

Pearls, not Problems: Exploring Transformative Education in Indigenous Australian Studies

Elizabeth Mackinlay¹ and Katelyn Barney²

¹ School of Education, The University of Queensland, Australia

² The Aboriginal and Torres Strait Islander Studies Unit, The University of Queensland, Australia

This article explores the shift in terminology that occurred in a 2-year Australian Learning and Teaching Council (ALTC)-funded curriculum renewal project that set out to broadly explore current teaching and learning practice in Indigenous Australian studies (www.teaching4change.edu.au). While we started with the term 'Problem-Based Learning', it became clear as the project progressed that the terminology we were using was not politically or pedagogically appropriate. As the data began to reveal, the research team became increasingly uncomfortable with the colonial underpinnings and associations of the term 'Problem-Based Learning' (PBL), and began to explore the possibility of redefining what we do as something else entirely. A key outcome of the project was that PBL became PEARL, to describe the Political, Embodied, Active, and Reflective aspects of this teaching and learning approach in Indigenous Australian studies. The shift from PBL to PEARL was unexpected, but has resulted in exciting possibilities for migrating and extending theories of teaching and learning in Indigenous Australian studies into critical pedagogy, critical race theory and transformative education. Drawing on critical pedagogy, critical race theory and transformative education theory, this article explores the rationale behind the shift in terminology from PBL to PEARL. We also draw on student data from focus groups, questionnaires and lecturer reflection to examine the ways the results from this project hold great potential for the further implementation of PEARL into primary and secondary classrooms, specifically in relation to pedagogical practice in embedding Indigenous perspectives.

■ **Keywords:** Indigenous Australian studies, teaching and learning, tertiary education, PEARL

The metaphor of a pearl aptly describes the teaching and learning processes enacted in Indigenous Australian studies across the five university sites in the Australian Learning and Teaching Council (ALTC)-funded project, 'Exploring Problem-Based Learning as Transformative Education in Indigenous Australian Studies'. The well-known phrase 'pearls of wisdom' goes some way in explaining the analogy in the sense that both pearls and wisdom take a long time to grow; both may seem small, but are extremely valuable, and they both develop from a substance that is irritating, unwanted and unremarkable. It is the way in which a pearl is made that perhaps best clarifies why the metaphor is appropriate for pedagogical processes in Indigenous Australian studies. Like teaching and learning, a pearl is a gemstone that is created by a living creature — it is organic and grows in relationship to events and others around it. The pearl itself is formed when a foreign object such as dirt or a small piece of stray food gets inside the shell of an oyster (or other mollusc) by mistake. To protect itself, the creature covers the intruding object with the

same substance that its shell is made of, a mineral known as nacre. The oyster or other mollusc continues covering the object with multiple layers of nacre, eventually forming a pearl. Pearls come in many shapes, colours and sizes. No single pearl is perfect or the same, and nor does every oyster always produce a pearl. The stages of pearl development — the intrusion of something new, strategies that are put in place to cope with the intrusion, and then the resulting growth — are similar to the transformation that takes place in this teaching and learning approach.

A key outcome of this project then has been a change in terminology — PBL has become PEARL. While we started with the term 'PBL', it became clear as the project progressed that the terminology we were using was not politically or pedagogically appropriate. As the data began to

ADDRESS FOR CORRESPONDENCE: Elizabeth Mackinlay, School of Education, The University of Queensland, St Lucia, QLD, 4072, Australia. E-mail: e.mackinlay@uq.edu.au

reveal, the research team became increasingly uncomfortable with the colonial underpinnings and associations of the term 'Problem-Based Learning' and began to explore the possibility of redefining what we do as something else entirely. The shift from PBL to PEARL was unexpected, but has resulted in exciting possibilities for migrating and extending theories of teaching and learning in Indigenous Australian studies into critical pedagogy, critical race theory and transformative education. This article explores the rationale behind the shift in terminology from PBL to PEARL in more detail.

What is PBL and Why the Shift in Terminology?

The term 'Problem-Based Learning' (PBL) was originally implemented in health science and medical education curricula in Canada's McMaster University Medical School in the late 1960s (Schwartz, Mennin, & Webb, 2001, p. 2). Commonly adapted and used in the course content of natural sciences (e.g., geography, Pawson et al., 2006; science, Tandogan & Orhan, 2007; mathematics, Hiebert et al., 1996) and professional degrees (e.g., veterinary science, Howell, Lane, Brace, & Shull, 2003; medicine, White et al., 2004; education, Ochoa & Robinson, 2005), PBL courses and curricula are now found all over the world, including Australia (Schwartz et al., p. 2). Developed out of research that demonstrates that adult learners understand material better and retain it for longer if they engage with it actively, the popular appeal of problem-based learning is not surprising. Active engagement usually entails the student taking on the responsibility to work through some real-life problem or accurate simulation. Described by Savin-Baden as a 'student centred' approach to pedagogy, she explains that PBL offers students opportunities to 'explore a wide range of information, to link the learning with their own needs as learners and to develop independence in enquiry' (2000, p. 3).

