

Improving Reading in Culturally Situated Contexts

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This article explores second year pre-service teachers' ability to work with Indigenous students and their families during a small-scale project conducted in an Indigenous community. Supported field placements offered the pre-service teachers valuable opportunities to engage with the teaching of reading to Indigenous students 'on their turf'. Given the high likelihood that pre-service teachers will be employed in schools with Indigenous populations, it is important that they develop an understanding of the reading process, the factors that impact on learning how to read, as well as cross-cultural aspects that affect the learning process. Pre-service teachers need to develop understanding of the factors that impact on the literacy development of students and how to engage them in culturally responsive pedagogical practices that focus on the positive aspects of the learner. Following the field placement, analysis of the data demonstrated that pre-service teachers were able to engage with the reading process through the use of running records, and develop field knowledge through understanding the impact of relationships on the learning environment. This information can be used by others to support field placements in Indigenous communities.

■ **Keywords:** Indigenous education, community partnerships, reading ability, running records, higher education, pre-service teacher education

The need to design programs that expose pre-service teachers to different social and cultural contexts is important for teachers in our global society. Working with Indigenous students requires teacher educators to have a strong understanding of how learners learn and how to 'cater for learning differences, language and cultural development' (Darling-Hammond, 2006, p. 301). Darling-Hammond and Sykes (2003, as cited in Darling-Hammond, 2006, p. 302) draw attention to the under-preparation of pre-service teachers to teach diverse student populations, questioning how well teacher education programs assist in the development of deep knowledge that connects to the life world of the learners. The under-preparation of teachers may be evidenced in figures presented by the Australian Bureau of Statistics (1998) that suggest many Indigenous students left school with little more than primary level schooling. Many significant and complex issues result in this low level of education for Indigenous students including: language difficulties, sometimes involving several Indigenous dialects; cultural assumptions about comprehension of English; remote schools and difficulty maintaining staff; and health problems, especially with middle ear infections affecting up to 70% of children and resulting in permanent

hearing loss. The under-preparation of teachers may also be a contributing factor. This statistic is a serious indicator that the needs of Indigenous students are not being met and that traditional teaching approaches are ill-designed to enable success for all students (Rose, Lui-Chivizhe, Mc-Night, and Smith, 2003). Thwaite (2007) concurs that Australian teachers have not been successful in fostering English literacy skills of Indigenous students where they consistently score significantly lower in National Literacy Benchmarking tests (Ministerial Council on Education, Employment Training and Youth Affairs, 2007). Teacher quality thus remains one of the key focus areas identified in the Indigenous Education Plan 2010–2014 (Ministerial Council for Education, Early Childhood Development and Youth Affairs, 2010) aiming for successful Indigenous schooling.

Central to pre-service teacher preparation is having knowledge of the pedagogy, of content and of the community, in order to make learning relevant to the needs

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of the students they work with. That is, pre-service teachers must develop the dispositions to seek out and address the difficult questions that arise from practice within all of these arenas (Zeichner, 1992, as cited in Darling-Hammond, 2006, p. 309). When pre-service teachers can make learning relevant to Indigenous students they will be able to address the issue of developing student's self-efficacy about succeeding in school. The work of Purdie, Tripcony, Boulton-Lewis, Fanshawe & Gunstone (2000, p. vii) identifies significant people in the school context, such as teachers, who create either positive or negative influences on the identities of students, which directly affects their school outcomes. Indigenous students, like all students, have stronger attachments to school when they have a positive self-identity. Therefore, it is the quality of the teachers as well as curriculum issues that impact on positive academic development. To help students develop a positive self-identity in school settings, they need to feel accepted and valued by their teachers. Thus, the attitude and behaviours of teachers towards Indigenous students are critical factors that impact on relationships and academic learning (Rowe, 2003). Teachers need to develop and maintain positive relationships with Indigenous students and their families, noting the impact that this has on motivation and academic learning (Anderson & Walter, 2010; Threadgold, 2010). Nakata's (2003) research focuses attention on the influence of a strong, empowering learning environment which supports Indigenous students to learn.

