

# Reflecting on our own learning: incorporating diverse worldviews into teaching and learning activities.

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## STRUCTURED ABSTRACT

### CONTEXT

The teacher's experience is frequently overlooked as a source of useful data on teaching practice. Nelson (2003, p. 85) points out that "every class is potentially an experiment from which the data are either discarded or never gathered." This paper presents two academics' reflections on the impact of their training in te reo Maori and tikanga Maori on their teaching activities.

### PURPOSE

To reflect on academics' learning of Maori language and culture in order to design teaching and learning activities that incorporate Maori language and the Maori worldview.

### APPROACH

The paper uses three of Brookfield's (1998) four lenses of reflection on teaching practice.

### RESULTS

The first academic considered it was important to enable students to adequately explore the worldviews of the diverse stakeholders they will design products for in future and to test students on their understanding of these in order to satisfy cultural aspects of the graduate profile outcomes. The second academic found benefits of the use of Maori language in class in creating an atmosphere reflective of the principles of the Treaty of Waitangi. Each academic found something to learn from the other's work.

### CONCLUSIONS

Adding the Maori language and worldview enables the classroom to better reflect New Zealand's bi-cultural environment and student projects to better meet the needs of diverse stakeholder groups, and also explicitly addresses the cultural aspects of the graduate profile.

### KEYWORDS

Diversity; inclusive learning; tikanga Maori.

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## Introduction

In this paper, two teaching academics reflect on their approaches to incorporating te reo Maori and te ao Maori into different teaching and learning settings. This paper situates the teacher as learner and as a reflective practitioner. This paper makes two important contributions to research on culturally responsive teaching and learning. Firstly, it provides two case studies of application of diversity training in tertiary teaching environments, and secondly, it situates the teacher as learner and as reflective practitioner as the context for analysis. The paper begins by providing an overview of literature on reflective practice and teacher-as-learner approaches. Each academic then provides a description of how they have employed culturally relevant practices into their teaching. Finally, the merits of each approach are discussed and the contribution to fostering culturally relevant teaching and learning activities are analysed.

### Reflective teaching practice and situating the teacher as learner.

Nelson (2003, p. 85) points out that “every class is potentially an experiment from which the data are either discarded or never gathered.” Indeed, if teaching practitioners frequently view their own experience as “essentially worthless” for informing their future practice (Brookfield S., 2015, p. 11) how many effective contributions to the Scholarship of Teaching and Learning (SoTL) that are worth reporting are withheld because practitioners feel that it is too mundane to centre a paper around their own experience – however innovative or pivotal it may have been? This paper uses Brookfield’s (1998) four lenses for reflection on teaching practice: the autobiographical lens, where practitioners draw on their own experience as a student, the learner lens, where the practitioner receives feedback from students; the colleague lens (how our colleague sees our practice), and the theoretical lens (how our practice sits with the relevant literature).

As Brookfield’s first lens suggests, the teacher has been a student formerly, but he limits the lens to the previous role. Schon (1995; 1992), however, identifies that practitioners become professionals through what is learned in action, rather than only what was learned during training. We take this view in this paper and therefore consider the teacher to be a continuous learner of practice. We also recognize that, in accordance with the ako educational philosophy, the teacher is not only a learner from their own practice, but also a learner from her own students (Ministry of Education, 2012). Consequently, we will refer to the autobiographical lens when describing the teacher’s perspective and the “student” lens to describe learners who occupy the formal role of students in the class.

What follows are two case studies of academic staff members’ experiences applying their diversity training to their teaching and learning activities. As data on student perceptions is unavailable at this stage, the analysis is confined to three of Brookfield’s lenses: each academic will describe his experience through the autobiographical lens and the literature lens; and then the two academics will reflect on each other’s practice and draw applicable lessons for themselves, providing analysis through the colleague lens.

### Incorporating te Tauihu principles into teaching.

#### *Academic 1.*

The first academic undertook the *Te Tauihu* course as a compulsory module for new staff induction at Wintec. The course aims to:

*“build capability in tikanga and te reo through teaching and learning in a bi-cultural context and with Māori learners [and] develop social, personal, and cultural knowledge and skills that will enable participants to engage more effectively with Māori in formal and informal contexts.”*

Reflecting from the autobiographical lens, he notes:

One of the greatest challenges I found was the assessment requiring interpretation of a song in te reo: the involvement of artistic expression in learning seemed foreign to me. My first

thought was: “what does this have to do with teaching engineering?”.

