

A middle approach to literacy in a Minority Indigenous Australian language context.

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Members of the Kunibídjí community live in Maningrida, a remote community in the Northern Territory and speak Ndjébbana as their preferred language of communication. They are one of many groups of Indigenous Australians who speak a minority language. Very little has been documented about the social practices of literacy with speakers of such languages, particularly with the texts that mediate these languages. Knowing about the beliefs and attitudes enacted by these speakers towards these texts is useful in understanding the process of learning minority and majority languages. This paper presents a middle approach to literacy. This is distinct from top-down and bottom-up approaches which have emerged from the minority Indigenous Australian language context in Maningrida. A middle approach to literacy incorporates non-Indigenous intervention in Indigenous social practices and the technological transformation of Indigenous texts. The methodological aspects of such intervention and transformation together with the implications of a middle approach to literacy are presented in this paper. Throughout the paper references are made to Kunibídjí children's access to digital Ndjébbana texts and their engagement with these texts in a home environment.

Introduction

The number of Indigenous Australian languages that are spoken are decreasing (Dixon 1991, Kraus 1992). Walsh (1993, p.2) suggests that of the 250 Indigenous Australian languages that were spoken before European contact, 160 are extinct, seventy are under threat and only twenty are likely to survive. Yet, according to Dixon (1980, p.79), 'If a minority group is to maintain its ethnic identity and social cohesion it must retain its language'.

This paper is about approaches to literacy in minority Indigenous Australian language contexts. Speakers of minority Indigenous Australian languages are bound by their membership as part of a minority as well as their Indigenous knowledge systems. Skutnabb-Kangas (2000, p.491) define a minority group as 'a group which is smaller in number than the rest of the population of a state, whose members have ethnic, religious or linguistic features different for those of the rest of the population, and are guided, if only implicitly, by the will to safeguard their culture, traditions, religion or language'. An important feature of being part of a minority group, according to Skutnabb-Kangas (2000, p.491) is the safeguarding the Discourses that make the group distinct. In a minority Indigenous Australian language context, the use of language by the speakers is way of safeguarding the Indigenous knowledge systems that have been threatened by contact with non-Indigenous agents. Cobo (1987) suggests that

'Indigenous communities, peoples and nations are those which, in having a historical continuity with pre-invasion and pre-colonial societies that developed on

their territories, consider themselves to be distinct from other sectors of the societies now prevailing in those territories, or parts of them’.

Often this distinction is overshadowed by concepts of difference between Indigenous and non-Indigenous peoples. The difference between Indigenous knowledge systems and non-Indigenous knowledge systems influences how texts are negotiated and what literacies are deemed as important. The threatened state of minority Indigenous Australian languages often overshadows the literacy context where such languages are spoken. Approaches to literacy that have been developed outside these language contexts are often not the most effective in these minority language contexts. Approaches to literacy based on empowering the participants with global discourses often focus on domain languages such as English. Conversely, approaches to literacy based entirely on the local context seem ineffective when the local context is marked by the marginalisation of the speakers with respect to access to texts which mediate these languages. The middle approach to literacy presented in this paper attempts to reconcile the problems of marginalisation which may inhibit the negotiation of meaning in a minority Indigenous Australian language context.

There is a pressing need to identify the beliefs and attitudes of the speakers of minority Indigenous Australian languages towards texts. Nakata (2003) suggests that anthropological models of cultural difference have stagnated the understandings of literacy in Indigenous Australian contexts. The diversity of minority Indigenous Australian language contexts is also a factor in the limited understandings of literacy in such contexts. The complexity of non-Indigenous intervention and technological change are often implicit factors that complicate the literacy context for speakers of minority Indigenous Australian languages.

This paper proposes a model of literacy that has been developed from a particular minority Indigenous Australian context. As a minority Indigenous language group, members of the Kunibidji community use Ndjébbana as their preferred language of communication. Nearly all Kunibidji community members live in Maningrida, a remote community in Arnhem Land in the Northern Territory. Members of the Kunibidji community are the traditional landowners of the lands and seas directly around Maningrida. Maningrida was developed as a trading post rather than a mission, therefore, the linguistic diversity in Maningrida is unique. Other languages that are spoken in Maningrida include Burarra, Gun-nartpa, eastern Kunwinjku, Rembarranga, Nkarra, Gorrone, Kunbarlang, Dalabon, Djinang, Wurlaki. English is often spoken as a third or fourth language by Kunibidji. In per capita terms, Maningrida may be the most multilingual community in the world (Carew 2002). Given this diverse language context, references to Kunibidji children’s reading of Ndjébbana texts throughout this paper are entirely appropriate.