Teachers who accept students and who value their language, culture and community are recognised by the students as warm and supportive. When teachers learn to take into account and value Aboriginal epistemology (ways of knowing), axiologies (ways of doing) and ontologies (ways of being), students will feel valued and develop stronger relationships with teachers and teaching (Moreton-Robinson & Walter, 2009). As teachers learn about children and their communities, they deepen their knowledge of the rich resources children bring to their school-based learning. Indigenous methodological frames recognise all knowledge as socially situated, partial and grounded in subjectivities and experiences of everyday life. The work of Howard and Lipinogo (2008) demonstrates how teachers can become more perceptive of children's rich home knowledge and the intellectual capital they bring to the learning environment. The subtle shifts and changes in pedagogy that can occur when teachers demonstrate cultural sensitivities are reciprocated by closer relationships and connections to the students.

Hooley and Ryan (2008) stress the importance of understanding communities and identify the need for respectful relationships between teachers, students and communities as key drivers of success for Indigenous students. Their work also emphasises the need to adapt the 'white curriculum' so that children can 'relate this to their daily lives' (Hooley & Ryan, 2008, p. 2). One of the means

of adapting the 'white curriculum' may be through the use of reading recovery, and in particular the use of 'running records' that allow teachers to identify strengths and weaknesses in students' literacy skills. These processes allow teachers to differentiate the curriculum that embodies real-life practice and understanding to school based learning. Authentic engagement with students' families helps teachers to understand, know and build trustful relationships with their students and thus promote academic learning (Burgess & Berwick, 2009). The formation of meaningful partnerships between teachers, families and children remains one of the key determinants of success for Indigenous students.

Improving Literacy Outcomes

'Reading recovery' can play a part in improving literacy outcomes for students as it can prevent a cycle of reading failure (Cox & Hopkins, 2006). It was developed in New Zealand 30 years ago by Clay (1993) and allows for individual students to receive a half-hour lesson each school day for 12 to 20 weeks until they can meet grade-level expectations. Since 1984 when reading recovery began in the United States, approximately 75% of students who complete the full 12- to 20-week intervention can meet grade-level expectations in reading and writing (Clay, 2005). Follow-up studies indicate that most reading recovery students also do well on standardised tests and maintain their gains in later years. Reading recovery has a strong tradition of success with the lowest-achieving children. Dunn (2007) concurs, and describes it as an important tool to use as 'response-to-intervention', in order to intervene early and help students catch up instead of waiting for the failure to show up. Reading recovery is supported by empirical research-based literature (Centre, Wheldall, Freeman, Outhred & McNaught, 1995; Cox & Hopkins, 2006; Dunn, 2007; Reynolds, Wheldall & Madelaine, 2007; Schwartz, Hobbaum, Briggs, and Scull, 2009) reporting significant effect sizes for groups across age groups and settings. Substantial effect sizes are noted, ranging from 0.64–1.55 in favour of reading recovery over comparison groups across seven different standardised measures of reading. Schwartz et al. (2009) also report retention gains in reading are maintained over time. The work of these researchers supports the use of reading recovery principles as a means of meeting the needs of Indigenous students.

Reynolds and Wheldall (2007) reviewed research on reading recovery and concluded that the system of reading assessment provided 'an excellent model in demonstrating how to plan, promote, and implement intervention across an educational system' (p. 218). Cox and Hopkins (2006) argue strongly that use of reading recovery becomes an important focus for teacher educators in order to provide new graduates with essential skills required because children have different preschool, life and social experiences, noting that no literacy program or set of instructional

procedures will meet the needs of every child. Reading recovery is a means that teachers can use to identify student needs on key areas of literacy development. McNaughton, Phillips and MacDonald (2003) considers the disparities in literacy development between cultural groups in New Zealand and the impact of reading recovery methods as a powerful intervention tool used for the indigenous students of New Zealand. This author discusses three concepts from the reading recovery theoretical base: acceleration, roaming around the known, and treatment integrity. There may be similarities between Australia's Indigenous literacy development and that of the indigenous Maori and Pacific Island communities in terms of breaking the reading failure cycle. Even though McNaughton (2008) was investigating reading comprehension in years 4–8, perhaps the same reading recovery concepts of acceleration, roaming around the known and treatment integrity could be incorporated with Indigenous students as a basis for sustained school improvement in literacy achievement. This article is investigating treatment integrity of the use of running records. It is hoped that the accurate use of this reading recovery tool will assist with treatment integrity and fidelity for the pre-service teachers as they progress through their careers.

