

Bridges to Global Citizenship: Ecologically Sustainable Futures Utilising Children's Literature in Teacher Education

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Abstract

Developing an understanding of the importance of a sustainable future is vital in helping children to become 'global citizens'. Global citizens are those willing to take responsibility for their own actions, respect and value diversity and see themselves as contributors to a more peaceful and sustainable world. Children's literature — picture and story books in particular — can be used as a powerful tool to help even the youngest citizens become aware of the need to assume responsibility for creating and enjoying a sustainable future through global citizenship. Children's literature can be utilised to help children examine and change personal lifestyles to secure a sustainable future; to identify, investigate, evaluate and undertake appropriate action to maintain, protect and enhance local and global environments; to challenge preconceived ideas, accept change and acknowledge uncertainty and to work cooperatively and in partnerships with others. This article explores and examines ways in which some examples of Australasian children's literature, specifically *Storm Boy* (Thiele, 1963), *Lester and Clyde* (Reece, 1991), *The Waterhole* (Base, 2001), *Window* (Baker, 1991) and *Belonging* (Baker, 2004), have been used in a literacy focused preservice teacher education course to assist preservice teachers entering their internship school placements to develop children's understandings of an ecologically sustainable future. It provides further insight into methods for embedding teaching for a sustainable future into pre-service teacher education.

Greater life expectancy, more gender and racial equality, extensive consumer choice, and some extension of human rights and political freedoms have been just some of the benefits enjoyed by the world's peoples due to modern economic developments (Agnello, White, & Fryer, 2006). But are they really benefits when they are unequally shared and are associated with such mounting costs as ecological degradation, economic instability, social exclusion, loss of cultural diversity, and psychological insecurity? How can the world expect a sustainable future when in varying ways, and to fluctuating extents, most of the world's people are living in ways that are ecologically, economically, socially,

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culturally and personally unsustainable (Huckle, 2001)? As the earth exceeds seven billion human inhabitants, these are questions that must be addressed, particularly as they pertain to young children as they grow to assume responsibility for the care of the Earth and its inhabitants. Teachers and teacher educators are crucial in educating the future leaders to ensure sustainability.

Ecologically Sustainable Futures in Contemporary Childhood

(O)ur sense of responsibility to our land and our community, and our sense of being a part of a continuum of history, are invisible.

We float as individuals living individual moments in history and time.

We don't care about the fact that we're the ancestors of future generations.

(Cullis-Suzuki, Frederickson, Kayassi, Mackenzie, & Cohen, 2007, p. 37)

The Australian Curriculum defines sustainability education as futures focused and interconnected to issues of global significance.

Sustainability education is futures-oriented, focusing on protecting environments and creating a more ecologically and socially just world through informed action. Actions that support more sustainable patterns of living require consideration of environmental, social, cultural and economic systems and their interdependence. (Australian Curriculum, Assessment and Reporting Authority [ACARA], 2011, p. 6)

There are many and varied definitions of sustainability, and as Wals and Jickling (2002) note, these do not always include environmental issues (Littleddyke & McRae, 2009); however, environmental sustainability is important. This is especially so in light of children's and young people's increasing fears for the environment (Strife, 2012), when the Earth's resources are being used at an alarming rate that cannot be sustained indefinitely (Assadourian, 2010). Teacher educators are therefore vital in assisting children and young people in working towards securing an ecologically sustainable future (Anderberg, Norden, & Hansson, 2009) and enacting the knowledge, skills and values of global citizenship (Davis, 2008).