However, as I reflected on my variety of learning experiences, having lived in five different countries, in all of which I was educated (at primary, secondary and tertiary levels), I realized that in each country there was an overlay of culture on a predominantly westernized education system. In Cuba, where I attended primary school, we sat at desks and learned from a teacher at the blackboard, however in every classroom, there was a picture of three important people in Cuban political culture: Fidel Castro (then president), Che Guevara, and Vladimir Ilyich Lenin. I had a similar experience in Iraq, except every classroom had a picture of Saddam Hussein. In the Ukraine and in Malaysia, my tertiary experience was largely the same as in New Zealand, except I had to learn, respectively, the Russian and Malay languages as a cultural requirement. What I began to realise was that in each country, a western education system had been imported, and the only differences were peripheral – the language, the pictures in the classroom, the flag outside. This course taught me that there is a method of educating that exists outside of that westernized method.

Reflecting in the context of the literature reveals that this comfort in teaching courses whose content feels universal is misplaced. It may be a feature of the scientific knowledge system which has a tendency to ignore or subordinate systems of knowledge that do not subscribe to the scientific method (Durie, 2005). Academics claim that engineering is the same around the world – fluid flows through a pipe according to the same properties, regardless of the country, or cultural environment in which that pipe is located. But academics are not teaching a pipe, or the fluid within it. They are teaching students about how fluid flows through a pipe, and students’ learning is a personal process (Fry, Ketteridge, & Marshall, 2003). Students’ learning is affected by the country, and cultural environment in which the student is located (Brodbeck, Guillaume, & Lee, 2010), as well as the characteristics and motivations of the student themselves (Fry, Ketteridge, & Marshall, 2003; Hattie & Donoghue, 2016). Teachers of subjects based on the scientific method may feel they are culture-free, but this can be to the detriment of, particularly, minority students (Averill, et al., 2009). To create culturally-safe schools, students must not feel that they must leave their culture at the door (MacFarlane, Glynn, Cavanagh, & Bateman, 2007).

The next step was to put the newfound knowledge into action. Ideas included, perhaps beginning classes with a waiata, or starting slide-show presentations with a whiti? However that felt a lot like (literal) lip service, or at least like the pictures and flags being different while the overall approach was unchanged. Furthermore, in a class that did not contain any Maori students, this seemed more a recognition of biculturalism in general than a means of improving cultural understanding of the students in particular.

I recognized that I needed to incorporate te ao Maori into my teaching. This required further exploration of te ao Maori myself in a context where it was a relevant and essential consideration. The best place to start this was my research project.

The research project aims to design an all-in-one system for climate control and air purification that it fits in one room. The impetus for this single-space design derived from the following quote:

*“Crowded conditions mean illnesses spread easily. It only takes one kid to bring a cold or school sores home. Adults and older kids get a cold, but the baby gets bronchiolitis or pneumonia and ends up in hospital. Very commonly families all sleep in the living room because they can only afford to heat one room.”*

– Dr Russell Wills, former Children’s Commissioner (du Fresne, 2014)

The issue of families sleeping in one room is often presented in the media as an issue of economics: that families can only afford to heat one room is the reason for all sharing a room. As noted in the backgrounder on the project: due to an inability to affect the inadequacies of the housing stock, or the low incomes, an engineering solution focused on how to improve the indoor air quality of the room in which the family was located. Did this mean, however, that the

product was defunct in an “ideal” scenario, where everyone has their own room? As I reflected on my experience in the marae, being in the same room as everyone else had a different feeling, a cultural meaning. As it turns out, the one-person-per-room was imported from te ao Pakeha in the late 19<sup>th</sup> century. In fact, such houses were an uncomfortable departure from traditional wharepuni, which featured extended family together (Schrader, 2013). Indeed, as of the 21<sup>st</sup> century, Housing New Zealand has taken preferences for open plan, shared spaces with fluctuating occupancy to meet housing needs of Maori (Hall, 2008). It appears, then, that to meet the needs of all stakeholders, I needed to go outside my own worldview. The design of the product should take into account the needs of the intended user groups. Students should be encouraged to do the same. This was the outcome for this academic as a learner in the te Taihu course.

