Crossing the boundaries of imagination: The role of a public library exhibition in global learning for student teachers and teacher educators

Anne Hickling-Hudson[*], Erika Hepple

Queensland University of Technology, Australia

HIGHLIGHTS

- Student teachers designed a library exhibition on global education themes.
- University and library staff collaborated to engage students in 'public pedagogy'.
- In their exhibition work, students 'crossed the boundaries of imagination' into symbolic, three-dimensional representation.
- University and library colleagues crossed institutional boundaries to mutually facilitate new learning.
- The project introduced participants to a relational way of promoting public global learning.

ARTICLE INFO

ABSTRACT

In this paper, we utilise the theoretical concept of 'boundary crossing' to explore how, as Australian university teacher educators, we worked with library curators and a class of student teachers to mount a public exhibition of their group work. We consider how the students crossed 'boundaries of imagination' in symbolic representation and critical analysis by creating artistic installations to express global education themes. We reflect on what we, the university educators, learned about crossing institutional and pedagogical boundaries to mutually facilitate new learning. We argue for the importance of shared public pedagogy as offering new avenues for teacher education and of connecting with local communities.

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1. Introduction

In this paper, we explore how the pedagogical innovation of working with student teachers to mount a library exhibition can be analysed and understood by concepts of "boundary crossing" (Akkerman & Bakker, 2011) and by the approach of creating space for students to draw on creative imagination as a central feature of learning (Bland, 2016). As teacher educators working with library colleagues in Australia to organise the exhibition, we discuss how the project enhanced our understanding of our pedagogy and the learning of our students in two institutional sites — university and public library. From one site, the two authors, teacher educators at an Australian university (Queensland University of Technology - QUT)), initiated collaboration with staff at the second site (the State Library of Queensland). Our goal was to create new learning opportunities for undergraduate student teachers enrolled in an elective subject, *The Global Teacher*, dedicated to global perspectives in education. The title of our paper, 'Crossing the Boundaries of

* Corresponding author.
  E-mail address: a.hudson@qut.edu.au (A. Hickling-Hudson).

Imagination', is inspired by a phrase borrowed from one of our students reflecting on the impact of engaging in the collaborative project.

Our project relates to the emerging field of 'public pedagogy' (Burdick & Sandlin, 2013; Sandlin, O'Malley, & Burdick, 2011). This area of practice involves implementing learning opportunities and processes in community and educational settings outside of formal educational institutions. In teacher education, public pedagogy refers to the professional learning made available to student teachers (sometimes called pre-service teachers) beyond the confines of the traditional campus and school practicum to prepare them for enacting pedagogy within the community space. The term "student teachers" in this paper refers to teacher trainees studying for the pre-service degree of Bachelor of Education.

Starting with a discussion of background, theoretical, and methodological research considerations, we then reflect on and discuss how we worked across two institutional sites to engage the students in developing their learning and teaching skills through mounting an exhibition of their work at the State Library, to which the public was invited. This meant that in addition to implementing the teacher education program on campus, we had to draw on the resources and curatorial expertise of the State Library. We reflect on how participants crossed boundaries that engendered new pedagogical, curricular, and organisational learning through this project.

2. Background: 'Learning and Teaching in Public Spaces' — the interstate context

Our work in designing and carrying out pedagogical collaboration with the State Library took place between 2011 and 2014 as part of a nationally funded research project developed by teacher educators in four Australian universities in the Australian states of Victoria, New South Wales, and Queensland. We brought QUT's Faculty of Education subject, *The Global Teacher*, into this project, "Learning and Teaching in Public Spaces," led by a teacher education team at Victoria University in Melbourne (Ryan and Charman, 2014, Victoria University, n.d.). The central concept of this interstate project was that of collaborative exchanges with museums and/or libraries in experiential learning and citizenship. The four university teams collaborating in implementing and researching this pedagogical approach (from Victoria University, Deakin University, Charles Sturt University and QUT) exchanged ideas as they experimented with designing undergraduate subjects to have students exhibit their learning in public spaces such as museums and/or libraries. Ethical guidelines involving disclosure and consent documents were drawn up at each university as well for the overall research project, and ethics approval was received at university and national levels. The project won three-year funding from the Australian Office of Learning and Teaching (OLT) that supported the coordination work of a project leader, annual exchange visits between the university academics, the payment of research assistants, and a conference at the end of 3 years at which each university presented its work.

The four universities involved in the project each provided different curricular contexts within which students in various degree programs worked to exhibit their learning. Students at Victoria, Deakin and Charles Sturt Universities collaborated with the curators of local museums to produce digital histories, texts, object exhibitions, and art installations to express profiles and narratives of local residents and their experiences as immigrants to Australia (see Note 1). At QUT, the task we gave our pre-service student teachers was somewhat different. We asked them to work with librarian curators at State Library Queensland to create exhibitions of topics that they were studying as part of *The Global Teacher* subject, an elective which had started at the university in 2004. The

aim of this subject is to help prepare student teachers to live and work interculturally, with a greater global understanding of socio-cultural and educational issues of planetary significance (see Note 2, and see section 6 below, for a brief description of the subject). As the new element in the *Global Teacher* subject, the library exhibition is the focus of our analysis and reflections in this paper.

3. Theoretical considerations

In this section we discuss three theoretical considerations important for our paper —namely: the varieties of public pedagogy in which we locate our work in teacher education, the specific pedagogy of arranging for student teachers to visit and work with public institutions such as museums, and the value of encouraging students to utilise creative imagination. We refer to scholarly observations about the insufficiency of good guidelines relating to these elements in current teacher education pedagogy.

Educators can problematise public pedagogies by relating them to many types of publics and environments, ranging from privileged to disadvantaged, and considering how they can be designed, offered, accepted, engaged with, ignored or resisted (see Savage, 2010; Sandlin, O'Malley and Burdick, 2011). Another step in problematising public pedagogies is to challenge its practitioners to make links between the theorisation of enactment and the geographical situated spaces of learning, both local and global. This is the focus of *Public Pedagogies*, a special issue of *The Australian Journal of Adult Learning* (AJAL, 2015), devoted to discussing pedagogies in a variety of public spaces of learning, including some of those in our interstate project. "The public locations described in the articles include libraries, museums, schools, universities, gardens, neighbourhood houses and spaces outside of those" — from social movements in the streets of Chile, to protest music in radical adult education for social change (Charman & Ryan, 2015, p. 355—358).