There is a considerable body of research (Davis, 2008; Holden, 2011; Horton, Hadfield-Hill, Christensen, & Kraftl, 2013) that claims that childhood is a crucial period for developing fundamental habits, norms, dispositions, values, lifestyles, identities and feelings of belonging and care that can have enduring environmental consequences. Decisions made later in life often have their genesis in childhood activities, actions and beliefs (Mackey, 2012). To enable an ecologically sustainable future it needs to be understood how lifestyle choices can reduce humankind's impact on the environment and lead to a decline in conflicts over scarce resources (Blewitt & Cullingford, 2004). The importance of educating future generations for an ecologically sustainable future cannot be underestimated. Contemporary childhood is increasingly global in focus and children are profoundly affected by decisions and events occurring beyond their own shores, whether they are World Trade Organization agreements, terrorism in New York, deforestation in the Amazon rainforest, genetic engineering innovations, or a simple sneeze in China that evolves into a global influenza epidemic (Bliss, 2010). As the world becomes a 'smaller' place, it is important that children and young people understand this interdependence of communities and all life forms and the impact that decisions made in one place can and will have in another place (White, 2002). Selby (1999) argues that by enabling children and young people to acquire the knowledge, skills and values to make critical choices about these issues they are more likely to be able to identify

and take action to stop the spread of the negative effects of globalisation, considering the world from a global citizenship perspective.

Some recent research (Roseland, 2012) has revealed that community management and the active inclusion of the most disadvantaged and marginalised groups has shown some success in addressing ecological sustainability issues. Approaches that empower people to bring about legal and political change hold great promise in securing a sustainable future (Selby, 2000). Humanity, whether in an industrialised or a rural subsistence society, relies on the environment for its very existence, and economic growth cannot occur without having some kind of impact on the environment. The need to use resources sustainably is, of course, at the heart of an ecologically sustainable future. As Burnouf (2004, p. 3) argues: 'children need to be made aware that what affects the world affects them as well'. Children's literature may be one way of helping to achieve this.

To provide for environmental sustainability, children and young people must learn actions that will preserve, protect and enrich the environments for all species on earth. As Wals and Jickling (2002) have claimed, economic improvements and practices that encourage a sustainable future are inextricably related. With education, generations of future and current consumers can understand how improvements in people's lifestyles, reduction of poverty and economic growth can occur without being detrimental to the lives of the future occupants of this planet (Allen, 2011). The financing needed to achieve this, however, will need to be many times greater than is currently budgeted for in most developed and developing countries (United Nations Development Programme, 2011). Sustainability cannot be achieved without those in power recognising and taking into account the need for a fair and equitable share of resources and education on the ecological disposal of waste (Hopwood, Mellor, & O'Brien, 2005); and modifying the rapidly accelerating overuse of available natural resources (Anand, 2011).

Global citizenship, then, involves understanding the interrelationship between poverty, social, cultural and political persecution, and global inequality, and being able to appreciate the interconnectedness of living on Earth (Ferreira, 2013). Educators must assist students to acknowledge how current and future lifestyle choices can and will impact on the environment and can lead to conflicts over the ever-increasing scarcity of resources. It is important for the young people of today to note that these choices impact now and will continue to in the future, on the world's poorest inhabitants, as these are the citizens of the world most at risk. To understand how to work towards an ecologically sustainable future, children must be assisted to tackle injustice and inequality and couple economic improvements with ecologically sustainable practices addressing knowledge and understandings, skills and values (Banbury, Stinerock, & Subrahmanyam, 2012).

As the problems facing humanity are interconnected and integrated throughout society, so must our solutions be integrated across all areas of our learning. Children's literature, with rich text, engaging illustrations and strong links to local communities and cultural ethnicities, can be utilised in teacher education programs (Effeney & Davis, 2013; Ferreira, 2013; Ferreira, Ryan, Davis, Cavanaugh, & Thomas, 2009; Ferreira & Ryan, 2013) to address some of these connections and demonstrate ways of living sustainably. Highly recognised and award-winning authors of exceptional children's literature, such as Colin Thiele, Jeannie Baker, James Reece and Graeme Base, through the use of rich and detailed descriptions and identifiable and endearing settings and characters, weave issues of ecological sustainability into their stories, and as such their texts can be used to integrate teachings about a sustainable future. (Lintner, 2011; Takenaga, 2012)

