Upsetting the Norms of Teacher Education

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Abstract
Traditionally, multicultural education is not seen as something that those from the mainstream need to concern themselves with unless it is as a holiday fill-in activity. Intercultural education on the other hand explores the responsibility for the construction of culture by mainstream society. In this article, I explore my role in the delivering of mathematics education courses in teacher education programs in three countries: New Zealand, Australia, and Sweden. I focus on my attempts to raise mainstream as well as minority students’ awareness of intercultural understandings. Different approaches, including the use of storytelling, were used to match local circumstances but all had the same aim of making preservice teachers reappraise the role that mathematics education has in marginalising some children’s cultural backgrounds.

Keywords: Mathematics Education; Teacher Preparation; Intercultural Education; Multicultural Education; Responsibility.

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Introduction
Although in many countries of the world, school students come from a range of different backgrounds, most teacher populations do not share this diversity (Bartell et al., 2013; Norberg, 2000). As a fair-skinned, blue-eyed woman from a middle-class background, I am fairly typical of many teachers, especially teachers of the first seven years of school in Western countries. As a teacher and later as a researcher, I have worked with communities with whom I did not share a first language or culture and learnt much as consequence. On the other hand, as a teacher educator, the preservice teachers I work with closely resemble me in both appearance and home background. With them, I have wanted to raise issues that had become important to me from my work with Indigenous communities in Australia and New Zealand, migrant communities in Australia and Sweden, and refugee students in New Zealand.
What I am trying to convey is that when queer teacher educators embrace what makes us who we are, when we acknowledge how our life experiences have shaped us or suborned us, when we can help preservice teachers hear a sound where there is silence; it is only then can we become teacher educators of some consequence; it is only then that we can, in equal measure, inspire and confound, instigate, and originate (Turner, 2010, p. 298).

Although Turner wrote this about revealing his sexual orientation to his students, it could apply equally to those of us whose life experiences have left us with a desire to upset the norms that present certain students and certain knowledge as having more right to be taught and, simultaneously, other students and other knowledge as having no right to be taught. If we want to help preservice teachers understand how privilege and oppression work in our society, then we need to find ways to raise these issues (Bartell et al., 2013; DeFreitas & McAuley, 2008) and to help our preservice teachers determine ways to work with future students that do not continue to reproduce inequities. For me, this is a form of the care that I have for my preservice teachers (Gore & Zeichner, 1991).

White elementary teachers are often ignorant about racial inequality; if confronted with inequity, feel blamed for injustices and act defensively toward presentations on issues of social inequality and White privilege; tend to approach issues of inequality from a personal perspective rather than as societal, systemic, and institutional manifestations; and want to be told what to do in a multicultural classroom, how to teach “others” rather than to explore the impact of their attitudes on multicultural teaching effectiveness (Bartell et al., 2013, p. 224).

As teacher educators, care for our preservice teachers extends to helping them better understand these issues, not just so that they can then act on them when they are teachers, but also because there are conforming elements in society, including neo-liberal approaches (Sleeter, 2008), that contribute to a colour-blind approach in education being seen as the safest one to adopt (Norberg, 2000). Teachers’ professionalism is under assault in many places around the world and preservice teachers need tools for understanding how their work is constructed by society so that they are then better able to contribute to a more equitable society for their students (Sleeter, 2008).

As a mathematics educator, I face preservice teachers who have often had poor experiences of learning mathematics (Meaney & Lange, 2012) and hold perceptions that mathematics is a culture-free subject (Bishop, 1994) that is too difficult to include in an intercultural approach to education (Caneva, 2012). Yet my reading of research literature and my own experiences have shown me that mathematics is culturally formed and is based on an underlying set of values that can produce a cultural dissonance between it and some students’ home backgrounds (Meaney & Lange, 2013). In an earlier paper, Bishop (1990) argued that mathematics and by implication mathematics education is not benign but acts as a cultural imperialist force. He stated, “one must ask: should there not be more resistance to this cultural hegemony?” (p. 63).

