Part 1

Content areas

Chapter 1

Education, the socio-environmental world and the child

Learning outcomes

This chapter aims to:

- outline the major components of socio-environmental education
- demonstrate the centrality of socio-environmental issues to all aspects of life, and to education
- familiarise you with the ways in which this book reflects socio-environmental thinking and education.

Introduction

> … supporting all young Australians to become successful learners, confident and creative individuals, and active and informed citizens. (ACARA, 2010, p. 7)

> The future wellbeing of human society and its environment depends on the quality of people's interactions with each other and with their cultural, social and physical environments as they strive to meet each other's needs. (Board of Studies NSW, 1998, p. 7)

Cambodian leader Pol Pot makes a fascinating character study. Compared to the Holocausts of World War II against Jews, Romani, gay people and others, his Killing Fields in Cambodia are closer to us in time and place. One criterion for being chosen and forced by Pol Pot to work as a farm labourer was wearing glasses. The 'logic' behind that was that such people were deemed to be intellectuals and, as such, were a threat to the new regime. They were sent to farms because in Pol Pot's mind the work of greatest worth was food production. In reality, most of these people, from the cities and therefore unaccustomed to farm labour, worked themselves to an exhausted, undernourished, possibly disease-ridden death, hence the name 'The Killing Fields'.

The episode offers a helpful illustration of the random nature of prejudice – based, in this case, on the wearing of glasses. Those of us who aren't part of minorities, such as white Anglo–Celtic people living in Australia, might have to learn about prejudice mainly through books. We might never or rarely have 'felt it in our guts', when people make judgment about external features such as skin colour.

This example raises questions about the purpose of education. Surely at least in part, it guides us on how to treat one another – how to rise above ignorance, prejudice or superstition that might otherwise characterise our interactions. Another goal of education is to teach children to act in such a way as to extend the 'shelf life' of the planet. This second goal is harder to defend to the satisfaction of people who have little interest in what happens to the planet beyond their own lifetime.

Curriculum: what and why?

The word 'curriculum' comes from a Latin term meaning 'running course'. Similar looking and meaning words commonly occur in modern-day English. You do a course of study; blood courses (runs) through your veins; cursive writing is running writing; a current runs along a river or an electric wire.

As you are no doubt aware, an Australian Curriculum is being developed in stages. Keep in mind that your own state or territory may be developing its own interpretations of the national documents – remain familiar with these. As Lin (2012, p. 170) points out, a 'curriculum is a key site where people's subjectivities [personal viewpoints] and cultural imaginaries are produced, contested or transformed'. A curriculum will always be, at best, someone's expression of the ideal experiences for a group of learners. A look at old curriculum documents will demonstrate that views on

optimal learning experiences change with time. The assumptions of any curriculum may need at times to be questioned and even subverted.

That is not to say that a curriculum is without benefit. Particularly for new teachers, it provides guidelines from more experienced people about what might be the most appropriate learning experiences for students of a particular age and readiness. It provides the security, for teachers, students, parents and others, that comes from knowing that students elsewhere are undertaking similar learning experiences. One thing that a curriculum does well, like good parents, is to ensure that things are fairly distributed, rather than giving all the best things to one child. For example, while many of your students might be fascinated by ancient Egypt, your secondary school counterparts might be disappointed and frustrated if you teach it in detail in primary school. Regrettably, we can't have *all* the good bits.

Here is where subverting the curriculum, even if only in the most benign of ways, might be justifiable. If studying the Gold Rush, showing Pharaoh Tutankhamun's death mask might elicit gasps in response to its unspeakable beauty. This could help to explain why (mainly) men have taken such risks in search of gold over the ages, and why it is so highly prized and priced. We might have an in-class question and answer session about mummies, pyramids, pharaohs and the like, to 'get it out of their system'. Rewards could be offered in the form of extension activities based on gold-related topics of the students' choice, including ancient Egypt, once the core work is completed satisfactorily. The rewards could be mocked up in the style of 'American wild west' posters, and students who have finished their core work could choose from among them, or devise their own, in negotiation.