We originally focused on PBL because the approach is used in preference to other approaches in many Indigenous Australian studies classrooms. Project team member John Maynard noted in the first Reference Group meeting that from an Aboriginal perspective, Indigenous Australian people had been using PBL long before Indigenous Australian people knew what PBL was. He said PBL was used in opening up discussion between Aboriginal people and working in groups. Without wanting to interpret the intended sentiment behind his words, Maynard's comments are interesting for us in terms of processes of dialogue, action and reflection that are inherent in any PBL context.

The approach usually involves students working in small groups with a lecturer or a tutor who facilitates discussions and learning (Schwartz et al., 2001, p. 2). The real-world focus of PBL combined with its emphasis on self-directed learning assists students to learn how to learn,

to link learning with their own interests and motivations, and to focus their explorations (Savin-Baden, 2000, p. 5). In many ways, PBL group work enables the class to build a 'community' of learners, joined by a shared commitment and desire to know, which hooks maintains is essential to create a climate where openness, intellectual rigor and personal transformation can happen (hooks, 1994, p. 40). PBL thus does not allow students to remain passive participants in a classroom, and in practical terms what this means for many students is that they engage in a way of working that they may not have encountered at university before. For many students both the topic and the teaching approach are unknown territory, and it is not unusual for them to initially experience enormous resentment, conflict and resistance to the shift in emphasis and responsibility from the lecturer or faculty member as expert, to a classroom which 'acknowledges both teachers and students as creators and holders of knowledge' (Ross & Hurlbert, 2004, p. 81). Further, PBL privileges open-minded, reflective, critical and active learning. It pays due respect to both student and teacher as people with knowledge, understanding, feelings and interests who come together in a shared space. PBL acknowledges that knowledge is complex and changes as a result of the way that people respond and perceive their worlds (Margetson, 1997, p. 39). PBL therefore has the potential to safely and sensitively create a space where a 'pedagogy of discomfort' (Boler, 2004, p. 120) allows these strong reactions, difficult emotions and uncomfortable dialogues to be negotiated.

However, as the project progressed, we increasingly found that the terminology we were using was not politically or pedagogically appropriate. Focus group discussions of five to eight students were undertaken by Barney after she had observed classroom activities at The University of Queensland in May 2010, Monash University in August 2010, Charles Darwin University in September 2010, University of Newcastle in October 2010 and UTS in May 2011. In discussions, students noted that one of the reasons for this was the colonial underpinnings and associations of the term 'Problem-Based Learning' and the negative ways Indigenous people have historically been framed as 'problems':

Certainly in Australia it's been often framed as the Aboriginal problem. (CDU student focus group)

I think the word 'problem' is problematic; it's got a negative connotation to it. (Monash student focus group)

I just don't like the negativity. I think it needs to be changed and changed pretty soon if you're using it for Indigenous studies. Looking at the history of colonisation of Australia and now, being part of history, Aboriginal people and communities are still called problems. I think it's an offensive term and I think if we're to use it for Indigenous studies, we need to find something more respectful in that way too. (Monash student focus group)

I think it's about responsibility too, and it's responsibility of academia . . . to not treat this as a problem. (Monash student focus group)

'Problem' is such a negative word. (Monash student focus group)
You could probably find a less negative word than 'problem'. 'Problem' does sound like it's something that needs to be fixed. I don't necessarily think that it's broken, you know — I probably didn't say that right but I just don't think — maybe it's just too needy, that word. (Monash student focus group)

That historical thing of the Aboriginal problem. (Monash student focus group)

These comments say something about how students are reworking and rethinking relationships with Indigenous Australians. However, what is missing is the behind story of the context on which they are reflecting on. In a teaching and learning context, these understandings could usefully be migrated across to discuss issues of whiteness, racism and postcolonialism.