Consequently, a promising approach to these issues is to consider how to integrate multicultural or intercultural education in mathematics education courses. Amongst other things, these educational approaches develop understandings about how different groups can recognise the value in each other’s cultural practices, including mathematics.

Policies supporting multiculturalism have been implemented by governments since the 1970s. For example, in Australia the then prime minister, Malcolm Fraser (1981), stated:

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Multiculturalism is concerned with far more than the passive toleration of diversity. It sees diversity as a quality to be actively embraced, a source of social dynamism. It encourages groups to be open and to interact, so that all Australians may learn and benefit from each other’s heritages. Multiculturalism is about diversity, not division—it is about interaction not isolation. It is about cultural and ethnic differences set within a framework of shared fundamental values which enables them to co-exist on a complementary rather than competitive basis. It involves respect for the law and for our democratic institutions and processes. Insisting upon a core area of common values is no threat to multiculturalism but its guarantee, for it provides the minimal conditions on which the well-being of all is secured.

Not least, multiculturalism is about equality of opportunity for the members of all groups to participate in and benefit from Australia’s social, economic and political life. This concern with equality of opportunity is dictated by both morality and hard-nosed realism. I am talking here about basic human rights, not benevolence which the giver bestows or withdraws at will. No society can long retain the commitment and involvement of groups that are denied these rights. If particular groups feel that they and their children are condemned whether through legal or other arrangements to occupy the worst jobs and housing, to suffer the poorest health and education, then the societies in which they live are bent on a path which will cost them dearly (p. 3).

Although these sentiments still pull on my heart strings, recently governments world-wide have distanced themselves from multicultural policies for a range of reasons, including a perception that they were divisive rather than inclusive (Meer & Mohood, 2012). An alternative policy is that of interculturalism or intercultural dialogue (Meer & Mohood, 2012) with some researchers using the terms multicultural and intercultural interchangeably (see César & Favilli, 2005). In education, the term intercultural education has been in circulation for almost as long as multicultural education (see Caneva, 2012). For example, in Italy, intercultural education has been the basis for setting up school programs that include immigrant groups. Milione (2011) described interculturalism as a form of integration that “offers a search for a sensitive and changeable balance between identity and differences, within an inclusive process based on participation, comparison, and mutual exchange” (p. 176). Although multiculturalism also expects dialogue between people from different groups (Meer & Mohood, 2012), in schools it was often the teacher who made decisions about what activities were included, and how they should be introduced. This has led to a realisation of the fears that Zaslavsky (1973) expressed forty years ago:

Teachers must be careful that they do not introduce cultural applications as examples of "quaint customs" or "primitive practices". . . . They must inspire students to think critically about the reasons for these practices, to dig deeply into the lives and environment of the people involved. It is so easy to trivialize the concept of multicultural education by throwing in a few examples as holidays approach (p. 53).

Interculturalism, with its insistence on dialogue, does not seem to face the same risk of trivialising cultural knowledge. It also seems to provide opportunities for discussion of not just ethnic differences, but also about how privilege and oppression operate to offer different life chances to different groups within societies. However, in order for preservice teachers to engage in mutual exchanges of ideas, they need to understand how they are positioned through processes of privilege and oppression within their society; a task that many teacher educators do not find easy to facilitate (Mueller & O'Connor, 2007).

In this paper, I explore my practices as a teacher educator in three countries by considering them as examples of intercultural education. Although much has been written about the need for mathematics
teachers to develop skills to ensure equity and social justice are achieved in their classrooms, very little research has looked at teacher educators’ roles in preparing teachers for this (Sleeter, 2008). As a mathematics teacher educator who has worked in several countries and who cares deeply about these issues, I wanted to explore how I promoted the issues with preservice teachers. This follows from exploration of my role as a researcher/curriculum facilitator in Indigenous communities (Meaney, 2004) and as a professional development facilitator (Lange & Meaney, 2013).

