Sustainable Education and Sustainable Schools

David Butler, South Australian Department of Education and Children’s Services.

I acknowledge that we are meeting on Kuarna land.

The difference between a sustainable or a chaotic future is learning.¹

Dr Stephen Sterling 2001

Sterling then goes on to say that

Most learning, however, is functional or informational learning, which is orientated towards socialization and vocational goals that take no account of the challenge of sustainability.

For the past eleven years I have been Policy Officer for Society and Environment in the South Australian Department of Education and Children’s Services.

It has been an interesting experience connecting Government policy making (or more often policy implementation) with educational and learning theory and practice and community capacity building.

In preparing and presenting the paper I am aware of the expertise and experience that you, and others at this conference, bring to the areas I am covering. I am also aware that I am really skimming the surface of extremely complex ideas, behaviours and practices.

The paper is in two sections

• Sustainable Education in which I will briefly talk about the nature of sustainability (as interconnecting systems) + learning (as transformation) + empowerment (as community capacity building) in the context of sustainable education and a suggestion for sustainable education as curriculum change.

• An update on a movement to Sustainable Schools in South Australia and nationally.

SUSTAINABLE EDUCATION

Sustainability

"Development which meets the needs of the present without compromising the ability of future generations to meet their own needs."

Our Common Future the report of the World Commission on Environment and Development 1987²

¹ P 10, Sterling S (2001) Sustainable Education – Re-visioning Learning and Change, Schumacher Briefings, Green Books, Dartington, UK

² Also referred to the Brundtland Report 1987
This definition is usually cited as the primary source definition of Ecologically Sustainable Development. During the 90s and early part of the 00s there have been hundreds of definitions developed to support particular positions on ESD.

Sterling stresses the need for taking a holistic systems thinking approach to sustainability if, as societies, we are to go beyond the dominant forms of thinking which are analytical, linear, and reductionist.

Dr John Fien in his Education for Sustainability (2001) paper identifies four interdependent systems as the pillars of sustainability:

- Biophysical systems that provide life support systems for all life, human and non-human
- Economic systems which provide a continuing means of livelihood (jobs and money) for people
- Social and cultural systems which provide ways for people to live together peacefully, equitably and with respect for human rights and dignity
- Political systems through which power is exercised fairly and democratically to make decisions about the way social and economic systems operate and use the biophysical environment

The interconnections between biophysical (ecological), social and economic systems are often identified as being critical to sustainable development. This is referred to as Triple Bottom Line (TBL) as John Elkington and others highlight the need for businesses to consider all three when reporting on their performance rather than just economic performance.

Fien, and others, including Tricia Caswell Executive Director of Global Sustainability@RMIT, stress that it is the political system, or governance, that is central in decision making and organising action that enable ‘economic prosperity, environmental quality and ... social justice’ that are vital for sustainable futures.

How we perceive the relationship between these interconnecting systems is central to how we interact in them. At the South Australian Sustainable Schools and Sites Seminar on July 7 2003 Professor Ian Lowe argued that in looking at systems through the dominant culture Government, Industry and Society generally place the Economy (and economic prosperity) as the overarching system, when in reality it should be

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3 Sterling
4 Pp. 4-5, Fien John (June 2001) Education for Sustainability, Tela Series, Australian Conservation Council
6 TBL+1 (Governance), Global Sustainability@RMIT, Website http://www.global.rmit.edu.au/tbl/
7 P2 Elkington
Sterling applies complexity theory thinking to emphasise the need for us to further our understanding of the interconnectedness of these ‘complex adaptive systems’ in relation to sustainability.

Sustainability is the ability of a system to sustain itself in relation to its environment, given that all systems are made up of subsystems and parts of larger supra-systems. A system that either undermines the health of its own subsystems or its supra-system is unsustainable.

Learning

Learning connected with sustainability is deep learning - transformative learning - learning as change.

It involves seeing outside where and how we currently live. It includes

- Ongoing challenging of our world views
- Personal and societal lifestyle changes
- Holistic ways of knowing
- Capacity building
- An ecological moral base
- Linking personal and community growth and wellbeing

Sterling identifies a range of educational responses to sustainability.

