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All chapters submitted to the editors of this book meet the Australian Government Research Council’s definition of research. Papers identified by * on the contents page indicate chapters refereed by two independent peers. Papers without an * identifier indicate non-refereed papers.

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Digital technologies and language resources – finding common ground

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Introduction
Over the last four decades, Batchelor Institute has been involved in keeping Aboriginal languages and cultures strong and discovering new ways of bringing Western and traditional Aboriginal knowledge practices together, through initiatives such as the ‘Aboriginal Languages Fortnights’ and the establishment of the Centre for Aboriginal Languages and Linguistics (CALL), and through ongoing work of training and supporting Aboriginal educators. The integration of different knowledge systems has also produced a number of educational and linguistic resources which support the use, preservation and promotion of Indigenous languages, and has often included the use of digital technologies and the engagement of Aboriginal Elders from many communities. This paper, which is based on a panel presentation by the four authors, will discuss some of the issues arising from this blending of technologies and knowledges, and consider the implications for Indigenous communities and the wider academic context of research and teaching.

Since at least 1973, when the first Literature Production Centres (LPCs) in NT schools with bilingual programs began turning out materials in Aboriginal languages and English, those involved in that work have wrestled with questions such as: How could local ancestral knowledge be incorporated in appropriate ways to strengthen the curriculum and ensure the engagement of Aboriginal Elders? If Aboriginal stories, originally negotiated and performed, were ‘fixed’ in print, would the storybooks produced by LPCs be valued and used by students? What would the impact of these books be—quite apart from their advantages as tools for use in literacy programs—given that they presented static versions of stories that might previously have been told and retold with individual interpretations?

As Christie et al. (2014, p. 7) explain:

Many books were based on local stories, told mostly by community elders – their histories, their environment and its resources, their ancestral heroes and tricksters. These books were often painstakingly transcribed and edited from audio recordings, and carefully illustrated. Many hours of work by groups of people went into producing a single book, which was then printed on a local printing machine. Most editions were of around 100 copies, with light card covers, folded and stapled. They were used in the local school, or sent out to schools in other communities with the same language. Many communities also published a regular bilingual newspaper.

Telling the stories and turning them into Western products was empowering. It provided many opportunities for skill training (such as learning to use an IBM Selectric typewriter and, for some, operating an AM offset printer).

These books are a legacy of a time when common ground was established in the name of ‘both ways education’, bilingual education, Dhinthun wayawu (at Milingimbi), the Warlpiri curriculum cycle, team teaching etc. From the western perspective the search for common ground has been a continuing journey, a journey through time. From an Indigenous perspective the mingling of knowledge systems was often best represented as a place (ganma, garma, etc) (For more details see Marika-Mununggiritj & Christie, 1995; and Tamisari & Milmilany, 2003).

In our work over the last few decades one of the key aspects of finding common ground in our both-ways practices has been an emphasis on the learning journey. For Batchelor Institute staff this journey, scaffolded using action research, was critical in finding common ground in
order to create new learning spaces across the curriculum; sites of modernity as it were. In many ways this practice forced us to create our own language as a means to undertake the both-ways journey. The language of that journey was strong, but gentle, and always respectful; importantly, it was inclusive of all participants.

The four of us are now associated in various ways with the Living Archive of Aboriginal Languages (LAAL) (see www.cdu.edu.au/laal). Now that we have funding, the technology and the support of artists, writers and their families in communities to turn print-based books into accessible online materials, we find we are asking ourselves additional questions. For example, what does it mean to ‘find common ground’ again in the digital era, when we seek to reuse these books and handwritten stories by turning them into digital objects that will be much more widely accessible? Throughout this journey it has, once again, been necessary to negotiate and to reconstruct common ground.

Digitising allows for skill training (e.g., in coding, writing metadata, scanning, image processing, using optical character recognition software). It also allows for blending, repurposing (by adding English and/or audio). Social media encourages engagement through the creation of mashups, ‘likes’, retweets, etc., and these, in turn, require the development of new skills. By ‘mash-ups’ we mean the combination of two or more pre-existing elements from any media format that have been put together with the aim of making something new. To use an example, this could involve bringing in an image from the internet, taking a photo of your cousins with your iPad, adding a photo of your country, getting your favourite footy player’s number, drawing some patterns and slamming it together with your favourite song. These may represent exciting creative opportunities, but as we explain later, they need to be constrained by carefully negotiated standards and procedures.