Within the complex socio-cultural environments of public pedagogies, our focus in this paper is on the bounded, case study context of the education of undergraduates studying a global education subject. Our goal was to utilise, in our teacher education practice, a readily accessible public institution such as a museum or library by asking our students to explore what learning was involved in making an exhibition around a theme, displaying it in that public space, and inviting a visiting public to interact with their exhibition. We utilised State Library Queensland rather than a museum, because this library was already displaying two public exhibitions that could give the students ideas, had a public exhibition space, and had library curators who were interested in working with us on this innovative project. Given our total lack of experience in designing three-dimensional exhibitions, the library curators would be positioned to play an essential role in advising and assisting our students in this task. Our focus in the paper is to reflect on what we learned as teacher educators, and what the students learned, from the development of the project. Our experiences of working between two different institutional sites — campus and state library — motivated us to choose the four concepts involved in 'Boundary Crossing' discussed by Sanne Akkerman and Arthur Bakker (2011) as the theoretical analytical framework for our study.

Our study addresses a gap in the practice of public pedagogy discussed by the team in our interstate university project. As is noted in the final report by the project organisers at Victoria University: 'The project developed from beliefs that despite some evidence of collaborations between schools and universities and museums, educators at all levels often lack good pedagogical approaches that incorporate public learning spaces as sites of learning exchanges in their teaching curricula' (Ryan and Charman, 2014). In

the literature on learning in and through museums, a starting point is often that museums provide a good opportunity for students to experience the benefits of 'constructivism' in which they construct deep individual meaning from the learning in which they are engaged. Inadequately-designed museum visits and tours are the antithesis of this, "in that visitors are frequently offered no opportunities to interact with sensory data and to construct their own world" (Price & Hein, 1991). Joe Cain (2010) identifies barriers to tutors making use of science museum materials, visits and demonstrations, including the barrier of poor preparation in pedagogical methods. Literature citing positive approaches to learning through museum visits include an analysis by Ian Davies (2001) of the benefits of collaboration between initial teacher education programs and museums, particularly when there is an informed critique of the philosophy of history implied in any display. Well-informed collaborative programs, he argues, provide encouragement for replication by neophyte teachers in their schools. Another important argument from Valerie Innella (2010) resonated strongly with us: that "To empower students to learn not only about art and museum practices but also to curate an exhibition within the museum walls allows for the construction of new knowledge in a real world setting" (p.49). This accords with the broad acceptance by many educators that "active engagement in learning is essential for the development of the learner and for the development of the learners' understanding of themselves as learners in authentic settings and as curious and active participants in the world in which they live" (Ryan and Charman, 2014).

As our project progressed, we became increasingly aware of the role of imagination in the work of our students. Theorising this role, Derek Bland (2016) starts by pointing to research showing a toxic lack of imagination and creativity in school curricula, and argues cogently as to how educators can challenge this cognitively harmful lack. We support Bland's argument that the trend in education reform in many countries to 'narrow the curriculum in a culture of standardized testing', can limit the capacity of young people to think creatively. A narrow curriculum is likely to promote in students restricted ways of thinking that result in uncritical conformity and submission to what appears to be the inevitable, along with a lack of self-confidence in their intellectual capacities. With the crises of current economies and societies, educators need more than ever to recognise that 'cultivating our natural powers of imagination, creativity and innovation is not an option but an urgent necessity' (Robinson, 2011). They can select from the huge variety of ways of doing this advocated by educators whose work has become internationally endorsed, such as Maxine Greene (1995), Ken Robinson (2011), Yong Zhao (2012) and many others. Pedagogy that unlocks and harnesses the power of the imagination in the curriculum can draw inspiration from Bland's (2016) categorisation of four dimensions of the imagination that can be encouraged in and through education. He applies these four dimensions, (italicized in brackets), to the following quote by Ken Robinson (2011), who is globally famous for his advocacy of using the creative and critical imagination in learning:

"In imagination, we can step out of the here and now *(fantasy)*. We can revisit and review the past *(critical imagination)*. We can take a different view of the present by putting ourselves in the minds of others *(empathic imagination)* …. We may not be able to predict the future but by acting on the ideas produced in our imagination, we can help to create it *(creative imagination)* (p.142) (italics added by Bland)".

4. Methodology and methods

Our methodology, relevant to a bounded case study, draws on qualitative research traditions which explore 'emic' material,

identifying themes and seeking meaning from participants in their settings and contexts. Data emerges from sustained relationships between participants, and analyses aim to capture the insider's perspective (see Fairbrother, 2007, pp. 42–44). The study's settings, whether physical or pedagogical environment, or mode of discussion, observation or interview, play a significant role in qualitative research since the data and outcomes stem from these settings. The participant-researcher relationship involves a recognition of the positionality of the researchers, identifying their background and what this might mean for the interpretation of the data (Bourke, 2014). In keeping with a qualitative approach, we do not separate "findings" and "discussion", but instead, combine description and interpretation of findings within thematic subheadings, as well as reflecting on them.

The interstate context of the pedagogical project "Learning and Teaching in Public Spaces" was the framework in which we organised our particular iteration of the project — *The Global Teacher* exhibition at State Library Queensland (see Victoria University, n.d.). Our students worked in six small groups to create six installations, which collectively formed *The Global Teacher* Exhibition in one of the exhibition rooms at the State Library.

Our research questions flowed from our goal of understanding how learning from the project was experienced by our students and ourselves. We asked the relatively open-ended questions of:

- What students had learned from the public exhibition of their educational work exploring global social justice themes.
- What we, as teacher educators, had learned in two domains: (i) the domain of helping the students to develop and organise the exhibition; and, (ii) the domain of collaborating with library staff to work with the students.

In designing the method for collecting data, focus groups were chosen as offering a way of incorporating the students' views directly, using their own voices and perspectives. The 'multivocal' setting of the focus group has been noted as empowering the participants' voices, rather than that of the researcher, and hence levelling the uneven power distribution between students and researcher when collecting oral data (Madriz, 2003). In this study, as the researchers also teach the Global Teacher program, we arranged for two research assistants to conduct the focus groups with the students, to avoid the chance of our presence influencing the students' responses. In a further move to gather the participants' insider perspective, we drew on their individual reflective essays in which they discussed their perceptions of this experience of creating a public exhibition of their global education understandings. Prior to their writing this reflective essay, they were introduced to the reflective writing framework of Bain, Ballantyne, Mills, and Lester (2002) to assist them in reflecting on and analysing their experience (Ryan & Ryan, 2013).