Utilising Children's Literature to Help Secure an Ecologically Sustainable Future

*The ultimate test of a moral society is the kind of world it leaves to its children.
(Quote attributed to Deitrich Bonhoeffer, as cited in Kasser, 2010, p. 213)*

There has long been a substantial body of research supporting the many benefits of using children's literature and picture books in classrooms to improve the literacy skills of students (Galda, Ash, & Cullinan, 2001; Galda & Cullinan, 2006), but there have been fewer studies elucidating the benefits of using children's literature to teach about global citizenship and, in particular, to help in ensuring an ecologically sustainable future. As Reid, Payne, and Cutter-Mackenzie (2010) note, the field of children's ecoliterature warrants further deliberation. The use of children's literature is a well-documented approach to instilling emotional and affective responses to important issues in education (O'Sullivan, 2004), so examining how it can be used to help teach for a sustainable future will add to the field.

Much of the research identifying the benefits of utilising children's literature in primary classrooms concludes that it can be used to entertain, elicit a wealth of emotions, stretch the imagination and develop compassion in children (Pantaleo, 2002). The reading of children's literature and the use of visual literacy as a teaching strategy (Anstey & Bull, 2000; Callow, 2008, 2011) is a common feature of primary classrooms. Shared reading promotes community and a love of literacy among children and teachers (Hanzl, 1993). Literature has for many years been used in the classroom to address the teaching of literacy. With the introduction of basal type readers and intensive phonics and grammar programs, however, children's literature is no longer at the forefront of literacy education in primary schools. The new Australian National Curriculum (ACARA, 2011), which although introducing the study of literature as a separate strand in the English curriculum, appears to have a clear and intentional emphasis on the teaching of phonics and grammar as the main tools in teaching children to read (Dewerianka, 2012). Teachers who appreciate the use of children's literature will need to look beyond the value of picture books in teaching literacy and use such books to teach many additional concepts across the curriculum. The use of literature to assist students in understanding confronting and sometimes controversial (Simon & Norton, 2011) issues can be a powerful tool for primary teachers trying to contend with a crowded curriculum and the explicit teaching of the skills needed to achieve in the testing regime currently being administered in Australian primary schools. Many Australasian authors, including Colin Thiele, Jeannie Baker, James Reece and Graeme Base, provide teachers with quality literature that can assist in the exploration and discussion of ecological issues with children (Reid et al., 2010). By using texts addressing these ecological issues, teachers can then demonstrate the interconnectedness of the economic, cultural, social, ethical and ecological problems faced (Wason-Ellam, 2010). Thiele, Baker (O'Mahony, 2011), Reece and Base acknowledge this, though not always obviously, in their writings.

Children's literature, particularly that deemed 'picture books', can explore themes, concepts and issues that are both complex and contradictory and can lead children into 'sophisticated and satisfying discussions' (Baddeley & Eddershaw, 1994, p. 5). While research has shown that children's literature can be used to teach certain moral values (Marriott & Evans, 1998), it also suggests that children's literature can be used to expose the reader to certain moral dilemmas and give them the opportunity to evaluate and develop an understanding of the concept of global citizenship, including the dilemma of sustainable futures. Some of the problems or issues seen in children's literature range from:

... personal problems of family and peer relationships, but also encompasses questions of wider social and political interest such as race and gender, the environment and conservation, social and community conflict, war and peace and even global interdependence. (Marriott & Evans, 1998, pp. 6–7)

It can therefore be suggested that children can fill the gaps of their own understandings about issues such as a sustainable future through the use of relevant and engaging literature. While it appears that most children globally, even in the poorest areas, are influenced more by television (Morely & Robins, 2013), the most pervasive form of media, literature can still provide children with the opportunity to view issues from multiple perspectives (Merryfield & Wilson, 2005) and question the media opinions they are being served. Literature provides children with the opportunity to begin to form their own views and opinions and take a more global stance.