These views were shared by Aboriginal artist Denise Proud, who painted the artwork 'Spreading your Wings' for the project. She emphasised that she did not like the term 'PBL' because of these negative connotations. Colleagues at conferences and seminars also pointed to uneasiness with the terminology. For example, Monash students described the approach that was occurring in Indigenous Studies classrooms in a variety of ways:

It's not starting at zero how you would in the classroom where you start at zero and you get layers upon layers. You start at your current base of knowledge and you get thrown a bit of information. (Monash student focus group)

There is no key, there's no single answer is there. (Monash student focus group)

Letting go of that wall and throwing out what you believe and what you think and having that attacked — it's great. (Monash student focus group)

It is like a crystal, looking at something so that it's a wonderful way of getting knowledge, of that experience. (Monash student focus group)

It's just like layers of an onion, you peel it off in layers and you find the onion. (Monash student focus group)

I think it's more of a journey that people are invited to get on board with. I don't have an exciting term for this, but the idea of a journey, something that people are invited to engage with and be changed by. (Monash student focus group)

You're climbing a mountain and your aim is to get to the top. (Monash student focus group)

It's like a jigsaw — that little piece every week and you got to take that home with you and figure out how it fits into the bigger picture and then hopefully at the end you have the future in front of you. There'll still be pieces missing but you get the general idea. (Monash student focus group)

As data collection progressed, the project team acknowledged the need to find a more suitable term for the approach. As the project external evaluator Carmen Robertson stated: 'The connotations of "problem" are problematic!' Students and tutors also agreed with the need to find a new term:

I agree though 'Problem-Based Learning' doesn't — not that I think it's a bad term, but I don't think it encompasses what we so much do — I think there's more to it than that . . . I think it'd be good if there was another name that came out of it that did talk about — that Indigenous studies maybe even had for itself. (Tutor interview)

Do you really want to call it a 'Problem-Based Learning'? I don't think so, I think you're right, it's the journey, the way up the mountain, it's all the stuff you learn in between. (Monash student focus group)

I think it devalues the materials that we're given too. I think a title that reflects that would be important too because the materials are quite intimate about [Yanyuwa] culture too, so I think a title that reflects that would be more appropriate. (Monash student focus group)

During focus group discussions with students, a number of suggestions were made for a different term to replace PBL:

Action orientated. (CDU student focus group)

Issues focused. (CDU student focus group)

Rather than making it a problem, it's actually you're exploring a particular area of interest or an inquiry, an interest, an issue; some words like that. (UQ student focus group)

Inquiry based. (UQ student focus group)

Hands-on. (UTS student focus group)

Yeah, because if you say it's a problem then it's a problem. Like if it's an issue, not an issue is a problem. So I think that issue based. (UTS student focus group)

In discussions with leading PBL scholar David Boud, he noted that the terminology of 'Problem-Based Learning' had also been an issue in social work education because of the negative connotations of viewing clients as problems. He noted that at the University of Bristol they shifted to use the terminology 'Enquiry and Action Learning' (EAL; see Burgess & Taylor, 2005). Boud stated that 'inquiry-based learning' is another term used, but as that term is mainly used in school education in the science context the use of that may be confusing (Boud 2011, personal comm). Therefore, during the final Reference Group meeting, a decision was made to move away from the term 'Problem-Based Learning'. Mackinlay suggested PEARL as a new term to encompass the political, embodied, active, and reflective aspects of this learning approach.

PEARL as an Acronym

At the final Reference Group meeting in December 2011, the project team and Reference Group then developed the following description of PEARL as a teaching and learning approach in Indigenous Australian studies:

P (for political, performative, process, place based). We bring our experiences, knowledge and practice to the place where the current learning process occurs. We reflect and