### **Action: implementation of te Taihu principles into the final year project.**

The final year project is aligned to graduate profile outcomes for the professional body Engineering New Zealand. The two of significance to this paper are as follows (emphasis added):

- Design solutions for broadly-defined engineering technology problems and contribute to the design of systems, components or processes to meet specified needs with appropriate consideration for public health and safety, **cultural**, societal, and environmental considerations (SK5).
- Demonstrate understanding of the societal, health, safety, legal and **cultural** issues and the consequent responsibilities relevant to engineering technology practice and solutions to broadly defined engineering problems.(SK7)

Engineering students learn how to design engineering solutions to various problems. In doing so, they need to consider the user group. Where a user group contains people of different backgrounds to yourself (and they frequently will), recognizing the impact of your own cultural worldview, and incorporating that of the user group, will result in superior solutions to engineering problems. The graduate profile outcomes recognize this, but I have not seen this explicitly assessed.

In order to assess whether the students have considered diverse worldviews in their project design, I will therefore be asking the following question during the student presentation:

*“How does your design make appropriate consideration of cultural aspects of your end users?”*

Similarly, this question must be addressed in the student’s final report, there must be a consideration of the stakeholder groups for which this product is developed. This requires consideration of te ao Maori by the student. Consequently, my students will need to include in their final report a consideration of how the product will meet the needs of the end user group, with particular focus on design features that take into account Maori end users. This will be a condition of learning outcome 5 of the final year project: to communicate effectively with customers, peers, technicians, and engineers (where customers are the end-users) and means the project is aligned to graduate profile outcomes SK5 and SK7 with particular recognition of cultural factors, which is seldom done explicitly in final year projects.

### **Embedding Te Taihu principles into my classroom.**

#### *Academic 2.*

The second academic has yet to take the Te Taihu course, but reflects on his current teaching practice in advance of this. I have become familiarised and competent now through my work towards the Adult and Tertiary Teaching in Practice (ATTP) course, which devotes considerable attention on the significance of te ao Maori, te reo Maori and te tiriti o Waitangi strategies. Also, by attending our team meetings (te Hui Tima), that involves the use of te reo Maori.

My teaching embeds a range of te tauihu principles, from te reo, te ao and te tiriti o Waitangi, to construct powerful and profound teaching sessions with my learners as well as create care and support in the classroom, establishing an environment of mahitahi to support each other during learning. The philosophy of teaching comes only from education and shared experiences from the teacher and learners, this implies the concept of Ako that states “*teaching and learning is a relationship where educators and students both are learning from each other*” (Ministry of Education, 2009, p. 21). My teaching practice enables professional values and care in this context, such as *whanaungatanga* (building effective educational bonds and relationship with my learners), creation of *manaakitanga* (Caring for my learners) and establishing *mahitahi* (working together to foster better learning with trust and respect).

In acknowledgement to the indigenous language of New Zealand, te reo Maori, I regularly introduce my sessions with te reo Maori words such as, *kia ora koutou*, *tena koe* and *ka pai* for acknowledgement. In my teaching, I endeavour to reflect the principles from the national document, *Te Tiriti O Waitangi*, which are partnership, participation and protection. Partnership has occurred with my teaching element of collaborative learning, which initiated the engagement of the Maori community and created a welcoming atmosphere for them in the organisation. Protection of Maori interests, culture and value is demonstrated by my use of te reo Maori and inclusion of karakia in classes. Participation is seen from my active learning teaching element, continually creating exercises to initiate the students to work together (Clements, 2016). All these values help to establish a positive environment in class and initiates the tikanga for better learning and support.

The literature that support my teaching approach are those adult learning theories. One of them is social and situated learning involving the social constructivism of Vygotsky. Constructivism focuses on teachers as provider of support to extend the potential learning of the students (Stewart, 2013). In my teaching, I effectively deliver that support or scaffolding environment to my students to achieve and surpass in solving their problems. In my classes, I practice active engagement by doing exercises, discussions, and research investigation presentations happening in groups to develop commitment and shared interest and passion between the students. Another theory, I apply in my teaching practice is being a behaviourist, it covers learning as observable changes in behaviour and highlight the role of the teacher in designing and controlling the learning environment (Stewart, 2013), which eventually supports my ultimate goal of student centered learning environment.

