Explaining education
for sustainability

This chapter explains the origins of education for sustainability and what it seeks to achieve. It discusses links between this concept and terms such as environmental education. It also highlights tensions with existing education systems that often reproduce unsustainable practices. No education is value-free. Values and principles that are essential to education for sustainability are therefore discussed as well.

3.1   The roots of education for sustainability

Education for sustainability is an emerging concept that "encompasses a new vision of education that seeks to empower people of all ages to assume responsibility for creating a sustainable future."[1] As noted in section 1.2, the major focus of this report is on the *environmental* dimensions of sustainability.

Although education for sustainability is still developing as a body of thinking, many of its roots are grounded in the environmental education movement that emerged in the late 1960s and early 1970s.

Environmental education first gained prominence at an international level during the Stockholm Conference on the Environment in 1972. Three years later, an international conference focusing on environmental education was held in Yugoslavia. The resulting *Belgrade Charter* called on education to develop a population of people:

> ... aware of, and concerned about, the environment and its associated problems, and which has the knowledge, skills, attitudes, motivations and commitment to work individually and collectively toward solutions of current problems and the prevention of new ones.[2]

This Charter was developed and refined at the world's first Intergovernmental Conference on Environmental Education in Tbilisi, Georgia, in 1977. The *Tbilisi Declaration* established three broad goals for environmental education:

- to foster clear awareness of, and concern about, economic, social, political and ecological interdependence in urban and rural areas

- to provide every person with opportunities to acquire the knowledge, values, attitudes, commitment and skills needed to protect and improve the environment

- to create new patterns of behaviour in individuals, groups and society as a whole towards the environment.[3]

The *Tbilisi Declaration* clearly set out the goals of environmental education and its guiding principles. Most contemporary writings on environmental education,

and many essential parts of education for sustainability, are a reiteration, expansion and critique of these founding principles and ideas.[4]

Subtle shifts to sustainability

During the 1980s, and with more momentum in the 1990s, a shift began to emerge. The language of sustainability began to creep into the discourses of many educators in New Zealand and overseas. This can be linked to broader changes in the international arena and the popularising of the term 'sustainable development' in 1987.[5] Ever since, a much stronger emphasis has been placed on trying to integrate environmental, social, cultural and economic concerns.

Although the language may have changed, education has continued to be upheld as essential for environmental sustainability and to sustain the social, cultural and economic well-being of people living now and in the future. For example, a strong commitment was made at the Earth Summit in 1992. All 40 chapters of its action plan, *Agenda 21*, called for education. Governments from around the world, including New Zealand, agreed that education for sustainability is:

> **... critical for achieving environmental and ethical awareness, values and attitudes, skills and behaviour consistent with sustainable development and for effective public participation in decision making.[6]**

Agenda 21 also called for all countries to develop a strategy to implement education for sustainability. The call for education to be a critical part of sustainable development continues to be heard at every international conference on this topic. In 1997, representatives from around the world met at a conference organised by UNESCO and the government of Greece. They reaffirmed the urgent need for governments to honour their earlier commitments to education for sustainability and the need for a:

> **... rapid and radical change of behaviours and lifestyles, including changing consumption and production patterns. For this, appropriate education and public awareness should be recognised as one of the pillars of sustainability.[7]**

At the World Summit on Sustainable Development in 2002, governments emphasised that education for sustainability is "critical for promoting sustainable development" and agreed to "integrate sustainable development into education systems at all levels of education in order to promote education as a key agent for change".[8] Members of the United Nations, including New Zealand, have recently re-affirmed their commitments in this area by declaring a Decade of Education for Sustainable Development from 2005 to 2014. The United Nations General Assembly has invited governments to include necessary concrete measures to implement this decade.

3.2 Environmental education or education for sustainability?

There is currently much debate, both in New Zealand and beyond, about the best language for communicating the role of education in environmental and sustainability issues. Is 'environmental education' past its use-by date? Should it simply come under the umbrella of 'education for sustainability'? Do both these terms mean the same thing? As noted above, many of the roots of education for sustainability have grown from the environmental education movement. Nonetheless, we have deliberately used the term education for sustainability in this report for important reasons. These are discussed below.

