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Food gardens: Cultivating a pedagogy of place

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Abstract

Place-based education attempts to position the individual in relationship with the human and non-human elements of the life-world, at a place that is welcoming of educational experience and a knowledge base from which to construct a more ecologically sustainable culture (Woodhouse, 2001). Food gardens, along with ecological restoration projects within schools are experiencing a significant renaissance and are important sites for place-based education. Many of these places are located in and around the immediate environment of a school ground and become significant educational portals through which children explore their world.

In this paper I will report on the literature reviewed for a study on how a pedagogy of place is cultivated within garden experiences. There is limited research about the use of school gardens as an educational tool and the specific pedagogies that support learning in this context. A number of themes emerge from various bodies of literature that provide a conceptual framework for the study of food garden pedagogies. These themes include place-based education, ecological literary, and nature as teacher. It is useful to think about primary school gardens in the light of this literature because it helps frame a research question for a study into how pedagogies of place can be cultivated within food gardens.

Introduction

In this paper I will define and examine the role and significance of place and place-based education within school curriculum and its ability to provide a pathway towards greater ecological understanding and linkages of school and community.

The place of garden is identified as an important educational setting of promise and possibility, which brings students closer to nature and teaches important messages about ecosystems and broader ecological patterns. School gardens as an educational portal are considered via the exploration of emerging themes and constructs such as place-based education, ecological literacy, and nature as teacher. A pedagogy of place is identified as a possible means of considering how ecological teaching and learning may occur. The paper identifies the gaps within the research literature and highlights the main ideas I will be attempting to address in my own research.

Background to the research

My study of how young children experience the place of food garden is an extension of my personal on-going curiosity in human-nature relationships. My research into how a pedagogy of place can be cultivated via food gardens and land care initiative stems from my personal interest in the significance of food gardens and their contribution to sustainability. Within my own family's food garden, there is always something to eat. Observing my children grazing in the raspberries, digging up carrots and foraging for peas confirms the place of garden as a doorway to a magical and nourishing encounter. Growing and harvesting one's own food is a political, social and ecological act that has far reaching consequences.

The process of place-making, particularly in (primary) educational contexts, and the pedagogical potential of place (Gruenewald, 2003b) are fundamental concepts to my study and provide an important framework from which the research will develop. My research sets out to examine how the place of food garden and naturalised school ground spaces promote and foster pedagogies that enable students to develop a relationship with place and learn about nature and the systems that exist within that place, particularly with regard to food production and earth stewardship. It will note the multitude of relationships that exist within the garden, both human and non-human and observe the ways in which these relationships are taught and learnt. Finally, the study will consider how place responsive pedagogies can make links to formal curriculum and be made an integrated and permanent aspect of the overall school plan. I am curious about how the literature will inform my research, and undertake the following review in order to explore a range of concepts and themes.

Place-based education

Traditionally, education has been viewed as an indoor activity that adheres to a prescribed curriculum that more often than not occurs within the confines of a classroom. Today unfortunately, we still witness the classroom as the predominant context in which formal education occurs, achievement is determined, and learning is measured; where going outside is proffered as a reward after the “real learning” has taken place. Research indicates that the vast majority of teachers, for reasons that include classroom security and the amount of required planning, tend not to use the available school landscapes for the delivery of curriculum, or only use them very irregularly (Skamp & Bergmann, 2001). There is however, a movement towards educational approaches that utilise outdoor and local environments, and although this practice has received limited attention from mainstream educational discourse (Gruenewald, 2003b), in some contemporary schooling contexts we are now witnessing the repositioning of classrooms and pedagogy towards specific local places and spaces (Bell, 2001b; Centre for Ecoliteracy, 1999; Lewicki, 1998). The insistence that curriculum geared toward exploring places can deepen empathetic connections and expand the possibilities for learning outward has been argued vehemently (Gruenewald, 2003a; Hutchison, 1998; Sobel, 2004). Places as David Gruenewald suggests, “are profoundly pedagogical” (Gruenewald, 2003a, p.621) and teach us about how the world works and how our lives fit into the spaces we occupy.

