

Indigenous learners in the digital age: recognising skills and knowledge

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Abstract

This paper presents findings from an action research project conducted by the University of Ballarat, funded through the Australian Flexible Learning Framework, New Practices initiatives. The project was designed to help remove barriers to Recognition of Prior Learning (RPL) through the development of a streamlined and culturally appropriate model for assessing the knowledge and skills of Indigenous workers intending to gain vocational qualifications. The project investigated and trialled the use of web-based voice applications for recording and transmitting oral evidence.

The paper highlights challenges in traditional RPL assessment processes described as time-consuming and cumbersome by Kemmis (2004) and Bowman et al (2003). These challenges were encountered by experienced Indigenous workers who possessed a wealth of knowledge and experience in relation to their work, but had not, necessarily, collected the documents (certificates, logbooks, diaries) to demonstrate competence. These workers preferred to demonstrate their knowledge orally, through discussion, conversation and/or narrative. They were geographically isolated, which meant that face to face interview methods proved a costly option. Initial trials suggested that online voice technology might provide an alternative method for the confidential and secure capture and transmission of evidence of competence.

Introduction

Increasing participation of Indigenous peoples in vocational education and training (VET) with the aim of improving their lives has been a sector goal for many years. In 1998, the Aboriginal and Torres Strait Islander Peoples Training Advisory Council and the Australian National Training Authority (ANTA) agreed to develop a national strategy to address this goal. *Partners in a Learning Culture (2000-2005)* highlighted key goals for involving Indigenous peoples in vocational education and training and improving employment outcomes. The associated *Blueprint* document provided clear implementation strategies. However, in the final report for this strategy, Kemmis (2004) argued that, although progress had been made in achieving the goals, there was still a long way to go before Indigenous voices were heard, not only at all levels of government but also within individual training organisations.

Recognition of Prior Learning has been identified as "a powerful tool for bringing people into the [VET] learning system" (Bowman, et.al. 2003, p. 11). However, Kemmis (2004, p. 11) concluded, "Indigenous clients of VET still access RPL and RCC [Recognition of Current Competency] at lower rates than non-Indigenous clients. Under-utilisation was explained in terms of cumbersome and time-consuming procedures". Other obstacles to RPL (and training delivery) for Indigenous learners include lack of flexibility (ie limited choice in timing and location) as well as limited attention to culturally appropriate strategies and models. Kemmis also stated that "consideration should also be given to revising the *Blueprint* to encourage redoubled efforts to improve access to RPL and RCC for Indigenous people" (p. 11).

Barriers to the implementation of RPL have been well-documented (Bowman et al, 2003). The process is described as “too daunting (the forms) and too time consuming, preparing the evidence too much work and they [the applicants] were often unable to locate the evidence” (p. 8). Where learners have significant pre-existing knowledge and skills, the development of an engaging, culturally appropriate, flexible, streamlined process should provide a greater chance for gaining credit and reducing training times. This could lead to increased access to job options. How then, can the RPL process be streamlined and made more flexible as well as culturally relevant to engage greater numbers of Indigenous Australians in VET?

The application of online voice technologies might begin to provide some solutions to the need for streamlined RPL processes that are flexible and culturally appropriate. These technologies may allow learners whose strengths lie in oral communication to more easily demonstrate their knowledge and skills without producing copious documents. Enabling oral evidence to be submitted may be more culturally appropriate and better engage some Indigenous learners. Daniell (2003) and Lal (2003) argued that designing online processes must be done collaboratively to ensure that cultural background is considered appropriately. This would be as true for RPL as for other learning and assessment processes. Online options can increase flexibility in the timing and venue for the RPL process (*Online Assessment Strategies and Models: Research analysis---issues and implications*, July 2003). Where learners are located a great distance from the training organisation, the confidential and secure transmission of oral evidence should also help produce a more flexible, accessible RPL option. Online voice technology has not, previously, been applied in this way.

