EDUCATION AND SUSTAINABLE DEVELOPMENT

Elaine Nevin addresses the role of education in achieving sustainable development and explores the relationship between development education (DE), education for sustainable development (ESD) and environmental education (EE) in an Irish context. The article examines how these three 'educations' can develop and grow, and considers examples of 'good practice' in ESD in the context of Irish national policy frameworks, particularly focusing on how ESD can fit into these frameworks.

What is sustainable development?

The concept of sustainable development emerged as a response to a growing concern about human society's impact on the natural environment. The concept of sustainable development was defined in 1987 by the Brundtland Commission (formally the World Commission on Environment and Development) as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs' (Brundtland, 1987). This definition acknowledges that while development may be necessary to meet human needs and improve the quality of life, it must happen without depleting the capacity of the natural environment to meet present and future needs. The sustainable development movement has grown and campaigned on the basis that sustainability protects both the interests of future generations and the earth's capacity to regenerate. At first it emphasised the environment in development policies but, since 2002, has evolved to encompass social justice and the fight against poverty as key principles of sustainable development.

There are two commonly used visualisations of how the various aspects of sustainable development interact: one is of three overlapping circles representing the three pillars of sustainable development - economy, society and environment (fig 1.a). The other shows the economy embedded in society, which in turn is embedded in the environment (fig 1.b). The latter focuses on the central role that the environment plays in human society and in turn in the economy.
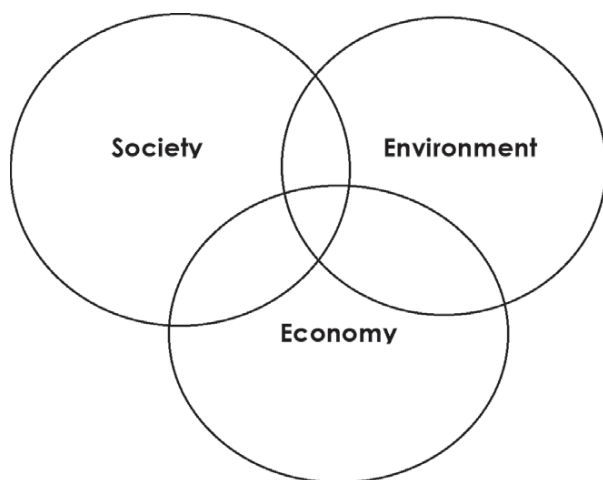
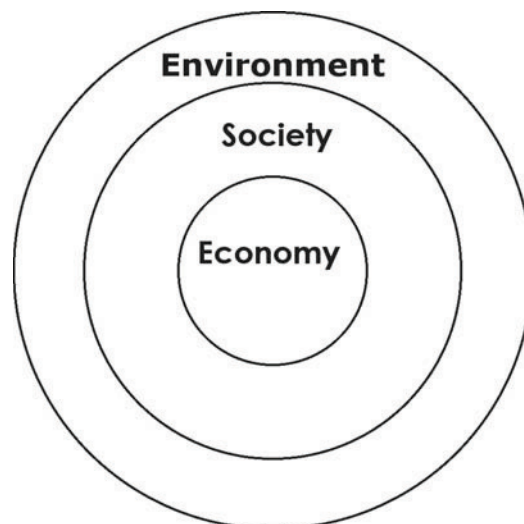**Fig 1.a. Overlapping pillars of Sustainable Development**

Fig 1.b. Concentric circles visualization of Sustainable Development

The underlying concepts of sustainable development are defined by Agenda 21, which is the Action Programme for the 21st century adopted by governments at the United Nations Conference on Environment and Development (also known as the Earth Summit) in 1992. The Summit confirmed its resolve to promote the three pillars of sustainable development as interdependent and mutually reinforcing concepts.

What role does education play in sustainable development?

Good quality education is an essential tool for achieving a more sustainable world. This was emphasised at the UN World Summit in Johannesburg in 2002 where the reorientation of current education systems was outlined as key to sustainable development. Education for sustainable development (ESD) promotes the development of the knowledge, skills, understanding, values and actions required to create a sustainable world, which ensures environmental protection and conservation, promotes social equity and encourages economic sustainability. The concept of ESD developed largely from environmental education, which has sought to develop the knowledge, skills, values, attitudes and behaviours in people to care for their environment. The aim of ESD is to enable people to make decisions and carry out actions to improve our quality of life without compromising the planet. It also aims to integrate the values inherent in sustainable development into all aspects and levels of learning.