The middle approach to literacy, presented in this paper, attempts to understand the diversity of attitudes to literacy enacted by speakers of minority Indigenous Australian languages. Such knowledge would suitably replace the notions of ‘cultural difference’ that have stigmatised Indigenous Australian Education. Integral to a middle approach to

literacy is a transferable methodology that may be used in different language contexts. The literacy practices of the participants are identified as they access new technologies that as a direct result of intervention of non-Indigenous collaboration. The negotiated practices of literacy in a middle approach to literacy include the everyday social practices of the speakers of the language and the negotiated practices associated with new forms of mediating minority Indigenous Australian languages. The respect for speakers of minority Indigenous Australian languages is enacted in the wider choices these speakers have to take and make meaning in their own language.

This paper is the result of qualitative and quantitative studies conducted with Kunibídjí children reading Ndjébbana digital texts at home. The children had access to 96 Ndjébbana talking books, stories in their first language that were displayed on the computer. As the children selected the texts, the narrative was read to the children, page by page as the children pressed the navigational buttons. The words were highlighted as they were read by members of the Kunibíjdi community who were previously recorded reading the entire text.

This paper is presented in three sections. The first section examines the theory of the language context and the identified approaches to literacy. The middle approach to literacy is then compared to top-down and bottom-up approaches to literacy. The second section examines some methodological elements of a middle approach to literacy. The justification of non-Indigenous intervention in the literacy practices of minority Indigenous Australian languages speakers is also discussed. Another methodological feature of a middle approach to literacy is the possibilities of transforming texts to mediate minority Indigenous Australian languages. The final methodological element discussed is the elicitation of a participant voice that has the capacity to communicate benefits of the literacy events. The third section of this paper examines the implications of a middle approach to literacy in minority Indigenous Australian language contexts.

A middle approach to literacy

A middle approach to literacy that is presented in this paper is different to top-down or bottom-up approaches to literacy. Top-down approaches to literacy examine the 'voices of power' (Auerbach 1997) of global discourses, seeking to promote the participants membership with such Discourses. The need to be part of the global community is assumed in a top-down approach to literacy. Street (2001, p.15), however, suggests that teachers of literacy should be learning how to design more culturally sensitive programs rather those based on what people are assumed to 'need'. Programs based on alternative developmental paradigms to the 'western framework of progress and degeneration' (Rogers 2001, p.215) may be applicable to speakers of minority Indigenous Australian languages.

Ethically, top-down approaches to literacy do not respect the local context. Several authors have noted the need to develop an Indigenous standpoint in research (Smith, A. 1997, Smith L. T. 1999, p.120) and literacy (Nakata 2003). Barta (2002) suggests that progress in Indigenous Education will be made 'when educators realise that how they

teach Native students is just as important as what they teach'. Top-down approaches to literacy fail to address how to proceed with teaching students with knowledge systems different to those of the English speaking majority. Top-down approaches to literacy fail to respect the local contexts of minority Indigenous Australian language speakers.

Bottom-up approaches to literacy begin by 'understanding the literacy practices target groups and communities are engaged in' (Street 2001, p.1). Such an approach to literacy elevates the local literacy practices of the participants as an integral ingredient in successful literacy projects. Without understanding what the participants find meaningful and purposeful, the success of the literacy project is questionable.

An example of a bottom-up approach to literacy is the New Literacy Studies (NLS). The NLS makes extensive use of literacy events and literacy practices. Heath identified the concept of 'literacy events' (1983, p.386) as occasions when written language is integral to the interactions amongst the participants and where written language is central to the participants' interpretive processes and strategies. Literacy events are important in understanding what people do with literacy instead of focusing on what literacy can do for a specific group of people (Barton 1994, p.26). Such an understanding highlights the difference between top-down and bottom-up approaches to literacy. Another concept employed by the NLS is termed literacy practices. Literacy practices are seen to include values, attitudes, feelings and social relationships (Street 1995, p.12) as well as the simple behaviours of 'literacy events'. Barton and Hamilton (1999, p.7) suggest that literacy practices have become the basis for a social theory of literacy. Such a social theory of literacy views meaning making as a negotiated process that is ideologically bound by the participants. This is in contrast to the view that literacy is an assimilation of skills that are viewed as necessary to 'support the expanding technological world' (Bigum and Green 1992, p.5).