Over the past decade the significance of place has emerged amongst outdoor educators, ecologists and environmentalists alike, each maintaining that location or place is critical to the authenticity and relevance of education, and more recently to the sustainability of earth itself (Woodhouse, 2001). Increasingly, the phenomena of place and its educative potential has been recognised by ecological educators as an alternative approach to understanding the environment (Sobel, 2004). The use of place in educational contexts not only provides students with knowledge and understanding of a particular place, but also communicates that the land has value, that students’ experience outside the classroom have value, and that students’ own personal knowledge has value (Sanger, 1997). One approach to education which focuses on the significance of understanding the natural environment, particularly in the context of specific locales, is known as place-based education or place based pedagogy. It is also recognised in the literature as community-oriented schooling, ecological education and bioregional education (Woodhouse & Knapp, 2000). All of these terms share a common emphasis on place and the importance of place providing a framework from which students come to learn about a particular place, about themselves and about the world in which they live (Gruenewald, 2003a; Smith, 2002; Sobel, 2004). What place-based education attempts to do is position the individual in relationship with the human and non-human elements of the

life-world, at a place that is welcoming of educational experience and a knowledge base from which to construct a more ecologically sustainable culture (Woodhouse, 2001).

Place-based education emerges from the particular attributes of a place. The content is specific to the geography, ecology, sociology, politics, and other dynamics of that place (Woodhouse & Knapp, 2000). The aim of place-based education is to ground learning in local phenomena and students' lived experience and provide opportunities that allow children to experience full-bodied encounters with the world, therefore adapting to the unique characteristics of particular places (Smith, 2002). David Gruenewald describes it as an approach that is concerned with context and the value of learning from and nurturing specific places, communities and regions (Gruenewald, 2003a). He alleges that the study of place can help increase student engagement and understanding, and that it serves to strengthen children's connections to the earth, to others and to the regions in which they live. In this light, place is not viewed as an isolated concept or location, rather as a portal into the real life world. David Sobel strengthens this viewpoint describing place-based education as:-

the process of using the local community and environment as a starting point to teach concepts in language, arts, mathematics, social studies, science, and other subjects across the curriculum. Emphasising hands-on, real-world learning experience, this approach to education helps students develop stronger ties to their community, enhances students' appreciation for the natural world, and creates a heightened commitment to serving as active, contributing citizens (Sobel, 2004, pg.7).

Despite the connections between place-based education, school grounds and the formal curriculum of schools as being largely unexplored (Skamp & Bergmann, 2001), landscapes such as edible food gardens and ecological restoration initiatives are challenging these links. Underpinning these initiatives is the belief that school grounds have enormous educational potential for learning that goes beyond, but supports at the same time, the more formalised learning that occurs in a classroom. More than just settings of beautification, these "learnsapes"¹ have the capacity to change the school curriculum and are important settings for learning (Tyas Tungaal, 1998). Through practical and experiential approaches outdoor classrooms are providing inspirational settings and subject matter for teaching and learning across the curriculum (Bell, 2000a; Dymont, 2005; Lucas, 1995; Malone & Tranter, 2003; Titman, 1994). Inherent within these endeavours is the conviction that place, be it a school yard, a vegetable garden, a wetland or frog pond, holds the promise of becoming the

¹ Learnsapes is a teaching initiative of the New South Wales Department of Education and Training (NSW DET). The learnscape features usually include natural features of a school ground such as an edible garden, a wetland, a worm farm or a vegetated area. These sites become the context in which learning takes place usually via interaction with the natural environment.

educational instrument that orchestrates the fostering of experience and understanding of the natural world in primary education (Capra, 1999; Moore, 1995).

Pedagogy of Place

Underpinning Gregory Smith's work on place-based education (1999; 2002; 2004) is an exploration and consideration of pedagogies that connect children to the world, to learning and to experiencing nature. His writing has provided substantial influence and guidance on the importance of pedagogical practice within place-based education. Pedagogy is concerned with educational technique and the ways in which teaching and learning is taken up. How each of these are considered and experienced by both teacher and student is critical in determining the learning environment as well as informing and responding to the emerging learning opportunities that exist within that particular environment.

One such pedagogy that is grounded in nature experiences and integrates school and community as co-learners in a common natural habitat is referred to as a pedagogy of place (Lewicki, 1998). According to Lewicki, the concept holds three fundamental tenets: nature teaches, understanding place is indispensable to community, and where and how a student learns is as vital as what a student learns. These principles are in keeping with the consideration of distinctive pedagogical practices that enable children's experiences and exploration of natural settings (Bell, 2001b) and that are devoted to a local context (Furman & Gruenewald, 2004). In the context of growing food and land conservation, a pedagogy of place is helpful in thinking about how children develop relationships and meaning to particular places. In what Lewicki (1998) has described as a viable educational habitat for children, a pedagogy of place enables children to learn on a daily basis the lessons of nature, raising their levels of ecological consciousness. It is able to bring:

...school and community together on a common pathway dedicated to stewardship and life-long learning. It is teaching by using one's landscape, family and community surroundings as the educational foundation. Significant learning takes place outdoors and in the community. This community expands outward from local landscape and home, to regional realities, to international issues. In coming to know one's place, one comes to know what is fundamental to all places. Respect and reverence for one's immediate place, land stewardship, gives one respect and reverence for all places (Lewicki, 1998, pg.9).