Darling-Hammond (2006) suggested that teachers need to draw on social cultural frameworks and develop 'sociocultural consciousness' or 'diversity awareness' in addition to 'pedagogical content knowledge' when working with Indigenous students. Reading recovery provides a well-supported research-based intervention that has the potential to help address the disparities that exist between cultural groups. Reynolds et al. (2009) acknowledge that reading recovery has many worthy features and has been successful in raising the achievement for many students. Reading recovery is also noted as a systematic and comprehensive program of professional development. Cox and Hopkins (2006) present five measures of reading achievement that the program of reading recovery targets. The fifth of these measures involves text reading, which is accompanied by running records used to determine the level at which the student can read with 90% or greater accuracy. Running records, when used correctly, will assess all the measures outlined by Cox and Hopkins (2006); namely, letter identification, word identification, concepts about print, writing vocabulary, hearing and recording sounds in words, and finally text reading. They suggest that the key to successful implementation of reading recovery is training and professional development across three tiers: university trainers who train and support teacher leaders; and district level leaders who train and support teachers. Rose et al. (2003) present a study about 'scaffolding' methodology used to teach Indigenous adults returning to study at university. The types of cues involved include: context, the syntax or sequence of words, and comprehension. By drawing attention to text patterns and intended meanings of text, the program and the scaffolding strate-

gies described in this study are akin to those incorporated in reading recovery processes and enable the students to work at a higher level than would be possible on their own. This study aims to inquire into the effects of providing strategies to undergraduate level pre-service teachers so they may work directly with students who are at risk in the area of reading and to do so in a way that engenders respectful relationships with Indigenous students. The focus questions of the study are:

1. To what extent are pre-service teachers able to build a relationship with the Indigenous children?
2. To what extent are pre-service teachers able to successfully employ running records to inform their teaching of reading to Indigenous students?

Site Selection

Alpha House (pseudonym) is a community house located in an Indigenous neighbourhood in a large rural Australian city. The site was chosen because it provided a naturalistic informal learning place 'on their turf' (neighbourhood setting for the families and children), a place where both children and parents felt comfortable attending. The contextualisation of this space as a neutral setting removed from school environments was important as some Indigenous people have had negative associations with schools (Purdie, 2003). The decision to use this site was critical to successfully involving the Indigenous community with the project. This decision was based on the notion that Indigenous parents feel alienated from school environments, feeling that they lack the knowledge and skills to deal with teachers (Gray & Beresford, 2008). As Alpha House is located in the Indigenous neighbourhood and parents attend the centre for other purposes, it was felt they would be more comfortable here and feel more in control as it was in their neighbourhood. The setting was designed to break down the barriers to educational learning for the students and the broader community as family members would be free to watch and listen to their children. The site's independent location meant that pre-service teachers could design and tailor specific learning programs to the needs of individual students, rather than trying to work within the constraints of the education system of classroom teacher's programs. Pre-service teachers thus had autonomy to develop their own teaching programs, applying the scaffolded support to their own as well as the student's learning. Another factor in choosing this site was discussion with the community Elder. In these discussions, our attention was drawn to the needs of families in the community, and it was suggested that they would respond much more positively when activities were conducted in their locality. The site was in close proximity for all participants, thus alleviating transport issues. The site was a place where the Indigenous community felt like they had a level of power and authority. The

selection of this site was therefore based on the availability and willingness of the community to be involved; to have available sufficient numbers of students with learning needs for pre-service teachers to work with on a one-to-one basis, and to have a proactive group of parents who supported the implementation of the program. The Indigenous Elder was very supportive of this community project. This support was central to the success of the project both in gaining access to participants and also in the delivery of the project.