### **Reflecting on each other’s activities: the colleague lens.**

Academic 1: I see that this staff member, who is fluent in English and Hindi is using te reo in class. This demonstrates to students his willingness to try new things and shows courage. Hopefully it encourages students to do the same, in terms of embracing diversity, as well as in venturing into the unfamiliar in their studies. Earlier I had stated that it could seem like “lip service”, and I revise my view on that. Enthusiastically speaking the reo is an action to embrace diversity, as well as words that support the values of te Tiriti O Waitangi. It encourages me to do the same in my own classes.

Academic 2: After recognising the approaches this staff member has taken to incorporate te ao Maori into different teaching and learning settings, it clearly shows that he is acknowledging the cultural significance in teaching. In considering his own cultural background, he has still given large recognition to the Maori Culture in the engineering projects. By travelling to large number of countries and gaining the diverse cultural background, he delivers vital understanding on the diversity of worldviews. This staff member has given emphasis to his learners to design solutions that must contribute and respect the cultural aspects of our consumers. This positive action gives me motivation towards how I can construct my engineering projects and assignments by taking into account the cultural diversity.

### **Conclusion.**

This paper presents two academics’ reflections on their formal learning of te reo and tikanga

Maori. Their reflections use three of four lenses presented by Brookfield (1998): autobiographical, literature and colleague-based. The academics present case studies of how their training applies to their teaching activities, and reflect on these in the context of the autobiographical lens, the literature, and as colleagues. Such reflection causes one academic to revise his view of the value of speaking te reo in class.

## References.

- Averill, R., Anderson, D., Easton, H., Te Maro, P., Smith, D., & Hynds, A. (2009). Culturally responsive teaching of mathematics: three models from linked studies. *Journal for Research in Mathematics Education*, 40(2), 157-186.
- Brodbeck, F., Guillaume, Y., & Lee, N. (2010). Ethnic Diversity as a Multilevel Construct. *Journal of Cross-Cultural Psychology*, 1198-1218.
- Brookfield, S. (1998). Critically reflective practice. *Journal of Continuing Education in the Health Professions*, 18, 197-205.
- Brookfield, S. (2015). *The Skillful Teacher*. San Francisco: Jossey-Bass.
- Clements, A. (2016, November 1). *Te Tiriti o Waitangi: Living the Values*. Retrieved from School News: <https://www.schoolnews.co.nz/2016/11/te-tiriti-o-waitangi-living-the-values/>
- Denise Chalmers, L. H. (2012). *University teaching in focus: a learning-centred approach*. Camberwell, Vic: ACER Press.
- du Fresne, K. (2014, September 26). Our smallest citizens. *The Listener*.
- Durie, M. (2005). Indigenous knowledge within a global knowledge system. *Higher Education Policy*, 18, 301-312.
- Fry, H., Ketteridge, S., & Marshall, S. (2003). *A Handbook for Teaching and Learning in Higher Education* (2nd Edition ed.). London: Routledge.
- Hall, L. (2008). *Maori and Pacific People's Housing Needs in the Auckland Region: a literature review*. Auckland: Auckland Regional Council.
- Hattie, J., & Donoghue, G. (2016). Learning strategies: a synthesis and conceptual model. *Science of Learning*, 1-13.
- MacFarlane, A., Glynn, T., Cavanagh, T., & Bateman, S. (2007). Creating culturally-safe schools for Maori students. *The Australian Journal of Indigenous Education*, 36, 65-76.
- Ministry of Education. (2009). *Ka Hikitia: Managing for Success 2008-2012*. Wellington: Ministry of Education.
- Ministry of Education. (2012). *Ka Hikitia Accelerating Success 2013-2017*. Wellington: Ministry of Education.
- Nelson, C. E. (2003). Doing it: examples of several of the different genres of the Scholarship of Teaching and Learning. *Journal on Excellence in College Teaching*, 14(2-3), 85-94.
- Schon, D. (1992). *The Reflective Practitioner*. London: Routledge.
- Schon, D. (1995). Knowing-in-action: the new scholarship requires a new epistemology. *Change*, 27(6), 26-34.
- Schrader, B. (2013, September 5). *Maori Housing - te noho whare*. Retrieved July 2018, from Te Ara - the Encyclopedia: <http://www.teara.govt.nz/en/maori-housing-te-noho-whare/>
- Stewart, M. (2013). Understanding learning: theories and critique. In L. Hunt, & D. Chalmers, *University Teaching in Focus: a learning-centred approach* (pp. 3-21). Camberwell: ACER Press.