Like many Indigenous groups, Aboriginal Australians are still trying to find a voice in the mainstream. A long history of social disadvantage has meant that today Indigenous people are 'the most educationally disadvantaged group in Australia' (Howard et al. 2011, p. 365). The school sector is no exception with Indigenous students performing significantly lower than their non-Indigenous peers. I seek to address this inequity by asking: What are the barriers to effective learning for Indigenous students? To answer this, I look inward by asking: what is it about my white middle class culture that may not be accessible to or may be disadvantaging Indigenous students and could my teaching practice be a contributing factor? Following my analysis, I discuss positive curricular change and teaching practices informed by constructivism which are helping to improve the situation for Indigenous students.

Lack of cultural capital disadvantages Indigenous learners. As Klenowski (2009, p.1) illuminates, there has been a trend of underperformance whereby Indigenous students have been scoring significantly lower than their non-Indigenous counterparts. 'In 2005, the gap between Indigenous and All students ranged from 14 percentage points in Year 3 numeracy to 33 percentage points in Year 7, with only 49 per cent of Indigenous students meeting the benchmark' [..] and in the latest results on the national benchmarks for reading, writing and numeracy in Years 3, 5 and 7, a high percentage of Indigenous students are performing well below the benchmark' (MCEETYA 2008, cited in Klenowski 2009, p. 4). According to Bourdieu, possession of cultural capital has a positive effect on educational success (Jaeger 2011, p. 281). Bourdieu describes cultural capital as 'knowledge of the dominant conceptual and normative codes inscribed in a culture' attained through cultural activities such as reading books and visiting museums or art galleries and involvement in extracurricular activities (Jaeger 2011, pp. 283 & 284). In order to determine if a child's exposure to these activities does determine academic success, Jaeger underwent an empirical study. He found that while visiting cultural institutions and participation in extracurricular activities are not strong correlates of educational success, a strong literary home environment and reading habits are 'highly significant predictors of both reading and math[s] achievement' (Jaeger 2011, pp. 290 & 292). Thus, for groups where there is a mismatch between home life and school, such as

many Indigenous families without access to vehicles of cultural capital, students often struggle to perform academically.

By default, my teaching is at times transmission pedagogy which can be alienating to the learner. As the Victorian Government (2010, p. 38) highlights, a big question in Indigenous education is why 'a significant proportion of Aboriginal young people are disengaging from school'. In order to answer this, I examine data from an Indigenous student and reflect on my own teaching practice. Thirteen year old Mark who has dropped out of mainstream school comments:

They don't understand what I need to learn, [..], I hate reading and copying off the board it's boring. [..] I wish they would make it interesting and practical, [..], make it relate to something I know about'. (Edwards-Groves & Murray 2008, p. 171)

Here Mark depicts the traditional transmission approach to teaching and learning in which the student is the passive object to be filled with knowledge from the teacher (Freire 1996, p.53). Mark is not '[being] called upon to know' in dialogue with the teacher and his fellow students but to be the mere recipient of information (Freire 1996, p. 61). In addition, it is hard for Mark to see the relevance of the learning experience. The teacher either has not or cannot find a way to connect with Mark so he can bring his own life experience and learning to the subject. Instead it is static, decontextualized and divorced from reality (Freire 1996, pp. 52 & 58). This style of teaching and learning not only echoes my own schooling in the 60s and 70s but is one I have in the past employed by default.

A colonial curriculum denies Indigenous students a culturally inclusive education which would not only help maintain Indigenous languages, but could also improve English literacy. Historically, schools for Indigenous students have been sites of assimilation designed to 'destroy the uniqueness of their language, values, culture and [their] relationship with their native lands' (Schimmel 2007, p. 425). Australia is no exception; hence, there has been a long tradition of European languages and cultural learning, with the exclusion of aboriginal ways of 'knowing and being' (Klenowski 2009, p. 15).

As Schimmel (2007, p. 425) argues '[t]he right to an education that is constant with and draws upon the culture and language of Indigenous peoples is a human right which is too often overlooked by governments'. Fortunately, some governments are now working with their Indigenous communities to establish language programs in order to fulfil this human right. One initiated by the Canadian government with its Indigenous Inuit community has been a bilingual immersion program in which Inuit children are schooled for the first three years in their native Inuktitut before changing to either of the dominant codes, French or English, for the remainder of their schooling. Interestingly, when this group is compared with students in the Second Language program in which Inuit children are schooled entirely in French or English, it has not only been found that the immersion program students are more fluent in Inuktitut by grade seven, but their academic skills in their heritage language are also better than those of the second language group in either dominant code (Wright 2010). It appears that activities such as talking to their elders about the moral of a story or making projections into the future improve their abstract thinking. A further study by Usborne et al. (2012, p. 3) shows that these skills are then transferable to the mainstream language; 'the better [students] were in Inuktitut during their early years of schooling, the better they were in French or English [..] in subsequent years'. This supports findings from other studies that suggest that bilingual education assists acquisition of basic literacy and numeracy skills for students from non English speaking backgrounds (Senate Employment, Workplace Relations, Small Business and Education References Committee 2000, p.62). In the Australian context, there have been attempts at Indigenous bilingual education with mixed success. Some programs have failed due to a lack of political will or doubt of the programs' effectiveness. However, as Raven (2008) recounts, there is significant evidence that Indigenous students achieve better using their home languages; 'bilingual education programs achieve higher levels of outcomes, including literacy outcomes in the mainstream language, than non-bilingual programs in similar settings'. Thus, early bilingualism could not only help maintain Indigenous languages but could also improve the English literacy outcomes for Indigenous students.

