897 W.E Roth provided detailed descriptions of signs from Indigenous peoples in North West Central Queensland, with reference to observations made by Captain Sturt in the late 1840s to early 1850s:

> *The reported use of 'masonic' signs attributed to the blacks by Captain Sturt, who had been in close proximity to these districts some half a century ago, immediately flashed across my mind, and the possibility of such signs being idea-grams, the actual expressions of ideas led me on step by step to making a study of what I subsequently discovered to be an actual well-defined sign-language, extending throughout the entire North-West-Central districts of Queensland. It may be interesting to note that I have during the past few months discovered traces of a gesture-language, with some of the idea-grams expressed by identical signs, in the coastal district around Rockhampton* (Roth et al. 1897).

Reports from Spence and Gillen in 1899 offered further insight to how Indigenous sign languages are embedded in kinship relations and can effectively feature in place of spoken language:

> *Not seldom, when a party of women are in camp, there will be almost perfect silence and yet a brisk conversation is all the while being conducted on their fingers or rather with their hands and arms, as many of the signs are made byputting the hands, or perhaps the elbows, in varying positions (Spencer & Gillen 1899).*

The representations seen in the early 20th century demonstrated a significant jump in the understanding of gestures to be a form of sign language. Recognition in the 1930s and early 1940s media can be drawn from its alignment with sign languages used by the Deaf (The Courier-Mail 1938) and acknowledgment by those who had maintained a position of power (The Evening News 1934). J. T. Beckett, a former Northern Territory Inspector of Aboriginals (1911-1917), is quoted as noting Indigenous sign language to be "one of the most intelligently devised means of communication yet invented by human beings" and further comments on its adaptive continuity and longevity (The Evening News,1934). An article by E. O. G Scott, considered to be one of the first people to actively research Indigenous sign, shares a willingness to understand how the language is used, its bimodality, and why it faced extinction (Scott, 1941). Discussions which include characteristics of sign language such as space, location and shape also take place within this period (The Courier-Mail, 1938). A major focal point from this era is the development in understanding about the use of Indigenous sign language and its cultural connotations.

The article by E.O.G Scott, who was the director of the Queen Victoria Museum and Art Gallery in Tasmania between 1938 and 1942 (Hamilton, 2012), specifically addressed the presence of sign language among the Jaralde peoples in South Australia. In particular, he refers to an account from Mr A. M Berndt, Hon. Assistant in Ethnology at the South Australian Museum, who observed Albert Karloan, a 75-year-old Jaralde man, using the sign language of his people with "excitement and gratification" (Scott, 1941). However, the article made several observations in relation to the status of the visual language within the community, which may also be representative of struggles faced by others in relation to their own sign language status.

Firstly, it was identified that Jaralde sign language was severely endangered due to a diminishing population; secondly, the decreased population had limited intergenerational transmission and was "preserved only in the memory of old people" (Scott, 1941). Signs were described as systematic, their outlines distinctly visually representing the objects or aspects of actions. Adaptability was noted, with signs clearly adapted in relation to the proximity of those signing or their conventions and variably accompanied by speech according to the cultural expectations. Further discussion surrounding the nature of the language suggested that the impending extinction reduced the capacity to accurately measure its true complexity (Scott, 1941). A contemporary argument is that Indigenous sign languages that demonstrate reduced complexity only do so due to their declining status and endangerment (Adone and Maypilama 2015).

Despite this increased awareness by the European colonisers of the existence of Indigenous sign languages in the early part of the 20th century, the sign languages remained largely unrecognised as being unique and complex standalone languages. Indeed, many continued to view them as being "akin to pantomime or pictorial gestures" (Slegers, 2010). However, in the 1960s, some of the more prominent sign languages of the world were gradually becoming better understood and were starting to garner acknowledgement and respect as authentic, natural languages (Sebba & Turner, 2021). For example, the American linguist William Stoke argued that the characteristics inherent to spoken languages also exist within sign languages:

> *Human use of faces, hands, arms and other body parts to signal is of course universal, found not only in all cultures but akin also to behaviour observed in other species. When organised into word-forming and sentence-forming systems, however, as happens in the natural languages of deaf people, these bodily expressed signals - and especially syntactic combinations of them - become linguistic signs belonging to a unique grammatical-lexical system* (Stoke 1980, 366).