The aim of this research project was, then, to investigate and develop an innovative model for conducting RPL that would integrate appropriate online voice technology with the potential to be more streamlined, flexible and culturally appropriate for a particular cohort of Indigenous learners employed at a remote Aboriginal family services work unit. This research was conducted collaboratively with a variety of Indigenous communities in recognition of the diversity that exists amongst these communities and to avoid potentially misleading assumptions about Indigenous learning styles.

Research method

The multifaceted action research methodology utilised for this project centred around four themes: voice technologies and web design (a flexible and streamlined process), Indigenous learning and cultural sensitivities (making the process culturally relevant), new forms of evidence (capturing, transmitting and assessing oral evidence), the pilot (testing the model in real life). Cycles of collaboration, planning, action, observation and reflection occurred often concurrently and continuously over a period of six months within a dynamic workplace context where the innovative RPL model was being developed. The progression of decisions and processes involved in developing the online model is presented diagrammatically in Figure 1, p. 4.

Due to the innovative nature of this work and the uncertainty of successful outcomes, the methodology for the research could not be prescriptive. The specific pattern within this research can be described as a cyclical process where consultation was entered into, a product, idea or discovery was produced by a team member. If

appropriate, the product, idea or discovery was trialled and the outcomes presented to the team. Both the creator/s and the team then worked towards consensus about the way forward through dialogue and debate either informally (corridor chats) or formally (team meetings or discussion/interview with the evaluator who took on the role of objective observer/critical friend). Decisions regarding the contribution the outcome could make to the development of another component of the RPL model were then implemented. Critical reflection about the outcome then brought about another cycle of consultation, planning, action, observation and reflection. With this methodology, the objectives and focus of the research were continually discussed and clarified at the same time the components of the model were examined, evaluated and refined. The project evaluator was considered the primary researcher based on her status (being both 'inside' but 'external to' the team). Her work included tracking and recording the learning progress of both the team and individuals within the team.

The data generated by this research methodology took the form of evaluator notes, voice recordings and written minutes of team meetings, posted scripts and audio files from two blog (online web log) sites and reports written for the funding body.