A more inclusive curriculum improves outcomes for both Indigenous and non Indigenous students. Recently, Indigenous Australians have sought to address their linguistic rights and have begun to reclaim their languages. In response, there has been curricula change whereby aboriginal languages and culture are now taught in Australian schools. Currently, around 80 different Indigenous languages are being taught in 260 schools with over 16,000 Indigenous and 13,000 non-Indigenous students (Purdie et al. 2008, pp. x & xi). In 2010, the Victorian Curriculum and Assessment Authority released the Prep – Year 10 Protocols and Standards for the Teaching of Aboriginal Language and Culture so that Indigenous languages can now be taught in the Victorian government school sector. Currently, the Woiwurrung language is being piloted at Healesville Secondary School at Year 7 level. In NSW, a similar program began in 2006 at Parkes High School. Since then, the local Wiradjuri language has been taught to both Indigenous and non-Indigenous lower secondary students in consultation with the Indigenous community. Although the program was originally introduced at Year 7 level, it has gained in popularity and is now taught at Year 7 - 9 levels with positive results. As Maier (p. 214) argues 'Wiradjuri is helping improve student literacy; pronouncing words, identifying nouns, verbs and pronouns, using suffixes and comparing English and Wiradjuri grammatical structures [is] all [helping to] improve student literacy' (Maier pp. 211 & 214). Although this is not a bilingual program, the opportunity to engage with aboriginal culture is having positive outcomes for both Indigenous and non-Indigenous students.

Accelerated Literacy informed by socio-constructivism engages learners and improves literacy outcomes for Indigenous students. Upon hearing of a new literacy program, an Indigenous student said: 'You won't be able to teach me to read, Miss; nobody can' (Cowey 2005, p.1). As Cowey (2005, p. 3) illuminates, many Indigenous students in remote communities cannot even read a simple text. As a result, the readers available to these students are basic word and sound decoders normally only used for early childhood students. The pedagogical principal behind this is a developmental one that asserts that a certain level should be achieved before a student advances to the next level. Hence, an adolescent whose reading ability is level one may be stuck on a reader for that level, even thought its content and structure is totally inappropriate for his/her age group. A different approach predicated by

Accelerated Literacy (AL) asserts that good learning is that which is in advance of development (Cowey 2005, p. 6). Central to this pedagogy is a student's zone of proximal development (ZDP). Vygotsky explains the ZDP as ' "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" ' (Vygotsky, cited in Cowey 2005, p. 5). Thus the ZDP is the 'potential learning' through assistance. AL is based on this principal; texts are used within the ZDP for the class and teachers provide support by using scaffolding strategies such as prompts to help students develop an understanding of the text (National Accelerated Literacy Program 2007, p.11). Although some students' initial understanding may not be correct, over time they are guided into a more appropriate awareness. As Cowey (2005, p. 7) argues, 'this is not to say that the teacher keeps telling students facts until they can tell them back [..], [r]ather, teacher and students negotiate shared understanding'. Not only is this pedagogy more in line with Indigenous ways of knowing and being, but is more engaging than the information transmission model thirteen year old Mark experienced. Here, the student is not a docile listener [or copier] but a critical co-investigator in dialogue with the teacher (Freire 1996, p.62). Apart from engaging learners, AL is improving students' literacy; in 2010 students in the AL program showed higher rates of progress in comprehension than the national norm in almost all year levels (Literacy Secretariat 2011, p.5). Thus, AL informed by social constructivism is helping Indigenous learners to become literate citizens in spite of a lack of opportunity to do so early in life.

'Make it Count' informed by constructivist pedagogy helps Indigenous students engage with mathematics. According to the 2000 -2006 Program for International Student Assessment - (PISA) results '"[Australian] Indigenous students perform at a substantially lower level of [..] mathematical […] literacy compared to their non-Indigenous peers" '. As Howard et al. (2011, p. 372) argue, Indigenous students disengage from their learning as they see 'no real life meaning in the way mathematics is being taught'; 'they don't see how mathematics fits into their lives'. This echoes thirteen year old Mark's comment that '[t]hey don't understand what I need to learn - I wish [..] they would make it relate to something I know about' (Edwards-Groves & Murray

2008, p. 171). Constructivist learning is active participation in problem-solving involving a learning activity students find relevant and engaging (Kanselaar 2002, p. 3). Furthermore, it emphasises authentic tasks in a meaningful context rather than abstractions removed from their frame of reference (Kanselaar 2002, p.3). An initiative by the Australian Association of Mathematics entitled 'Make it Count', aimed at closing the gap between Indigenous and non Indigenous students' numeracy levels, draws on constructivism. In contrast to a traditional mathematics teaching style, in which tasks are presented and solved out of context, 'Make it Count' emphasises relevance and solves authentic problems through a familiar context (The Australian Association of Mathematics Teachers INC.). For example, in a lesson on statistics, the teacher chose the familiar context of rugby league to get students thinking about how the local team, the Titans, use statistics to inform them about 'numbers of kicks, sets of six, tackles, scrums, forward passes, sin-bin penalties, and so on' (The Australian Association of Mathematics Teachers INC.). Here, in contrast to Mark's experience, the teacher has found a way to connect with the students so they can bring their own life experiences and learning to the subject. Because the new mathematical content was skilfully taught through a meaningful context, students engaged fully with the activity and saw first hand the value of statistics (The Australian Association of Mathematics Teachers INC).

Clearly, my white middle class culture has impacted on the educational outcomes of Indigenous students. A school system that has insisted on assimilation without consideration of Indigenous ways of knowing and being has not only denied Indigenous students the opportunity of maintaining their own culture but has also constrained their understanding in the mainstream. In addition, lack of resources and poor teaching practices are a deficit. However, more recent improvements such as a more inclusive curriculum and improved pedagogy are having positive effects. With further initiatives both from within and outside of education, Indigenous students should see a gradual improvement in educational outcomes.

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