As Stephens (1992) claimed:

Children's fiction belongs firmly in the domain of cultural practices which exist for the purpose of socialising their target audience. Childhood is seen as the crucial formative period in the life of a human being, the time for basic education about the nature of the world, how to live in it ... (p. 8)

A study of how five tutors utilised some children's fictional texts while teaching in a pre-service teacher education English course will assist to demonstrate how children's literature can be used to integrate with teaching for sustainable futures and help develop attitudes of teaching for global citizenship in preservice teachers.

Methodology and Context of the Study

As a part of their program, 140 final year preservice teachers at a large multi-campus regional NSW university were encouraged to use examples of authentic, award-winning Australasian children's literature with a global education focus as a part of their teaching programs when undertaking their final 10-week practicum or internship in primary schools throughout Australia. Specific examples of Australasian children's literature were utilised and teaching pedagogies modelled throughout their final Literacy course, a compulsory 4th-year course. This article will now examine how five tutors brought together through teaching this course, and all having expressed a desire to teach for global citizenship, utilised these specific texts to emphasise and demonstrate the teaching of the global education theme of sustainable futures. Using a case study methodological approach (Creswell, 2008), the researcher asked tutors to keep a diary of teaching practices used (Carter & Mankoff, 2005), activities undertaken and texts used in Literacy tutorials. Three group interviews were held with tutors to establish basic understandings about teaching for sustainable futures, a hard copy survey was administered focusing on knowledge of the texts chosen and the tutors' self-efficacy in teaching about global citizenship and sustainable futures, and the diaries of teaching activities were examined as data collection by the researcher to identify how some specific Australasian children's texts were used in tutorials to address the economic, social, cultural and ecological issues of teaching for a sustainable future and how the tutors drew these together to demonstrate the links to Global Citizenship. Tutors kept reflective teaching diaries for the semester-long course of 12 weeks, and a survey was conducted prior to teaching the course. Brief 15-minute group interviews were conducted on three occasions throughout the semester (week 1, week 5 and week 11) to address any issues tutors may have been having with the study and also to check understandings from the surveys and discuss diary entries. Specific themes were identified using qualitative content analysis within the interviews, survey results and diary entries.

Tutors were directed to Australasian texts with strong ecological themes. The course coordinator had deliberately chosen these texts. Tutors discussed and shared teaching strategies and resources to accompany the texts in a weekly meeting, appreciating the collegial network that was established, and survey and interview results indicated they were confident in their ability to disseminate information about teaching for a sustainable future and linking this to teaching for global citizenship. Teaching diary entries described particular pedagogical strategies employed in the English tutorials that may establish links to global citizenship through teaching for sustainable futures using children's literature in an English program.

Implementation of the Literature Study

The focus for this study is how these specific texts were utilised and the pedagogical strategies modelled by tutors to demonstrate to preservice teachers methods of using authentic, high quality children's literature to develop teaching programs that integrate the teaching of literacy with teaching about an ecologically sustainable future. To begin with, selecting the most appropriate texts is important.

***Storm Boy* (Thiele, 1963) and Environmental Description**

Colin Thiele has long been renowned as a writer of high quality children's literature who exhibits a moral conscience about environmental issues and the importance of securing a sustainable future. Books such as *Storm Boy*, written by Thiele in 1963, are skilful ways to introduce young readers of junior fiction to amazing environmental wonders (Holm, 2012) such as the Coorong, the place where the Murray River meets the sea in South Australia. In the news of late (Phillips, 2013) there have been reports of an impending environmental disaster in the Murray River basin, including the Coorong. Some have reported that the 'freshwater' Coorong, once home to hundreds of thousands of birds, is now in places six times saltier than the sea (Lester & Fairweather, 2009). Diary entries indicated that tutors demonstrated how children reading *Storm Boy* could be introduced to the abundance of life in Coorong area and the need to protect and sustain this environment. Using this book, preservice teachers were shown by tutors how to explore the interconnectedness of the economic, social, cultural and environmental issues facing the people of the region and how to encourage students to consider some possible solutions. Tutor 1 described to preservice teachers how Thiele not only describes the area but also demonstrates the main characters' cultural and economic ties to the Coorong. Through examining diary entries it was apparent that tutors decided to use a character focus activity to demonstrate how characters such as the Indigenous man and Fingerbone Bill help Storm Boy learn about his world and the fragility of the environment and the animals that build their lives in it. Preservice teachers were directed by tutors to particular extracts from the text that were typical of the simple descriptions and add richness to Thiele's work, and in the process can teach readers about their own world.