The Centre for Australian Languages and Linguistics (CALL)

CALL acts as a resource for Batchelor Institute students and staff. One of its functions is to maintain an archive for documents and resources produced by LPCs as well as the language research undertaken by Batchelor Institute of Indigenous Tertiary Education (BIITE) students in connection with the Aboriginal Languages Fortnight, and the resources developed by students as part of their course work. The CALL archive holds published and unpublished works, some of which have been available to BIITE staff and students through the library database and now in partnership with the Living Archive project are becoming accessible to the wider community.

The majority of materials in the CALL archive were developed within the both-ways philosophy where Aboriginal and western educators sought to find common-ground in development of resources to support curriculum requirements, to meet the needs of bilingual programs in remote schools and also the needs of students that wanted language resources but were not part of a bilingual program. Common-ground practices have always been a site of modernity, shifting and changing to meet the needs of each group engaging in that space. The advent of digital technologies has meant that the common ground for language resource development is shifting and changing on a daily basis so that it is debatable whether there is the same need for negotiated common-ground practices as there was in the pre-digital age.

The use of tablets and other mobile devices, in particular, in remote communities is bringing new life to old resources in ways that are individual and personal (Devlin, Christie, Bow, Joy, & Green, 2014). Aboriginal teachers and their students can take old books and audio recordings, instantly create new videos and produce a language resource that is relevant to that day/week for those students in their learning space. The limitations of working within Western literacies and print media are
diminishing, allowing Aboriginal teachers and children to make dynamic language resources that are relevant and important to curriculum requirements and personal interests.

In the home, children are taking the skills learned at school to make mashups that might include documented clan stories, old and new photos, video, drawing new images, adding text and overlaying their voices to tell stories of their country and their family and to explore issues that are important to them. These mashups are mostly temporary expressions that are shared with family and friends or sometimes uploaded more publicly online to YouTube.

Aboriginal people in remote communities frequently find their voice through the arts; the new digital environment provides them with opportunities to create art forms that include intergenerational expressions of language, culture and contemporary issues, and ways of being creative that are individual, yet still inclusive of family and community.

Just as the philosophy of both-ways practices requires finding that common-ground and developing that site of modernity, it has to involve negotiation, sharing knowledge and resources, and developing ways in which Aboriginal and Western systems can work together. However, it would be possible to neglect this in development of digitised language resources: our common ground might just be a shared site on a server. What language resources do people want, and how, and where do they want to access those resources? We have a responsibility to engage in those discussions. The rest is up to individuals, families or classroom teams to make the digital resources that express who they are today. In that way they will create their own sites of modernity.

The era of bilingual education
During the era of bilingual education, the stories produced by Literature Production Centres were written for a very specific context, and only occasionally shared outside the community of origin. The digital era expands that original audience well beyond what was ever envisaged, and so issues of copyright and intellectual property come into play.

According to Australian law, copyright for the books developed in Literature Production Centres belongs to the Northern Territory government, as they were first published under the direction or control of the NT Department of Education. This means that the individual authors, illustrators, and others do not hold copyright to the materials; however, they do retain ‘moral rights’ with respect to attribution and any alterations. While these moral rights are automatically recognised, the right to reproduce and make the works public remains with the copyright owners, who can also license their rights, giving another person the right to use the copyright material. As partners in the Living Archive project, the Department of Education has licensed the digitisation and online sharing of these books through the LAAL website (www.cdu.edu.au/laal/copyright).

In order to assure the inclusion of Indigenous voices in the renewed digital life of these materials, the Living Archive project team has chosen to go beyond the simple attribution of moral rights (in the metadata on the archive) and has set out, deliberately, to seek the permission of the original contributors to put their materials online. This was done using a permission form written in plain English explaining the project and requesting consent to make the materials available online through the Living Archive website. The original creators or the family members of those who had passed away all agreed to sign these forms and see the materials become more widely available.

A challenge emerges with materials which have no attribution of authorship, as the moral rights of the creators are still maintained even when they are not named in the work. Legal advice suggests these ‘orphan’ materials which have no attribution of authorship, as the moral rights of the creators are still maintained even when they are not named in the work. Legal advice suggests these ‘orphan’
materials carry a high risk, as a creator may come forward at any time and object to the distribution of their works. To mitigate this risk, the project team is working at spending time in communities asking people to identify the creators of these materials, which gives another way for local Indigenous people to engage with the materials in the archive.