Participants

The sample of Indigenous students varied from 24 to 27 participants. Participant attendance varied due to the mobility of families moving in and out of the housing estate area, transport or other social factors which prevented children from attending. The students were of primary age, ranging from Kindergarten (5 years of age) to Year 6 (12 years of age). There was a fairly equal mix of male and female students. The data presented is based on 24 children who regularly attended the Homework Centre. Opportunity sampling was the only process used, primarily due to the qualitative nature of the project (Neuman, 2000).

Twenty-four second-year pre-service teachers enrolled in a primary teacher education course participated in the project. Pre-service teachers ranged from HSC leavers to mature-age students. Over two thirds of the teachers indicated they had Indigenous students in classes during their own schooling, but indicated their association with them was mainly limited to sport interaction; there was little academic or social mixing beyond this. Six pre-service teachers had no prior contact with Indigenous students or families at any point in their life. A signed written consent to participate was obtained from the university students, and from the school students, via their parents. Participation was completely voluntary. Written consent forms were sent to parents, along with an information sheet. This was followed up by verbal explanations where the first author met with parents in the company of an Indigenous community member. Ethics approval was awarded by the Ethics in Human Research Committee of Charles Sturt University prior to the commencement of the project.

Data Gathering

The project used a case study approach, so the site could be investigated in-depth, allowing analysis to be conducted from multiple perspectives. The use of qualitative measures allowed data from students, pre-service teachers, parents, gatekeepers and the researcher to be triangulated to verify the appropriateness of the interpretations made from each source. Qualitative approaches included semi-structured interviews with the gatekeeper of Alpha House, direct observations and document analysis. This data provided information about pre-service teachers' ability to

link with and develop relationships with the students and the community. This qualitative information was supported by set interview questions and pre-service teachers' assignments to provide material for analysis of the running record data for the reading program.

Open-ended questions asked of key stakeholders (gatekeepers and parents) assisted in the development of an authentic picture, allowing interpretation by the respondent, probing feelings and perceptions of these individuals. Direct observations were used by the first author, acting from a dual role position as both a privileged observer and active participant. Observations were noted in class during lectures and tutorials and at the field sites. As a privileged observer, this role was mainly passive, only becoming active when pre-service teachers needed support.

During the 6-week field placement, pre-service teachers used running records to assess and program reading activities for Indigenous students. The sessions included oral reading, reading activities, and comprehension of the text. During each session a running record was taken at the conclusion of the day's activities. Between weekly sessions, the pre-service teachers were expected to reflect on results and begin planning for the following session. During university class, this work was scaffolded through university-based tutorials. Pre-service teachers were expected to design and carry out teaching activities with levels of scaffolding that closely matched the students' reading needs. This data used for this article formed part of a longer-term program that engaged with the community over a 12-month period.

Document analysis of pre-service teachers' work from class as well as their field site journals provided insight into the degree the students were able to move from a theoretical approach to the practical application of the project. This examination looked first at their level of understanding, field application and analysis; and second, at their understanding of the implication of affective and relationship issues on Indigenous student learning. Set interview questions were used to provide internal validation of responses provided in the open-ended questions and to further support the triangulation process outlined by Burns (2000). Descriptive statistical analysis of documents in the form of pre-service teachers' assignments were used to assess how well they could implement a reading program and use running records to inform teaching and learning. We are aware that generalisations cannot be made to other contexts as the sampling procedure would not sufficiently allow this case to be replicated, or for generalisations to be made beyond the context of this project (Burns, 2000).

Results and Discussion

The focus areas for this project included: building relationships with indigenous students and employing running records to teach reading skills to Indigenous students.

Focus Question 1: How do Teacher Education Students Build a Relationship With Indigenous Children?