**Autoethnography**

This article is not a traditional research paper. Rather, it draws on my recollections of lecture and workshop material to explore the influences that affected what I offered. As such, it is an autoethnographical account of my work as a mathematics teacher educator. Drawing on the work of Reed-Danahay (1997), Burdell and Swadener (1999) defined autoethnography as “a form of self-narrative that places the self within a social context. It is both a method and a text” (p. 22). As Afonso wrote about her use of autoethnography, “rather than offering definitive answers, I intended for the reader to engage with my text in reflective thinking, or pedagogical thoughtfulness” (Afonso & Taylor, 2009, p. 276), so I use this methodology to explore issues in my work as a teacher educator but do not present answers to specific research questions.

In this paper, I describe a few activities and place them within the wider societal and university background. I chose to write about these activities because I retain strong memories of their implementation because of the dilemmas that were presented to me to resolve in one way or another:

> [Dilemmas] capture not only the dialectic between alternative views, values, beliefs in persons and in society, but also in the dialectic of subject (the acting I) and object (the society and culture that are in us and upon us)


Although the preservice teachers I came in contact with are discussed generally in this paper, I do not provide any written or spoken material from them; rather, I draw on my recollections of their responses in trying to make sense on my own actions within the contexts. The material, therefore, is not provided so it can be analysed empirically but, rather, to provide information about my actions within the social contexts in which I was operating. It is analysed in the final section by identification of the factors that affected my ability to plan activities that would promote intercultural dialogue.

This article describes my learning journey as I trialled ideas, changed them, rejected them, and developed alternatives. By reflecting on my experiences in constructing an intercultural dialogue that sought to consider how privilege and oppression work in society, I am not suggesting that was the only priority in my teaching. Like Gore and Zeichner (1991), I also cared that my students understood the mathematical concepts and how to develop children’s understandings of them.

> We support academic rigor, and technical competence as long as this rigor and competence do not exclude attention to an ethic of care and compassion, and as long as what we are being rigorous and competent about does not merely represent a white, male, western view of the world


The following three sections provide brief descriptions of the historical, societal situations that have contributed to the diversity in the school population of those countries, and the government policies that
affected education provision. In each section, I then describe the courses I taught and some of the activities I instigated, with retrospective rationales for these activities and some evaluation of what I learnt from their implementation. The final section provides a discussion of adopting an intercultural approach to mathematics teacher preparation as a way to help preservice teachers unpack issues of privilege and oppression as they aim for a more socially just society.

New Zealand

In 1998, I arrived in New Zealand from Australia to complete a PhD. I continued teaching part-time during my PhD and full-time on completion of it, both at school and university. In 2006, I was employed as teacher educator at the University of Otago’s Department of Education. Teacher education began in New Zealand universities after its deregulation by the government in 1995 (Alcorn, 2005). The programme I worked on focused predominantly on educating the generalist teachers needed for the first eight years of school. When I joined, the programme was still small and in direct competition with the local College of Education which had provided teacher education for more than a century. The university’s programme was innovative and had a strong commitment to honouring its Treaty of Waitangi obligations.

The Treaty of Waitangi was signed by Māori chiefs in 1840 when New Zealand was ceded to the British Crown. However, differences between the English and the Māori versions of the treaty resulted in controversy over the rights and responsibilities of both parties. Generally, it is agreed that under the terms of the Treaty of Waitangi, New Zealand is a bicultural country, which should respect and actively maintain Māori culture and language (Durie, 1999). Although governments rarely fulfilled their obligations (Bishop & Glynn, 1999), recently there has been more emphasis on respecting the principles of the Treaty of Waitangi in all circumstances (Earp, 2004). Implementing the principles of the treaty in mathematics teacher-preparation courses has been difficult. Anderson, Averill, Easton, and Smith (2005) found that prospective teachers were positive about including cultural activities in their mathematics programmes but were “less confident in describing mathematical links to Treaty principles” (p. 87).