The interviews with the student focus groups were semi-structured. The questions below provided a broad structure for an expanded conversation, and the discussion was tape-recorded then transcribed:

- Can you tell me about your topic and why you are choosing to exhibit this way?
- How is this collaboration with the State Library helping you develop as future teachers, do you think?
- What value do you see in putting this exhibition together?

The essay question set for the final assignment asked students to reflect on their experience of their work throughout the semester in *The Global Teacher* subject. We drew on the essays of a selection of the twenty six students who gave us informed permission to utilise

anonymous quotations from their work. We coded into ten themes what these students wrote in their essays about their experience of the entire semester's work in this subject. We then segmented the themes according to what section of the subject they commented on (lectures, seminars or exhibition). For this paper we selected information from our further coding of themes pertaining to the library exhibition as follows:

- How the group presented their selected topic in the exhibition.
- Experience of group work to prepare the exhibition.
- What they learned from the library curators.
- Curriculum ideas for future teaching, stemming from their experience of the exhibition.
- Motivational change as a result of the exhibition.

In our 'Findings' sections, quotations from interviews and transcripts are referred to by initials. The 'Findings' include discussion not only of our students' voices, but also of our own notes concerning our reflections on our pedagogy. We identified and selected themes from these notes, added points from our ongoing conversations about the project, and drew on these points as we wrote the paper.

5. Analytical approach

As we were integrally involved in both the teaching and the research process, we have blended a description of events with an analysis of them. In analysing our data, we explore how the learning potential of boundary crossings worked in our project, drawing on the suggestion that this process can be conceptualised into four key areas:

(a) identification, which involves building an understanding of what the diverse practices in each sphere of work are about;
(b) coordination, the process of creating cooperative and routinised exchanges between practices in different domains;
(c) reflection, which expands perspective-making and perspective-taking on the practices; and
(d) transformation, which is about collaboration and co-development of new practices (Akkerman & Bakker, 2011, p. 150).

Reflective practice is at the heart of professional development (Ryan & Ryan, 2013; Schön, 1987). Pedagogic reflection is integral to decision-making and self-evaluation about learning and teaching. The theory of "boundary crossings" helped us in our goal of reflecting on how learning developed across the two culturally different sites of the university and the State Library, amongst our students, and between ourselves in terms of our embedding of collaborative pedagogy. Akkerman and Bakker (2011), who analysed over 100 studies exploring boundary crossings in educational contexts, noted how the participants in these different cultural domains are challenged by discontinuity in their professional practices. This leads them to seek and give help, and to negotiate and re-shape their understandings and practices. Using a new combination of information and tools, they develop a shared vision that leads to outcomes and mutual benefits not hitherto fully envisaged by either party (see Akkerman & Bakker, 2011; Engestrom, Engestrom, & Karkkainen, 1995; Flynn et al., 2015).

Traditionally, the two domains encompassed by teacher education are theoretical professional analysis in university seminar rooms, and experiential learning, through the practicum, about how to teach in the classrooms of primary, secondary, and early childhood schools. Whilst both domains offer professional learning experiences, they do so in different ways. The concept of boundary crossings enables a relational approach that considers how interactions that encourage new learning can be established between two sites in spite of the differences between them (Akkerman & Bakker, 2012). Analysing our collaborative teacher education project through a relational approach enabled us to consider how the university and library sites mutually facilitated new learning of the student teachers and their teacher educators. Our analysis offers a blending of theoretical knowledge and experiential learning in terms of establishing the pedagogy of exhibiting as a systematic professional practice, and a new way of understanding teaching for both teacher educators and student teachers.

Within the theory of boundary crossings, the importance of "boundary objects" is acknowledged, as these mediate or connect types of learning by bridging the space between different domains (Akkerman & Bakker, 2011). In our study, the students' exhibition expressing global education themes constituted the boundary object that mediated the learning between the two domain sites: the university and the public library. The boundary object was of central learning significance. Our findings explore this in two sections. The first (Findings #1) discusses how the exhibition expanded the participants' horizons beyond their familiar boundaries in a university subject. In this section, we highlight the role of student imagination in expressing their previous knowledge in new ways. The second section (Findings #2) discusses how the exhibition crossed boundaries in terms of the chosen analytical categories: 'identification', 'coordination', 'reflection' and 'transformation.' Following the discussion of findings, we reflect in Section 9 on what we learned, as teacher educators, from the process of establishing the pedagogy of exhibiting as a systematic professional practice.

The library exhibition was one section of 'The Global Teacher' subject, so it is important to see it within the context of the semester-long subject, described in the next section.

6. Studying "The Global Teacher": the curriculum context

Each year since its inception in 2004, 'The Global Teacher' subject (see Note 2) has offered undergraduate student teachers the opportunity to engage with global education issues stemming from the following themes:

- The role of education in tackling violence.
- Identity and cultural representation.
- Racism and anti-racist strategies in education.
- Poverty and anti-poverty strategies in education.
- Education for environmental and community health.
- Changing schools for a changing world.

Global Teacher students (usually between 30 and 50 in number, from any of three year levels) explore discourses that underlie global problems, such as discourses contemptuous of the culture and ethnicity of the 'Other', discourses engendering violence, justifying greed, exploitation and the trashing of the environment, blaming the victims of impoverishment and persecution. They critically analyse these portrayals and their impact on education. They consider alternative education systems and counter discourses across the world which seek to counter injustice. An explicit goal is for the subject to disrupt prevailing preconceptions about education and to consider it in global terms likely to lead to changes in perception across multiple domains. The subject challenges students to consider social change through education, acknowledging the standpoint that "Without studying a critical global context, it is difficult for teachers and researchers to analyse fully the intellectual and material violence of the traditional model of schooling inherited from European colonialism and perpetuated today … or to have a foundation for alternative ways of thinking

about and changing education to work towards social justice" (Hickling-Hudson, 2011, p. 453; Hickling-Hudson, 2006; Victoria University, n.d.).