Developing positive relationships with the students was stated as a priority by the Alpha House gatekeeper, who highlighted the importance of the teacher–student relationship, particularly when working in a cross-cultural setting. This notion, identified by Borg (2009) research as a key factor to successful relationships, is reiterated by the Alpha House gatekeeper as a critical component of the teacher and Indigenous student relationship:

The developing of a relationship is vital, there needs to be valuing and non-judgemental attitudes, otherwise the program will not work because it is voluntary. (Alpha House Gatekeeper, personal communication, November 20, 2005)

The gatekeeper placed a strong emphasis on the development of the teacher–student relationship and for pre-service teachers to maintain a non-judgmental attitude towards perceived cultural differences. This point was reiterated a number of times at the field site, emphasised by the Elder as well as visiting parents. Pre-service teachers were challenged from time to time because of the different expectations of the Indigenous students to learning and their perceptions of the different ways Indigenous parents expected children to engage with learning. Pre-service teachers were, in fact, challenged by their own limited cultural perspectives and limited training to date about cultural understandings.

A number of factors impacted on relationship building at the field site. First, pre-service teachers were nervous about working with the Indigenous communities. This was partly due to previous negative media presentations related to surrounding Indigenous communities. Assurances about pre-service teacher safety at the field site were given by an Elder and the gatekeeper prior to the project starting. Although this went some way towards addressing this issue, pre-service teachers showed marked group clustering on their initial visits. Relationship building was affected by first impressions and prior conceptions of Indigenous neighbourhoods. Groups of pre-service teachers would wait together on the lawn and wait for children to come to them, or be allocated a student. Only a few of them, mainly the more extrovert ones, introduced themselves to the students, and collected together small groups of students to play some games to facilitate interaction prior to settling into reading activities. As students came on their own, it was up to the pre-service teachers to develop a social relationship with the student while developing a working relationship with them.

‘Being on their turf’ changed the power situation between the cultures and affected the way white pre-service teachers interacted with the students. The site location affected relationships in a number of ways. The power base

had in part shifted from the pre-service teachers to the Indigenous community as the project was in their neighbourhood. Although the pre-service teachers were given 4 weeks in-class preparation prior to their first visit to the field site, many had not had any prior interaction with Indigenous people and were unsure of unspoken rules and ways of being and doing. Their outward behaviour was much more rigid, rather than relaxed and informal in the early weeks of the project. Santrock (2007) discusses how children perceive cues and respond to body language. In part this affected the level and type of bonding between the pre-service teachers and the student dyads in the initial stages. From the third week on, as familiarity with the site and routines became established, changes in relationships were noted. A family living near the field site made the comment that after a few weeks, the pre-service teachers no longer waited in their cars for either the first author or the gatekeeper, but were able to chat and engage with Indigenous parents while they waited for students to arrive. The students were comfortable working with their pre-service teacher and were often reticent with working or sharing with others. The more successful relationships developed in those groups where students connected with pre-service teachers. Where early relationships were established, comments from significant adults associated with the children reflected the importance of home support for the tutoring program. This interaction is evidenced in the following statement:

I know my child will learn with these teachers and my child feels comfortable going to Alpha House. (Alpha House Gatekeeper, personal communication, November 20, 2005)

Pre-service teachers were aware there was a strong focus on developing positive relationships with the community and it was their responsibility to be proactive in this area. One aspect that strengthened relationships across all groups resulted from the weekly feedback certificates students took home. These short messages highlighted reading strengths noted from the running records. The messages identified positive learning that had taken place and aspects that the student needed to work on. Copies of each student’s work were kept in individual folders at Alpha house and parents were encouraged to come and visit. The immediate positive response from family members served to connect community and give purpose to the project. It was surprising to see this small token becoming such an asset. Feedback from the community indicated that this was the first time for many Indigenous families that any positive comments related to learning had been sent home. It was very strongly pointed out that the only time parents had received communication from school was for negative purposes. Parents felt they had limited communication with the students’ schoolteachers and expressed concern that by the time reports were sent home, it was often too late to work with the children. Grandparents, many

of whom were caring for their grandchildren expressed positive affirmation comments regarding the certificates. This communication served to strengthen the bonds between many pre-service teachers, their students and the Indigenous community.