Otago’s teacher education programme integrated content subjects with pedagogical knowledge into a single course. In this course, I taught the mathematics education and curriculum development components. From the first lecture, the students engaged in discussions about their obligations to the Treaty of Waitangi as teachers and were expected to reflect on their learning throughout the course. An example, is the requirement that the students developed their own lesson plans and justified the content they included. In doing those kinds of tasks, students had to engage with “cognitive and emotional labour” (DeFreitas & McAuley, 2007). Not all students felt the demands made on them were appropriate, and some left to enrol in the College of Education where one preservice teacher stated, “here they help you know what you have to do, they even give you lesson plans, so you just have to fill them in.”

The experience of working on a teacher education programme that required preservice teachers to critique what they were learning, encouraged me to present challenging tasks. I did not need them to agree with my point of view (Gore & Zeichner, 1991), but I did want them to have to resolve an issue where there was an obvious conflict. For example, at that time New Zealand was implementing a professional development project to improve students’ numeracy strategies and knowledge. This required placing children into groups based on their performance in a diagnostic interview. Given that there is significant concern about the use of ability groups because certain ethnicities, such as Māori are over-represented in lower groups (Alton-Lee, 2012), it seemed necessary to challenge the normalising of this practice. So, in one workshop I asked the preservice teachers to arrange themselves in order of mathematical abilities. They did this, but there was a lot of resentment and some obvious discomfort, especially from those preservice teachers who placed themselves at the lower end of the ability scale. Although we were able to have a discussion about what the impact of implementing the groupings in mathematics classrooms might be, I felt that emotions

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this activity had provoked restricted what we could talk about. We were able to talk about how mathematical ability was socially constructed but not about how this contributed to some groups of school students achieving at higher levels. The activity also seemed counterintuitive to our efforts to have preservice teachers feel comfortable with mathematics.

As a consequence of reflecting on this experience, I had first-year preservice teachers in 2007 read and discuss an adapted chapter from my PhD thesis on mathematics curriculum development. A Māori colleague gave a lecture on “Pākeha (non-Māori) capture of the New Zealand curriculum.” This included a description of Ole Skovsmose’s (2005) ideas about students’ foregrounds and backgrounds, and their connection to political obstacles to students’ learning.

Below is a summary of the discussion that was written up at the time so that we could return to the ideas later in the semester.

- **What is curriculum?**
  - Info needed to know in order to survive in society, find employment, provide us with life skills; existing social norms passed down
  - Consistent amongst schools, adaptable
  - The official policy for teaching, learning, and assessment in schools
  - A national statement that defines the learning, principles, and achievement aims and objectives which all NZ schools are required to follow
  - Curricula are guidelines for understanding the learning and teaching in schools
  - Is a document that offers courses by an institution—a broad balanced education. This is the product of the social, economic, cultural, and political expressions of a particular historical time.
  - Cultural product
    - social contexts
    - practices
    - social interactions
  - Politics—relationships in society

- **Who controls the curriculum?**
  - The government and the educational professionals, but really the public
  - The Ministry of Education and schools themselves control the curriculum; influential people
  - Ministry of Education, education professionals, society, public involvement
  - Government
    - tax payers (hegemonic)
    - leaders within communities
  - Government, public influences
  - People with power and money in society, scholars; minority groups—asked but not necessarily valued
  - The politics, social, economic, and cultural influences of a particular time

- **How is it affected by students’ foregrounds and backgrounds?**
  - Upbringing, religion, income, surroundings, socially
  - Changing needs of society (diverse)
  - What’s happening in community and the world
  - Morals and views shaped by parents, culture, ethnic background, and religion
It must cater for a wide range of different upbringings and interests
- Home, social pressures, cultural, religion, up-bringing
- Cultural allowances, economic status