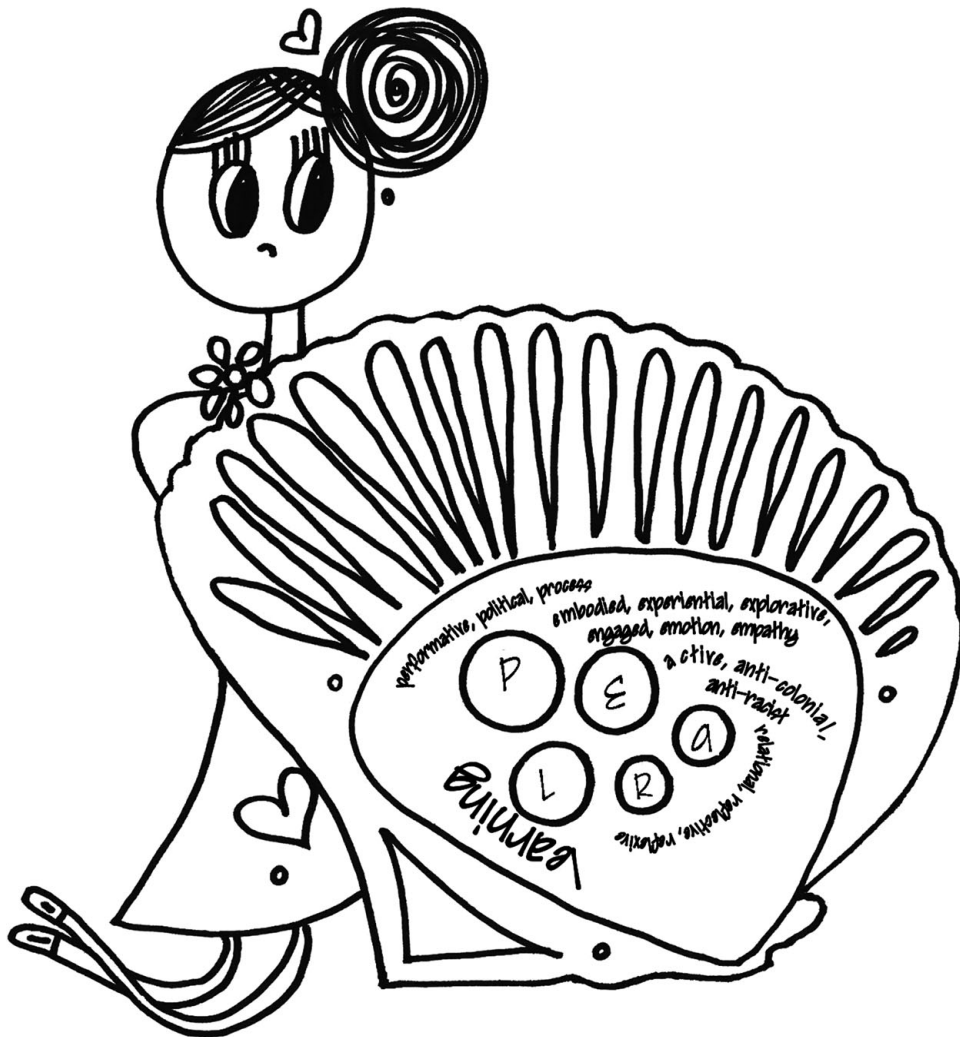


FIGURE 1
Sketch of PEARL by Mackinlay (2012).

respond to the agency of the space and the elements of the place where our teaching and learning takes place. We perform our learning, embody the process and recognise the inherent political nature and knowing that we move through. We know that we will move in and out of the place and back again to influence the places where teaching and learning occurs.

E (for embodied, experiential, explorative, engaged, emotion, empathy). A holistic exploration that engages mind, body and emotion in empathetic dialogue. A transformative process based on equal collaboration.

A (for active, anti-racist, anti-colonial, agency). Theoretical imperatives relate implicitly to anti-racist/anti-colonial discourses. Practically, we view PEARL as aiding students to shift from reflection to action through agency and awareness. The shift to action is a critical element of transformation and enables students to become agents for change and decolonisation.

R (for relational, reflective, reflexive). Through reflection on particular structured learning activities, students' experiences are transformed into knowledge and deeper wisdom which they apply to their personal and professional lives.

L (for lifelong learning). Learning in PEARL is learning for life, for change, for empowerment, for hope, for knowledge, to lead, to let go of assumptions, to liberate and to lustre — to shine!

Historically, Indigenous Australian studies has relied upon anthropology and history as foundational disciplines for the construction of knowledge about Indigenous Australian peoples. However, the past 20 years have seen a shift alongside the postmodern turn in the social sciences whereby the concept of Indigenous knowledge as constructed, represented and sustained by Indigenous voices has become a defining feature of what the discipline of Aboriginal and Torres Strait Islander studies now looks like. Indigenous Australian studies today is an

interdisciplinary field that takes a critical and reflexive approach to actively deconstruct colonialism and the all-pervasiveness of whiteness in the construction of knowledge by and in relationship with Aboriginal and Torres Strait Islander peoples. While the shift at a disciplinary level to critical modes of thinking has now happened, the ways in which we teach Indigenous Australian studies has been slower to take up a critical pedagogical position, particularly in higher education contexts. Little or no attention has been paid to the ways in which we *actually* teach and learn Indigenous Australian studies, and this project has drawn important links between the political and social justice agendas of what we do in this field and the pedagogical processes that assist us to achieve these aims. A strong association between Indigenous Australian studies pedagogy, critical pedagogy, critical race theory and whiteness studies, and transformative education has been developed in this project.