The early 21st century media engages with conversations around the lack of bilingual education for Aboriginal children, with the curriculum being in English preventing necessary understanding. The discussion around this makes comparison to deaf children facing similar difficulties and highlights the problematic nature of catching up where inadequate access to information is present (Minwalla & Times News Network, 2002). The issue of Indigenous education exists on the periphery of this article; however, when we regard the importance of Indigenous sign language as an indispensable feature of bimodal communication much like sign language may be for the Deaf, the complexities become magnified (Trounson, 2017). The peripheral nature of the media representation, which suggested that Indigenous students who did not have Standard Australian English as a first language were not at the same distinct disadvantage as deaf students, may have been indicative of a reluctance to fully acknowledge the extent of harm caused by the exclusion of traditional Indigenous language from the Australian curriculum.

Current media representation of Indigenous sign language has had the most substantial changes. Rather than the representation occurring based on outsider observations, the representation comes from Indigenous people themselves; observational experiences and academic overviews have been usurped by those with lived experience of Indigenous sign language due to ancestry and consequential cultural immersion. The result of this is

increased distinctions made between traditional sign languages and sign language for the Deaf. Namely, how traditional sign language exists in conjunction with traditional languages as a bimodal form of cultural communication in contrast with modern sign that exists as a singular modality to replace spoken languages such as Auslan, British Sign Language or American Sign Language (Trounson, 2017). Additionally, there is growing awareness of how the use of traditional sign language reflects Indigenous attitudes towards disabilities in contrast with the bimodal nature of traditional languages presenting minimal barriers for deaf members in their communities. The main barriers for Indigenous deaf people result from their choice of sign inhibiting access to either mainstream society or their culture.

Also present in modern media representation is increased awareness of Indigenous sign language within mainstream Australia, and the promotion of preservation, utilisation, and rejuvenation. Examples include showcasing Iltyem-Iltyem sign language from Anmatyer lands at language awareness expos (Shine 2018), to the extensive research and documentation of Yolŋu sign language (Power 2019), and the push for reengaging Indigenous youth with their elders and traditional languages (Thomas et al. 2022). While the latter focuses on spoken language, the current media representation demonstrates space to develop and incorporate similar programs involving Indigenous sign languages.

The media representation of Indigenous sign languages over almost 200 years aptly demonstrates the metamorphosis to understanding the context of Indigenous sign languages, their purpose from a cultural perspective, as well as the integral role of culture in making sense of the language. The shift from observational to lived experience representation demonstrates growing awareness of the need for Indigenous self-representation and right to their language. It is also visible that, unbeknownst to early European Australians, Indigenous sign language was used to communicate with them as much as it was used to communicate and negotiate with their Indigenous neighbours. Thus, the most recent increase in media representation coincides with a greater mainstream awareness and push for preservation of remaining traditional sign languages and, as such, the enactment of these efforts.

Effective tools in the present-day mainstream environment

The presentation and active promotion of Indigenous sign languages can also offer significant benefits in relation to participation in mainstream institutions, such as those dealing with education, health, and legal matters. Indigenous people may find themselves ostracised from these institutions due to linguicism. For example, the failure to teach bimodal–bilingual students, within Indigenous communities, in their first language reduces their access to education. Indeed, this presumption that their first language is harmful, and disposable, inherently ignores their linguistic human rights (Skutnabb-Kangas 2012). It has been shown through research by the Northern Territory Aboriginal Interpreters Service and Royal Darwin Hospital culturally safe communication utilised within health institutions can improve health outcomes for Indigenous people (Kerrigan et al. 2021). Participants in this research were observed to be empowered when assisted to communicate their health matters in their first language as opposed to English. Another initiative known as Lyfe

Languages (http://www.lyfelanguages.com) demonstrates the impact of greater access to health information on health outcomes. The Lyfe languages seeks to remove communication barriers through the translation of medical information into the languages spoken by Aboriginal and Torres Strait Islander communities. It aims to “bridge gaps in health information through the creation of a Universal Translator that connects ancient wisdom, old and new knowledge, and cutting-edge technology”. The outcomes of such language continuation initiatives support the potential of Indigenous sign languages to be effective within mainstream health institutions.