Rationale for research design

Voice technologies and web design

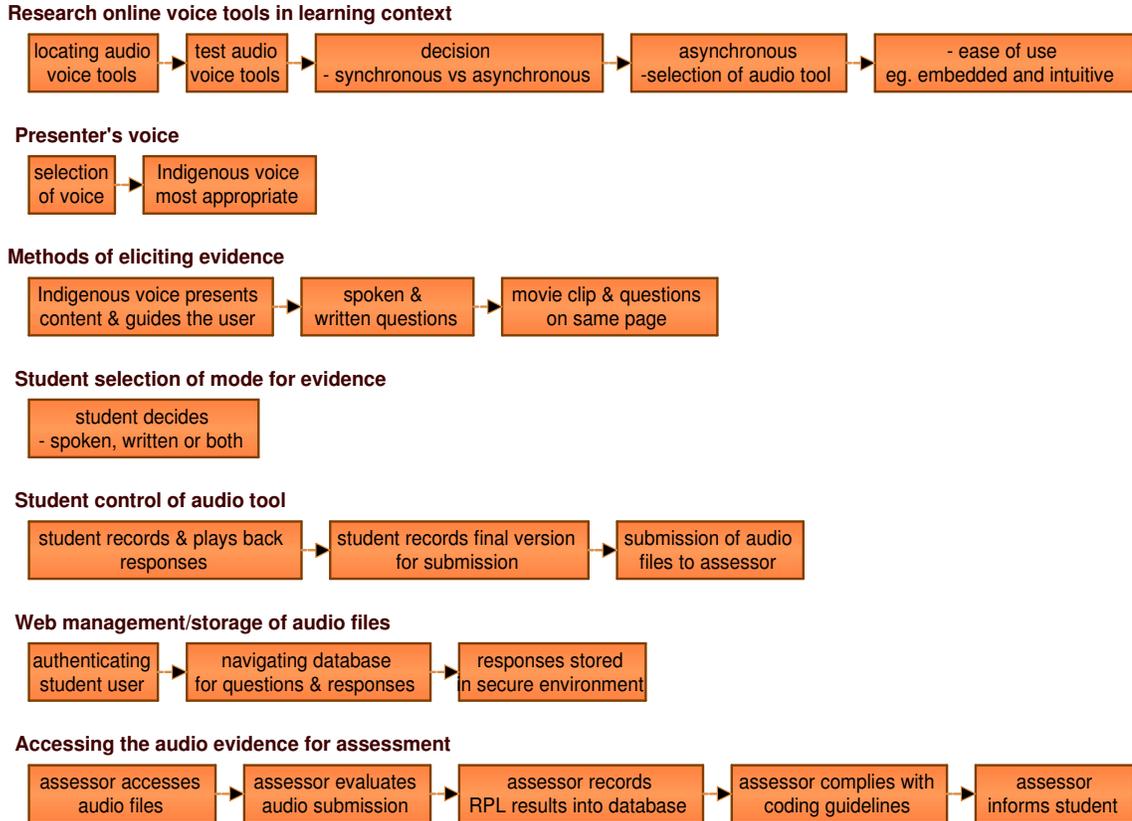
The challenge to develop an online RPL model that was both streamlined and flexible meant scoping the technological requirements. This required a process of consultation with both the cohort and the research team to determine the capabilities required of the technology. Once the scope of the task was understood, preliminary investigations into the range of technologies available were conducted and at various points throughout the investigation, both formal and informal dialogue was engaged in to evaluate the potential of the technologies. Technology specialists were consulted and various team members assisted with trialling. The investigation of some technologies was discontinued once it was determined that they did not meet the requirements of the model. Additional technologies were then identified, trialled, evaluated and re-trialled until a satisfactory technological solution was found. Formal documentation of this process was reported in the preliminary research findings, *Indigenous Learners in the Digital Age: recognising skills and knowledge: Investigation Report* (Woodward, P. and Eagles, D., November 2004).

In the design of the RPL model, incorporating opportunities for interaction among learners, instructor and content was considered a key instructional design challenge. The goal was to make these components work together to engage learners in both the assessment process and also their further training. In this way, online technologies have the potential to replicate the classroom environment (Ally, 2004).

Early decisions about the use of the technology focussed on whether the online communication should be synchronous (in real time) or asynchronous. Although there were disadvantages to asynchronous communication for the model, the advantages outweighed the disadvantages in that the collaboration preferred by our cohort could be built into the web design of the asynchronous environment and the learner had greater control over the timing of the assessment. There was also greater useability in the web interface and embedding the assessment content was

straightforward. The asynchronous environment provided greater time for reflection and more control over the evidence that was submitted. High level online facilitation skills were not required by the assessor, and the challenges for security and confidentiality were more easily met. The decision to use an asynchronous online audio tool offered various levels of media interaction described as desirable by Laurillard in Ally (2004) and created the most effective online learning/assessment environment.

Figure 1: Progression of decisions and processes involved in online component



Indigenous learnings and cultural sensitivities

Foster, as reported in Lal (2003), suggested that, despite the existence of multicultural policies and models of accommodating different cultural groups within Australian classrooms, there is a tendency for learning and teaching (and presumably assessment) to occur in ways that are designed to meet the needs of ‘mainstream’ Anglo-Australian culture. Although this research did not focus specifically on the learning styles of Indigenous people, the team became aware of the tendency to make assumptions about homogeneity amongst Indigenous people. Even learning and assessment strategies developed specifically for Indigenous learners are frequently designed as if ‘one size fits all’ (e-learning Guidelines for ATSI Learners: Access and Equity Online, 2003, p. 7). The consultation process and the research outcomes, however, reinforced the need to consider the diverse range of Indigenous learning styles in the design and construction of the RPL model. Consultations were conducted with regional Indigenous cooperatives and with one Indigenous researcher