- What is the likely impact on students’ learning of the inclusion or exclusion of their backgrounds and foregounds?
  - Lack of self-knowledge, loss of identity, loss of cultural history
  - May leave students narrow-minded about one particular culture; a loss of identity
  - Identity—ability to relate, desire to learn, Māori culture and interest
  - Exclusion—inhibits learning, as they can’t relate
  - Inclusion—all children will understand each other better, rather than isolate them

- What can teachers do to overcome “political” learning obstacles?
  - Work together as a school—research etc, get on with it
  - Open to understanding every child’s different identity
  - Bringing issues into public forum
  - Change of government
  - Utilise flexibility

As can be seen from the notes, this discussion allowed the development of a nuanced understanding of how privilege and oppression operated because it began with a discussion about the positioning of school students through the structure of the mathematics curriculum. The preservice teachers were engaged in “emotional work” (DeFreitas & McAuley, 2007), but this was productive for transformation and very different from the emotional work that was generated with the ability-grouping activity. Yet the focus remained on what the system did to students, not on preservice teachers’ own understanding of the privileges that they received from their gender, ethnicity, or class. Nevertheless, as an activity that promoted intercultural dialogue, issues were raised such as “political learning obstacles” that are not normally discussed in mathematics education courses.

Australia

I returned to Australia at the beginning of 2008 to work as a mathematics educator at Charles Sturt University (CSU). Mathematics education was provided as separate courses, with preservice teachers taking one course per year for the first three years of their degrees. As one of only two mathematics educators on my campus, and the most senior mathematics educator at the university, it soon fell to me to revise the mathematics education courses. This gave me flexibility to bring in the perspectives I saw as being valuable, but at the same time I was restricted by the more traditional structure of the teacher education programme. I missed that there was no clear social justice agenda infiltrating the programme as at Otago.

This university in rural New South Wales drew predominantly on students from the local region, many of whom had never travelled further than Sydney. I remember, during one introduction activity, being confronted by the amount of travelling I had done in the previous three months compared with the travelling these preservice teachers had done in their whole lives. Although the local city and region had a large Indigenous population and long history of immigration from non-English speaking countries, including a recent influx of African refugees, the preservice teachers did not reflect those demographics. There were a few Indigenous preservice teachers in each cohort of approximately 100 students, and only one preservice teacher from a non-English speaking background during the three years I taught there. Unlike New Zealand, there was no formal treaty between the Crown and the Indigenous population. Reconciliation efforts since the end of the 1980s have led to the inclusion of Indigenous knowledge and
understandings in school and teacher education curricula across Australia (Hart, Whatman, McLaughlin, & Sharma-Brymer, 2012). Although in the mathematics education courses there was a need to include Indigenous perspectives, the general feeling was that this was difficult to achieve.

It was possible to get to know the preservice teachers over a period of time because they took three different mathematics courses over consecutive years. This created opportunities to raise social justice perspectives, especially in the third-year course. For example, we had one cohort of first-year preservice teachers work with students at a school in a low-income area with a large Indigenous population. The preservice teachers and school students had to work together to produce a poster to show how one of the students’ out-of-school activities was connected to mathematics. The school students were provided with cameras to take photographs of their home activities, while the preservice teachers brought laptops to each meeting. This activity enabled the preservice teachers to not only see that mathematics could add value to a range of different activities, but to also value children’s home activities as starting points for their teaching. I felt the need for such an activity because at Otago, a discussion with the preservice teachers had shown that many of them believed it was the responsibility of parents to keep in touch with teachers about their children’s education. If parents did not turn up to parents’ evening then teachers did not feel that they needed to make contact. Reflecting on this conversation, I felt that preservice teachers should understand what they missed out on from not learning about the children’s home experiences. However, I left Otago before I could implement an activity for raising this awareness. From assessing the posters and the preservice teachers’ reflections on the CSU task, implementing this activity seemed to benefit both the preservice teachers and the school students.