When talking with other tutors about how we would use this text we decided on using the first page of the text to show students some of the really descriptive passages. I think it worked quite well. (Tutor 2)

One of the tutors, Tutor 1, who had been teaching in primary schools for a number of years before becoming a university tutor, identified in an interview how she had used this text in her classroom teaching program and how young generations of readers had been able to identify with *Storm Boy* (Thiele, 1963), and how utilising this text in tutorials had helped preservice teachers to understand the interdependence of all of

the elements of any fragile environment and the need to protect these. This became apparent when examining the teaching programs produced by the preservice teachers in her tutorial group. When examining the pedagogical strategies utilised by tutors, as indicated through interviews and diary entries, it was apparent that preservice teachers were shown the link between the book and the local community of the Coorong region and how the economy of this and many local regions is dependent upon an ecologically sustainable environment. Tutors used non-fiction information provided to them about record low inflows to the River Murray through drought and over-allocation causing a significant social, cultural, economic and environmental impact on the Lower Lakes and Coorong region, to emphasise yet again the interconnectedness of all of these factors and demonstrate to preservice teachers methods of integrating factual information with a fictional text to assist in teaching about sustainability utilising an integrated approach.

One teaching diary entry indicated that Tutor 2, who also worked in tutoring in the HSIE course studied by this group of preservice teachers, shared information about the South Australian Government and its aims to secure a future for the region as a healthy, productive and resilient wetland system of international importance, knowing that this would directly support the local economy and socially and culturally affect communities that rely on a healthy ecological environment to prosper (Birckhead et al., 2011).

The Waterhole (Base, 2001) and Controversial Issues

Teaching about controversial issues and the need to tackle controversial issues (Summers, Childs, & Corney, 2005), such as what needs to be activated to secure an ecologically sustainable future for our Earth, could be made easier and more meaningful when children's literature is carefully utilised. This was an issue that all five tutors noted in their diaries as something that preservice teachers had requested more information about in their teaching programs. Tutors discussed this and shared information about the use of the visual imagery found in the text, *The Waterhole* (2001), by Graeme Base. Issues such as ecological degradation and the supply of clean water were raised. When interviewing tutors about their use of this text it appeared that preservice teachers understood how *The Waterhole* could be viewed as a simple counting book, but with a deeper study they were shown how to assist children to develop an understanding of the interdependence of all creatures on earth.

My group had difficulty at first going beyond the counting book, but when we discussed the constant waterhole focus and its degradation they were able to see how it could be used by older groups. (Tutor 1)

Although the text centres on a waterhole that is progressively drying up, Base is able to show how water is essential to life. The data revealed that all five tutors demonstrated how this book could be used to introduce children to the concept of saving water and caring for their local waterways (see Figure 1). They demonstrated how by using the highly engaging and intricate visual images, preservice teachers could assist children to examine the concept of drought and water shortages and help them to understand the importance of ecologically sustainable lifestyles. The causes and effects of drought and water shortages were examined through the use of this text's bright and colourful illustrations.