The last two decades have seen a major shift in thinking from environmentalism to sustainable development (which, as discussed in section 1.2, aims to achieve sustainability). It has been suggested that environmentalism is mostly a movement *against* some things – for example stopping pollution and other harmful activities – while sustainable development takes a more proactive approach *towards* positive outcomes.[9] Education for sustainability is therefore very forward-looking. It aims to do things differently in the first place, instead of just cleaning up the symptoms of underlying problems.

There has also been a more explicit acknowledgement that sustainable development is inherently about human beings, rather than the 'environment out there' or 'nature conservation'. As Tilbury *et al*. state:

> Education with the objective of achieving sustainability varies from previous approaches to environmental education in that it focuses sharply on developing closer links among environmental quality, human equality, human rights and peace and their underlying political threads.[10]

This does not mean there is no longer a place for environmental education or environmentalism, which have often been driven by social concerns about environmental change. It is still essential to develop knowledge about the environment and to establish an ethic of caring towards the rest of the natural world. However, environmental educators need to engage with many different interests in society to further their concerns. Environmental issues are about more than just the natural, physical world. They are inescapably philosophical, ethical, cultural and political as well.[11] It is important to recognise what has always been the case – that how people perceive and interact with their environment (their worldviews) cannot be separated from the society and the culture they live in.

The term 'education for sustainability' is also likely to appeal to a broader audience than 'environmental education'. As several participants in this report suggested, some sectors of society can be quite negative towards any label with the word environment in it.[12] This highlights a need to make very strong

connections between the social, cultural and eco-
nomic well-being of people (living now and in the
future) and a healthy and sustainable environment.

People have used a variety of terms to communicate
the thinking behind 'education for sustainability', the
term favoured in this report. This phrase is usually
interchangeable with 'education for sustainable
development'. Other labels such as 'education for a
sustainable future', 'sustainability education' and even
'education for a sustainable world order' have been
proposed.[13] Some people also claim that environmen-
tal education and education for sustainability essentially aim to achieve the
same ends. While we acknowledge that words are important, people could
wait forever for a consensus to develop on the best term to use. It is therefore
important to keep in mind that it is not the words *per se* that are significant. It
is how these words are used and what they actually mean to people that is
most important. It is more imperative to develop some common understanding
around education for sustainability, or close siblings of this term, than to argue
over the best words to use. Section 3.4 identifies key principles of education for
sustainability. People who are familiar with environmental education are likely
to recognise many of these as well.

The debate will probably continue between environmental education and
education for sustainability. However this could just be the growing pains of a
movement stretching to embody a huge vision – a vision that environmental
education has always shown some characteristics of, but which it now needs to
manifest much more proactively. Education for sustainability could simply be
thought of as a more contemporary way of taking many of the principles of
environmental education, and extending them to communicate in a way that is
relevant to the twenty-first century.

To summarise, environmental education is still important. Both environmental
education and education for sustainability aim to enable learners to question
unsustainable practices. They also aim to empower people to make changes, in
their own lives and in the institutions around them. Education for sustainability
includes many of the founding principles of environmental education but it is
broader in scope. It has more of a human focus and recognises that fundamen-
tal human rights and social justice are just as essential to sustainable develop-
ment as environmental sustainability. As following sections will highlight,
education for sustainability also tends to take a more explicit socially critical
perspective. Unfortunately, much education that is currently practised in New
Zealand and overseas may actually be working against this purpose.

Knowledge is being more effectively used today to justify wrong being done, than to prevent it.[14]

– John Ralston Saul

3.3 Education for (un)sustainability?

Before outlining the principles of education for sustainability, it is important to take a step back to examine how education is already used in societies. It is also important to recognise the values and assumptions that are embedded in all education systems. Education, as a process, helps to shape the ways people think, feel and act. The formal education system in particular performs a number of functions:

- it tells people what their society/culture knows and believes about the world

- it trains people for employment

- it helps to reproduce the society/culture that people live in and maintains existing systems and structures of power

- it can be transformative, developing the potential of individuals and allowing them to achieve changes within themselves and across society.[15]

Existing education systems can therefore present a dilemma for sustainability. They often support existing social practices and ideologies that are dominant in society. In a society that is operating in an unsustainable manner, unsustainable systems and ways of living can simply be 'transmitted' from one generation to the next.[16] For example, it is interesting to note that the most 'educated' countries are those with the biggest ecological footprints (see section 2.3 for New Zealand's footprint).[17] Nonetheless, it is the fact that education does have

the power to be transformative and empowering that has seen education for sustainability promoted for so many years.