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8 Address to South Australian Sustainable Schools and Sites seminar 7 July 2003
9 P54 Sterling
10 Pp 60 – 61 Sterling
Education about sustainability
The emphasis is on content/knowledge based learning within the dominant paradigm. It assumes that the meaning of sustainability can be clearly identified and taught as a separate subject. This is essentially ‘learning as maintenance’ of the current paradigm because the latter is unchallenged.

Education for sustainability
The emphasis is on ‘learning for change’ that includes content, but goes further to include values and capability bias. It is deeper learner as it involves critical and reflective thinking about sustainability. It is assumed that we know clearly what values, knowledge and skills ‘are needed’ for change and while challenging the existing paradigm leaves it mainly in tack. Sterling suggests that most of the greening of schools and colleges movement is largely located here.

Education as sustainability
The emphasis is on process and the quality of learning, which is seen as an essentially creative, reflective and participative process. Knowing is seen as approximate, relational and provisional, and learning is continual exploration through practice...

The shift is towards ‘learning as change’ which engages the whole person and learning institution. ... In this dynamic state, the process of sustainable development or sustainable living is essentially one of learning, while the context of learning is essentially that of sustainability.....

This response is the most difficult to achieve, particularly at the institutional level, as it is most in conflict with existing structures, values and methodologies, and cannot be imposed.

Empowerment

Education as Sustainability requires all people in sites, in schools, in their communities to have the knowledge and understandings, dispositions and capabilities to be agents of change in the school/community, both now and through the future.

To move in this direction educators need to understand that empowerment comes from within a person and community rather than being given to them by others. Therefore it is the power of engagement through quality learning with people that is most likely to lead to positive personal and community action by them.

Pat Thomson in her 2003 report Active Citizenship Action Research Projects defines active citizenship approaches as meaning that
Young people are involved in deciding on, designing, organising and working together to undertake and evaluate projects that make a contribution to the general social good. \textsuperscript{11} Dr Pat Thompson 2003

In a paper presented by Dr John Dryden to the South Australian Civics and Citizenship Education Reference Group in 1996 Dr Dryden outlines a student Engagement Level Reform Matrix. The matrix is based on four elements in a range of levels from the classroom to the international level. The four elements of school/teacher/student engagement are To students For students With students By students\textsuperscript{12}

How often have you used, or heard used, the term Student Free Day to describe a whole school curriculum-planning day?

The Youth Environment Council of South Australia provides an example of interacting with young people to raise their expectations in their engagement in societal and environmental decision-making. The YEC was formed in 1997 as a Minister of Education and Minister of Environment advisory council. The YEC’s formation and operation is based on Dryden’s notion of engagement in decision-making with youth and by youth. YEC members actively engage with other young and older people to promote the need for ‘intergenerational equity’ now, as well as for the future.

It is essential that we remember a sustainable future cannot be created without considering and involving young people. We all need to use our hearts, heads and hands to work in partnership with one another, to make sure that the systems we live by are owned by young and old alike, and that they are feasible, not only for this generation, but all generations that follow. It is imperative that in creating a sustainable future, we are working with our youth, and not just for them\textsuperscript{13}.

Amy Ralfs, a former YEC member and now a YEC mentor

Sustainable Education as curriculum change

Education as Sustainability views Curriculum as a way an educational community formally supports its members to identify and achieve personal and community learning outcomes within the context of

\textsuperscript{11}P6 Thomson, Pat (2003) \textit{Active Citizenship Action Research Projects}, Final Report for the Department of Education and Children’s Services and the South Australian Civics and Citizenship Education Professional Development programme management committee


\textsuperscript{13}Ralfs, Amy (2002), Youth Environment Council of South Australia Keynote address at Australian Association for Environmental Education Bi-Annual Conference, Brisbane July 2002.
economic, environmental and social wellbeing. This is a more holistic view of curriculum in education than a mechanistic view of centralised predetermined learning outcomes as being the curriculum.