When researching the literacy practices of Kunibídjí children, the main problem emerging with the bottom-up approach to literacy was the reproductive nature of the literacy events. Many speakers of minority Indigenous Australian languages are excluded from access to texts in their own language at home due to their political positioning. Kostogriz (2002) suggests that 'literacy events involve not only reproductive but also productive-transformative activities'. The design of the literacy events in the study involving Kunibídjí children was critical in establishing opportunities to understand the potential benefits of access to texts that mediate minority Indigenous Australian languages. As Kunibídjí children did not have access to Ndjébbana texts at home, identifying the literacy practices without access to Ndjébbana texts seemed rather pointless, as it would not inform teaching practices at the school with such texts. The middle approach to literacy that is proposed in this paper grew out of a need to intervene in the literacy practices of Kunibídjí children to provide the children with opportunities to access Ndjébbana texts at home.

A middle approach to literacy uses the concepts of literacy events and literacy practices that have been developed by the NLS, together with explicit interventions to improve the accessibility of texts for speakers of minority Indigenous Australian languages. The

middle approach to literacy proposed in this paper takes a critical approach to research which 'does not just describe research, it uses research to redefine social theory' (Carspeckan 1996, p.3). The literacy practices that are identified in a minority Indigenous Australian language context as part of a middle approach to literacy provide the participants with greater opportunities to access texts that mediate threatened languages. The literacy practices that are enacted in these literacy events define the social theory of literacy for the participants where some of their marginalisation is removed. Such literacy practices provide useful information to school programs that are aimed at supporting minority Indigenous Australian languages. The non-Indigenous intervention into the literacy practices of minority Indigenous Australian language speakers is discussed in the next section.

Justifying non-Indigenous intervention

An important feature of the middle approach to literacy in a minority Indigenous Australian language context is the non-Indigenous intervention into the literacy practices of the participants. There are several ways to approach such interventions. First, the only way some minority Indigenous Australian children will experience opportunities of accessing reading materials in their first language, at least in the short term, is through some kind of external intervention. Kunibídjí children for example did not have Ndjébbana texts at home. Ndjébbana texts are not available at the ABC shops or any other bookstore for that matter. The school controls the distribution of Ndjébbana texts amongst the Kunibídjí community. The intervention of providing access to Ndjébbana texts for Kunibídjí children at home also provides the children with new configurations of text distribution amongst the Kunibídjí community.

A second approach to non-Indigenous intervention is to accept that such intervention happens on a daily basis in many minority Indigenous Australian language contexts. Every Indigenous Australian child, for example, who is taught by a non-Indigenous teacher encounters some kind of intervention into their language and knowledge system. The risk of non-Indigenous intervention in Indigenous Australian communities is that such intervention may compete with models of Indigenous self-determination that are emerging in many of these language contexts. Such a pragmatic approach to non-Indigenous intervention in the literacy practices of speakers of minority Indigenous Australian languages has more purchase when linked to a theoretical position of justice.

The third approach to non-Indigenous intervention in the literacy practices of Indigenous Australians, is to align the intervention with the human rights of the participants. The non-Indigenous intervention of providing the participants with choices to access the texts is justified in relation to naturalistic theories of justice. Naturalist theories of justice are those that cannot be altered by human interference (Holzgree 2003, p.19). The ethics of human rights, for example, are based on a naturalist theory of justice as they are not dependent on a time or place. Tensón (2003, p.94) suggests that 'because human rights are held by individuals by virtue of their personhood, they are independent of history, culture or national borders'. Non-Indigenous intervention into the literacy practices of the participants can be justified where the human rights of the participants are enhanced as

the result of such intervention. A middle approach to literacy reduces the participants' marginalisation of access to texts in their threatened languages.

Embedded in the middle approach to literacy in such contexts is the respect for the linguistic human rights of the speakers of minority Indigenous Australian languages. Linguistic majorities take it for granted that their education will be in the medium of their own language (Skutnabb-Kangas 2000, p.499). When a linguistic minority want their language as a medium of education the issue becomes a linguistic human right. Access to texts that mediate appropriate minority Indigenous Australian languages to the speakers of such languages is an extension of their linguistic human rights. Opportunities for the participants to access texts at home that mediate their first language is seen as part of a naturalistic theory of justice. Non-Indigenous intervention can play a critical role in securing the participants' access to such texts given the Discursive resources available to the non-Indigenous agents.