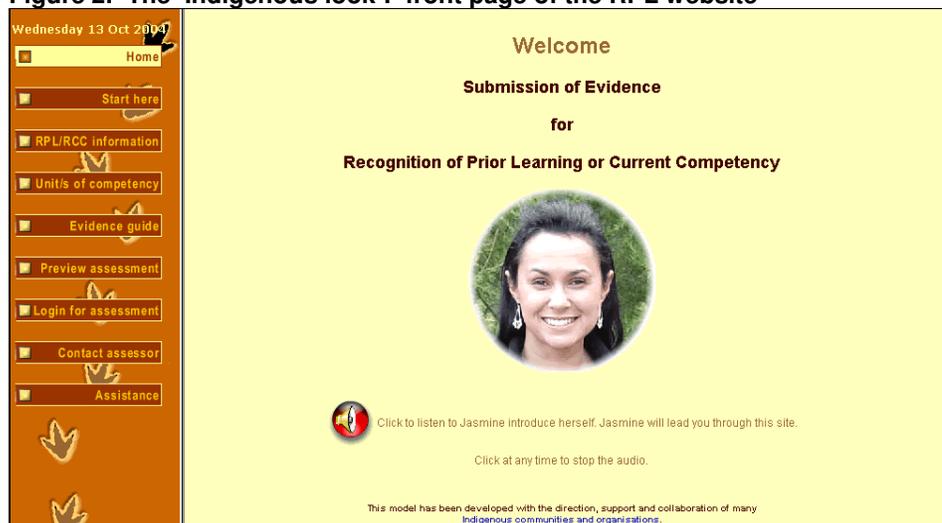
who lived amongst more traditional Indigenous people. The outcomes of these consultations informed the look of the web interface (where a Wirangu woman's image welcomed learners to the site, see Figure 2), how the assessment questions were phrased, and the use of stimulus material prior to engaging in the formal assessment process. The professional nature of the trial cohort meant that professional jargon was not avoided. A plain English option was discussed but the final decision rested with the assessor who felt that knowledge of the professional language could be expected and that the jargon would not alienate the learners.

From its inception, the project was based around a belief that an option for the provision of evidence in verbal mode might be more meaningful and valuable for (some) Indigenous learners. Much research suggests that transference of knowledge takes place through oral processes including speech, story telling, song and dance. While the trial group of learners are not now living in a traditional society, they communicated the relevance of oral communication through the consultation process.

The original RPL design had included the opportunity for the learners to discuss the assessment as a group prior to submitting individual evidence. The team considered the possibility of allowing the submission of group evidence to engage in collaborative assessment, a contentious idea highlighted by Walsh (2004). This group discussion was believed to be culturally appropriate. Guidelines on Indigenous learning preferences advise that Indigenous people prefer to work collaboratively, "Indigenous learners often feel shy in one-to-one situations, preferring to learn with a group" (*Gettin' down to it! Teaching and Learning Strategies for Working with Indigenous Learners, 2004, p. 24*). The final web model did not, however, allow for collaborative assessment and the trial phase confirmed individual submission of evidence as an appropriate method. Collaboration around the stimulus material was always an option for the learners, but one that they chose not to take up within the trial.

Clear and transparent acknowledgement of Indigenous involvement in the construction of the RPL model also helped to achieve the goal of engaging Indigenous learners through an Indigenous presence.

Figure 2. The 'Indigenous look': front page of the RPL website



New forms of evidence

The provision of evidence through speaking is only one option in the RPL model, however, it is an option that all participants in the trial chose. Verbal evidence formed the basis to determine whether or not competency had been achieved. The online environment (including the presentation of the stimulus material and outline of the process) was required to support the learner so that he/she was in the best position to provide the verbal answers to questions that reflected the depth of knowledge.

This aspect of the research immersed team members in investigation and critical reflection on the value we placed on talk: speech and conversations in social and learning contexts. The team established an audio blog site to provide an experiential learning opportunity for team members. They felt they should experience using a microphone at a computer, recording their own voices and playing it back. Although all team members like to talk, most team members were either loath to listen to the sound of their own voices, or curious and a bit tentative about playback. It was a fascinating yet unsettling experience. There was no assumption that the Indigenous learners would find voice recording any easier but there was an acknowledgement from the learners themselves that they might find oral presentation less intimidating and more familiar than traditional RPL processes.