Ideologies and values

As noted above, no education is value-free. For example, the topics that teachers select and the content of their school's curriculum are all based on value judgements about what matters most in education.[18] This is acknowledged in the National Curriculum Statements for New Zealand schools, which state that:

> **The content of a school's curriculum reflects what is valued by a society and a school community ... The school curriculum, through its practices and procedures, will reinforce the commonly held beliefs of individual and collective responsibility which underpin New Zealand's democratic society.** [19]

As section 4.1 will highlight, existing education priorities for New Zealand that do not mention the environment suggest that environmental and sustainability concerns are currently being given very little value by the government.

Education for sustainability needs to be open about a values-based approach. This has important implications, as it contrasts with the views of many individuals and sectors of society who believe that education can and should be value-free. Some people fear that values are somehow linked to indoctrination, despite the fact that education systems are already shaping people to think and act in certain ways. However, as several educators note:

> **Indoctrination is ... an anathema to education systems in democratic societies where we give our students skills to think for themselves, ask questions, solve problems, and make decisions.[20]**

Ultimately, education for sustainability requires people to critically think about and reflect on their own values and the values embedded in the institutions that surround them.[21] This can provide a basis for deciding what sorts of values a society (and different groups within it) may wish to pursue, without blindly accepting the current situation. It also requires some conscious individual and collective responsibility for making those decisions.

Assumptions

As highlighted earlier, education also helps to tell people what their society/ culture knows and believes about the world. People can never know and understand absolutely everything. They therefore make some major assumptions about how the world actually works. Education for sustainability needs to encourage people to reflect on their own underlying assumptions, as well as those of other people and institutions in society.

To promote this process, educators need to be open about the assumptions that are often implicit in debates about sustainability. The following list could be useful for this purpose. It is based on an analysis of United Nations conferences on sustainable development throughout the 1990s:[22]

- a healthy environment is essential for sustainable development (and vice-versa)

- sustainability should be achieved through democratic processes

- individuals have basic human rights

- sustainability depends on peace, justice, and equity

- development should be human-centred (i.e. for the betterment of humanity as a whole as opposed to the empowerment of a few)

- no nation should prosper through the explicit impoverishment of another nation

- diversity, both biological and cultural, is intrinsically valuable

- intergenerational respect and responsibility will safeguard the rights of future generations.

We add these assumptions:

- there are ecological limits that constrain resource use and the ability of the environment to absorb the impacts of human-induced wastes

- humans can use technologies to enhance their ability to exist within these limits; however, technologies also act as a double-edged sword (they regularly contribute to further pressures on sustainability that may have been unforeseen)

- economic and monetary systems can be (re)designed to better reflect environmental and social costs and benefits.

3.4 Key principles of education for sustainability

Education for sustainability is still developing as a body of thinking. It draws on many theories and ideas from education and sustainability discussions. Most of the principles highlighted here are therefore not unique to education for sustainability. Furthermore, this section is not intended to be exhaustive. It merely draws together some key principles from recent literature on education for sustainability in the international community.[23] Many of these have been touched on earlier in this chapter.

A strong values base

> The main message of any knowledge system is not whether it is true or false. It's not about ideas being proven or unproved. The purpose of any people's evolutionary framework is and always will be the social, cultural and ethical values that are promoted amongst one's members.[24]
> – Aroha Mead

Values saturate people's experiences, and are at the heart of everything they do. Education for sustainability seeks to extend boundaries of concern beyond an individual's sense of self (their way of seeing and interacting with the rest of the world). It encourages people to connect with, and care for, others and the environment they live in. Although the 'thinking' sides of education for sustainability are often highlighted, education for sustainability requires people to use their hearts just as much as their heads. Values that are needed for a sustainable future include (but are not limited to) compassion, equity, justice, peace, cultural sensitivity, respect for the environment and recognition of the rights of future generations. As one of our participants noted during research for this report, "it makes it more easy to start with a values focus because you can then evaluate issues from the solid ground of these values – otherwise there's no yardstick".[25]

The problems that exist in the world today cannot be solved by the level of thinking that created them.[26]

– Albert Einstein

Critical thinking and reflective learning

It is important not to 'transmit' unsustainable practices from one generation to the next. People also need to reflect on their own learning. Education for sustainability encourages people to ask lots of questions, to challenge underlying assumptions, and to think for themselves about sustainability issues. Critical thinking is important. People need to be able to peel back the layers of unsustainable practices so that they can understand and address the causes that rest behind them. As Huckle notes, looking at the formal education system:

> Education for sustainability invites us to question the assumptions of dominant discourses in education, particularly those objectives, content and teaching methods which favour initiating people into the concepts and skills needed for finding scientific and technological solutions to environmental problems without addressing their root social, political and economic causes.[27]

Future-focused

> The best way to predict the future is to invent it.[28]
> – Alan Kay

People should not just be able to critique unsustainable practices. They need to be encouraged to contribute to positive outcomes. While it is important to learn from the past, education for sustainability is very future-focused. It "involves learners in an examination of probable and possible futures ... this exercise is crucially linked to the development of 'hope', 'empowerment' and 'action'".[29] The choices that people and institutions make today, and the actions that they take, often have enormous implications for sustainability. It is therefore essential to maintain a long-term perspective.

Participation

People should be given the opportunity to have a say in the future world that they, and future generations, will live in. Public participation is vital for democracy and sustainability. It is essential to develop a mandate within communities to make changes. Changes that support sustainability are more likely to be implemented if people have a clear understanding and commitment to them.

Communities also need to be empowered to take responsibility for issues for themselves. Governments and businesses often have very short-term timeframes, because of the systems that they currently work within. Communities therefore need to develop long-term visions of where they want to head and to ensure that institutions in society are accountable for the actions that they take. There are always many competing interests in debates about sustainability and it is important to build tolerance around different interests and perspectives. However, it is also important to keep questioning and scrutinising what it is that people and institutions are actually seeking to sustain.

They were nothing more than people by themselves. Even paired, any pairing, they would have been nothing more than people by themselves. But all together, they had become the heart and muscles and mind of something perilous and new, something strange and growing and great. Together, all together, they were instruments of change.[30]

– Keri Hulme

I first took Sustainable Futures because I wanted an interesting diversion. I thought it would be a cool but cruisy subject. It wasn't. The course was full-on, interesting and challenging...As a result of taking Sustainable Futures I now know more about current issues facing our environment and have made my own informed decisions on these issues. Sustainable Futures was different from any other course, with more discussion, debate and more effect on me person-ally. -Kate Rogers

We did a more specific topic focussing on genetic engineering. It was awesome to be learning something which is a current issue more fully and the different perspectives which people hold in relation to it...The course was really inspiring and it was good to actually do practical things and not only think about them. -Bella Shewan

Throughout 2003 our class has discovered many different sectors that influence our environment in both positive and negative ways. The class environment has been that of passionate opinions being discussed and people learning to become more open-minded and willing to accept opposing opin-ions. The class has been the stage for many heated debates that have fuelled individuals' passion to protect the environment and create a sustainable future at Christchurch Girls' High School, Christchurch and New Zealand.
-Sarah Townsend

I learned about how people influence society and about environmental issues in New Zealand...Even though I am a foreign student from Korea, I under-stood different sides on each issue and found this class interesting and exciting.
-Anna Park

I was seen by friends as a 'greenie' as soon as I started the course, but often found them interested in what we got up to in class. I'm glad I chose this subject because it gave me an opportunity to answer questions they had and to give them an insight into environmental issues studied by my class...it has opened my eyes to the world and made me make changes to my lifestyle. I have also been given an opportunity to inform and share with my peers and family, which I am grateful for. -Zoe Hauraki

When studying the course, I came to the realisation that as a person who was willing to make a difference, I was not fulfilling my potential to do this. I became more aware of how to improve my skills in this area, and have taught others how to do so as well...Often we perceive environmental prob-lems / issues to be too large to deal with, so it is easier just to ignore these as a whole. Sustainable Future puts this perception into perspective. We are shown as students how we can take action and work towards a sustainable planet...As a whole, I have been alerted to everyday issues that occur that can be done better, or more sustainably. For example, I cannot take the amount of items we

consume seriously. It seems we as a community have blown excess consumerism out of proportion; time, money and resources are wasted, so where do we go from here? -Sara McCormick

I believe that all students and young people should be given this same opportunity for environmental education, as I have found all the things I have learned to be very valuable. -Beth Lepper