Over time, we developed a relationship with this school and often took preservice teachers there. Many of them approached the school with reluctance, repeating stories about the likelihood that their cars would be damaged when parking them in the neighbourhood. Once we were met by a student from the special unit for behavioural problems who began to swear at the preservice teachers. Although these preservice teachers had had many positive experiences with the children they worked with at this school, the encounter with the swearing child seemed to reinforce all their preconceived views of what it was like to work in a school in a low-income area with a large Indigenous population. Although the preservice teachers were required to take courses in Indigenous Studies as part of their teacher education program, from anecdotal comments, many seemed to distance themselves from any responsibility for the current situation for many Indigenous people. These preservice teachers responded in similar ways to those documented by others (Mueller & O’Connor, 2007; Pimentel, 2010). Consequently, I wanted to raise the preservice teachers’ awareness about what it would mean to become dispossessed of their land, their language, and their history, but in a way that problematised it rather than just presented it as a series of facts. I anticipated that this would help the preservice teachers to understand better, the norms they had accepted about Indigenous people and to reconsider how their own backgrounds as “white” Australians gave them privileges not available to Indigenous people.

The moral tale that I told with appropriate pictures was about how aliens had deemed Earth to be a suitable planet for taking holidays because of its quaint customs. In order to make the tourist business run more smoothly, more and more aliens settled on earth and set up businesses. With the influx of aliens, the schooling system was overhauled and modernised so that alien children would not be disadvantaged by the quaint way of organising schooling. One of the areas that was modernised was the numbering system, with Earth’s base-10 system being replaced by the base-8 system used on the aliens’ home planet. A consequence of this change in number system was that Earth children who had been high achievers were then positioned as low achievers. The fable ends with Earthlings banding together to lobby for the support of friendly aliens to have the base-10 system at least recognised as an alternative means of doing arithmetic in schools.
This presentation was generally well received by the preservice teachers who felt it raised issues that made
them think, without positioning them as having to be merely guilty. As Gore and Zeichner (1991) stated,
there is a fine balance between making preservice teachers accept that they are part of a inequitable
system that they have benefited from, and having them explore the issue:

*While we reject the view that student teachers need to be “enlightened” about the true
meaning of reality and manipulated toward acceptance of the “correct” solutions to our
problems (i.e., indoctrination), we also reject the moral relativism that would lead us to be
satisfied with any knowledge that has been generated by student teacher research, merely
because the research was conducted by student teachers (p. 124).*

Like the activity where preservice teachers had to arrange themselves according to mathematics ability,
this task drew on the preservice teachers’ fear of mathematical inadequacy to show how system structures
contribute to the inadequacy, and how it was linked to the positioning of certain groups of children. This
seemed to dissipate the anger of feeling inadequate, but provided an empathetic entry into understanding
what it was like to have one’s traditional knowledge, language, and culture considered valueless. During the
workshops that followed the lecture, we played a PowerPoint presentation with a voice-over from a leading
Indigenous mathematician about how to use Indigenous culture in the teaching of mathematics, which the
Although I had hoped it would encourage the Indigenous preservice teachers to contribute more about
their experiences to the discussion, that did not eventuate. This was disappointing, although not surprising
given their small numbers in the class, because it meant that the intercultural dialogue was without input
from valuable dialogue partners.