The Alpha House gatekeeper worked with both pre-service teachers and their own community to bridge the gap between the cultures. The gatekeeper for Alpha House would encourage parents, especially mothers, to come to the centre and watch their children learning, to help parents overcome the negative intergenerational perception of school and teachers and to build a positive framework for the pre-service teachers. Parents would come, encouraged to have a cup of tea and a chat, and would then sit and listen to their child working. For many parents, this was the first time that they had seen their child in a learning situation. This slow and deliberate exposure between all the parties resulted in the beginning of breakdown of some of the barriers between the cultures. This resulted in a positive effect on both groups. Pre-service teachers felt more comfortable in this environment, as parents were accepting and appreciative of the work they were doing. For pre-service teachers, this helped to overcome some of their apprehensions and they subsequently responded in a much more accommodating way to both parents and students. This was a small but significant step.

The development of cultural understanding was important to the project. The pre-service teachers were seen as: 'Not touched by the school system and so did not carry the prejudices and preconceived ideas of mainstream teachers' (Alpha House Gatekeeper, personal communication, November 20, 2005).

However, although positive relationships were developed and maintained, much more work needed to be done to overcome entrenched cultural perceptions, and ways of believing, valuing and doing. In responding to an open-ended question about how well pre-service teachers worked with the students, the Alpha House gatekeeper indicated 'that more work needs to be done to bridge the cultural divide and define expectations' (Alpha House Gatekeeper, personal communication, November 30, 2005).

Positive relationships had been cultivated over many years by the first author by conducting the reading program with pre-service teacher since 2004. Developing positive relationships does take time, and each group going into the community has to build their own relationships with the community. For pre-service teachers, this is the beginning of a lifelong journey — each individual undertakes the journey at their beginning point of cultural understanding and competencies. We acknowledge that further work needs to be done. However, for this group of pre-service teachers, this short experience has provided them with an insight that Indigenous students, like other children, learn best when they have positive relationships with others.

Focus Question 2: Evaluate the Extent to Which Pre-Service Teachers Were Able to Successfully Employ Running Records to Inform Their Teaching of Reading

The field site experience was invaluable to students as the practical work engaged them in a problem-solving situation. This system worked well as it provided a direct relationship between theory and practice; it provided a forum for pre-service teachers to operate in a semi-autonomous way while fully supervised, and allowed direct instruction teaching methods to be amended as a result of regular monitoring (Marsh, 2004; Westwood (1999)).

One key aspect of the project was to teach second year pre-service teachers the core basic skills to implement, monitor and evaluate an individual reading program based on the use of running records. Qualitative data, sourced from observations and field notes indicated that pre-service teachers were able to use running records effectively to work with children with learning needs so that precise data collected would lead to teaching directed to the child's zone of proximal development (Verenikina, 2004).

Second year pre-service teachers showed competence in the use of most component sections of running records, which included determining the reading accuracy of the text; that is, whether it was read at a hard, instructional or easy level; the use of self-correction information to determine the effectiveness of reading strategies used; and the measure of fluency rates because they impact on reading comprehension (Neddenriep, Fritz, & Carrier, 2011). Table 1 breaks down aspects related to individual sections of running records before drawing together pertinent aspects in a holistic review.

Pre-service teachers completed their running records during their site visits. They then submitted these running records to the first author for analysis. Scoring was based on a score of 1 being allocated for correct entry of: accuracy, self-correction attempts; fluency and analysis of errors using meaning, structural and visual cuing information. A score of 2 was given where students applied level 1 information for programming. A score of 3 was given where cross-referencing was evident in the narrative and pre-service teachers could demonstrate linking of all the data results collated. The scoring was based on the correct tally marks on the running record as well as the narrative description explaining the results. Descriptive analysis figures in Table 1 demonstrate that all pre-service teachers achieved a 'basic understanding' of the use and application of running records. This information indicates all pre-service teachers could correctly apply the accuracy formula to analyse the reading level of the child, allowing them to adjust the text reading level to the child's specific needs. Eighty-five per cent of the teachers scored a level 1, demonstrating understanding of the basic function of the accuracy measure and its application to text selection for teaching purposes. A further 15% of pre-service teachers

TABLE 1
Pre-Service Teachers Ability to Use Running Record Information (Accuracy, Self-Correction, Fluency and Analysis of MSV).