A fourth way of approaching non-Indigenous intervention in such contexts is with reference to models of self-determination. Wehmeyer (2003, p.180) suggests that self-determination is based on three distinct elements; (1) on individual capacity to learn and develop, (2) opportunities gained from the experiences and environments and (3) the support provided to the individuals. Non-Indigenous intervention based on naturalistic theories of justice provides new experiences and opportunities for the participants to engage in literacy events that could not have been developed in the short term given the resources available to participants. The engagement in literacy events may extend an individual participants' capacity to learn and develop with reference to the content of the texts in their minority Indigenous Australian language. The important point is that the self-determination of the speakers of minority Indigenous Australian languages and non-Indigenous intervention based on natural justice are not mutually exclusive. The middle approach to literacy accommodates both concepts by focusing on the linguistic human rights of the participants.

As a non-Indigenous researcher studying the literacy practices of Kunibídjí children, I intervened into the children's domestic literacy practices knowing I was upholding their linguistic human rights. I further justified my intervention knowing the children had a choice to engage in the study. They were free to leave the site where the computer was located at any time. The literacy events in this study were designed to extend the children's choices of access to texts at home, independent of teachers or caregivers. The texts in the literacy events were designed to provide Kunibídjí children with access to Ndjébbana stories that represented their everyday language and social practice.

Mediating minority Indigenous Australian languages

The above section highlights how the purpose of non-Indigenous intervention can be justified with respect to Indigenous Australian self-determination. This section examines the kinds of texts that may be developed to effectively mediate minority Indigenous Australian languages. A useful frame of reference in this discussion is the examination of the history of technological literacies. Bruce (1998) suggests that literacy in relation to technologies has developed over time in the following way:

- Primitive symbol systems
- Complex oral language
- Manuscript literacy
- Print literacy
- Video literacy
- Digital/multimedia /hypertext literacy
- Virtual reality

The evolution of technological literacies proposed by Bruce (1998), however, is one tended to be associated with the literacy practices of privileged speakers of majority languages. Many speakers of minority Indigenous Australian languages have a different history of technological literacies to those suggested above. This is due to the nature of contact they have had with non-Indigenous people. Furthermore, the access to technological literacies may be complicated by those literacies currently available to the participants in specific languages and specific places. The history of technological literacies that have been used by Kunibídjji to mediate Ndjébbana in a home environment highlights this difference.

My understandings of the evolution of Kunibídjji technological literacies associated with Ndjébbana in a home environment are follows:

- Complex oral language, ceremony, cultural artefacts, symbols
- Ndjébbana print literacy (since 1975) (limited access at home)

The above evolution of Kunibídjji technological literacies is just one example of how literacies have evolved in a remote Indigenous Australian context with one group of language speakers. Obviously the technological literacies of Kunibídjji community members are dependent upon a range of social practices that have operated over time. Television and videos, for example, are almost exclusively mediated in English, and have therefore been left out of the above list of technological literacies. At school, the vast majority of electronic literacies are mediated in English to Kunibídjji children.

The evolution of the participants' technological literacies in their minority language raises at least two important issues. Firstly, the expected transfer of one literacy success in a specific language context may not imply a similar success in a second language environment. Such an approach assumes a similar history of technological literacies exists amongst the two communities. Many elements of successful language programs may not be directly transferable between communities without identifying the kinds of literacies used in the everyday social practice of each community. A second point is that the identified technological literacies already known to the participants can be incorporated into the design of the texts. These designs make the texts more accessible to the participants as the technological literacies embedded in the texts are already within the participants frame of reference.

The evolution of Kunibídjí technological literacies, for example, suggests that the integration of printed texts with oral readings of the texts may be of some benefit to the Ndjébbana speaking community. Such texts could integrate oral readings of the texts with images and words. As the literacy practices were examined in the home environment of Kunibídjí children, the capacity of independent access to the texts was critical. My non-Indigenous intervention made use of what had 'gone before, rather than be led purely by the capabilities of the latest technical innovation' (Levy 1997;xi), as far as the design of the Ndjébbana texts were concerned. The capacity to match the previous technological literacies of the participants to the variety of past and present technological innovations was a key to successfully providing texts that are predominantly invisible to the participants. Kunibídjí children were presented with a series of simple Ndjébbana talking books, designed to integrate texts, sounds and images of the familiar Ndjébbana stories stored at the school. Displaying the texts on a touch screen computer further enhanced the invisibility of the Ndjébbana talking books. This technology promoted access to the texts by participants without their need to command a keyboard or mouse.