PEARL as Critical Pedagogy and Critical Race Theory in Education

The acronym 'PEARL' pays attention to and makes space for education as an inherently political process linked intimately to the interrogation and deconstruction of colonialism. In this way, PEARL enacts what might be described as both a critical pedagogy and a critical race agenda. As McClaren (2009, p. 61) notes, the practice of critical pedagogy is as diverse as its many adherents, but there are a number of overarching characteristics of critical pedagogy that we can see at play in PEARL. The work of Freire informs the broad theoretical framework of PEARL in the sense that we aim to educate students to be 'truly humanised social (cultural) agents in the world' committed to social justice, democracy and freedom from oppression (Darder, Bartodano, & Torres, 2009, p. 9). The emphasis in PEARL on the employment of critical theory for dialectical understanding, teases 'out the histories and relations of accepted meanings and appearances' (McClaren, 2009, p. 61) and enables examination of the 'underlying political, social, and economic foundations of the larger society' (McClaren, p. 63). PEARL, like critical theory, asks 'how and why knowledge gets constructed the way it does and how and why some constructions of reality are legitimated and celebrated by the dominant culture while others clearly are not' (McClaren, p. 63). In the context of Indigenous Australian studies, PEARL's critical theory approach enables teachers and learners to consider the ways in which Aboriginal and Torres Strait Islander epistemologies are represented, sidelined and/or excluded across disciplines. It interrogates the ideologies that make such inequities possible, and to deconstruct unequal relations of power between Indigenous and non-Indigenous people in the past and present. Importantly, PEARL privileges the Freirean concept of *praxis*; that is, the ongoing interaction of reflection, dialogue and action in order to 'illuminate'

human activity and 'provide a better understanding of the world as we find it and as it might be' (Darder et al., p. 13). Praxis in PEARL pedagogy deliberately awakens students to 'break with the given, the taken-for-granted — to move towards what might be, what is not yet' (Greene, 2009, p. 83), to ask questions about the possibility of social justice, self-determination and sovereignty for Indigenous people in Australia. In turn, such questioning brings into play the Freirean notion of dialogue as embedded in the context of conscientisation — a process of developing not just consciousness, but a consciousness that is understood to transform reality and provoke social change (Slater, Fain, & Rosatto, 2002, p. 1). Freire (1970, p. 64) explains:

Dialogue cannot exist unless it involves critical thinking — thinking which discerns an indivisible solidarity between the world and people admitting of no dichotomy between them — thinking which perceives reality as process and transformation, rather than as a static entity — thinking which does not separate itself from action, but constantly immerses itself in temporality.

Such questioning leads to further critical interrogation into the uncomfortable landscape of race. By necessity then, PEARL extends its pedagogical lens to encompass a critical race agenda. Dialogue in and around the ongoing realities of colonisation and the unresolved issues of Indigenous sovereignty are difficult conversations to have, and a critical race theory perspective enables PEARL to insist that 'race still matters' (Ladson-Billings, 2009, p. 18). Critical race theory refuses students the option to walk away from, deny or silence the understanding that 'race is always already present in every social configuring of our lives' (Ladson-Billings, 2009, p. 19). Non-Indigenous students are confronted with their complicity in processes of colonisation and see the ways in which they knowingly or unknowingly enact, sustain and benefit from their white power and privilege. Critical race theory further enacts a civil rights and social justice platform that provides an opening for students to envisage how they might begin to transform a world suffering under the 'albatross of racial hegemony' (Barnes, 1990, pp. 1864–1865, as cited in Ladson-Billings, p. 21). PEARL engages critical race theory to reveal the power of whiteness and colonialism, and personalise and politicise Indigenous Australian studies in a way that will open a space where sweeping change might be possible. The potential that PEARL has for transformative education by enacting a critical pedagogical approach and a critical race agenda is an area which we now turn to explore.

PEARL as Transformative Education

The aims and goals of transformative education provide an appropriate educational framework within which to situate the teaching and learning processes enacted in PEARL classrooms across Australia. Transformative education holds that 'learning is understood as a process of

using a prior interpretation to construe a new or revised interpretation of the meaning of one's experience in order to guide future action' (Mezirow, 1996, p. 162) Drawing upon the work of O'Sullivan, Morrell, and O'Connor (2002, p. xvii), transformative education can further be defined as teaching and learning which involves:

- a deep structural shift in the basic premises of thought, feelings and actions
- a shift of consciousness that alters our way of being in the world
- understanding ourselves, our self-locations, and our relationships with others in the world
- understanding relations of power in interlocking structures of race, class and gender
- envisioning alternative approaches and possibilities for social justice.