The students who choose *The Global Teacher* elective represent a range of education specialisations in the Bachelor of Education degree: early childhood, primary, and secondary education. They enrol in the elective because they want to prepare themselves to utilise global learning in their future pedagogy, and to expand their understanding and skills in working productively in increasingly linguistically and culturally diverse classrooms. The first assessed task for the students in *The Global Teacher* subject is for small groups to prepare a seminar of 60 to 70 minutes on one of the semester's topics and involve the rest of the class in this seminar, typically a visual/textual/verbal presentation of themes, via computer graphics, and an interactive activity such as a quiz, role play or interpretation and discussion of a diagram, map or pictures engaging the whole class. The concluding assessed activity is an individual essay reflecting on their learning throughout the semester. In the 2013 semester of our project, there were 26 students. They organised themselves into six groups, and selected one of the themes of the subject (outlined above) as the basis of a seminar that engaged their peers. Participation in these seminars offered the presenting group the chance to build their pedagogic skills, and also helped the whole class to move towards developing an informed global perspective.

It was the organising of a public exhibition of symbolic objects and texts that was new and experimental for *The Global Teacher* subject within the interstate project. Staying in their small groups, the students designed six installations that expressed their seminar themes, and mounted them in the State Library. Neither our students nor ourselves, the teacher educators, had ever before had such an experience. We had visited museums and analysed their displays, but had never designed and mounted a three-dimensional exhibition comprising an arrangement of objects and texts giving meaning to a theme. The exhibition room was open to the public, and the exhibition attracted visitors who were invited and those attending for curiosity. This work involved something different from the type of pedagogic imagination that students had previously drawn on to implement their interactive classroom seminars. For their final assessment item, the students provided written reflections on their library exhibition as a learning experience (see Hepple and Hickling-Hudson, 2014; Hickling-Hudson and Hepple, 2015.

Our goals in teaching *The Global Teacher* subject, as described above, dovetailed with the goals in public pedagogy of interrogating, challenging, and re-imagining aspects of society. Adding the library exhibition allowed us to extend the subject in a way that not only utilised a community setting for learning, but also gave students space to experiment with using their critical and creative imagination to deepen their learning.

We follow with an analysis of our "findings" in this project, using the qualitative approach which blends description, interpretation, and reflection. Acknowledging our positionality entails reflection on our experience as teacher educators, one with a Caribbean and one with a European background. Our years of involvement in global and intercultural education in Australia, Europe, the Caribbean, and Hong Kong motivated our keenness to work with our students and colleagues in this interstate project that sought to provide strategies for extending pedagogy with a social justice focus beyond the classroom and into the public sphere.

7. Findings #1: 'crossing the boundaries of the imagination' in the student exhibition of six group installations

The student groups deepened their understanding of the content of global themes in education when they imagined, designed, and implemented their own installation, and when they observed those of the other groups. Each student group worked on the challenging task of using their imagination to translate their cognitive understanding of a theme into a three-dimensional installation. It was this work of imagining how to represent global topics three-dimensionally that led one of our students to say to us, as we moved around observing them working on the exhibits, that creating the installation was causing the group to "*cross the boundaries of the imagination*" (our italics), a phrase that he also used in his assignment essay reflecting on the impact of engaging in the project. We adopt this phrase to describe, below, how our students crossed boundaries of the imagination in one or more of the ways posited by Robinson (2011) and Bland (2016). By observing the students' installations, and discussing them, we, the teacher educators, worked out how each group installation had engaged in emphasising these different dimensions of imagination. We noted that while most groups used at least four imaginative dimensions, not all groups did. However, we felt that all the groups had crossed boundaries by moving beyond the type of pedagogical creativity shown in their earlier group seminars, which had combined verbal, visual, textual and activity-based dimensions. The new element was that the students in their installations communicated three-dimensionally, not only by means of graphics, texts, class activity and discussion as in the seminars, but through an artistic arrangement of objects, symbols, pictures and texts, followed by conversation, that engaged the senses and imagination of public viewers in the ways described below.

7.1. The role of education in tackling violence

This group "crossed the boundaries of imagination" by means of their symbolic rendering, in three-dimensional visuals, of peace and shelter from violence. For this, they hung two large umbrellas from the ceiling. Attached to and hanging from the spokes of the umbrellas were mobiles demonstrating, in pictures and text, the themes of violence and peace: (a) the violence of civil conflict generated by different ethnicities, the impact of violence on schools and students, and violence as bullying in the school environment; and, (b) peace studies and anti-bullying programs in schools. The display's blend of critical and empathic text within the frame of symbolic umbrellas illustrated imagination operating in the four ways noted by Bland (2016).

7.2. Identity and cultural representation

This group used their installation to engage the audience both visually and orally in ethical issues relating to the various cultural representations of Australian Indigenous identity. They blended and applied creative and critical imagination to present their information in the following ways: (a) as a wall design using text and drawings; (b) as a DVD that they had composed; and, (c) as a display, on the table, of historical books, papers, and other objects showing a critical historical perspective on the cultural representation of Aboriginal people at various phases of the British colonisation of Australia, using curriculum and library materials.

7.3. Racism and anti-racist strategies in education

The educational message of this group sought to activate the fostering of anti-racist values and perspectives in schools and communities. The group crossed boundaries from research to symbolic and empathic imagination by setting up an installation of lighted candles around a photograph on a table to commemorate the young man, Benjamin Hermansen, a Norwegian-born youth of Ghanaian parentage who had been stabbed to death in 2001 by members of a neo-Nazi group in Norway. They blended critical with creative imagination to express anti-racism by displaying: (a) photographs of demonstrations condemning the racist violence that had caused the death of the young victim, and (b) a selection of anti-racist texts for use in teaching.

7.4. Poverty and anti-poverty strategies in education

In this installation, the students engaged their audience with symbols, ideas and information about global poverty. The center-piece was their imaginative symbolic display of an arrangement of hessian sacks that had contained coffee — as a tangible reminder of the inequality of global consumerism. This display showed that whilst supplying a valued product to the developed world, the people in many countries of the Global South involved in growing and producing coffee receive insufficient funds to raise them from poverty. Complementing this creative display was a critical analysis utilising maps, charts, and statistical data, of the inequalities of global poverty and wealth. Through an interactive activity on a laptop computer, the group brought these ideas together in an 'empathic' way (Bland, 2016) as a classroom resource that highlighted the importance of education and economic reform as offering future generations a pathway out of poverty.