These two views are not necessarily mutually exclusive. In fact, it is where the two views of curriculum come together that opportunities for change exist and the change is most likely to be sustainable. An example of how they can connect is described below in Diagram 2 ‘The Essential Learnings through Education as Sustainability’

The five Essential Learnings – Futures, Identity, Interdependence, Thinking and Communications – are understandings, dispositions and capabilities, that are integral to children and students learning described by the South Australian Curriculum Standards and Accountability framework. The Essential Learnings are incorporated into the SACSA learning outcomes. However, when viewed in the context of Sustainable Education and centred on principles of sustainability the Essential Learnings become powerful agents of curriculum and learning change.
Deep Critical Thinkers
Emphasis on critically and creatively investigating interconnecting social, cultural ecological and economic systems, alternative world-views and behaviour to develop values, understandings, skills and dispositions congruent with principles of sustainable futures

Effective Communicators
Emphasis on developing communication skills associated with powerful personal and group voice and informed, meaningful, inclusive and responsible civic decision-making

Interdependence
Identity
Emphasis on exploring why and how the vibrant synergy of identity and interdependence enhances our capacity to adopt lifestyles congruent with interconnected cultural, social, economic and ecological sustainable futures

Principles of Sustainability
- Conservation of biological diversity and ecological integrity
- Conservation of cultural diversity and cultural integrity
- Integrated long-term and short-term decision-making
- Precautionary principle
- Inter-generational and intra-generational equity

Active and Ethical Civic and Ecological Citizens Futures
Emphasis on active participation in ongoing significant civic and ecological actions that establish communities’ ethos, capacity and commitment to adopt ways of living which are in line with responsible social, economic, cultural and ecological behaviours both now and in the future

Future
The process of transforming learning and lifestyles for sustainable futures is ongoing and ever improving through being informed by past learning and actions

Diagram 2 The Essential Learnings through Education as Sustainability
Closely connected to changing views of Sustainable Education are schools, sites, professional associations, education departments and environmental departments investigating and developing Sustainable Schools programmes.

For example

- In 2002 the South Australian Primary Principals’ Association’s (SAPPA) Curriculum Committee identified exploring the concept of Sustainable Schools as a new initiative for 2002/3. A sustainable school is one where the reporting on educational standards, economic management, social and cultural welfare and environmental performance are interconnected and equally important. This is the step forward from environmental education as isolated projects.\(^\text{14}\)

- The Department of Education and Children’s Services’ Learning to Learn project, supports pre-schools and schools to transform the learning for staff and students and young children by exploring what sustainable education means. It includes re-visioning the nature and purpose of learning and whole school change. For example the Hills Cluster of schools, a Learning to Learn Project 1 Group, is working on what it means to integrate student voice, futures and sustainable education.

- The Ecologically Sustainable Development (ESD) Team in the Department’s Site Property Services Group supports sites and schools in a number of ways such as embedding ESD design principles into DECS building/refurbishment programs and administering ESD grants for sites and schools to implement sustainable practices.

A further stimulus for sustainable schools has been the national Sustainable Schools Programme. The national Sustainable Schools programme has grown out of the National Environmental Education Network’s (see Appendix One) that was formed by the Federal Department of Environment and Heritage in 2001. The trialing of the Sustainable Schools projects in New South Wales and Victoria has been supported by a grant of $200,000 from the Department of Environment and Heritage.

Since the start of the NSW and Victorian trials other States and Territories have expressed an interest in working with the Department to identify and address their specific needs with respect to the development of the programme in each State and Territory.

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\(^{14}\) South Australian Primary Principals’ Association’s SAPPA Talk Chat line March 2002
The Department is now in the process of developing criteria against which State and Territory applications for funding for development of Sustainable Schools can be assessed.

As a result of these influences a group of interested people from the Department of Education and Children’s Services (Learning Outcomes and Curriculum Group), SAPPA, the Department for Environment and Heritage (Environmental Education Unit), the Asia Pacific Network for International Education and Values Education, and the Youth Environment Council of South Australia came together to consider ways forward in growing sustainable schools in South Australia. The immediate aim has been to develop a South Australian proposal for participation in the national Sustainable Schools programme.