Over the past decade the significance of place has emerged amongst outdoor educators, ecologists and environmentalists alike, each maintaining that location or place is critical to the relevance of education, and more recently to the sustainability of earth itself. Increasingly, the phenomena of place and its educative potential has been recognized by ecological educators

as an alternative approach to understanding the environment (Gruenewald, 2003b; Sobel, 2004). The use of place in educational contexts not only provides students with knowledge and understanding of a particular place, but also communicates that the land has value, that students' experience outside the classroom has value, and that students' own personal knowledge has value (Sanger, 1997). Ecologist David Orr asserts that place is often nebulous to educators declaring that "to a great extent we are a displaced people for whom our immediate places are no longer sources of food, water, livelihood, energy, materials, friends, recreation or sacred inspiration" (Orr, 1992, p.88). He suggests that the integration of place into education is important in order to re-educate people in the art of living well where they happen to live. Similarly, David Gruenewald has called for schools to provide opportunities for students to participate meaningfully in the process of place-making, that is, in the process of shaping what our places will become (Gruenewald, 2003b).

Notions of place-making are fundamental to my research project. In the food garden children not only learn about important associations between growing and consuming food (Berry, 1990; Pollan, 2006) and establishing powerful connections with the earth (Orr, 2005), but they also develop a *sense of place* that involves an attachment, a belonging and commitment to the garden (Chatterjee, 2005). In *Changing Places*, John Cameron provides a valuable perspective on what a sense of place can bring about:

To put 'sense of' in front of a word is to bring attention to the individual experience, so that a sense of community means more than the concept of community, it means the way in which people experience a particular community, the feeling of belonging. Similarly, a sense of place would refer to the way in which people experience and feel the enfolded meanings, activities and landscapes that occur around them (Cameron, 2003, p.3)

Suffice to say, the place of garden and the act of engaging with place holds immense educative potential in allowing students to invest in such places with particular kinds of meaning, wonder, belonging, ownership, caring and loving (Gruenewald, 2003b).

Ecological literacy

Grounded within a pedagogy of place is the concept of ecological literacy, an expression drawn on by Fritjof Capra (Capra, 1999) and David Orr (Orr, 1992, 1994, 2004). They each highlight the importance of developing an affinity with the basic principles of ecology such as life, earth, forests, water, soils and place, suggesting that they ought to be the guiding principles for creating sustainable learning communities. Ecological literacy or being eco-literate relates to an understanding of these principles and being able to embody them in the

daily life of human communities. Concerned largely with the ability to read, literacy is a fundamental life skill that enables making sense of the contemporary world. David Orr advocates however, that “the goal of ecological literacy is not a passive kind of literacy to be confused with reading, as important as that is, but rather the active cultivation of ecological intelligence, imagination and competence, which is to say design intelligence” (Orr, 2004, p.20). He proposes that ecological literacy necessitates the more demanding capacity to observe nature with insight, describing it as “a merger of landscape and mindscape” (Orr, 2005, p.93). Roth (1993) concurs, arguing that environmental literacy is “the capacity to perceive and interpret the relative health of environmental systems and to take appropriate action to maintain, restore, or improve the health of those systems” (cited in Lewicki, 1998).

Ecosystems and food gardens are doorways into a world of ecological literacy and are exemplars of ecological households in action. Learning how food gets from seed to table requires understanding fundamental natural processes and living systems such as energy flows and nutrient cycles: how one organism's waste becomes another's food requires an elaborate understanding of complex living systems. The ability of ecosystems to organize themselves in sustainable ways as a community means that all its members depend on one another and are all interconnected in a vast network of relationships called the web of life. This thinking in terms of relationships, patterns, connectedness and context is known as “systems thinking” (Capra, 2005, p.xiii) and is central to how we view the world. Gregory Bateson (in Swan, 1992) argues that our inability to think ecologically, to see and learn from these patterns in nature and transfer them into similar patterns of thought is contributing to our failed attempts to become a sustainable society. Wendell Berry emphasizes the garden place as a critical site for the cultivation of ecological literacy. He acknowledges the growing of food as a serious form of agriculture involving processes for reclaiming our place in nature, arguing that the potential of relationships can emerge among people and landscapes where care and continuity rather than commercial success are the central aims (Berry, 1990).