7.5. Education for environmental and community health

This group used artistic, creative and critical imagination in their display of resources that could be used by teachers in a range of year level classes to engage school children in environmental and community health issues. As a platform for their symbolic display, the group imaginatively created a wall of cardboard boxes on which they stacked plastic bottles full of tainted river water as a reminder of issues of water pollution and recycling of waste. With the addition of text and photos on the walls highlighting varieties and issues of pollution, these students invited audience interaction by providing a stylised "tree" on the branches of which visitors could write and attach messages addressing individual ways of contributing to a sustainable, healthy environment.

7.6. Changing schools for a changing world

This group's installation featured a multi-media comparison through pictures, videos, and text, of four different education models: the libertarian approach offered by Summerhill School in the UK; the work-study socialist model from the Cuban education system; the holistic approach of Rudolf Steiner integrating moral, creative and intellectual learning; and the didactic, structured instructional approach exemplified by the South Korean education system. The group displayed written material raising the question of where traditional public education models and alternative models in Australia fit into this mapping, and discussed this with the visitors. They applied creative and critical imagination in their use of visual images, digital technologies, and analysis. Their interactive craftwork symbolized the creative school. They used all of these elements in their installation to engage visitors in their critique of educational values and models.

The description above of the students' six group installations is interwoven with our interpretation of how each group "crossed the boundaries of imagination" by using their artistic, creative, critical and empathic imagination to express their understanding of aspects of a topic in a symbolic, three-dimensional way suitable for an exhibition. We had not been aware, at the beginning of the project, of the central role that imagination would play in student design of their installations. Nor could we have envisaged the extent to which our own understanding of the role of imagination in learning was to be enhanced by watching our students develop their installation skills. These skills were relational across boundaries in several ways, including relating to their seminars previously conducted as their first assignment. The students used symbolic and artistic representation in the state library site to capture the essence of each seminar topic. They related to both their university and library mentors in carrying out this task, and they related to engagement with members of the public who visited their exhibition. We reflected that such skills would help them to operate in future as creative teachers who maintain openness to emotions and feelings and demonstrate a humanist approach in their work (Cremin, 2009; Grainger, Barnes, & Scoffham, 2006; Woods & Jeffrey, 1996). Observing the six student groups engaging visitors in their pedagogic installations, we felt that we had gone some way towards practising our belief in pedagogy as

> a cultural practice that must be accountable ethically and politically for the stories it produces, the claims it makes on public memories, and the images of the future it deems legitimate … [pedagogy] should … work, in part, to link theory and practice in the service of organising, struggling over, and deepening political, economic, and social freedoms. (Giroux, 2004, p. 69).

8. Findings #2: implementing the exhibition: boundary crossing in organisation, pedagogy and learning

8.1. Identification and coordination

The first phase of the collaboration between the university teachers and the library staff expressed the "identification" process outlined by Akkerman and Bakker (2011) as the starting point for boundary crossing. In this phase, the diverse practices of the university and library domains were clarified sufficiently to allow the joint activity to proceed. Essential at this early stage was the willingness of both parties, the curators and the teacher educators, to be flexible and open to new concepts, new procedures, and differing institutional and professional demands and concerns. The collaboration between the two institutions commenced with a number of exploratory meetings in which we negotiated the institutional partners' roles in planning and mounting a public exhibition within a nine-week curriculum framework. Whilst the library curators needed to become familiar with university processes, schedules, and the aims of *The Global Teacher* subject, the teacher educators needed to understand the practices of the State Library underpinning the setting up of exhibitions, their scope and limitations. The protocols for collaboration were then mapped out in a Memorandum of Understanding between the two institutions.

Having identified the key stepping stones to establishing an exhibition, we embarked on the process of creating cooperative exchanges between practices in the two different domains. An important introduction was the field trip that we organised for the students, taking them first to Queensland's State Museum and next to the State Library to study how these public spaces exhibited representations of historical and contemporary issues, including

political events that shaped Queensland in different eras, and how people thought and lived. This was a collaboration across institutional boundaries, engaging *The Global Teacher* student teachers as well as ourselves, their lecturers, in becoming familiar with the State Library environment and the dedicated space in which their exhibition would be held.

The staff of State Library Queensland provided guided tours of their exhibitions, the key one of which was entitled "State of Emergency". It used photographs, film clips, recorded voices, posters, and other artefacts to show clashes between Indigenous people and white government officials in the Australian state of Queensland in the 1970s, and the strategies that resisted and challenged the injustices affecting Indigenous Australians (which were similar to those affecting Indigenous communities globally). The students saw how a three-dimensional exhibition such as this could enhance powerful learning around a social theme. For them, this was an empowering step into the 'identification' phase discussed by Akkerman and Bakker (2011). The example of how ideas and viewpoints were represented in the "State of Emergency" installation was a first step in thinking about how they could tackle the creation of a new kind of representation of the themes they were studying in their *Global Teacher* subject.

Following this visit, student groups embarked on their 'coordination' stage, by meeting to work out how to design a visual, three-dimensional way of exhibiting to the public such issues as poverty, environmental problems, inter-community violence, and their educational implications. The second part of the 'coordination' stage for the students was working cooperatively in their six groups in the library's exhibition room to put together and mount the installations that they had designed in theory. For the teacher educators, further steps in our coordination of the process involved: (i) organising times for our students to meet with the library curators to seek advice in the design and setting up of their installations; (ii) making ourselves available for student consultation on campus as their tasks progressed; and, (iii) working with students and library curators to prepare the room for the final exhibition to which the public was invited.

8.2. Reflection

In boundary crossing activities, reflection can offer insights in terms of "perspective-making", that is, being able to explicate one's personal understandings and knowledge about a process or issue, and "perspective-taking" as the ability to engage with others' different perspectives in order to see issues from alternative viewpoints, such that "one enriches one's identity beyond its current status" (Akkerman & Bakker, 2011, p. 146). Reflecting on boundary crossing experiences can generate new understandings as participants recognise, articulate, and evaluate the differences in values and processes in different domains.

In order to help develop new understandings, students and educators require new boundary crossing experiences. The opportunity to mount an exhibition in the public space of the State Library offered these student teachers a unique learning experience. As one international student in the class noted: "Above all things, having an exhibition in the state library was an invaluable experience, because in my country there are very little opportunities [to do such things]" (SHP) (Students are named by initials).