In other words, transformative education is teaching and learning that effects a change in perspective and frame reference (Mezirow, 1996). Further, transformative education and learning as it is practised today places increasing emphasis on shifts taking place ontologically as well as epistemologically, so learners become actively engaged in new avenues for social justice (Garde-Hansen & Calvert, 2007). This kind of shift is explicitly stated as one of the learning objectives for students enrolled in Indigenous studies — that is, to critically engage with and understand the types of discourses that frame, locate and determine what it means to be an Indigenous person historically and today, and to further consider students' own positioning in relation to these discourses. Like transformative learning itself, critical reflection is therefore essential to this proposed research project, and it is our conviction that PEARL pedagogy creates a space where this can happen.

Certainly, the data from students collected during focus group interviews and pre- and post-questionnaires suggests that the PEARL approach has the potential to transform students' understandings, challenge their assumptions and change their perspectives about Indigenous histories, peoples and cultures:

For me personally this subject has changed my perspective about Indigenous people. (UTS student focus group)

It's taught me to be open-minded because I don't want to treat other people like that. That's actually invited, that kind of experience is invited to be a valid part of the course. Our own experience matters because we're reflecting on how what we've experienced affects our engagement I guess if that makes sense. (Monash student focus group)

I think that's a really powerful aspect too, the fact that it has the ability to change our own attitudes because we're working through it and understanding what our attitudes are and how they need to be changed. (Monash student focus group)

I think before I was a bit naïve maybe. I think just not as aware of what was going — like how . . . and the structure of the Indigenous society. I don't think I had any idea. I think if

you live in a certain way then you kind of sort of expect that everybody else is as well. (Newcastle student focus group)

I think the way it's transformative, is that it informs the reality of situations and moves the illusion around what people's perceptions are — their own — like you were saying — it's very hard to get outside of yourself and your background. (UQ student focus group)

It's really enjoyable and it really gets you thinking about how you as a person can contribute out of university to bring about social change. (UTS student focus group)

I'm glad it's being integrated into my life at this point, not when I'm 50. I can start changing the way I live and hopefully other people and just knowing the different sides of the issue. (UQ student focus group)

Some students also noted the ways the learning and teaching approach allowed them to transform other's understandings as well. As one student noted:

I have the best example of this though because I go home to a partner that is — he is quite racist or has been — because that process is changing through information. Because I'm passing on my information to my partner and my kids and saying, did you know blah, blah and then they'll come up with their racist thing and I'm but blah, blah. You know, like that is why that happens and then he is, in turn, taking that information to his workplace and he's going, did you know da-da-da-da to his workmates and that's passing on. My kids are going to school and questioning the information that they're given. My son is doing discovery and settlement and things like that and he had the courage — he's quite a laid-back child — but he had the courage to stand up and go it wasn't settled, it was invaded. His teacher actually encouraged that and encouraged that discussion. So I think it has not just changed my perspective but it has helped to change the people around me as well, so I think it's part of a broader, much bigger . . . (Newcastle student focus group)

Importantly, as Shapiro (2009, p. 113) notes:

Transformative learning is not something that can necessarily happen on a schedule or within the confines of a particular structured learning experience. Developing the trust and safety that can make it possible for people to take risks — allowing the needed space for disequilibrium, exploration, and reintegration, and for action and reflection — takes time, time that can best be measured in weeks, months, or even years, and certainly not in hours or days.

This was emphasised by a student who stated: 'It doesn't necessarily happen in a week. It's a big ask for people to negotiate that space in such a quick time when they don't know each other' (UQ student focus group). Another student noted: 'A transformation from that [teaching and learning] exercise? No, the transformation is — well it's laid the seeds for part of the process of transformation' (UQ student focus group).

Certainly not all students leave transformed:

I felt really hollow actually 'cause it's the same as I felt in nearly every course I've done so far. Just where it's like we're just missing

something major and there's nothing I can really do about it. (UQ student focus group)

I feel like really not powerless, but like the teacher would be like who do you think you are to say you think you can change this and this and this? I feel like yeah, often like what I would write, how I'd want things to change, would be — I'm not quite at that level yet I guess, as a student. (UTS student focus group)

Jaded was sort of like you're just sort of whatever you can get, you become cynical. (CDU student focus group)

I just think it's making me more bitter. (CDU student focus group)

I feel like really, not powerless, but . . . I feel like yeah, often like what I would write, how I'd want things to change, would be I'm not quite at that level yet I guess, as a student. (UTS student focus group)

These comments raise the question of an ethics of care needed to help students make their way through the complexities of their identities in relation to Indigenous studies. Bird Rose (1997, p. 213) notes that academics working in Indigenous Australian studies have an obligation to an 'ethics of care' to 'do what we can to effect some healing in this world' between Indigenous and non-Indigenous Australians. We also need to assist students to come to terms with the difficulties, discomforts and emotions experienced between non-Indigenous and Indigenous teachers and students in these cross-cultural contexts. PEARL makes space to give voice to things often known intuitively and allows teachers and learners in Indigenous Australian studies to ask the difficult, messy and uncomfortable questions about race relations between Indigenous and non-Indigenous Australians, white race power and privilege, and our own positioning in relation to colonial history. It is this dialogue with Self about the Other that ultimately links, as Fox asserts, awareness and acceptance of the colonial reality with 'an agenda which does not accept the dichotomies implicit in the terms coloniser/colonised . . . but rather explores the relations of power through dialogue, creating spaces for transformation, for new educational and methodological strategies' (Fox, 2004, p. 91).