The RPL model provided stimulus material (a video clip of a racial incident during a woman's basketball game). Questions were developed around the incident and the knowledge of learners regarding how to facilitate cooperative behaviour. The questions had an audio option. Learners could listen as well as read the question. The voice tool enabled them to record their answer to the question, play back the answer, and re-record if necessary. Once the learner was satisfied that the answer reflected their knowledge, they would click on the 'send' button and the audio file was transmitted to the assessor. The assessor would make a judgement about the quality of the answer and provide feedback via email to the learner.

The pilot

Prior to the pilot, the research team made a visit to the workplace (pilot site). The web designer inspected the computer resources. Learners had access to computers, a technical person for support, and good Internet connection. This visit had three valuable outcomes: it enabled the learners to 'put a face to the people', it facilitated shared understandings and it enabled observation of the multi-skilling required of these learners in their work place.

Pilot methodology

The learners were given minimal direction about the web tool in the pilot context. This allowed testing of many of the features of the online model including: the intuitiveness of the web interface, use of the preview section and video clips, comprehension of the questions, management of the recording features and submission of the verbal evidence. It also allowed for the researchers to get a sense of the time required to get to the submission stage and also how much help or clarification was required.

Learners were provided with a quiet space where they could use the computer with the microphone connected. The web designer gave a brief introduction to the site. She made sure that the learner understood that the tool included a preview and a submission site, and that all information was available in both written and verbal forms. The learners were assured that one of the team was available if help was needed. They were advised they could begin when they were ready and that there were no time limits on recording and re-recording responses. The students needed no prompting to provide responses. This immediately suggested a satisfying and even pleasurable experience.

Feedback on the model

After the student had completed the task or completed the preview, we invited them to talk about the experiences. There were 11 key aspects of the tool for which feedback was sought. These covered the familiarity of the learner with the technology and using it for training purposes, the ease of navigation and technical use of the site and the quality of engagement (cultural appropriateness and professional interest). The responses to these questions would provide preliminary information on the potential for providing a RPL model that would meet the objectives for being time-effective, flexible and culturally relevant. It was decided not to record learner responses to the evaluation questions since they had just been through a recording experience and the researchers were interested in obtaining the most spontaneous responses possible. To ensure that the responses were accurately recorded, they were fed back to the learners during the discussion and the two team members verified the written records with each other.

Results and Discussion

The responses to the model were overwhelmingly positive. The following responses have been selected as pertinent to the key objectives of streamlining the process and ensuring cultural relevance. These responses were amongst many identified through informal interview with the students, observation, and note swapping between the two researchers at the end of the day.

Responses relating to streamlining the process and using the technology:

The responses to the navigation were very positive. The learners were captivated by the video clips when they were introduced to the website, but the discussion/interview did not yield any specific insights into the use, appeal or content of the video clips.

The learners were relaxed about the voice recording. The different reactions we observed were fascinating. One learner, nervous and under a lot of pressure at work, did not want to listen to, or play back, her responses: *"I don't want to hear if I did, I'd go "arrrrgghh" and stop doing it. No way, no way!"* [that she would listen to the feedback of her responses or voice]. (Learner # 2). In this case the responses were spoken and immediately submitted. There was no re-recording or playback. This response demonstrates the ease of usage of the model and the potential for a streamlined process.