Mediating minority Indigenous Australian languages as new forms of texts is not a new phenomenon. Black (1993) has identified a variety of new uses for Indigenous Australian languages as they are presented on new mediums. Minority Indigenous Australian languages are mediated in a variety of ways. Laughren (2000, p.1) suggests that as the number of Indigenous Australian languages has decreased, those that remain have been represented in a variety of media. The mediation of minority Indigenous Australian languages through digital texts is justified by the multimodality of such texts. The New London Group (1996) suggest that the visual, linguistic, spatial, audio and gestural designs are all incorporated in an integrated meaning making system that is multimodal. Rose (1996, p.xx) has shown that 'radio and television production are closer to the oral nature of traditional Aboriginal communication than printed-word newspapers, magazines or books'. An important feature of the Ndjébbana talking books was the way the printed word was integrated with visual and audio designs of meaning, promoting access to members of the Kunibídjí community who could not read.

The middle approach to literacy promotes the relevant transformation of texts to mediate minority languages in an effective manner to the participants. In many minority Indigenous Australian language contexts the transformation of texts is only possible with some form of non-Indigenous intervention. As well as focusing on the linguistic human rights of the participants, the actions of non-Indigenous agents are also sympathetic to the evolution of the technological literacies of the participants. In this way the middle approach to literacy is aligned with a critical approach to technology. In his critical approach to technology, Feenberg (2002, p.14) highlights the social values placed on design, not just the use of technological systems. The texts and technology that mediated the Ndjébbana talking books, for example, were designed with reference to the technological literacies of Kunibídjí children in an attempt to make the content of the texts more accessible in a home environment. Incorporated in the design of the Ndjébbana talking books was the capacity to include many members of the Kunibídjí community in the production of texts as they occurred in their country or around their

home. Many community members who could not read, for example, contributed to the sounds in the talking books.

The mediation of minority Indigenous Australian languages on specifically design texts is an attempt to find a 'subtle starting point' (Barton 1994, p.207) in a program of literacy intervention for the participants. Providing texts that are almost invisible to the speakers of minority Indigenous Australian languages promotes access to the texts and reduces the social transformations that are necessary to engage in the literacy events. The subtle starting point in the middle approach to literacy is an attempt to provide the participants with access to literacy events that appear to be a natural extension of their social practices. The choice to engage in the literacy events should not be determined by a set of technological and social practices that are foreign to the participants as speakers of minority Indigenous Australian languages.

Such an approach does not limit the social transformation that is possible in a middle approach to literacy. The technological transformation of texts attempts to extend the social transformation of the participants through engagement in the literacy events with texts in the participants' first language. Mediating the participants' languages in an appropriate manner provides opportunities for the participant's to critically examine the appropriateness of the new technology. Through such access and engagement the participants are free to transform their social practices in relation to the relevance of these texts to their local literacy practices.

Eliciting a participant voice

The response of the participants to the non-Indigenous intervention in promoting access to new kinds of texts to mediate minority Indigenous Australian languages is important. The middle approach to literacy seeks to document the independent responses of the participants enacted in the literacy events. The participants' beliefs and attitudes about accessing their threatened languages on new technology provides those involved in minority Indigenous Australian language programs with valuable data that can inform policies and practices in the context of literacy. The choices made by the participants when their linguistic human rights are promoted extends the participant voice. These voices can become the yardstick for further literacy projects in the same context. The independence of the participant voice is a characteristic of the research methodology of the middle approach to literacy.