Pre-service teacher	Running record: Accuracy	Running record: Self-correction	Running record: Fluency	Running record: Analysis MSV
01	2	1	0	1
02	2	1	1	1
03	1	0	0	1
04	2	0	0	1
05	2	1	0	1
05	1	1	0	1
06	1	1	1	1
07	1	1	1	1
08	2	1	1	1
09	1	2	1	0
10	1	1	1	1
11	1	1	1	1
12	1	1	1	0
13	1	1	1	1
14	1	1	1	1
15	1	1	2	1
16	1	1	1	1
17	1	1	1	1
18	1	1	1	1
19	1	1	1	1
20	1	1	3	1
21	1	1	1	1
22	1	1	1	1
23	1	1	1	1
24	1	1	1	1
25	1	1	1	1
26	1	1	1	1
27	1	1	1	1
28	1	1	2	1
29	1	1	1	1
30	1	1	1	1
31	1	1	1	1
32	1	1	1	1
33	1	1	1	1

Note: Score 0 = no understanding; score 1 = basic understanding; score 2 = advanced understanding and application; score 3 = advanced understanding, application and cross-referencing to other data

achieved a level 2. This higher rating reflected their capacity to engage in deeper analysis by their ability to analyse the child’s result against the text type; that is, whether it was a fiction or nonfiction text, and assess the student’s ability with a greater level of sophistication.

Table 1 indicates ‘basic understanding’ levels of pre-service teacher application of self-correction rates. Fountas & Pinnell (1996) discuss the importance of self-correction in the reading process, drawing attention to high student error rates, accompanied by a lack of self-

correction, as demonstrating a lack of awareness of the loss of meaning or that cues used were inefficient. Pre-service teachers demonstrated competence in being able to correctly calculate self-correction rates, analyse and then use this information to determine the competence of the child in the selection of and use of reading strategies at error. Pre-service teachers used this information to directly adjust their teaching behaviour accordingly. Ninety-four per cent of pre-service teachers achieved a level 1 or 2 score. This means they were able to use the formula correctly, and apply this information to analyse whether which of the cuing systems (meaning, structural and visual cues [MSV]) the reader was using at error. They then used this information competently to adjust the level of teaching support and scaffolding required. This level of analysis not only informed them of the success with their own teaching, but also how well the student was applying self-correction strategies during reading. Understanding how to teach within the zone of proximal development and taking responsibility for this is an important process for pre-service teachers to grasp, as it is the teacher who makes the difference to a child’s learning.

Only six per cent of the pre-service teacher cohort did not discuss self-correction in their analysis. The 94% who did discuss self-correction only scored at a ‘basic level’ of competence. This figure draws attention to the need to further scaffold the pre-service teachers in their learning to ensure they can adequately apply and analyse self-correction measures. Being able to interpret a running record is an important skill and one that develops with practice. The ability to identify the cuing system or combinations of systems the child is using is important to unlocking which cues the student is using at error and self-correction. This is an important strategy commonly used by classroom teachers and an important tool for classroom teachers (Clay, 2005).

Recording a student’s reading fluency is a fairly simple exercise. Students are timed for a period of 1 minute and the number of errors is subtracted from the total number of words read in that time. This then provides the number of words that are read correctly in a minute. Despite the ease with which this can be done, 15% of the pre-service teacher cohort was unable to show evidence in their written analysis that they had incorporated this into their running records. One student commented: ‘I just keep forgetting to do it’. This may indicate that some pre-service teachers may have had too much to orchestrate at the field sites and were unable to add this further dimension at their level of training. This lack of attention to reading fluency may also have resulted from other factors impacting at the field site, such as managing the working relationship with the student.

The gatekeeper at Alpha House was only able to provide generalised comments regarding pre-service teachers’ ability to work with students. When asked ‘How well did the pre-service teachers understand running records and

develop individual reading programs?', the response was generalised rather than specific:

[They] helped the children learn how to sound out words and how to think about what the story was about. (Alpha House gatekeeper, personal communication, November 15, 2005)

No mention was made of running records. The absence of comment and the limited and generalised nature of the comments by the gatekeeper related to running records and reading is noteworthy both for what was said and what wasn't said. Whether this was due to a lack of understanding of the reading process or not remains unanswered, as the gatekeeper was involved with some of the training related to running records.