I enjoyed using this text with my tutorial group as we had to really examine the images, and as we did so many of the students commented on how they could use it if they were trying to help children understand what it means to live sustainably and also teach about visual imagery. (Tutor 3)



FIGURE 1: (Colour online) *The Waterhole*. The diminishing waterhole. Source: Reproduced by permission of Penguin Books Ltd, Melbourne (a division of Pearson, Australia Group Pty. Ltd.) and Graeme Base, copyright (c) Doublebase Pty Ltd 2001, 2003.

Data indicated that the integration of teaching about issues such as the social context of the waterhole as a meeting place for all of the species and the degradation of the environment were discussed and examined along the way, demonstrating the social implications of an ecologically unsustainable environment. It has been noted that children find it far easier to assimilate this kind of information when it is presented in the form of a story (Diakiw, 1990).

Lester and Clyde (1991) and Critical Thinking Questioning

The text *Lester and Clyde*, by James H. Reece (1991), was chosen to use in tutorials as this text is easily found in many junior classrooms throughout Australia and is regularly used as an early reader. Tutorial groups read and discussed the text and pre-service teachers were encouraged to respond from their own background and experiences. Tutors had been supplied with a list of questions that could be asked, which they then modelled using inferential reading and critical thinking questioning strategies. Questions included: How does the pollution of the waterways affect the people in your local area? How does it affect people in Australia? How does it affect people around the world? How does it affect the natural environment? What are the causes of it? What are the solutions? Are the solutions the same for people everywhere? When something happens in one part of the world does it affect people in other parts of the world? How can this be a global issue? Diary entries indicated that tutors demonstrated how the student responses could then become the basis for follow-up activities (see Figure 2). As this particular tutorial had been assigned to focus on the teaching of visual literacy elements, tutors used the final, visually confronting image in the text, where Clyde is



FIGURE 2: (Colour online) *Lester and Clyde ... until Man comes along*. Source: Reproduced by permission of Ashton Scholastic Ltd, Auckland, New Zealand and James H. Reece, copyright (c) 1976, 1991.

reassuring Lester about his safety with the emergence of the dark and sinister-looking bulldozer in the background, to conduct a visual analysis in tutorials utilising elements of the resources for visual grammar schema (Simpson, 2004). Tutors also used Anstey and Bull's (2009) elements and conventions of still images to demonstrate how visual imagery can be used to stimulate children to engage in making choices about their local waterways and the use of land in their own neighbourhoods.

Data indicated that tutors utilised this text to demonstrate to preservice teachers that education for a sustainable future may empower students to change their ways of thinking, being and acting 'in order to minimise environmental impacts and to enhance environmentally and socially sustainable practices' within schools and homes and the wider community (Elliott & Davis, 2009, p. 7). The preservice teachers were encouraged by tutors to note how this text could be used in classrooms to demonstrate the need for a sustainable future to be socially and culturally inclusive. Data from an interview suggested that this could be linked back to a previous course students had studied about inclusivity.

I found in this tutorial I talked a lot about global citizenship and I described how everyone could work together to help to achieve ecological sustainability and sometimes forgive actions that may have harmed the environment, and strive for changes in behaviours. I also showed the students how we could use the rhyming patterns to teach reading skills! (Tutor 5)

***Belonging* (2004) and Integration and Visual Literacy**

Nodelman (1996) asserts that texts are able to not only educate their readers about issues such as community values and the importance of sustainable ecologies, but to also offer 'access to a vast spectrum of ways of being human' (p. 129) and build a sense of cultural identity. Jeannie Baker's *Belonging* (2004) was another text chosen to use in the course tutorials to demonstrate the integration of the teaching of English skills with the teaching for a sustainable future. It takes its readers on an emotional journey by offering glimpses of what the future landscape could be like if unhindered development is left to take hold, but then develops a vision of a sustainable community working together to make a difference. This beautiful collage picture book can be used to



FIGURE 3: (Colour online) *Belonging. Changing a community.* Source: Reproduced by permission of Walker Books Ltd, London, SE11 5HJ and Jeannie Baker, copyright (c) 2004, 2008 Jeannie Baker (from *Belonging* by Jeannie Baker).

assist children in becoming citizens of the world, who will care for and build a sustainable future by connecting with each other and creating a social and cultural community. Tutors' diary entries showed that by focusing on the visual and textural interplay (Callow, 2008) in this text, preservice teachers can lead children through the collage technique used by Baker, and show how she uses both natural and man-made recycled material to construct her images.

