

Everyday Environmental Education Experiences: The Role of Content in Early Childhood Education

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Abstract In recent years discussions surrounding early childhood curriculum has focused on the movement from developmental to sociocultural theory. A further area worthy of investigation involves the role of content in early childhood education, specifically the relationship between content, context and pedagogy. The paper draws on teacher vignettes to consider how environmental education can be represented as a content area in early years education. Issues associated with environmental education as an emerging area of importance in early childhood education are also discussed.

Contemporary Issues in Early Childhood Curriculum

Piaget's theory regarding development and learning in young children has played a foundational role in early childhood education and curriculum for many years. The belief that young children actively construct their knowledge saw early educators argue that the most appropriate learning experiences for young children would allow for active engagement and exploration of appropriate materials (Bredekamp & Copple, 1997). In recent years, this perspective has been increasingly reconsidered, with beliefs about young children's learning now drawing on sociohistorical and sociocultural explanations for development. Sociocultural theory emphasises the role adults, communities and cultural artefacts play in the development of children's knowledge as well as the types or forms of knowledge they actually acquire within a given community (Rogoff, 2003). The movement from developmental to sociocultural theory has been important in generating much needed discussion and research in the area of early childhood curriculum and pedagogy (Edwards, 2003). In the main these discussions have emphasised the importance of understanding how children construct knowledge in social settings and have emphasised the idea that development is a culturally determined rather than universal process (Fleer, 2002; Fleer, 2006; Robbins, 2005). These advancements in understanding about children's learning and development have been important to rethinking practice in early childhood education. However, despite these developments, issues associated with the role of content in children's learning and the early childhood curricula are yet to receive detailed attention.

The role of content knowledge in early childhood curricula is of particular importance given the recent emphasis placed on sociocultural constructions of knowledge which

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see knowledge as contextually bound and determined by social practices. From this perspective the “what” (or content) of early childhood curricula should be informed by the cultural experiences shared and generated by children and adults within a given early childhood educational setting. Accordingly, an issue of concern in early childhood curricula research is the role content knowledge holds in a field of education characterised by beliefs about education that focus on learning from a socio-cultural perspective (Hedges & Cullen, 2005). In other words, if learning is described as socially generated and situated how is the actual content informing the learning experiences offered to young children determined? Furthermore, to what extent is content knowledge present in early childhood settings that have traditionally valued experiential learning over content knowledge as a basis for the development of the curriculum?

Early childhood education has traditionally emphasised how teachers should approach the task of educating children without necessarily focussing on what children should learn. Historically this emphasis may be seen as an outcome of the developmentally-orientated belief that young children learn best when provided with opportunities to construct understandings of the concepts and issues that they find of interest and meaning in their daily lives (see Figure 1). Whilst the advent of sociocultural theory in early childhood education has challenged many established beliefs about children’s learning and development, the theory itself does not necessarily make explicit issues associated with the role of content in early childhood curricula. In general, content in early childhood education is a highly contentious and largely under-researched area (Fleer, 2003; Kendall, 2003). Existing studies suggest that the traditional emphasis on experience-based learning in early childhood education places content knowledge in a secondary position to pedagogical activity meaning that whilst young children may engage in content based experiences they may not necessarily construct understandings of the discipline area itself (Kallery & Psillos, 2001). This issue has been attributed to early childhood educators’ levels of knowledge in key content areas combined with the perceptions educators hold regarding the role of content in early childhood education in relation to traditional beliefs about learning (Hedges & Cullen, 2005).

Wood (2004) has found that children do not necessarily engage with the content knowledge supposedly embedded in common early childhood play experiences (p. 22). Furthermore, Jordan (2004) has detailed the role interactions between children and adults play in relation to the acquisition of content knowledge (Jordan, 2004, p. 42). Research in this area raises questions regarding the role and position of content in early childhood education from both the educators’ and children’s perspectives. For example, to what extent does an emphasis on the *processes of learning* serve to displace the role of *content in learning* and its consequent acquisition by children? To what extent are children able to see the content knowledge they are meant to be engaging with when operating within curricula that emphasises the role of experiential based learning, even where this is conducted within a sociocultural orientation valuing the role of social interactions and the culturally defined nature of knowledge?