Another means by which rights can be protected in the online environment is through the use of Creative Commons, which allows people to legally build on and share creative works. The license chosen for the Living Archive project is Creative Commons Attribution-NonCommercial-NoDerivs 3.0 Australia, which means users are free to share the material in any medium or format as long as they give appropriate credit, and that any changes made may not be distributed. The non-commercial component means users may not use the material for commercial purposes.

While there are still risks involved in repurposing these valuable cultural and linguistic resources for a new era and a new audience, this project attempts to carefully navigate this complex area, and find appropriate common ground where both Indigenous and Western concepts of ownership and the transmission and sharing of knowledge are respected.

Indigenous Catholic community schools

What has been of particular interest in the Indigenous Catholic community schools has been the potential for curriculum development and teaching and learning in Aboriginal languages and cultures beyond the school. The use of digital technologies has allowed Aboriginal people the opportunity to use new technologies to create new cultural artefacts to continue to reproduce and often amplify continuing practices and narratives related to existing understandings of how life should be lived. These new artefacts include multi-modal texts and not just printed ones.

New digital materials, including those in the Living Archive, have allowed the books prepared for use in bilingual programs to be used outside of the schools concerned. Adults who did not learn to read their own languages have expressed interest in studying these materials as the archive has been viewed around the kitchen table. Some families and organisations have expressed some interest in reading these materials with small children on family-owned devices. This has allowed individuals, groups and organisations outside the school to have access to resources that were previously just located in the school.

Many of the written materials currently on the Living Archive were early print texts written specifically for use in the school. In many ways, they are tentative instructional texts, rather than natural cultural artefacts. Some of the stories are not attributed, as they were written by school employees and the copyright was thought to belong to the school. This has raised some issues, as teachers have planned to use these materials for teaching language and culture. For example, the Arrernte language program uses four key questions to analyse dreaming stories that are studied:

- Who do these stories belong to?
- What country do they belong to?
- What do the stories tell us?
- What do the stories mean?

This means that the stories have to be attributed and located geographically. The school has developed a large visual map on which they identify the location of family estates and the stories that belong to each. (For some readers the term ‘estates’ may conjure up images of properties owned by cattle barons or the landed gentry, but it is one used quite commonly by Indigenous people and anthropologists to refer to country or areas associated with particular clans.) Students then identify their country and their rights to both the country and the stories associated with it, through both the matriline and the patriline. The stories that are currently available
are not representative of all family groups. One planned teaching activity is for students to use iPads to collect a story, orally, from each of their mother’s and their father’s families. This story would then be located on the ‘country’ map. This map is one artefact that the teachers would like to have digitised in a way that would allow the stories to be stored behind each estate.

**The integration of different knowledge systems**

The integration of different knowledge systems has produced a number of educational and linguistic resources which support the use, preservation and promotion of Indigenous languages, and has often included the use of digital technologies and the engagement of Aboriginal Elders from many communities.

As scholars who have been using digital technology and Aboriginal language resources in our work, we are in agreement that we need to think carefully about digital technology and common ground if we are to do the right thing by the Aboriginal owners of knowledge and language in the digital era. We are in agreement that the moral rights of creators need to be asserted. Rights (documented permission and a respect for cultural sensitivities) need to be upheld to balance the wider benefits the resources may bring against the rights of the creators. As Bird & Simons (2003, p. 570) put it, it is sometimes the case that “...the sensitivity of the participants takes precedence over the sensitivities of the researcher”.

**Conclusion**

We are aware of the move from a restricted creation and distribution context (whether literature production centre, school, Aboriginal Languages Fortnight, or School of Australian Linguistics) to one which allows worldwide access, so therefore we have been careful about obtaining permission, clarifying copyright, respecting the moral rights of the creators, and putting limits on how the material can be used and modified by people outside the communities in which the books were originally produced. At the same time, we want the repository to be a living archive which facilitates the distribution of digital materials. Creative Commons licences and The Open Languages Archives Community provide agreed guidelines with respect to how that distribution is managed. These are the standards we have chosen to follow.

**References**


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