The Global Teacher subject took the students through four stages of practising perspective-making and perspective-taking. Their comments in the small focus group discussions and in their individual reflective writing at the conclusion of the semester gave us insight into their perceived learning in the program. In our *Global Teacher* program, perspective-making was inherent in asking the students to re-contextualise their knowledge from their group

seminar and re-present that in a three-dimensional form to engage an audience comprising the general public. The students' growing awareness of the possibilities of using space, the senses, objects, and symbols to create powerful messages for an audience was evidence of perspective-making, shown in their reflective comments:

> The exhibition was an interesting way of putting the seminar into another context … I found it very rewarding. It is a creative way to convey a message, and watching how the class as a whole managed *to create a room full of meaning was really inspiring* (MS, our emphasis).

The group focusing on racism chose to convey their anti-racist message through a collection of objects — a photo, candles, and a tribute book — as a memorial to one victim of racism. This one young man's story was displayed to represent the horrors of racism in manifold forms. The student teachers commented on how powerful they found this:

> By taking on a theme and then making an original and creative exhibit out of it, really made me see how it is possible to manage, express and redo thinking and end up with a concrete product that still gives a message (SR).

> You can't always explain things using words, sometimes you just have to show them what you mean (GR).

Perspective-taking, as the process of creating space for new viewpoints and representations, and articulating a new vision of possibilities, was illustrated when the students spoke about looking forward to their future lives as teachers. From the interviews, it was evident that some students had a new appreciation of what could constitute a public space for learning. They were applying their newfound recognition of the potential of the library space to appreciating that their future classroom, or the local library or school library, could be a future public learning space. These extracts from the focus group discussions give a general sense of how the students reflected on the meaning of their exhibition for their future teaching.

> An exhibition like this is being mounted in the State Library, that's true, but it could be equally mounted as part of a unit of work in a school classroom where it's a product of their learning, and it could be displayed as an installation in the classroom. It doesn't have to be in a formal setting like the state library or a museum (GT).

> It gives children an opportunity to see perspectives that they're studying … They could do a class project and put their own thoughts into visuals (AW).

> The collaboration with the State Library has helped us … to think how things can be displayed and how to engage an audience. As teachers we have to engage our students, so it's similar — in the exhibition we need to engage people who are walking through (MQ).

> It was astonishing to see how the class as a whole managed to use a simple room to create an exhibition with message and meaning. I think this is a great strategy to use in the future to motivate students and make them rethink topics in a different and creative way. It is also a good technique to use to make students physically see their results, where they can … support their thinking and demonstrate it in front of other people (SR).

To engage in perspective-taking, students had to learn the

organisational skills necessary to underpin their work of making the dialogical narratives conveyed by each installation. As the final report put it, when students had to make consensual decisions about what was to be presented and how, they also developed other useful life skills including negotiating, stepping out of their comfort zones, contributing to the community, reaching deeper levels of understanding of citizenship, and seeing themselves as part of a story (Ryan and Charman, 2014). We see such life skills as another dimension of perspective-taking.

In talking of a pedagogy of exhibiting, we are mindful of using the term pedagogy in its fullest definition beyond an interpretation as a set of pre-fabricated methods available for application in a teaching context. Pedagogy is both the theory and the practice of education that takes a critical stance and that is motivated by values of social justice (Giroux, 2004). Some of the student teachers in their reflective essays formulated a new vision of possibilities, conveying messages promoting social change through the exhibition. These comments went beyond thinking about pedagogic strategies, and reflect an engagement with the challenges of pedagogic commitment to global ethics:

> … an effort to try and change things, not just live with the way things are. To literally change and to make the world better. So future studies and also peace studies were an aspect of what we were trying to get across in our installation (AL).

> Global Teacher has helped me realise that I need to broaden my commitments to the world, to global ethics and issues that everyone faces while I'm learning and studying, so I can be more comfortable in my own skin and in other countries (VY).

> The topic and seminar have reinforced my understanding of teachers' approaches and how they will influence a student's prejudiced ideologies. Therefore I intend to question and reflect on my own practices in relation to recognising my own predisposition to bias (AL).

> Through presenting the seminar and exhibition, by being a part of Global Teacher and exploring the environmental and community health topic, I have changed the way I think about teaching. I was forced to consider issues and topics that I previously wanted to shield myself away from … my views have changed considerably as have my career and life objectives. I have not experienced anything else significant in my life these past few months to be able to attribute the motivational change to anything else but this subject. I am now hoping to teach English and work with abandoned, orphaned and homeless children at the Lotus Centre in Mongolia (VH).

The taking up of new perspectives was also evident in the way that the student teachers discussed their relationship with the State Library and how they valued the insights they gained from the mentoring of the library curators. The first two extracts below are from students essays, the second two from the focus group transcripts.

> After visiting the State Library and Museum in week 2, I reflected back on my initial viewpoint of libraries as places I associated with a boring connotation. Surprisingly, I loved the library, finding it anything but boring. Realising the resources available to access, taking notice of everything that was on display [in the State Library's exhibitions], paying attention to all the fine details, I used the knowledge I gained from the library in my own exhibition experience (CJ).

> We learnt from the people at the State Library who have given us talks, that exhibitions can be quite staid and traditional. They

suggested the idea of simplicity in an exhibition. That's why we chose the two umbrellas you would have seen … representing a metaphor for shelter away from the violence (JM).

> (We learnt through) finding out about all those resources that are out there just

> waiting to be used. Even just being given a proper tour of the library we learnt

> there is so much sitting there at our disposal. Otherwise I just never would have

> had an idea. (EV)

> Yeah I never would've thought of the library as the resource that it has been, the articles, and the newspapers, and the ways you can research. It has just changed my complete thought process of how to research an assignment. It's been fantastic. And the people we have spoken to like N., and the other people (who) have given us (library) tours, and we have a virtual tour online, and that was just awesome … It helped so much! We've met a lot of people that have really helped us out. (CJ).

Feedback along these lines from the students confirmed that co-producing this public exhibition was a new undertaking for them, challenging them to learn new skills by relating to the library curators, by utilising the state library as an intellectual space which most of them had not encountered before, by negotiating knowledge with each other, by learning how to engage an audience 'in a different and creative way', and by relating this project to their aims of engaging their future students.