**Sweden**

In March 2011, I began working at Malmö University in southern Sweden. Although Sweden also has an
Indigenous population, that community has never had a presence in southern Sweden. On the other hand,
like many European countries (Milione, 2011), Sweden has changed from being a country of emigration in
the 19th century to one of immigration since the second half of the 20th century. Islam is now “the second
largest religion in Sweden” (Norberg, 2000, p. 512). Almost 50% of Malmö school students were born
overseas or had parents who were born overseas. However, it seemed that generally it was difficult for
teachers to know how to adapt their teaching to support the inclusion of immigrant children into the
teaching of mathematics. In the two classes that Norberg (2000) investigated in her study of teaching in
diverse classrooms, the teachers had adopted a monocultural approach to the children. Bartell et al. (2013)
describe such an approach as a colour-blind approach. The teachers in Norberg’s (2000) study saw this
approach as a good thing because ethnicity was not used to single children out as being different. However,
research elsewhere suggests that such an approach is likely to be detrimental to the learning of students
coming from minority backgrounds because they will not feel included (Bartell et al., 2013).

Unlike at University of Otago and CSU, in Sweden preservice teachers complete, intensively, one course at a
time for a 10-week period. Although we see the preservice teachers two or three times during their four-
year programs, there are often long periods of time in between. As at CSU, the cohorts are large. Unlike
Otago and CSU, we have many colleagues at Malmö and there are many different courses running
simultaneously. Traditionally, lecturers do not teach a whole course but rather teach a few weeks on
different courses, making it difficult to get to know the preservice teachers as individuals. I was very upset
on one occasion when, on having the preservice teachers work in groups, I did not know them well enough
to encourage them to include a preservice teacher from an ethnic minority in the discussions. The woman
left the class early and I felt that if I had had a stronger relationship with the preservice teachers, I would
have found a better way to ensure that all of them were included in the activities.
At both Otago and CSU, I had arranged for a mathematics lecture to be given in a language the preservice teachers had no understanding of (Malay at Otago, and Danish at CSU). The preservice teachers were asked to participate as best they could. At the end of the lecture, I asked them about the strategies they had used, and how this understanding could be used in their own teaching of mathematics. Although at Malmö, the majority of preservice teachers had Swedish as their home language, a significant proportion of preservice students were bilingual. Therefore, it was not possible for me to present a mathematics lecture in another language. However, my own lack of fluency in Swedish meant that I gave my presentations in English with PowerPoint slides in Swedish. I provided regular opportunities for preservice teachers to discuss their understandings in Swedish. This provided us with similar discussions about what activities could support students who are learners of a language to participate more fully in the mathematics lessons.

The diversity of languages spoken within the cohort did provide an opportunity to share descriptions of number systems. However, the preservice teachers’ perception that mathematics is the same everywhere limited possibilities for discussing other ways of presenting number ideas. In the first year that I lectured at Malmö, I struggled to explain the Swedish division algorithm because it is written as a fraction. Being used to having the flexibility to show different strategies for formulating the division with the algorithm that I was familiar with, the Swedish algorithm in the form of a fraction restricted my ability to talk about the underlying concepts behind division. In the following year, I used this awareness to have the preservice teachers investigate different number systems and present the findings to their groups. As a whole group, they were then required to talk about the advantages and disadvantages of the different numbering systems, including the Swedish one, to the rest of the class. Although this activity did not work for all groups in all classes, it did provide an opportunity for many groups not to just understand better how the Swedish numbering system worked but to also see that other (unrecognised) knowledge could become a resource for school students in learning/accepting the Swedish system. The preservice teachers were then able to see that a discussion about different numbering systems in their own classes was likely to facilitate deep understandings about the purposes of numbering systems and standard algorithms.

Discussion and conclusion

In research on mathematics education courses for aspiring teachers, it is not easy to find studies of how to include intercultural or multicultural perspectives. Mathematics, with its aura of being culture free and with many preservice teachers arriving at university with a dread of it, contributes to the difficulties of upsetting norms about how some children and their home knowledge should be integrated into mathematics lessons. Yet, as a teacher educator with a social justice perspective, I began my teacher education career with a desire to do just that. I wanted to raise preservice teachers’ awareness of how oppression and privilege operates in our society so that they had a basis from which to enter into a dialogue with the communities in which they taught. I wanted to provide activities that promoted intercultural dialogue so that preservice teachers could better understand how privilege and oppression operated. Not all the activities that I undertook produced this result and even when some preservice teachers were able to take up the challenge of seeing how they had been positioned by the system, not all accepted this challenge.