FIGURE 1: Composting the fruits scraps as an everyday environmental education experience

Environmental Education as a Content Area in Early Childhood Curriculum

Environmental education offers a vehicle to examine issues associated with the role of content in early childhood education because it is grounded in teachers' and children's daily lives and experiences. In addition, environmental education is multidisciplinary drawing on a number of key learning experiences, including literacy, numeracy and aspects of scientific knowledge development. Environmental education can therefore be easily integrated into early childhood education which philosophically draws on a range of experiences in order to support children's learning. The appropriateness of environmental education as a tool for exploring content issues in early childhood is furthered by current concern about the present condition of the environment.

Over the past four decades there has been a growing understanding that the continued economic, environmental, social and technological developments instigated by human beings have changed the biosphere. There are substantial concerns among the environmental community that the limits of the earth's capacity to provide for human existence are within sight (Australian State of the Environment Committee, 2001; Millennium EcoSystem Assessment Board, 2005). These concerns have led governments to re-examine prevailing cultural norms about the nature of the earth as an infinite resource for human exploitation, and promoted moves to more sustainable patterns of development. Environmental education has been identified at the international policy level as an important change agent for sustainable development (UNESCO, 2002, 2004; UNESCO-UNEP, 1978, 1992). Recently the United Nations (2004) declared 2005–2014 as the Decade of Education for Sustainable Development. Thus, environmental education has an important role to play in the development of students who are capable of understanding, and are motivated to work toward, building a sustainable future. It is considered that the early years have a particular importance as:

The young learner in general develops most of his [sic] final adult physio-neurological capacity quite early in life and therefore the learning, especially of attitudes and values so important to imaginative action in environmental problems, is vital and needs to be considered carefully early in these sequences of lifelong learning (UNESCO, 1977, p. 88).

However, environmental education remains an area that "is viewed as marginal" in early childhood education (Davis & Elliott, 2003, p. 1). As is the case in the primary school years, practitioners have tended to focus upon values-based environmental education in early childhood education rather than on knowledge rich learning experiences (Cutter-Mackenzie, 2006, in press). This trend is in accordance with current practices, as identified by Cutter-Mackenzie (2003), who found primary and early years school teachers (preschool – year 7) emphasise the values associated with learning more so than content knowledge:

The priority is learning and that includes me ... I want to learn with the kids, so I don't need to know in advance ... I don't plan to have any sort of environmental issues and knowledge and content pushed with young children (1).

I can walk my children along the beach and pick up things and use descriptive words to describe the shapes of things, without having to tell them ... I am not into names of shells or trees and names of habitats, but I would rather say, this is interesting and I wonder why the shell is this shape (2) (Cutter-Mackenzie, 2003, p. 188).

These teachers also identified that:

I don't think I need to know specific content to be able to teach (1).

Maybe we need to teach the kids how to learn, more than just worrying about content ... I have always firmly believed that the teacher is in many ways, or the content of what the teacher is teaching, is quite irrelevant to what the children learn (3) (Cutter-Mackenzie, 2003, p. 191–192).

Clearly the teachers cited in Cutter-Mackenzie's 2003 study focus on the process of teaching, a constructivist orientation to teaching and learning that focuses on the learning experience more so than content to inform learning. This compares with an approach to teaching and learning that is aware of, and draws explicitly on, content knowledge (knowledge rich teaching) to inform learning in addition to the pedagogical approach. Here, there would be focuses on systematic pedagogical techniques combined with stated outcomes that would allow environmental education policies and practices to be translated into meaningful learning experiences for young children (Cutter-Mackenzie & Smith, 2003). This combination of pedagogical technique and content knowledge in relation to environmental education was expressed by an early childhood teacher based in metropolitan Melbourne. This teacher was participating in a study by Edwards (2005) into early childhood teachers' conceptions of curriculum. In the example below, her reflection on early childhood curriculum illustrates how she drew on children's everyday experiences to teach them about their world. This teacher believed composting and recycling to be a particularly important experience for young children and explained how she attempted to make content knowledge explicit to the children by asking questions and engaging with a daily experience that involved the composting of fruit scraps and the recycling of paper within the educational setting:

If I highlight one of the things I require of the children as part of our society is that when we have lunch, we separate our papers and food scraps. And we have box for recycling paper and we have a container to put out in the compost bin outside. That those things aren't then just a practice that ends there. "Why do we have those bins? What do we do with those bins?" We are about to explore making paper, because I want the children to know that that box of paper that we collect doesn't just go into a bin, they need to know what the process is from that point, one because they don't see it. Someone collects that paper and it is taken out, "so what do we do with it?" So in a small sense then we re-create that in their environment and I say, "well I haven't got the big machines, but what the big machines will do with it", and so through the process and then the children get their hands in and they make their own paper. So part of it is going back, constructing learning and chalk and talk because I need to explain to them what happens, they will see it but we need to explore how, where, tie this simple piece of machinery to the machines that operate in the large factories for recycled paper for us in machines here and newspapers and paper bags and the like and the fact that it comes off the supermarket shelves (Edwards, 2005, p. 41).