Conclusion

Students enrol in courses in Indigenous Australian studies with a view to taking up employment in Indigenous affairs or Indigenous communities. Such courses seek to actively deconstruct historical and contemporary entanglements between Indigenous and non-Indigenous Australians and, in doing so, help build better working relationships between Indigenous and non-Indigenous Australians. The dialogic nature of PEARL provides an opportunity for students and lecturers to air and talk through the kinds of emotional and intellectual discomforts they are experiencing, and via this discursive exchange create the possibility to replace old ways of knowing and being with something new (Boler, 2004, p. 129).

At the time of writing, Mackinlay and Barney are in the process of exploring PEARL in a primary school setting. While we recognise that findings from higher education projects are not necessarily transferable to other educational settings, the results from this project hold great potential for the further implementation of PEARL into primary and secondary classrooms, specifically in relation to pedagogical practice in embedding Indigenous perspectives. The imperative for teachers to effectively, appropriately and ethically engage with Aboriginal and Torres Strait Islander knowledges, cultures and peoples in the content of their programs and the ways that such programs are taught is urgent, particularly given that Indigenous perspectives are mandated across the curriculum at all levels of schooling in the National Curriculum.

The project findings highlight the diverse ways that this approach is adapted in Indigenous Australian studies and the need for a more inclusive term for the approach to engage multiple perspectives and make space for the dynamic nature of this curriculum area. The issue of terminology and the challenge of defining pedagogical approaches in Indigenous Australian studies as 'PBL' became critical as the project progressed. While at the beginning we felt we had a certain kind of pedagogical allegiance to PBL because our work was framed initially in these terms, by the end of the project we realised that politically — and by extension pedagogically — we could no longer sustain that commitment. An open-minded and exploratory approach was needed to ensure that the difficulty with terminology was negotiated in a productive and positive way. Such an approach has grounded this project from start to finish and has enabled us to put into practice some of the very principles of transformative education that we are advocating, namely relational and dialogic processes.

References

- Barnes, R. (1990). Race consciousness: The thematic content of racial distinctiveness in critical race scholarship. *Harvard Law Review*, 103, 1864–1871.
- Bird Rose, D. (1997). Rupture and the ethics of care in colonized space. In T. Bonyhady & T. Griffiths (Eds.), *Pre-history to politics: John Mulvaney, the humanities and the public intellectual* (pp. 190–215). Melbourne, Australia: Melbourne University Press.
- Boler, M. (2004). Teaching for hope: The ethics of shattering world views. In D. Liston & J. Garrison (Eds.), *Teaching, learning and loving: Reclaiming passion in educational practice* (pp. 117–131). New York: Routledge.
- Burgess H., & Taylor I. (Eds.). (2005). *Effective learning and teaching in social policy and social work*. New York: Routledge.
- Darder, A., Bartodano, M.P., & Torres, R.D. (2009). Critical pedagogy: An introduction. In A. Darder, M.P. Bartodano, & R.D. Torres (Eds.), *The critical pedagogy reader* (2nd ed., pp. 1–20). New York: Routledge.