Another factor requiring consideration in relation to the role of Indigenous sign languages is the high incidence of hearing loss among Indigenous populations due to increased susceptibility of an ear infection called otitis media (Butcher 2015). The pervasive nature of the infection and disproportionate ratio of hearing loss within Indigenous communities increases the value of Indigenous sign languages, the bimodal-bilingual languages inherently inclusive. In absence of alternate languages, the resulting intersectionality of disability and linguistic exclusion leaves many Indigenous people in a vulnerable position. For example, according to Trounson (2017), research shows that many incarcerated Indigenous people have some form of hearing loss. Therefore, the active promotion of Indigenous sign languages and their incorporation as a recognised mode of communication within mainstream institutions such as prisons can provide significantly superior access to support and information, such as that required to understand and navigate the legal system (Trouson 2017).

Indigenous sign languages preservation initiatives

The absence of active promotion of Indigenous sign languages and the consequences of exclusion highlight the need to educate people about the existence of these enduring sign languages (Shine et al. 2018). Language is an important aspect of Indigenous culture, and sign languages are considered to be part and parcel of identity in many Indigenous societies (James et al., 2020). Their active promotion will enable the younger generations to learn, use and teach future generations, effectively supporting the much needed continuity of the world’s oldest culture. Two such recent initiatives aimed at preserving Indigenous sign languages are *The Illustrated Handbook of Yolŋu Sign Language of North East Arnhem Land* and the Iltyem-Iltyem online dictionary.

The Illustrated Handbook of Yolŋu Sign Language of North East Arnhem Land

The term Yolŋu people has been used since the 1960s to describe the Indigenous custodians of North East Arnhem Land (Bentley James et al 2020). With a reach of approximately fifty thousand square kilometres, this linguistically diverse region consists of over a hundred unique cultural homelands and approximately sixty clans (James et al. 2020). Many Yolŋu people had been displaced from their land during colonisation, however, the early 1970s marked the return of many Yolŋu peoples to their traditional homelands to live in smaller traditional communities in the Greater Arnhem Land (Morphy 2008). This

return to Country rejected the larger settlement based in Yirrkala in favour of nurturing "their connection to their country and their ability to protect it from exploitation by others… (and) restored their ability to regulate their own social affairs, and to hold on to their young people" (Morphy 2008).

Skutnabb-Kangas et al. (1995) argue that "Language is a part of culture which can be regarded as capable of introducing the greatest degree of harmony into society, since it is essentially additive, rather than subtractive". As such, YSL, previously known as Murngin Sign Language, is reflective of the Yolŋu peoples' deeply spiritual relationship with their ancestral lands and their complex kinship systems; it has adapted to engage with the unique ways and culture of the Yolŋu people (James, 2019).

The Illustrated Handbook of Yolŋu Sign Language of North East Arnhem Land was conceived by the late Laurie Baymarrwaŋa, a Yan-nhaŋu woman of the Malarra clan, who spent her life advocating for intergenerational transmission of traditional language and cultural practices (*Illustrated Handbook of Yolŋu Sign Language*, 2020). Between 1993 and 2014 anthropologist and linguist Dr Bentley James worked with Baymarrwaŋa to learn and record endangered sign languages, initially Baymarrwaŋa's native Yan-nhaŋu Sign Language and then YSL for the making of language projects and resources that would help Yolŋu children learn and use their traditional language (James, 2021).

Together, Baymarrwaŋa and Dr James compiled schoolbooks, published a dictionary and an atlas, and "recorded every single aspect of Yan-nhangu life from fish traps to bag and canoe making" (J. Power 2019). Additionally, they created community-led initiatives such as a junior ranger program, the Crocodile Islands Rangers, a program that requires the young participants to know and use the signs as part of their role (Bradshaw 2021).

The Illustrated Handbook of Yolŋu Sign Language of North East Arnhem Land consists of photographs depicting five hundred more frequently used Yolŋu signs (out of a possible seventeen hundred signs) and their movements. The signs are organised by the comprehensive diverse elements relevant to Yolŋu life – life on Country (and all it entails), kinship and relationships, emotions, flora and fauna, time and season, culinary, and life as it is today, inclusive of technology and occupations (Kendon 2021). Along with the signs, the book explains to the reader how to use the book and the structures of the sign, and imparts significant cultural information about Yolŋu peoples and their Country. A *Learners' Guide* contains ten simple sentences with their sign corresponding sequence and a complete index of the signs in both English and the local spoken language Yolŋu-matha (Kendon 2021). The handbook has documented:

> *…bimodal metaphors, idioms and signs of the Yolŋu experience of kin and country… and details, illustrates and teaches the vocabulary, hand shapes and movements, structure and grammar of YSL, with captions and text in Yolŋu and in English* (James, 2019).