Nature as Teacher

Children’s affinity for the natural world and their innate sense of natural curiosity about the world is well recognised (Brody, 2005; Cobb, 1977; Cornell, 1979) and takes prime importance within place-based education. Nurturing such interest in young children however remains one of the greatest challenges to education. Properly cultivated and validated by caring and knowledgeable adults, children’s fascination with nature can mature into ecological literacy and eventually into more purposeful lives (Orr, 1994). The ultimate goal of learning about nature according to James Swan is “not to master nomenclature but to bring

about greater sympathetic understanding of the natural world until we can enter into a knowing oneness of nature sympathy. For those who reach this state, nature becomes a teacher in return” (Swan, 1992, p.119). The notion of nature as teacher holds powerful connotations and has particular significance for those educators who undertake their practice in garden-based contexts.

In her book *Forest Food Garden*, Carolyn Nuttall documents the transformative curriculum developed with her primary students after initiating a food garden (Nuttall, 1996). As teacher, she moved to the background, listened to the insights of the class, let the material (in this instance, nature) speak for itself, and allowed the creative spirit to permeate the educational process (Thomashow, 1995). The children responded favourably to the forest food garden and in time, both teacher and students identified it as the place from which all teaching and learning would emanate: a pedagogy of place ensued. What transpired was a multitude of relationships with the place of garden. Children gained a heightened knowledge of what could be grown in the food forest and developed an intimate appreciation of the systems and processes within it. Along with this, an increased commitment and attachment to the garden place developed. Through natural processes, both human and ecological, nature became the teacher.

Identifying the research gaps

As the literature highlights, there is vigorous discourse surrounding the role of place-based education. What it brings to light is the role of food gardens and land care initiatives in place-based education within primary schools. Substantial research into the educational, environmental and nutritional benefits of gardening has been undertaken (Alexander, Wales North, & Hendren, 1995; Canaris, 1995; Dirks & Orvis, 2005; Moore, 1995; Robinson & Zajicek, 2005) and plays a significant part within the existing body of knowledge. Already acknowledged is the place-based literature undertaken by (Gruenewald, 2003a; Sobel, 1996, 2004; Woodhouse & Knapp, 2000) which contributes substantially towards the positioning of place within the educational curriculum. Additionally, The Centre for Ecological Literacy (1999) and its associated ambassadors (Ableman, 2005; Barlow & Stone, 2005; Capra, 1999; Murphy, 2003a, 2003b; Orr, 1992) have been prominent in their ground-breaking contributions towards the multidisciplinary potential of ecological education through the growing of food.

Laurie Thorp and Christine Townsend’s ethnographic case study of the impact of garden-based curriculum (Thorp & Townsend, 2001), Michael Murphy’s research in children’s health, nutrition, and knowledge of sustainable agriculture (Murphy, 2003a, 2003b), and

Anne Bell's ethnographical case study focusing on the impacts of a school ground naturalization project (Bell, 2000a), provide significant relevance to my research. Crucial in Bell's findings is the possibility of "enriched pedagogical relationships" (Bell, 2000a, p.192) that were developed through garden restoration work in primary schools. Examining these pedagogical relationships - human-place, place-human, human-human - and their implication, lies at the core of my own research.

My review of the garden-based literature identifies a gap that is concerned with place specific pedagogy: pedagogy that inherently acknowledges the significance of place within and beyond the school ground. Through open-ended interviews with children, teachers and principals, observations of gardening and land care sessions, the telling of children's experiences with natural places through art work, mapping and story-telling, my Ph D research will be guided by the following research questions:

1. What is the significance of a food garden?
2. How is the place of garden recognised within primary school curriculum?
3. What are the emerging pedagogies within place-based experiences?
4. What guides the nature and content of place-based pedagogy within primary schools?

My research into place responsive pedagogy holds great promise for exploring the role of teacher, learner and nature and the multi-dimensional relationships that exists within all three domains, and will inform future curriculum initiatives concerned with the importance of local places within and beyond the school ground.

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