8.3. Transformation

Transforming learning is a long-term process. Within the limitations of our project, we can only chart the beginning of that process in the domains that we have been exploring: those of the learning of the student teachers, the teacher educators, and the library staff. We have selected below a few of the many examples of students' written reflections which give us some insight into the beginning of this process. The student comments below show that transformation had started to occur for them pedagogically, in terms of understanding a teaching approach that was new to them.

> The value of group work and co-operation became clear to me how powerful it may prove to be. The project particularly changed my thinking as a teacher in not only how to bring activities such as these into the classroom to challenge my students but also how precious group discussion could be, something I never did enough of in my schooling years (AW).

> … It's been fantastic to think of education in a different way … It [the exhibition] really related to education because we want to create a classroom that is enticing to children. So doing this, it has really helped me to figure out how to make things attractive to people when they first walk in (CJ).

Engagement in *The Global Teacher* program was noted to have begun a shift in understandings, not only in pedagogy as professional practice but also intellectually, in terms of the global themes studied. The students' design of their installations, plus their views expressed in interviews and their essays, demonstrated that they had learnt skills of translating an ethical global message into a form of representation that differed from anything that they had created previously. Important messages universally relevant to education included information about how poverty and violence excludes or

distorts schooling, the plight of girls seeking education in many countries, the difficulties of attending school in war-torn countries, and the global and local challenges of environmental conservation. These two students remarked on how their work in the program was changing their thinking:

> This unit has really changed my whole thinking perception. I considered myself an open-minded person with un-racial views. Perhaps my mind was more narrow-minded than what I had realised or wanted to admit. This subject has really opened up a whole new thinking pattern reshaping my views and perspective on situations in how I wish to be taught as a teacher, and teach my students as a teacher (RF).

> Because there is a growing global realisation of other cultures, there needs to be a growing understanding in not only the teachers but also the students, and the teachers need to help the students in their understanding (HB).

Our creation of this collaborative exhibition in a public place, a pedagogical practice new to us, extended our learning as teacher educators. We started to develop an understanding of the nature of public pedagogy, learning how joint organisation of such events as a three-dimensional exhibition could embody the practice of pedagogy in a public space. We experienced how effective the approach was for the learning of our students as we witnessed them discussing, planning, arguing, and experimenting with how to translate the essential content of a social issue into a creative exhibition that would appeal to an audience. Since we ourselves had never engaged in such a process, we gained new understandings by observing and engaging with our students in their task, and by observing how the library curators advised and helped the students to draw on artistic considerations that were unfamiliar to us. It was exciting both for the students and for us when members of the public, some of them invited and others randomly visiting the library, viewed the exhibition and talked with the student groups, asking them questions about their installations and engaging with the creative activities that the students had integrated into their exhibits. We saw that this interactive process had important implications to help student teachers understand not only how they could enact "public pedagogy" by drawing in communities beyond the school, but also how they could encourage greater collaborative interactivity in the learning of pupils in their future classrooms.

In reflecting on our pedagogy, we reconsidered how we had set the assessment task. The semester's assessment required two items that would be graded: the group seminar at the beginning, and at the end, an individual essay reflecting on the nature of global and pedagogical learning in the semester's work. We had decided not to grade the actual installations: our students were not art students and we had felt it would not be appropriate to grade them on this work. But the installations involved a huge commitment of time and effort: they were a "labour of love". Some students said in the interviews that their installation work should have been recognised with a grade. We came to agree with that approach, and subsequently modified the assessment requirements to recognise each stage of the students' work. We also reflected that in future iterations of the subject, we would prepare students by discussing the variety of public sites through which teachers can engage their pupils in hands-on learning, including settings of governance such as parliaments and law courts, settings of worship, settings in which social fieldwork can be carried out, as well as cultural settings such as museums and public libraries which were the sites for our project.

The process of transforming learning was remarked upon by our colleagues in the State Library. In conversations with them, they noted that we were all undertaking co-development of a new practice, the shape and outcomes of which were unknown at the beginning. They spoke of the new understandings that they were developing by helping student teachers to translate their ideas into three-dimensional formats, and by collaborating with us, the university lecturers, to organise this interaction. In an interview, one of them reflected that this learning was like a 'teething' process:

> You had no idea of what it was going to look like. I had no idea what we were actually doing. Through email chains and … with conversations here and there, I felt like it was a success [the exhibition]. But … there was a lot of teething involved … in offering the room, in offering advice to the students, in even telling the people that we work with what was happening, we didn't really know — it was all kind of really open. But yeah, it came together (NB).

9. Establishing the pedagogy of exhibiting as a systematic professional practice

As teacher educators, we developed skills in a domain new to us, new to the students, and new to our library colleagues — that of understanding the pedagogy of the three-dimensional exhibition. Utilising the analytical framework of boundary crossing and relational domains (Akkerman & Bakker, 2011, 2012) helped us to envisage the exhibition as a "boundary object" — a catalyst that enabled our *Global Teacher* students to see the world differently and to understand teaching differently. It allowed students to work in two sites to explore the power of imaginative symbolism — "crossing the boundaries of the imagination" — for translating their knowledge and expressing their ideas in a new way. We drew heavily on our collaboration with State Library staff to help the students — and ourselves — think about how this could be done. This involved collective work, drawing on the imagination, artistic representation, creating, exhibiting, and engaging wider audiences beyond the university. "Crossing the boundaries of the imagination", a vivid student phrase referring to new ways of learning, includes the imaginatively innovative ways in which teacher educators can encourage the next generation of teachers in our schools to utilise creative pedagogy to promote global learning. We hoped that this would be the basis for our students to engage in creative and globally aware pedagogical practice when they become teachers.

To embed the new collaborative pedagogy was an ongoing process involving frequent communication and much flexibility, an ability to handle ambiguity and uncertainty, and in particular a shared belief in the value of this project. Undertaking any new pedagogy is likely to involve the participants in a "messy" and uncertain process as unexpected events are encountered and navigated. This is essentially the nature of skills in higher education which promote a problem-solving and critically reflective approach to learning (Adie, Mergler, Alford, Chandra, & Hepple, 2017; Bridgstock & Hearn, 2012) and was certainly the case as we learned how to mount a public exhibition of student teachers' work.