Baymarrwaŋa passed away in 2014 before the book could be completed. However, Dr James continued with the project and it was published in 2020. In line with Baymarrwaŋa's wishes that every Yolŋu child should know YSL, the book was distributed free to every local school, homeland and library (J. Power 2019). Dr James and the

community continue to work to make YSL more accessible to the wider population via an online platform (Bradshaw 2021).

Iltyem-Iltyem online dictionary

Supported by Indigenous Language Support, a government initiative, and the charity-funded Endangered Languages Documentations program, the Iltyem-Iltyem project is situated at the Batchelor Institute of Indigenous Tertiary Education. The Ityem-Iltyem website was designed as an online sign languages dictionary for Indigenous sign languages in Central Australia, such as those used by the Anmatyerr and Warlpiri people (Gawne 2015). The process and practices were created in consultation with local Elders and utilised mentoring relationships to foster stronger connections (Carew & Green 2015). Established with the needs of these communities in mind, it has been a joint initiative between those who sign and/or speak Indigenous languages and other professionals such as linguists and multimedia designers.

The initiative began with the intention to record multiple Arandic alternate sign languages; however, it has grown to include a variety of Indigenous sign languages (Green & Wilkins 2015). Arandic languages are Indigenous languages that have several languages or dialect clusters within Central Australia region. The initial pilot was launched in 2013 with sign languages from Anmatyerr, Ngaatjatjarra and Warlpiri regions being made available online (Gawne 2015). Other language groups have since participated in the project such as those from the Alyawarr and Kaytetye peoples; their contributions significantly expanding the scope of the website (Gawne 2015; Green & Wilkins 2015). Branched out to five spoken languages the dictionary collected several hundreds of videos for public viewing. As with the projects from North East Arnhem Land, this knowledge sits within the Elders who are passionate about passing on their languages and knowledge for the generations beyond.

Despite living in regions where digital technology and the internet is limited for many Aboriginal communities (Australian Digital Inclusion Index 2021), the project is seen to be an important element to promote widespread accessibility (Gawne 2015). Nevertheless, a concern with the project is that high levels of digital exclusion amongst the Indigenous populations could decrease the reach of the initiative. Despite the availability to link multimedia with computers being possible since the 1980s, it is only recently that more linguists have begun to utilise the resource (Thieberger 2011). However, whether or not the development of online resources is linked to increased presumptions of digital literacy, it remains essential to be mindful that studies have shown that, due to access and affordability, the digital inclusion for Indigenous people in remote areas is very low, with high dependency on mobile connectivity (Australian Digital Inclusion Index 2021).

As such, in order to maximise the success of such an initiative, rectifying Indigenous digital disadvantage is critical (Australian Digital Inclusion Index 2021). Those involved in the initiative factored in strategies to address the digital divide through listening to feedback on the needs of participants. The process of refining expectations assisted with addressing the digital divide between the researchers and local participants (Gawne 2015). However, more needs to be done in order to improve Indigenous access to online resources.

Conclusion

In reviewing the available literature on Indigenous sign languages, there is an overwhelming sadness for all that has been lost, and a frustration that steps to acknowledge, record, preserve and promote such cultural wonders that have been slowly implemented over so much time rather than actively protected. The literature shows that a bimodal–bilingual form of communication has a plethora of benefits for Indigenous communities in relation to maintaining connection with both Country and culture. It highlights the pressing need to incorporate linguistic inclusion as a core aspect in all reconciliatory efforts. Additionally, it underscores the role of preserving Indigenous sign languages to respect and promote the linguistic human rights of Indigenous peoples in Australia. There is also a need for Australia to understand that, in conjunction with the cultural cost, there has been a significant human cost because of its linguistic oppression of Indigenous peoples, namely the linguistic exclusion from public institutions such as health and education. The literature also demonstrates the importance of inclusion and access remaining at the forefront of any efforts to preserve and promote Indigenous sign languages.

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