It has been tremendously liberating to facilitate a course that has no curriculum demands/pressure. We can really spend some time actually discussing issues of sustainability and what it means for us all as well as delving into what real learning is about. Our Sustainable Futures course is more than just 'about', and 'for' the environment - it is also about the type of relationships we build in our learning communities and how we create powerful learning opportunities. -Jocelyn Paprill (teacher)
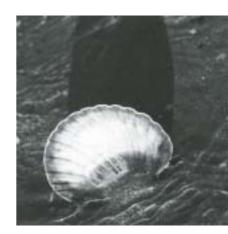
**Learners at Christchurch Girls' High School
Sustainable Futures Class (Year 12)**

Learning for life

> I never let my schooling get in the way of my education.[31]
> – Mark Twain

All people should be encouraged to participate in education for sustainability, and people learn throughout their lives. The formal education system is very important. However, it would be far too limiting for education for sustainability to focus on this system alone. Learning takes place in many different contexts. People learn through their families, peers, workplaces, the media, and many different social networks. Many other influences in society also help to shape the ways people think, feel and act. During research for this report, we asked participants which sector of society they thought it was most important for education for sustainability to focus on.[32] The range of answers highlighted the need for all people, of all ages and different backgrounds, to be involved in learning for sustainability.

Learning across boundaries

> The specialist knows more and more about less and less and finally knows everything about nothing.[33]
> – Konrad Lorenz

Because sustainability issues are very broad in scope, learning also needs to occur across established boundaries. For example, in the formal education system, especially at a secondary and tertiary level, learning has historically been disciplined into many different fields of knowledge. This has enabled people to develop in-depth expertise in many areas. However it has also made it very difficult for people to share valuable insights that could contribute to sustainability. This does not mean that there should be no specialists. It merely means that better connections need to be made across disciplinary boundaries. These issues are not unique to the formal education system. Many institutions in society also develop knowledge and make decisions without engaging with other sectors of society. Education for sustainability requires integrated thinking. It requires people and institutions to share knowledge, recognise the limits of their own expertise, and to work together on many different issues.

Transformative

> True compassion is more than flinging a coin to a beggar. It comes to see that an edifice which produces beggars needs restructuring.[3] – Martin Luther King Jr.

Education for sustainability has a strong purpose. This is reflected in the language that it uses. People should not just be educated 'about' sustainability. They need to be empowered to take actions that contribute to sustainable outcomes. Having said this, it is important not to place all responsibility on individuals. Societal changes are driven by people (usually working together) but people live and work within wider systems and social structures. These systems can enable people to act in certain ways, but they can also constrain them. Education for sustainability therefore needs to focus on both individual and systemic changes to resolve unsustainable practices. This will require a redesign of many systems that currently exist in societies. As a result, education for sustainability is often perceived as highly political. It aims to transform institutions in society that are promoting unsustainable practices, or holding back sustainable alternatives, so that people can work towards a better future.

3.5 Summary and key points

Key points from this chapter are:

• Education for sustainability is an emerging concept that has many of its roots in the environmental education movement. Environmental education is still important, but education for sustainability is broader in scope. It recognises that human rights and social justice are just as essential to sustainable development as environmental sustainability.

• It is imperative to develop some common understanding around education for sustainability, or close siblings of this term.

• Like all education, education for sustainability is not value-free. It encourages people to extend their boundaries of concern and to critically think about and reflect on their own values. It also encourages people to ask lots of questions, challenge underlying assumptions, and to think for themselves about sustainability issues.

• Education for sustainability needs to focus on the underlying causes of unsustainable practices, instead of just concentrating on their symptoms.

• It is important to be future-focused and develop a mandate within communities to make changes that support sustainability.

• People need to share knowledge, recognise the limits of their own expertise, and work together on many different issues.

• Both individual and systemic changes are needed to resolve unsustainable practices. This will require redesigning many systems that currently exist in society.

• International conferences on sustainable development consistently emphasise the vital need for education for sustainability. New Zealand's government has taken part in many of these conferences and has made commitments to education for sustainability.

Another principle of education for sustainability is that it should be implemented in a locally relevant and culturally appropriate way.[35] In a New Zealand context, issues such as the need for a basic education for all, women's rights, and poverty eradication will not have the same focus that they have in less 'developed' countries. Although these issues are still important for New Zealand, many other overwhelming issues need to be addressed. For example, a major issue for New Zealanders is the size of their ecological footprints and the vast volumes of waste that are generated in this country (see section 2.3 and chapter 6). The following two chapters examine how people are learning and being educated for sustainability in New Zealand today.