It was agreed that, as education as sustainability can not be imposed on people, it was best to listen to the collective wisdom of what people understand about Sustainable Education and Sustainable Schools and to grow the South Australian Sustainable School proposal from there.

The July 7 2003 Towards Sustainable Schools and Sites - Growing our wisdom as sustainable communities seminar was a beginning of this process. Appendix Two is an outline of the program for the day.

Ninety people from state parent groups, school communities, environmental agencies and groups, kindergartens, tertiary education institutions; health agencies, education agencies, professional teachers associations met to discuss what being a sustainable school and site means.

The focus of the groups discourse were the three interconnecting dimensions identified by Sterling

- Perception (empathy, ethos, values, beliefs, visions, principles, futures)
- Conception (understanding, ways of knowing, content, perspectives, patterns, connections)
- Practice (wisdom, participative learning, action, positive synergies, pedagogy, community building).

The participants in groups rotated through each of the dimensions adding to the ideas of the previous groups. This was based on an understanding that sustainability as learning as change involves people engaging with other people’s thinking and sharing their thinking.

Key points arising from the panel session that reported back on the discourse included [Note that the points have not been edited]:

Perception Dimension
- Connected curriculum

15 P53 Sterling
• When students and teachers feel they matter – are listened to - they will empathise with the programme
• Association with Essential Learnings
• Sustainability – not just environmental – health, job, relationships, cultures, housing
• Sustainability of disposition within communities – current action and future action – to be disposed to be sustainable – translate to current action
• Respect – valuing – enacting respect
• Transforming institutions is important for sustainability – teachers need equipping
• Developing worldview – impact on action – optimism to change the world

Conceptual Dimension
• Local to global – identifying, modelling and explaining (practical uses)
• Awareness of self, community and beyond
• Self - curriculum - critical ecological literacy – critical questioning and readings of environmental systems
• Awareness of learning systems, cultural processes and ecosystem processes
• Holistic learning
• Making connections
• Understanding system limitations
• Learning processes very important, young people empowered through involvement, integrity, active learning integration of theory and practice
• Schools as agent of change within the community

Practice Dimension
• Vision based on ethics that is shared and supported by structures and processes that enable inclusive democratic action
• Shared community ownership and collection of qualitative and quantitative data. Is the difference observable? Rich measures of change.
• Everybody - local school and broader community, inclusive of all groups joined up/ interconnected services and approaches
• Valuing different knowledges and successful practices - no one person has ownership of knowledge / shared and modelled leadership - practitioners - resulting in action - recycling bins , school audit of energy
• Sharing knowledge and successful practice - modelling good practice shared ownership and responsibility – celebration!! - acknowledging and reinforcing peoples efforts and achievements transferring the knowledge into action and action into knowledge

Outcomes of the seminar include:
• Shared understandings around common perceptions, concepts and practices associated with being sustainable educational communities
• Broadening networks within and between diverse groups interested in sustainable education
• The informing of the development of a draft South Australian model for Sustainable Schools and Sites within the context of state and national initiatives in Sustainable Futures and Sustainable Schools.

The South Australian model for Sustainable Schools is still being formed. The early draft proposal is that we work with key groups of Districts (there are 18 Education Districts) to develop a focus on Sustainable Schools’ practices within the districts that grow from existing and emerging initiatives.

The plan is to work with four or so districts, with each district having a slightly different focus while, at the same time, sharing their experiences. The driving groups will be students, parents and communities and Government and NGO agencies. The experiences of the schools and districts will be gathered to inform ongoing policymaking and practice at the local and state level.

We are very aware that whatever we do must be centred in each school within its community and based on sustainability as learning and learning as sustainability at the community level. For it is at the local community level, with appropriate district, state and national support, where ongoing growth of sustainable communities will occur.