By using this text in tutorials I was able to show how to integrate knowledge and values from other. Key Learning Areas such as Human Society and Its Environment. Perhaps the preservice teachers can use it to show children the waste that humans create and ways it can be used to not only create images of beauty but also save money and the Earth? (Tutor 4)

Study of this text showed preservice teachers how they can use the book in their teaching programs to show how just one action can start something that can change a street and then a community, a country, and perhaps the entire world. Tutorial groups examined Jeannie Baker's text finding that demonstrates that belonging is more than just inhabiting, that to truly belong we must enact a sense of community and shared values and work at and contribute to it (see Figure 3.). Preservice teachers were encouraged to use the book to demonstrate how to help to build a sense of community, belonging and empowerment over urbanised development in children. Tutors demonstrated using English skills in letter writing and debating that preservice teachers could utilise to show children how to identify and explore the opportunities to participate in and influence decision-making locally, nationally, regionally and even internationally. Data from diary entries and interviews showed that tutors demonstrated how to deconstruct this text's visual elements using particular elements from the resources for visual grammar schema (Simpson, 2004) and the elements and conventions of still images (Anstey &

Bull, 2009) which they were supplied with as a resource for this tutorial, so that children could then use the knowledge and skills gained to build their own understandings of what it is to be a global citizen and to apply this to other parts of the curriculum. One tutor commented on how this text shows how a community can work together to turn something that was uniform and uninspiring into a nurturing home not only for humans, but also for local native plant and animal species that may have left the area long ago.

During this tutorial I tried to model ways that children could be offered different and varied perspectives on sustainable living. I showed the students how Jeannie Baker clearly demonstrates ways to achieve a sustainable future, even in one's own neighbourhood, without placing economic burdens on the inhabitants, by using materials that their students may have at home. We discussed the way we could teach about recycling without it being tokenistic too. (Tutor 4)

Baker's texts show how 'small wins' (Davis, 2005) can have big impacts and help with developing understandings of a sustainable future, without impacting on economic viability.

Window (1991) and Problem-Based Learning

The Jeannie Baker texts were chosen because as an author Baker is known not only for her artistry, but also for her ability to encourage sensory, experiential, perceptual, relational, cultural and socially critical investigations of the environments and places featured in her books (Burke & Cutter-Mackenzie, 2010). The text *Window* (1991) was chosen as a tutorial resource because she visually describes the changing environment typical of many Australian city edges, from rural and natural to semi-urban, over a 24-year period, as seen through a window. The development of the community in her book is reminiscent of that of many Australian communities in the past 25 years. A key pedagogical strategy chosen by tutors to assist preservice teachers in teaching for a sustainable future was problem-based learning (PBL).

Tutor 3 explained how she had used the text as a catalyst for problem-based learning:

I used it to demonstrate to my group how they could prompt readers to consider their impact on the environment as a kind of moral dilemma. We then tried to design some English-based activities to help solve this — for example, debates. (Tutor 3)

Preservice teachers could then encourage their students when on practicum to consider their own environments and ask: What if we could have a say about urban development? What if we could protect green areas in our neighbourhood? A diary entry indicated how one tutor used this text to help preservice teachers come to an understanding of place-based learning.

We discussed how they (the preservice teachers) could use this text in their internship program to get their class to respond to a local community site that can be changed through human intervention. (Tutor 4)

In the author's endnotes to *Window* (1991), Baker calls for her readers to make a difference by opening a window in our minds, 'by understanding how change takes place and by changing the way we personally affect the environment' (Baker, 1991, p. 26), to make the necessary changes to help secure a sustainable future (see Figure 4).