When identifying the literacy practices of Kunibíjji children, much work had to be carried out to create appropriate literacy events. This work can be categorised into the elements of multimodality, theorised by Kress and van Leeuwen (2001). According to Kress and van Leeuwen (2001), multimodality can be theorised by elements of Discourse, design, production and distribution. The Discourse embedded in these texts included the technology, contextual content, Ndjébbana language and the past Indigenous and non-Indigenous collaborative partnerships that were integral in the production of the printed Ndjébbana books made over a twenty-five year period. The design was largely the result of non-Indigenous intervention that accommodated the technological literacies of the participants, as previously discussed. Production was dependent upon collaborative

Indigenous and non-Indigenous partnerships emerging to make the designs a textual reality. The distribution, on the other hand, was as far as logistically possible independent of any non-Indigenous intervention. Initially the interactions around the touch screen computers were recorded on video. Due to my long association with members of the Kunibídjí community, my presence was of little concern to the participants. The touch screens displaying the Ndjébbana talking books were left in the homes of Kunibídjí children where the interactions with the computer were invisibly recorded by the computer. After a few weeks these results were collated which provided an independent set of data, not associated with the my presence. Kunibídjí children tapped the screens of these computers over 110,000 times, demonstrating a strong desire to independently access these texts (Auld 2002). While such a result is impressive, it was the independence of the participant voice that emerged in the methodology that gave the results credibility.

While the participant voice can be elicited from the above quantitative results, the qualitative data provided by the videos around the computer also promoted a participant voice. In fact the videos were a collection of vignettes of the children speaking entirely in Ndjébbana. As problems with the transcription process emerged, the use of subtitles on these videos was the only logistical way the data would be translated into English. After extensive consultation with members of the Kunibídjí community, permission was granted to use these videos as vignettes in the thesis. The independence of the participant voice is clear to anybody viewing the video.

At least two important methodological issues arise from this experience. First, the identification of the participants in a thesis may have benefits to Indigenous and non-Indigenous readers. Christie (1989, p.45) has suggested that ‘without links to real people, and real places, real experience and understood events, literature is dead and alien’ to Indigenous Australians. Such a view, if held by the participants, justifies including the real experiences of the literacy events in the final presentation of a report about their literacy practices. Non-Indigenous readers of a thesis may benefit by the researcher attempting to make the interpretive process transparent by including the raw data in the final presentation.

The important methodological issue is the ability of researchers and participants to negotiate consensual arrangements that may be different to the normal arrangements held by research institutions. Many research institutions hold participant autonomy as the norm, without adequately accommodating the consensual arrangements that may emerge. The respect for the participants is not being challenged by this methodology. Respect for the participants is seen as human right. The possibility of changing the discursive positioning of the participants through integrating their actual voices and behaviours in digital reports needs more exploration. A middle approach to literacy identifies the emerging possibilities of adopting a more open approach to consensual relations with the participants with a view of changing their power relations with dominant institutions.

Implications

This section examines the implications of adopting a middle approach to literacy in a minority Indigenous Australian language context. An important feature of these

implications is that they are not based on the participants' engagement in the literacy events. Many participants may choose to reject the way their languages have been mediated as the result of non-Indigenous intervention. An important outcome of any literacy practice using a middle approach to literacy is to remember that education is for choice, and the participants are expressing their linguistic human right by rejecting or accepting the way their language is mediated.

Ontological conjecturing

An important feature of a middle approach to literacy is the conjecturing of the participants' ontology by the researcher. The provision of new texts that mediate minority Indigenous Australian languages can be seen by two contrasting human conditions. One of these is the having mode of existence which is a natural and inevitable human condition encouraged in a capitalist world (Fromm 1978, p.103). The other is a being mode of existence that 'enables self-actualisation, fulfilment, and abiding peace (Lankshear 2003, p.56). The 'being' mode of existence is associated with an ontological way of viewing the world and has application in a middle approach to literacy.

The use of new technologies is not promoted in the middle approach to literacy as a mechanism for assimilating Indigenous Australians into a capitalist world. Literacy resources are not seen as things the participants should 'have', even if they are mediating their threatened languages. Instead, texts that mediate their threatened languages are tested for how well these texts fit with 'being' a speaker of a minority Indigenous Australian language. Where these texts are not ontologically compatible then they have little purpose in extending the participants' linguistic human rights.

The middle approach to literacy conjectures the use of new technologies and texts to support the linguistic human rights of the participants. Embedded in these texts and technology will be non-Indigenous attitudes and beliefs towards literacy. Ormerod and Ivanic (2000, p.96) suggest that there are past and future inferred literacy practices associated with the physical production of texts. While the aim of text production is to make the texts invisible to the participants, the visible elements of the texts that remain is part of what is being conjectured to the participants. If the participants accept the texts as worthwhile reading, they are accepting that the technological transformations and the non-Indigenous literacy practices that are implicitly bound in the texts are also worthwhile. Often new technological literacies are embedded in the texts that must be negotiated by the participants to gain access to the textual content. The congruency with these technological literacies with the developmental paradigms of the participants is also being conjectured through repeated engagement in the literacy events.