This can be a slow process and can at times seem uncoordinated, but as Sterling says Knowing (and therefore action) is ... approximate, relational and provisional, and learning is continual exploration through practice.\textsuperscript{16}

REFERENCES

Dryden, John (1996), Student Voice in the Process of Educational Reform, University of South Australia (South Australia) - Paper delivered to the South Australian Civics and Citizenship Education Reference Group in 1996.

Fien, John (June 2001) Education for Sustainability, Tela Series, Australian Conservation Council


\textsuperscript{16} P61 Sterling
Thomson, Pat (2003) Active Citizenship Action Research Projects, University of South Australia (South Australia) - Final Report for the Department of Education and Children’s Services and the South Australian Civics and Citizenship Education Professional Development programme
APPENDIX ONE - THE NATIONAL SUSTAINABLE SCHOOLS PROGRAMME

The establishment of the National Environmental Education Network (NEEN) is a key initiative of Federal Department of Environment and Heritage National Action Plan Environmental Education for a Sustainable Future. NEEN is made up of representatives from Commonwealth, State and Territory environment and education agencies. NEEN aims to help governments coordinate the delivery of environmental education, promoting a more efficient use of scarce resources and achieving better environmental outcomes.

A major initiative of NEEN is the national Sustainable Schools programme. With the assistance of Federal funding Sustainable Schools trials are occurring in NSW and Victoria.

The NSW trial is being co-managed by Resource NSW and the NSW Department of Education and Training and is supported by over 20 other agencies. The existence of the NSW Environmental Education policy for schools and the Learning for Sustainability 2002-2005 policy, which requires all government departments to work together to reach common sustainability goals, provides substance to the project. The project is being mainly delivered through the network of 23 NSW Environmental Education Centres.17

The Victorian trial is being co-managed by the Gould League and CERES Environment Park with Department of Education and Training support. The project is based on an extension of the Waste Wise Schools programme, run by the Gould League, to include areas of biodiversity, energy and water in conjunction with a core module on Becoming a Sustainable School.18

17 For further information on the NSW Sustainable Schools project go to http://www.wetlands-e.schools.nsw.edu.au/background_information.htm
17 For further information on Vic Sustainable School project go to http://www.gould.edu.au/article.asp?id=6834
18 SAPPA Email to members, February 2002
APPENDIX TWO - SUSTAINABLE SCHOOLS AND SITES SEMINAR
PROGRAM

8.55 – 9.05 Welcome

9.10 - 10.30
Keynote Emeritus Professor Ian Lowe, Griffith University, Queensland
Rachel Cain (Youth Environment Council of South Australia),
Dr Rob Morrison (Member of National Environmental Education Council)
Mark Williams (Assistant Director Curriculum)
sharing their personal perspectives on sustainable futures.

10.30 – 11.00 Morning tea

11.00 – 11.20 Sustainable Schools
Clarification of the process for the Group Dialogue Sessions.
The sessions are based around Stephen Sterling’s views on ‘education as sustainability’ - ‘sustainability as education’ and the interconnections of the three dimensions of
1. Perception (ethos, values, beliefs, visions, principles, futures)
2. Conception (ways of knowing, understandings, content, perspectives, patterns, connections)
3. Practice (participative learning, action, positive synergies, pedagogy, community building). Based around Chapter 3 of Sterling’s book

Group dialogue sessions
11.20 - 12.10 Session 1
1/3 of participants on each question
Group A - Perception; Group B - Conception; Group C – Practice

12.10 – 12.50 Session 2
Group A - Practice; Groups B - Perception; Groups C - Conception
(Building from what the previous group has done)

12.50 – 1.30 Lunch

1.30 – 2.30 Session 3
Groups A - Conception; Groups B - Practice; Groups C - Perception
(Building from what 2 previous groups have done). Preparation of summary of main values/ principles/points for final session and choose panel representative (one per group).

2.30 – 2.50 Break
Meeting of the panel representatives to discuss panel session format.

2.50 – 3.50 Panel
Drawing together of main values/principles/points for each of the 3 dimensions.

3.50 – 4.00 Plenary