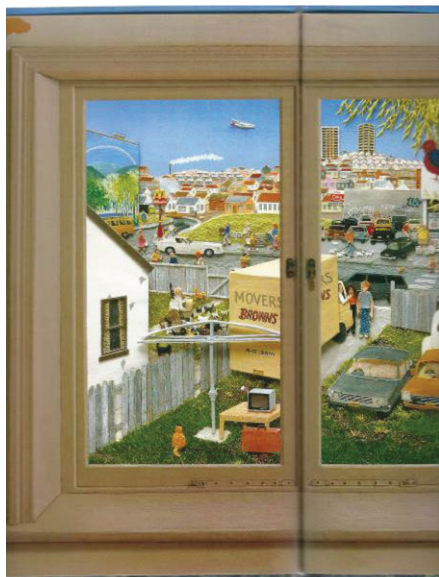


FIGURE 4: (Colour online) *Window*. The problem of urbanisation. Source: Reproduced by permission of Walker Books Ltd, London, SE11 5HJ and Jeannie Baker, copyright (c) 1991, 2002 Jeannie Baker (from *Window* by Jeannie Baker).

Conclusions

Of late, there has been some Australian research about the practices and resources for teaching about a sustainable future in preservice teacher education programs (Anderson, 2013; Ferreira, 2013; Ferreira et al., 2009; Miles & Cutter-Mackenzie, 2006; Wilson, 2012) and this article hopes to add to the field by detailing explicit texts and teaching strategies. As Kennelly, Taylor, Maxwell, and Serow (2012) noted, however, many preservice teachers do not have the pedagogical content knowledge, skills or even the desire to teach about the environment, and feel their capacity to do this is also hampered by their work situation and a system focus on high stakes testing.

The modelling and explicit demonstrating of strategies of how children's literature can be utilised to assist with this is then vital in helping to produce teachers who will be engaged and passionate educators who understand the value and benefits of a holistic education: an education that provides emotionally and relationally healthy learning communities with intellectual environments that produce not only competently technical, but also secure, caring, literate and actively participatory human beings. Children's literature dealing with the environment and ecological sustainability has the ability to have a deep and lasting impact because it deals with and appeals to not only the child's emotions but also their intellect (Gaard, 2009). Developing an understanding of what it means to be a global citizen in the 21st century, particularly when it seems there are varying and diverse definitions of this concept (Banks, 2011), and of helping to secure an ecologically sustainable future may seem like a distant goal, but by providing preservice teachers with the knowledge, skills and resources to introduce the youngest citizens to an understanding of ecological sustainability it may bring about 'small wins' (Davis, 2005), which may in turn lead to global change over time.

By utilising authentic, award-winning, high-quality children's literature in a university preservice teacher education, educators can give children the opportunity to form bridges between their own internal lives and what is happening in the environment

around them and the world beyond (Medress, 2008). Utilising pedagogical strategies that will integrate the teaching for a sustainable future across Key Learning Areas, pre-service teachers can design programs to use in schools to assist students in developing the capacity to understand how living their lives with greater ecological awareness can impact on their own worlds and also the world community and planet. Tutors engaged in this study demonstrated teaching activities and explicit pedagogical strategies that may enhance the teaching of children's ecoliterature. Further research into the utilisation of these teaching strategies, environmental description and the use of non-fiction sources, confronting controversial issues, visual literacy schema and problem-based learning is warranted. Assisting preservice teachers in designing programs of work to be used in schools to develop children who will identify and work cooperatively to solve problems with a sense of justice and equity is vital to work for a sustainable future.

Further research that could lead from this study is whether and how preservice teachers chose to use these ecologically focused texts as integral resources in the teaching programs they used while teaching in their internship practicum; and how and if they were able to utilise the strategies modelled in tutorials. A focus in this area could assist teachers in schools in implementing programs that will embed the teaching for a sustainable future across the curriculum.

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