Two of the students took advantage of the opportunities for critical reflection. One took the opportunity to prepare answers between the initial exposure to the questions and the time for submission of the response (which the asynchronous communication decision made easy). The next day she replayed her first answer and then recorded the answers in about an hour. This observation illustrates the benefits of the online model as described by Ally (2004), that learners have the opportunity to reflect and also have greater control over the learning (and presumably assessment) process. *"It's good cause you can erase stuff, but I realize now I needed to do a bit more work – taking the questions away, and I'll be better prepared"*. (Learner # 1)

Responses relating to cultural relevance of the website:

Students liked the introduction and welcome on the front page. This was illustrated by the comment: *"Loved goin' in, and the first thing you see is an Indigenous face. It's real cool...and loved that she said "deadly"*. (Learner # 1). Students liked the look of the site. One commented immediately on the freedom of the bird sound, and another commented on the enjoyment of the emu feet in different places on the pages. Consultation with Indigenous communities was undertaken during each step of the development process. Each consultation yielded positive feedback about the look of the web interface. This consultative process increased the likelihood of a positive reception to the look of the web interface by the pilot group. Many researchers have argued the need for considering cultural backgrounds of learners to ensure culturally relevant computer-based learning (and assessment), (Lal, 2003).

Responses relating to submitting new forms of evidence:

There were no problems with the comprehension of the questions. One of the applicants felt that the questions were so specific as to limit the chance to talk around the experiences and knowledge she had. With the questions based on the video clip situation, she seemed to experience some frustration that she could not open out the answers. On the other hand she also mentioned that the video clips provided an opportunity to reflect on that circumstance and the questions to enable her to make connections with other experiences and situations she had experienced in her work.

"Number 11 was a great question. I need to know how they are presenting to you. A big thing is whether I know the person well enough. Huge with me. No two situations are the same". (Learner # 3)

A third learner utilised the capacity to re-record till a response they were happy with was achieved. Two of the learners completed the entire task and both took about an hour to submit the evidence, another indication of the potential for a streamlined process. There was variation in the use of written and spoken forms of the questions. One learner read the questions and did not use the spoken version at all. Another used the oral form to clarify the written form. The third played through all the oral questions and used these for the initial stimulus. The fourth played through the previews using both forms, but did not want to complete the submission at that time.

One of the learners was motivated after the initial trial with the tool to collect the written evidence he had and then to return to the website to complete what he felt he

could do better in a verbal submission. The potential to submit written evidence (electronically) was built into the web design. This provided options to the learners.

All learners liked the voice component. Two said it gave them a feeling of confidence. One student said she felt there was someone she could listen to if she needed. Students asked about where the information went. This led to the decision to incorporate into the website an explanation of where the voice files went.

The comments and feedback from these interviews, as well as observation by the researchers of the learner interaction with the web interface, were used to refine the 'final model'. Further trialing would, no doubt, improve the model. Time restraints of the research did not allow for further development. It is clear from the responses of these learners that this model has significant potential to improve access to RPL for Indigenous people. It may well remove some of the barriers identified by Bowman et al (2003) for a range of learners.

Conclusions

Devising a streamlined, flexible, and culturally appropriate RPL model using online voice technology is possible. Although in its infancy in terms of trialing and evaluating, the model has potential to improve outcomes for some Indigenous peoples in VET. Early trials of the model suggest that through careful consultation around web design, the potential exists to better engage Indigenous learners in the RPL process and provide them with increased opportunities for achieving successful outcomes. Indications are that the use of online audio technology in the model increased the confidence of the learners in this trial. The Indigenous 'look' to the web interface appeared welcoming and the culturally appropriate video clip engaged the learners in the assessment process. The early success of preliminary trials suggests that the methodology used to develop the model may be the key to its positive reception. This methodology aligned closely to recommendations from *e-Learning for Aboriginal and Torres Strait Islander Learners* (ANTA 2003, p. 5), that "Indigenous people play a substantial role in developing the resource, Indigenous people, communities and organisations review and validate the resource and Indigenous people appear in the resource telling stories about themselves."

This model makes a significant contribution to the body of teaching and assessment practices that both recognise and cater for learning differences and preferences. The model is customisable and, therefore, not solely appropriate for Indigenous learners. The model can be used to assess learners with other backgrounds, experiences and capabilities. Inherent in the model is a flexibility that enables it to provide access across geographical distances where support from assessors is also available.

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