- Fox, C. (2004). Tensions in the decolonisation process: Disrupting preconceptions of postcolonial education in the Lao People's democratic republic. In A. Hickling-Hudson, J. Matthews, & A. Woods, *Disrupting preconceptions: Postcolonialism and education* (pp. 91–106). Flaxton, Australia: Post Pressed.
- Freire, P. (1970). *Pedagogy of the oppressed* (Trans. M. Bergman Ramos). New York: Continuum.
- Garde-Hansen, J., & Calvert, B. (2007). Developing a research culture in the undergraduate curriculum. *Active Learning in Higher Education*, 8(2), 105–116.
- Greene, M. (2009). In search of a critical pedagogy. In A. Darder, M.P. Baltodano & R.D. Torres (Eds.), *The critical pedagogy reader* (2nd ed., pp. 84–96). New York: Routledge.
- Hiebert, J., Carpenter, T.P., Fennema, E., Fuson, K., Human, P., Murray, H., . . . Wearne, D. (1996). Problem solving as a basis for reform in curriculum and instruction: The case for mathematics. *Educational Researcher*, 25, 12–21.
- Hooks, B. (1994). *Teaching to transgress: Education as the practice of freedom*. New York: Routledge.
- Howell, N.E., Lane, I.F., Brace, J.J., & Shull, R.M. (2002). Integration of problem-based learning in a veterinary medical curriculum: First-year experiences with application-based learning exercises at the University of Tennessee College of Veterinary Medicine. *Journal of Veterinary Medical Education*, 29(3), 169–175.
- Ladson-Billings, G. (2009). Just what is critical race theory and what's it doing in a nice field like education? In E. Taylor, D. Gillborn, & G. Ladson-Billings (Eds.), *Foundations of critical race theory in education* (pp. 17–36). New York: Routledge.
- Margetson, D. (1997). Why is problem-based learning a challenge? In D. Boud & G. Feletti (Eds.), *The challenge of problem-based learning* (pp. 36–44). London: Kogan Page.
- McClaren, P. (2009). Critical pedagogy: A look at the major concepts. In A. Darder, M.P. Baltodano, & R.D. Torres (Eds.), *The critical pedagogy reader* (2nd ed., pp. 61–83). New York: Routledge.
- Mezirow, J. (1996). Contemporary paradigms of learning. *Adult Education Quarterly*, 50, 5–23.
- Ochoa, T.A., & Robinson, J.M. (2005). Revisiting group consensus: Collaborative learning dynamics during a problem-based learning activity in education. *Teacher Education and Special Education*, 28(1), 10–20.
- O'Sullivan E., Morrell A., & O'Connor M.A. (Eds.). (2002). *Expanding the boundaries of transformative learning: Essays on theory and practice* (pp. xv–xx). New York: Palgrave.
- Pawson, E., Fournier, E., Haigh, M., Muniz, O., Trafford, J., & Vajoczki, S. (2006). Problem-based learning in geography: Towards a critical assessment of its purposes, benefits and risks. *Journal of Geography in Higher Education*, 30(1), 103–116.
- Ross, S.M., & Hurlbert, J.M. (2004). Problem-based learning: An exercise on Vermont's legalisation of civil unions. *Teaching Sociology*, 32(1), 79–93.
- Savin-Baden, M. (2000). *Problem-based learning in higher education: Untold stories*. Buckingham: The Society for Research into Higher Education and Open University Press.
- Schwartz, P., Mennin, S., & Webb, G. (2001). Introduction. In P. Schwartz, S. Mennin, & G. Webb (Eds.), *Problem-based learning: Case studies, experience and practice* (pp. 1–12). London: Kogan Page.
- Shapiro, S.A. (2009). Creating space for transformative learning. In B. Fisher-Yoshida, K.D. Geller, & S.A. Schapiro (Eds.), *Innovations in transformative learning: Space, culture and the arts* (pp. 111–114). New York: Peter Lang.
- Slater J., Fain S., & Rosatto C. (Eds.) (2002). *The Freirean legacy: Educating for social justice* (p. 1). New York: Peter Lang Publishing.
- Tandogan, R.O., & Orhan, A. (2007). The effects of problem-based learning in science education on students' academic achievement, attitude and concept learning. *Eurasia Journal of Mathematics, Science & Technology Education*, 3(1), 71–81.
- White, M., Michaud, G., Pachev, G., Lirenman, D., Kolenc, A., & FitzGerald, J. (2004). Randomized trial of problem-based versus didactic seminars for disseminating evidence-based guidelines on asthma management to primary care physicians. *Journal of Continuing Education in the Health Professions*, 24(4), 237–243.

About the Authors

Elizabeth Mackinlay is Associate Professor in the School of Education at The University of Queensland. Liz completed her PhD in Ethnomusicology in 1998 and a PhD in Education in 2003. She is currently undertaking research on Indigenous Australian women's performance, performance pedagogy and embodied learning, music and motherhood, and arts education as transformative practice. She is co-editor of *The Australian Journal of Indigenous Education* and Editor of *Music Education Research and Innovation*.

Katelyn Barney is Project Manager and Researcher in the Aboriginal and Torres Strait Islander Studies Unit at The University of Queensland. She is co-leader of the Australian Indigenous Studies Learning and Teaching Network and Managing Editor of *The Australian Journal of Indigenous Education*. Her major research interests include collaborative research with Indigenous Australian women performers, teaching and learning approaches in Indigenous Australian studies, and facilitating support for Indigenous Australian postgraduate students.