Beyond that, it is difficult to resist including a moral dimension here, by recounting the story of King Midas. As you may know, King Midas was granted his wish of having anything he touched turn to gold. According to one version of the story, this plan worked well enough for him, until he hugged his daughter. This is a wonderful reminder that there is stuff more precious than gold.

Reflection

As a values exercise, look at a high-resolution colour image of Tutankhamun's death mask (or visit the Museum of Egyptian Antiquities in Cairo one day), and contemplate the fact that you are made of immeasurably more valuable stuff than gold.

On Homer and educational philosophy

The starting point of our education journey is more fundamental than this, however. In one episode of *The Simpsons*, Homer is attached to a lie detector. The operation of the machine is explained to him. He is then asked, 'Do you understand?' 'Yes,' he replies, and the machine explodes. This raises a fundamental epistemological (knowledge-related) question: How do we know we know anything? This 'Do you

understand' question is applied in high-stakes situations. If you have sat next to an emergency exit in a plane, the flight attendant, after explaining what you need to do in an emergency, might ask if you understand. If you answer 'Yes', all you are doing is confirming that you understood that last question. Similarly, when people are read their rights in legal contexts, they are routinely asked if they understand them. It's an easy trap for us to fall into as teachers, too. We might habitually ask, 'Okay?' or 'Does everyone understand?' It's not a very helpful question for you or your learners.

This epistemological dilemma assumes particular importance if you are investigating a topic that is new for you. How do you verify that the information that you are reading, viewing or hearing is accurate and balanced? How do you identify the author's assumptions, biases and blind spots? In terms of your teaching and assessment, this relates to the challenge and privilege of 'looking through the window' into your students' mis/understandings. You will develop your own repertoire of concept checking with your students, but instead of asking 'Do you understand?', you might ask:

- Who can give me an example of … ?
- How might you put that in your own words?
- What might be a synonym for, the antonym of …, or a counterexample?
- How might you define …?
- Where/how/why might it be in/appropriate to use …?
- Tell me a bit more about …

Or you might say something incongruous to see if the children laugh and recognise the irony.

Education

If 'curriculum' is one circle of the Venn diagram within which you operate, a larger circle again is 'education'. It comes from the Latin *educare*, meaning 'to lead out'. Words like 'dux', 'duct', 'reduce', 'induce', 'induct', 'introduce' and 'seduce' have similar origins. The word 'education' presumably refers to leading out from a position of relative dependence to one of relative autonomy. Among the most valuable things you and education can do for your students is to give them practice in thinking hard and, counter-intuitively, helping them to distrust what they know. This raises the question: what gets in the way of hard thinking and questioning – that is, of real education – at school? Here are some tentative responses for you to consider and mistrust.

Preoccupation with testing

It is only natural for parents, politicians and teachers to ask, 'How are my/our kids doing?' compared to an imagined or difficult-to-define average. Yet this can become a distraction to a more important goal of education – to produce a generation of creative, compassionate big-thinkers.

Basic skills focus, in particular on literacy and numeracy

It is difficult to argue with the priorities of literacy and numeracy, but they are the means for studying other subjects, not just ends in themselves. Our students need and deserve to be practising their literacy and numeracy skills, and their critical literacy, on *topics of significance*, and in studying and producing *texts of substance*.

Competition and collaboration

We seem to be increasingly preoccupied with competition among students, teachers, systems and nations. While healthy competition can be a motivator, education can end up becoming impoverished and emaciated in the absence of collaboration, of rubbing minds together, to see what kinds of sparks eventuate.

The crowded curriculum

Like any journey, the learning journey becomes less pleasurable when undertaken at high speed and under pressure of time. Details might become blurred or be missed. While a sparsely populated curriculum might be under-stimulating, there is an argument to allow some time for the purposes of metaphorical 'rose-smelling' and enjoying the journey, rather than racing for the next destination, and then on to the one after that.