The process of conjecturing non-Indigenous intervention and the technological transformations of texts is a viable way to proceed in a minority Indigenous Australian language context. As such, the participants voice their positions with reference to the elements of the literacy events that can then be used to inform teacher practices. Where the participants demonstrate a desire to access texts mediated on a specific technology, their voice cannot be ignored. Ontological conjecturing is useful to gauge the success of

how well specifically designed technology matches a set of social practices. Whatever the outcome, evidence is generated.

Evidence based decisions

One of the implications of identifying the literacy practices of minority Indigenous Australian language speakers is the attempted elimination of epistemological vacuums in such contexts. Rather than working in an epistemological vacuum, teachers can identify how their student's negotiate digital texts in their first language, perhaps in a home environment. Luke (2003) has identified the need for educational decisions in times of change to be based on evidence. Effective teachers would seek to fill the epistemological vacuum with evidence of the literacy practices of their students while advocating their linguistic human rights. Their teaching practice is then informed by the evidence of the participant voice rather than beliefs or values which are often generated from outside the participants' experiences. When the evidence is obtained from literacy practices in a home environment, the evidence is not contaminated by the implicit Discursive practices imposed on these children when they attend school.

When evidence emerges about the literacy practices of speakers of minority Indigenous Australian languages, new models of literacy negotiation will hopefully replace the anthropological models of difference. Nakata (2003) identifies the importance of developing an Indigenous standpoint as an alternative to the anthropological standpoint of difference. The Indigenous standpoints that would be represented in these literacy practices are based on the possibilities of converging Indigenous and non-Indigenous technological literacies. Underpinning this convergence is the support for the linguistic human rights of the non-Indigenous minority. Where the voice of the participants may be represented in a multimedia format rather than a printed description of what happened presented as an academic transcript. Using such formats, Indigenous Australians can present their own standpoint to readers of these multimedia texts. Including the voices of such participants in the emerging Indigenous standpoint on Indigenous Australian education is an effective way of removing the epistemological vacuums that limit the capacity of many remote Indigenous Australian schools to provide quality educational opportunities for students.

Awareness raising communities

The use of new technology in the middle approach to literacy in a minority Indigenous Australian language context implies a community acceptance of such technology. On the other hand, Bigum (2002, p.134) suggests many schools follow the pig principle towards technology, where more is better. A consequence of a consumer approach to technology is that the computers in schools in many remote communities are serving agendas that are driven by top-down initiatives with little concern for local needs. Very few digital resources, for example, make their way into homes in remote communities where they can provide children with new textual choices in a family context.

Perhaps one of the largest misconceptions is that the school computers should be reserved for learning, rather than acquisition. Kunibídjí children's use of the computer in a home environment demonstrates at least some of the school's computers should be accessible

outside the school. If this is not the case a home-school digital divide may continue to emerge, as literacies associated with computers are only accessible in a school environment. Kunibídjí children have demonstrated poor attendance and low achievement at school. Their engagement with Ndjébbana talking books on touch screen computers in their homes, on the other hand, suggests limiting the access and use of school computers at school is to their disadvantage.

The main justification for the use of computers in a home environment stems from the relationship between primary Discourses in the home and secondary Discourses at school. 'Primary Discourses are those to which people are apprenticed early in life during their primary socialisation as members of particular families within their sociocultural settings' (Gee 1996, p.137). Secondary Discourses on the other hand are 'those to which people are apprenticed as part of their socialisation within various local, state and national groups and institutions outside early home and peer-group socialisation' (Gee 1996, p.137). The mastery of the secondary discourse is 'facilitated by the fact that their primary Discourses have adopted some of the features of these dominant Discourses' (Gee 1996, p.146). In many schools of minority Indigenous Australian language speaking students much money is spent promoting their capacities with secondary Discourses. The approach to literacy that is promoted in this paper suggests that both teachers and students may benefit when the students have access to texts that mediate their threatened languages at home. Opportunities for the children to acquire some digital epistemologies at home while simultaneously choosing to access texts in their first language is a potentially beneficial transformation of their primary Discourse. The professionalism of teachers of minority Indigenous Australian languages is supported when they are given opportunities to research alternative configurations of technology that will engage their students with reading at home.