The study, however, has limitations that must be noted. First, as it is not a longitudinal study, we are unable to comment on the long-term impact on these student teachers of their engagement in creating a public exhibition. Ideally, as researchers we would maintain contact and communication with our students into the early years of their teaching careers. Second, we drew some of the students' comments about the project from their end-of-semester essays which we graded. Arguably, the potential for bias here was balanced by the fact that we also drew on student insights from

interviews which were conducted by visiting interstate researchers and research assistants not previously known to them, and in which we were not present. In our paper we have used student comments that expressed a wide range of insights, choosing those which were most articulate. Thirdly, we recognise and regret that we did not pay sufficient attention to recording the reflections of the library curators on their involvement in the project.

Change requires people who care about change, who champion and implement it. We started the project because we wanted to add to our *Global Teacher* subject the particular goal of introducing students to a public pedagogy approach through mounting an interactive exhibition in the public library. That goal was achieved, and had significant consequences for learning. Students expanded their learning when they exercised a new kind of creativity in developing and mounting the exhibition which engaged them in a new kind of peer-group work, absorbed new skills from the library curators, practised interaction with members of the public who visited their display, and showed in their concluding writing what they had learned from the project. As teacher educators, we learned the importance of working with partners to develop a pedagogy that challenges student teachers to use creative, informed and critical imagination to engage with the public and with their own future pupils.

In subsequent semesters, there were modifications in the "boundary object" because curators who had worked with us at the library moved to other positions and could no longer be involved. In later iterations, the boundary object changed from that of three-dimensional installations to being that of digital narratives. But the ethos of educating student teachers in a public pedagogy approach remained the same. State Library staff continued to work with us as the teacher educators, and with the students, to help them design digital narratives that express the themes of global education that they are studying. University librarians and media experts also help us by publicising these student narratives on a public media site.

10. Conclusion

A major goal of our interstate project on public pedagogies in teacher education was for the university teams to utilise this project to provide resources that could be consulted as guidelines for colleagues embarking on similar pedagogy. This involved distilling principles embedded in the process of carrying out the project at each site (see Note 1). In this paper, we have put forward reflective principles of organising, implementing, researching and analysing the project in our state library site. This has helped us to clarify our own understanding of process. We hope that it might also serve as a resource helping teacher education colleagues who may wish to mount a similarly collaborative project with one or more partner institutions.

In the framework of 'boundary crossing', the concepts of identification, coordination, reflection and transformation as posited by Akkerman and Bakker (2011) and applied to a pedagogical project such as ours can provide an overview of what is involved in stages of a multi-institutional enterprise. Boundary crossing in our project took place at several levels. It was intrapersonal, among students in their groups (between research, imagination and group organisation), interpersonal for teacher educators and library curators (we crossed each other's institutional boundaries), and inter-institutional (with the teacher education program benefiting from the librarians' skills of mounting an exhibition, and the librarians learning from engaging with pedagogy in teacher education).

In an increasingly interconnected world, the education of future teachers needs to extend beyond the confines of university campuses to engage them in "public pedagogy" — the pedagogy of

implementing learning opportunities within community spaces such as those discussed in our paper. Where student teachers have engaged in a range of learning experiences in such community spaces, they will be better able to offer flexible and responsive cultural learning experiences to their students in the future.

Our discussion of "crossing boundaries" is set within the context of teacher education in Australia. At a time when the government is emphasising national standardisation in teachers' roles and work (Australian Curriculum, Assessment and Reporting Authority (ACARA), 2013, 2015), our study highlights the importance of articulating, promoting and maintaining a teacher education perspective which is not just national but is also global. This goal feeds into encouraging university and community collaboration to facilitate learning experiences that will develop the globally-informed knowledge, creativity, and imagination of our future teachers. Agreeing with the observation of Egan (1992, p. 85) that "Education … is a process that awakens individuals to a kind of thought that enables them to imagine conditions other than those that exist or that have existed", we suggest that teacher education benefits from content which moves beyond being discipline-specific to embracing the crossing of disciplinary boundaries to develop global learning. It also benefits from engaging with opportunities for learning across diverse institutional contexts.

Mounting the *Global Teacher* exhibition was the common goal motivating the institutional partners in the university and State Library sites to share their expertise. The exhibition, as the boundary object, mediated the learning between the two domain sites. We needed firstly to articulate relevant practices in our own pedagogical field and then be willing and able to weave these together with practices in a curatorial field, with adaptions as necessary, to enable the creation of the exhibition. The university lecturers facilitated the knowledge work of the students through organising the seminars, exhibition, written work, and oral engagement with interviewers, while the library curators exposed the students to new understandings and skills around the use of space, sensory information, and of symbolic objects as part of the pedagogy of exhibiting. In their exhibition work, students 'crossed the boundaries of imagination' into symbolic, three-dimensional representation. The project thus embodied innovative ways in which ethical, imaginative and systematic global pedagogy can be undertaken by the 'global teacher'. In this process of creative sharing of expertise to achieve a common goal, we gained a new understanding of our work and of the potential for new ways of enacting teacher education

Acknowledgement

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NOTES

NOTE 1

Professor Maureen Ryan and Dr. Karen Charman, the project leaders (Victoria University), describe in a detailed report the organisation and implementation of the work of the four universities in this project (Ryan and Charman, 2014). To summarise briefly:

Victoria University students worked with the Immigration Museum in Victoria to produce digital histories about immigrants to Australia.

Deakin University students worked with the Flagstaff Hill Maritime Museum and the National Wool Museum to produce a text and object exhibition of profiles of local residents and their immigration stories.

Charles Sturt University students worked with the Ben Chifley Home Museum to create art and media profiles of local residents including their immigration histories.

Queensland University of Technology student teachers worked with State Library Queensland to create exhibitions of topics that they were studying as part of *The Global Teacher* subject (see Ryan & Charman, 2014, p. 24; Victoria University, n.d., 'QUT Approach').

NOTE 2

The Queensland University of Technology subject *The Global Teacher* (CLB 049), was designed and taught from 2004 to 2012 by Professor Anne Hickling-Hudson, It was taught in 2013 by Dr. Erika Hepple and Anne Hickling-Hudson, and taught from 2014 by Erika Hepple, in QUT's Faculty of Education, School of Cultural and Professional Learning.