The 'right' answers

A difficult-to-shift culture of 'right' answers pervades much practice in schools, among teachers, administrators and students. This tends to make all players risk-averse, hesitant to explore and to make mistakes, or to experiment with lateral or divergent, creative thinking. Keep in mind, too, that much teaching conforms to a question–response–affirmation pattern. At times we arbitrarily affirm, and randomly fail to affirm, our students' responses. Try to observe if or when you do this, and review your teaching as necessary. Moreover, the profession tends to put pressure on its members to know everything and to be in control always. The first (knowing everything) is unattainable, and the second (being in control) would not necessarily be educationally desirable, even if it were possible.

Role of the media

The media, too, can contribute to this unthinking or unreflective process, in the way they choose, ignore and sometimes trivialise news stories. Some social media have done little to improve this. In their defence, the media largely set out to respond to what their authors see as popular with the public. If it's the trivial and superficial that get our attention, the media will keep feeding us the intellectual equivalent of junk food.

Worksheets

Commercially produced worksheets often presume little background knowledge on the part of the teacher. This may be helpful if you are a first-year-out casual teacher

receiving a call at 8.30 am, and have little experience in teaching, say, Year 6 Science. Nevertheless, some of these worksheets are arguably an insult to the profession and its members and, more importantly, provide very little intellectual stimulation or extension to students. Your students deserve better and, especially once you are established in the profession, you are capable of better.

Teachers' social bias

And what of the people in the industry? Does teaching (and curriculum writing) attract people preoccupied with control? And if so, what implications might that have for free-thinking? More broadly, school tends to be a middle-class institution, with middle-class ways of seeing and doing things. It is often peopled by a majority of middle-class staff, who might feel very much 'at home' in such a setting. As a result, they may miss out on ways of questioning or deconstructing their own culture, values and ways of doing things, or they may fail to expand their repertoire by looking for and experimenting with alternative ways. This may operate to the detriment of students from different backgrounds (socioeconomic, religious, ethnic, for example) who have different ways of thinking, knowing, doubting, creating and doing. These students' ways may then remain unseen, unrecognised, unrewarded and un-nurtured at school. The school, as well as these students, will be the poorer for this.

There are strategic responses to this potential 'de-thinking' of education.

'Lifting their reasoning'

The next time you use a commercially produced worksheet for teaching or for a university assessment task, investigate how you can raise the standard of the questioning from its existing level. Often this is not difficult, as the questioning is very much at a 'factual recall' level. Offering these more challenging questions can be a useful extension exercise for challenging all or some of your students and 'lifting their reasoning' or, to use a gaming analogy, to 'take them to the next level'. Even if you don't immediately have answers, the thinking prompted by this exercise is itself valuable.

You might find Bloom's Taxonomy of help in this exercise. Bloom's revised hierarchy of thinking proceeds as set out in Table 1.1, with the most sophisticated levels of thinking and engagement at the top of the table. You might find it most helpful to read it from the bottom up. Identify the conceptual level of the worksheet you choose, and raise it to the next level, or the next few levels.

Perspectives education

Perspectives education opens our minds and eyes to new ways of interpreting, accepting and rejecting information and experiences we encounter. De Bono's (1987) Six Thinking Hats remain a widely used tool in investigating phenomena in ways that are metacognitive (investigative of our thinking), factual, creative, optimistic, cautious or affective (feelings-based). Similarly, his Plus, Minus, Interesting (PMI) is a useful way