In this example the teacher illustrates how she combines specific pedagogical techniques, such as asking questions, "chalk and talk" and demonstrations to help children access the content knowledge related to environmental issues. The content knowledge is represented by processes associated with paper recycling, with the children later given an opportunity to recycle their own paper. Here the teacher

draws on the children's experiences to provide content knowledge via their exploration of an everyday-context bound task as illustrated in Figure 2.

The early childhood teacher from Edward's (2005) study gave another example about composting and vegetable gardening:

The other area is composting. We have our own garden, we are putting out vegetables, the children are actively doing it, and we eat the vegetables at the end of the process¹. "How do the vegetables develop from here to there? And what is that? And what is the compost doing?" Because it happens in there, where they can't see it, so we need to give them an open compost that they can see, and so it is a scientific experiment and they need to have a hands on involvement in it. So part of the hands on is the putting the fruit there, "what happens to the fruit scraps? And the food scraps when they go in the compost?" If they have an understanding of a normal everyday process. Things that parents do at home. "Who has a compost bin at home? Who has a recycle bin to put out? I wonder what happens to those things? Do you know?" And posing questions and letting children think about it (Edwards, 2005, p. 42).



FIGURE 2: Recycling as an everyday environmental education experience

In this example the teacher continued to explain the link between content knowledge, everyday experiences and pedagogical techniques. Once again, she made explicit both her pedagogical approach and the particular questions that would drive the acquisition of content knowledge, for example, "what happens to the fruit scraps and what is the compost doing?" For this teacher the content knowledge associated with environmental education could be drawn from the children's daily lives and experiences and actualised by specific pedagogical techniques, such as questioning and setting up an experiment. This description differs from those offered by the educators in Cutter-Mackenzie's (2003) research who suggested that content knowledge was secondary to pedagogical technique.

These three examples offer insight into the issues associated with the overlap between content knowledge, pedagogical approach and contextual experience. For some educators content knowledge may be viewed as secondary to pedagogical approaches that emphasise learning for the sake of learning, or learning through constructivist means. For others, there is the potential for children's contextual experiences to shape or determine the nature of content offered with this then informed by particular approaches to



FIGURE 3: Growing vegetables (food) as an everyday environmental education experience

teaching and learning. Issues associated with the role of content in early childhood education are complicated by traditional beliefs and practices that emphasise hands-on and constructivist based learning. The advent of sociocultural theory suggests a new focus on the role of contextual experience and social engagement in children's learning.

Environmental education provides a context by which children and teachers can construct everyday knowledge and offers a useful basis for examining issues associated with content in early childhood education. From this perspective, highly authentic learning experiences can be utilised to examine how teachers conceive content in early childhood education and how content knowledge is intersected with pedagogical knowledge to achieve intended environmental education outcomes (such as recycling, composting and vegetable growing) with young children.

Future Directions

Existing research into issues associated with the role of content in early childhood education is sparse and to date has focussed on debate regarding the traditional importance of allowing children to construct (individually or socially) understandings of the world. Further research is needed to examine how content is embedded in the curriculum and perceived by teachers of young children. This represents an important area of investigation, particularly given recent arguments regarding the shift from developmental to sociocultural orientated curricula with an emphasis on the contextually defined nature of knowledge. Environmental education offers a useful vehicle to examine the issues of content knowledge in early childhood education as it can be strongly linked to the everyday experiences of children, teachers and families. Furthermore, environmental education research in early childhood has focussed in the past on the particular environmental practices employed by teachers within centres rather than on the nature of the environmental content knowledge held by teachers and children. Shifting the focus to examine how environmental education is conceived by teachers in relation to children's contextual experiences offers the opportunity to examine how content, pedagogical technique and socially constructed knowledge are interfaced rather than focussing solely on the "amount" of content knowledge held by teachers or informing pedagogical beliefs about teaching and learning alone.

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Endnotes

1. As shown in Figure 3.

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