A by-product of locating these computers in the home is that the school community and the community of language speakers begin testing some new configurations associated with new technology. Where children have chosen to engage in the literacy events at home with digital texts, there is a purpose for 'having' computers at the school. The purpose for computers in such schools should be derived 'from local needs or interests and are tested by an external audience' (Bigum 2002, p.138). Many children who engage in the literacy events at home would benefit from producing digital texts at school as students. The minority language speaking community would be exposed to the possibilities of integrating the use of new technology between the school and home. Parents may see a more purposeful role in the early years of schooling for their children when they are engaged in the both the production and consumption of locally designed texts in their first language.

An important feature of such text production and consumption is the integration of the identity of the members of the language speaking community. Gee (2003, p.199) suggests that the power of video games 'resides in the ways in which they meld learning and identity'. The identity that can be integrated into texts using technology such as digital cameras should not be underestimated in a minority Indigenous Australian language context. Digital pictures, taken with a purposeful narrative in mind, can be linked to

sound bytes and texts relatively easily through a simple multimedia application. Cummins (1982) has suggested that some language demands are context embedded using a variety of contextual cues throughout the text. Locally produced texts using multimodal formats are capable of mediating the identity of the participants and their local community members in a context that reinforces their language and social practices. Both parents and teachers in minority Indigenous Australian language contexts should be experimenting with the kinds of engagement that result from incorporating the identity of the children in the texts which mediate these languages.

Challenging technological marginalisation

The final implication that will be considered in this section is how a middle approach to literacy challenges the technological marginalisation of the participants. Different authors have outlined different facets associated with the use of technology in this context. A brief outline of these is presented below in an attempt to highlight the multiple ways speakers of minority Indigenous Australian languages are marginalised with respect to new technology.

The command of technological literacies is linked to the access the participants have to those literacies. Walton (1995, p.6) has linked the students' command and access of a variety of texts in a range of contexts to the concept of critical literacy. Obviously limiting the participants' access to texts also limits their command. The access to digital technologies by marginalised groups has led to the concept of a digital divide between privileged and non-privileged groups. Warschauer (2003), however, suggests that the 'key issue is not unequal access to computers but rather the unequal ways that computers are used'. The use of technology has been linked to the design of technology. Feenberg (2002, p.14) highlights the social values placed on design, not just the use of technological systems as the important elements in his critical approach to technology. Design is the shaping of available resources into a framework that can act as the blueprint for the production of the object or entity or event. (Kress and van Leeuwen 2001, p.50). The resources available to the community of speakers limit the design of any text that is used to mediate minority Indigenous Australian languages.

The middle approach to literacy challenges the multiple elements of technological marginalisation. The non-Indigenous intervention negotiates the command of technological literacies necessary to produce digital texts in minority Indigenous Australian languages. As discussed above, the participants are provided with opportunities to extend their command of digital epistemologies through engagement in the literacy events in a home context. The production of texts by students at schools is another way of developing their command of technological literacies. The technological transformations of the texts that are the result of the non-Indigenous intervention promote access to the texts by the participants. Obviously, where the texts are located in the participants' homes access is also improved. Consumerism of texts that mediate minority Indigenous Australian languages is seen as a viable use in a middle approach to literacy. Many Indigenous Australian children have no say in the texts they consume in English over the televisions in their homes. At least with the research partnerships that are forged

in a middle approach to literacy, the parents and children have a say in the kinds of texts they want to consume at home.

The previous technological literacies of the participants are constructed as available resources for the texts. This means that not only oral commentaries can be included in the text but also community members who were previously excluded due to their print literacy can now be included in the production of such texts. Such an approach widens the community participation in the production process. The identity of the participants incorporated in their everyday language and social practices is also seen as an important available resource in a middle approach to literacy.

Conclusion

The middle approach to literacy presented by this paper is an attempt to align non-Indigenous intervention with Indigenous literacy practices. It promotes a technological transformation of texts in order to support the linguistic rights of the speakers of minority Indigenous Australian languages. The middle approach to literacy documents the literacy practices of the speakers of these languages as they make new choices about texts that mediate their threatened languages. Literacy practices can be identified as a result of changing the discursive positioning of the speakers through non-Indigenous intervention. Where reports of these literacy practices are provided on digital texts, the voice of the participants are literally included as a central feature of such reports. The evidence provided by these literacy practices enables informed decisions to be made about the relevance of continued access by speakers of such languages to these texts as primary Discourses.

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