Table 1.1: *Bloom's Taxonomy (Forehand, 2005)*

LEVEL	DEMONSTRATING COMPREHENSION THROUGH …
Creating	developing original concepts through manipulating or combining existing elements in new ways
Evaluating	applying judgments by critically examining the worth of a phenomenon
Analysing	breaking something down into its constituent parts; deconstructing
Applying	adapting and appropriating information in a new context
Understanding	reorganising information provided by paraphrasing, summarising and the like
Remembering	memorising and reciting information provided in the form in which it was provided; colloquially 'regurgitating'

of analysing a concept or phenomenon. 'Think, pair, share' is another common tool for thinking about and discussing an issue. Gardner's (1999) Multiple Intelligences serve as a reminder that there are a variety of ways of viewing and interpreting the world and its component parts. Some of these (linguistic, logical–mathematical, musical, spatial, bodily–kinaesthetic) correspond loosely to some of the subjects taught in F–6, and the primary years offer an excellent opportunity for students and teachers to experiment with these cross-border or borderless approaches to learning. Other approaches, such as the intrapersonal and interpersonal, deal with issues such as communication and reflection.

Contributions from other subject areas

Mathematics teachers, with their insistent appeal to 'show your working', probably have something to tell us here. Getting your students and yourself to ask and explain 'how' and 'why' is a good habit to develop. It is an effective way to delve into your students' thinking and attitudes. Also develop the habit of asking 'Why not?' and 'What if we … ?' or 'What if we stopped … ?'

A 'predict–observe–explain' approach (e.g. Kearney, 2004) is regularly used in science education, including environmental education. It also lends itself well to an investigation of social phenomena, such as hypothesising about yet-to-be-studied events in history, or current affairs. KWL charts (what we know; what we want to learn (or wonder); what we learnt) have parallels with this process. A student-produced or jointly produced mind map, completed in different colours at the beginning and end of a unit of work, might bring to light some of the growing sophistication of your students' learning and understanding, as well as gaps remaining.

Literacy need not be sacrificed for the social sciences or vice versa. A collaborative, interactive and communication-intensive classroom is going to be language-intensive and language-rich, and rich in composing and developing, evaluating and sharing

ideas through reading, writing, speaking and listening. All students should take part in all of these modes. Overwhelmingly, the medium of communication will be English, but teaching and learning experiences may at times include other languages, and will regularly incorporate numeracy. It is reasonable to assume that every one of your students has ideas that they want to share, either by saying or writing them. Every one of your students is in possession of knowledge that nobody else in the room knows.

Inquiry or inductive learning

Inquiry or inductive learning can be seen as the highly satisfying activity of finding out. Part of good teaching is working with students' natural curiosity, enticing them to come on a journey with us and 'look around the next corner', to see what's there. Where possible and practical, design your teaching around what are variously known as inductive, or learner-centred, or inquiry methods of learning and teaching. We might think and speak – ideally with some genuine passion – about something we've found, and invite the students into its mysteries and wonders. There is no 'one best method' for teaching and learning. At times, direct instruction might be a more appropriate and efficient method. In any case, inquiry learning should not regress to a simple 'guess what the teacher is thinking' exercise. A good rule of thumb is to, as Brophy, Alleman and Knightan (2009, p. 58) recommended, focus on powerful ideas.

Systems thinking

Just about everything – from sentences, to the water cycle, to the economy – can be categorised as systems or parts of systems or, if you like, teams. Each component has a role. Investigating changes or developments in systems can encourage deeper thinking, requiring us to consider causes, effects and consequences. Example 1.1 relates primarily to an investigation of history, with its changes through time, but also has sustainability and civics implications.

Example 1.1

Think, for example, of how, over time, subsistence production of food (enough for your own immediate needs) might develop, through more efficient techniques and technologies, into surplus production. This will allow for trading or bartering. The development of a common currency will make the exchange of goods easier and more efficient. This might begin with a measured weight of a valuable substance, such as a pound of silver, to be replaced eventually by tokens such as coins and notes. A surplus of food also allows for more leisure time, for specialisation in employment and for people to live in towns and cities, away from farms. Think of how improvements in transport might facilitate the delivery of goods to a central place or market, the emergence of individual shops and, eventually, online shopping and delivery. The development of refrigeration would allow for more efficient storage of surplus food, compared to previous methods, such as using spices and salt, pickling and