Examination of the data discussed from Table 1 supports the conclusion that the majority of pre-service teachers were able to use running records and to then make appropriate teaching decisions from this. Observations from class and field sites provide supporting triangulated evidence of document analysis, which shows pre-service teacher competence. All Indigenous students involved with the program moved up at least two reading recovery levels. This was verified by the university lecturer. Also observed was improved motivation to read, attention to reading strategies, and more sustained on-task behaviour over the course of the program. The use of running records provided the pre-service educators with a basis of understanding where students are at and how well their instructional strategies are working for them.

Conclusions

This case study has highlighted the importance of developing pre-service teacher knowledge and understanding of Indigenous students. Strong relationships must be built up so the two cultures can work together to build common links and understanding. The developing relationships between pre-service teachers and students are critical from a number of perspectives. First, in bonding people together, a sense of community and shared purpose develops and relationships strengthen. These relationships between pre-service teachers and families impact on the level of motivation and affect each one who engages in the process. The flow-on effect to the students ranges in the degree of positive or negative levels of engagement they experience with school-based learning. In other words, their emotional state affects their learning. Pre-service teachers' real-life exposure to the various factors that impact on reading development gave them greater insight into ways that environment can affect students. This case study has provided a snapshot of specific factors that have impacted on pre-service teachers working with reading in a field site.

The Alpha House site was important as it brought two cultures (mainstream white and Indigenous) together but in a reverse role. Pre-service teachers attending this site

were on unfamiliar territory. Previously conditioned to being part of the mainstream white dominant culture, pre-service teachers needed to walk in the shoes of others; experiencing minority culture characteristics and having to learn the rules and protocols of the Indigenous neighbourhood. Pre-service teachers experienced the effects of both spoken and unspoken aspects of another's culture and of having to work in an after-school setting within these parameters, where what might have worked before in a mainstream white classroom may not have necessarily worked successfully in this new framework (Howard & Hampshire, 2006).

One of the main factors that would determine the success of this project centred on how well the pre-service teachers were able to bond with and develop relationships with the children and their families. This point is echoed by Karten (2005), who elaborated on the point that teachers needed to build these relationships in order to work productively with children. The semi-formal nature of this site, away from the traditional classroom and the voluntary nature of student and family involvement in the project meant that pre-service teachers needed to develop proactive relationship skills with the students and the parents in order to encourage further attendance and academic learning (Barry, 1995; De Plevitz, 2006; Santoro & Allard, 2005; Silins & Mulford, 2007). One has to take into account the fact that the nature of this Indigenous group may bias the findings as these students attended and had parental (or grandparental) support and encouragement. Both of these circumstances are not the norm in other communities.

The dyad or small group teaching arrangement was designed specifically to provide practice in working in a teaching environment in which there were reduced demands on the teaching and learning act. By working in a scaffolded one-on-one teaching situation, pre-service teachers were provided the opportunity to learn about and appreciate the way relationships can impact on students' attitudes, input and the subsequent effort that is applied to learning.

Implications of the Project

This project has highlighted the need for pre-service teachers to have field site experiences to learn about Indigenous culture and to understand the complex issues that affect their lives to be able to position themselves to more effectively teach Indigenous students. Being able to develop some understanding at undergraduate level is important as this is one stage where barriers can be broken down. The ability to interact with Indigenous families 'on their turf' means shifting thinking and power — a notion that middle-class white Australian educators have the potential to embrace to re-engage the two cultures.

To be able to work more effectively with Indigenous families and to develop literacy capacity in students, pre-service teachers need to be equipped with skills and

understanding not only about how to develop reading skills, but knowledge and dispositions about how to engage the Indigenous communities to help Indigenous students. From an Indigenous perspective, the term 'Wammará' is an important philosophical base for Indigenous students as it reflects Wiradjuri philosophy. Pre-service teachers need to foster this principle of 'life-long learning' as part of their mainstream school teaching to achieve these ends.

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