In this paper, I have described some of the background and reasons for trialling different activities. From analysing my own story about what affected my planning choices, the following factors were identified: societal context for dealing with inequities, knowledge about resources, relationships with preservice teachers, and relationships with local schools. These can be seen in Figure 1. The planning of activities was facilitated by these factors being available. If one or more of them was not available, then the planning of activities became more difficult.
Although equity is promoted by government policies throughout the world, how it is supposed to be achieved, differs across nations. In New Zealand, the recognition that Māori people had rights under the Treaty of Waitangi provided the background for trying to ensure that the academic aspirations of Māori people were promoted in schools—not to the detriment of non-Māori but with equal respect. In Australia, the inclusion of Indigenous Studies in teacher education programs also assisted in considering ways that mathematics education could begin a dialogue with Indigenous communities. In Malmö, our university’s mission statement supported the inclusion of gender and ethnicity perspectives in all courses. However, this is not the same mandatory requirement as in Australia and New Zealand. Thus, the social expectations surrounding each teacher education programme can support or restrict possibilities for discussions with colleagues who teach the same courses. This will have an impact on possibilities for adopting a more comprehensive equity approach across a teacher education programme.

Building up relationships with local schools in low-income areas was also part of a commitment to social justice and equity that was promoted by the recontextualisation of government policies into university and teacher education mission statements. Although none of the universities where I have worked actively supported the development of such relationships, they did not hinder its development. Such as was the case of CSU.

Building up relationships with preservice teachers allowed for uncomfortable discussions to be started. It is an affective process to be confronted with the fact that you have been helped to achieve because of the privileges that are gained from being pale-skinned and/or middle-class (Motta, 2012). For affective engagement in these discussions to result in transformation and not withdrawal, trust is needed between lecturers and preservice teachers. The development of relationships helped, especially at CSU, where we taught the preservice teachers three times over three years. Although the cohorts were large, I did form relationships, at least with some of the preservice teachers, which could withstand difficult discussions. In New Zealand, the mathematics ability activity did not work, partly because I had not established a trusting relationship between myself and the preservice teachers. They could not see past their own hurt to think that I might have had an alternative purpose to humiliating them. It may also be that if I had had a better understanding of the preservice teachers’ previous experiences, I would not have introduced such an activity. Having limited opportunities to develop relationships with preservice teachers at Malmö, and
being uncertain myself of many things about teacher education in Sweden, has hindered being able to see possibilities for introducing activities that could lead the development of intercultural dialogue.

Knowledge of relevant material was also much easier in New Zealand and Australia than in my new country where I struggle with reading Swedish texts. As my fluency with the language and knowledge of teacher education in Sweden develops, my ability to find material that will contribute to appropriate activities for promoting intercultural dialogue is also likely to improve. Relevant material for New Zealand and Australian preservice teachers included academic resources, such as the Indigenous mathematician’s recorded talk and PowerPoint presentation, as well as human resources such as my Māori colleague who gave a lecture at Otago.

My journey of learning how to provide appropriate activities that contribute to preservice teachers committing to intercultural dialogue with the communities of the students that they will teach is by no means finished. Some of the activities that I have implemented have shown signs that they prompted preservice teachers to confront their own belief systems about how education advantages some groups based on class, ethnicity, and gender. However, not all activities were successful and, in some cases, were counterproductive. Nevertheless, promotion of intercultural dialogue seems to provide opportunities to move away from having to convince preservice teachers that my morality and how I see the world is more appropriate than theirs (Mueller & O’Connor, 2007). Intercultural dialogue promotes discussions that explore what a socially-just mathematics education can be and, therefore, is likely to lead to upsetting the norms that position some groups and their knowledge as having no right to be taught.

References