There are a number of key themes in ESD and while the dominant focus is on environmental concerns, it also addresses themes such as poverty alleviation, citizenship, peace, ethics, responsibility in local and global contexts, democracy and governance, justice, human rights, gender equality, corporate responsibility, natural resource management and biological diversity. It is generally accepted that certain characteristics are important for the successful implementation of ESD, reflecting the equal importance of both the learning process and the outcomes of the education process (adapted from 'UN Decade of Sustainable Development' UNESCO Nairobi Cluster, 2006). ESD should:

- **Be embedded in the curriculum in an interdisciplinary and holistic manner**, allowing for a whole-institution approach to policy making;
- S**hare the values and principles** that underpin sustainable development;
- **Promote critical thinking, problem solving and action**, all of which develop confidence in addressing the challenges to sustainable development;
- **Employ a variety of educational methods**, such as literature, art, drama and debate to illustrate the processes;
- **Allow learners to participate in decision-making** on the design and content of educational programmes;
- **Address** local as well as global issues, and avoid jargon-ridden language and terms;
- **Look to the future,** ensuring that the content has a long-term perspective and uses medium and long-term planning.

To promote ESD, the United Nations Decade of Education for Sustainable Development, 2005-2014, (DESD) was adopted by the UN General Assembly with the United Nations Educational, Scientific and Cultural Organisation (UNESCO) designated as the lead agency for promotion throughout the decade. The decade pursues a global vision 'of a world where everyone has the opportunity to benefit from quality education and learn the values, behaviour and lifestyles required for a sustainable future and for positive societal transformation' (www.unesco.org/education/desd).

The goal of the decade, as outlined by UNESCO, is to integrate the principles, values and practices of sustainable development into all aspects of education and learning. This aims to encourage changes in behaviour that will create a more sustainable future. One of the most important aspects of the DESD is the recognition that ESD must engage a wide

range of stakeholders from government, private sector, civil society, non-governmental organisations and the general public.

In its International Implementation Scheme (IIS) for DESD, UNESCO states that ESD is fundamentally about values, particularly respect for others, including those of present and future generations, for difference and diversity, for the environment and for the planet's resources (UNESCO, 2006). Education enables us to understand ourselves and others and our links with the wider natural and social environment; this understanding serves as a durable basis for building respect. Along with a sense of justice, responsibility, exploration and dialogue, ESD aims to move us toward adopting behaviours and practices which will enable us all to live a full life without being deprived of basic human needs.

Overview of good practice in Ireland

In February 2007, ECO-UNESCO undertook a research project on behalf of Comhar SDC (Sustainable Development Council) on education for sustainable development in Ireland (ECO-UNESCO, 2007). The research remit included the United Nations Economic Commission for Europe (UNECE) Strategy on ESD, European Union (EU) and Irish government policy frameworks, international case studies, and an overview of existing good practice in ESD in Ireland. The research methodology included a questionnaire based survey, adapted from the UNECE guidelines on good practice initiatives, and desktop research to identify examples of good practice projects and programmes in the area of ESD in Ireland.

The questionnaire was circulated to a wide range of groups in the formal and non-formal education sectors, including subject associations, subject support services, teachers' unions, education centres, Vocational Education Committees (VECs) and youth organisations. Target groups also included non-governmental organisations (NGOs) working in the environmental, development, human rights, community and voluntary sectors, and businesses associations including the Irish Small Firms Association, the Irish Small and Medium Enterprise association, the Irish Business and Employers Confederation (IBEC) and others.

According to UNECE, projects and initiatives are considered good practice if they are closely related to ESD, generate ideas and contribute to policy development. They must have some of the following outcomes and characteristics:

- Focus on educational and learning dimensions of sustainable development;

- Innovative development of new and creative solutions to common problems;
- Make a difference and have a tangible impact on those concerned;
- Have a sustainable effect;
- Have the potential for replication;
- Support evaluation in terms of innovation, success and sustainability.

Although the questionnaire response rate was relatively low (out of approximately 1,200 questionnaires circulated by email, 45 completed surveys were received) it did reflect a higher level and greater diversity of initiatives and providers in the area of ESD than had been anticipated. The highest response rate came from the environmental sector reflecting a wide range of programmes in formal, non-formal and informal education. ESD's traditional associations with environmental education (EE) have allowed it to consolidate existing links in countries where EE strategies are in place. These associations are based on ESD's placement of the environment at the centre of sustainable development.

There was a low response rate from some of the sectors approached including the business, media, community and voluntary sectors, most likely due to the perception of ESD as a primarily environmentally-oriented concept. However, this assertion cannot be fully verified as the low response could also be attributed to other factors such as heavy workloads.

The research project on ESD highlighted some examples of good practice within the formal, non-formal and informal sectors such as the ECO-UNESCO's Young Environmentalist Awards programme and the Green Schools programme (known as 'ECO-Schools' internationally). ESD initiatives in further education highlighted by the research included West Cork Permaculture's 'Permaculture Design' course, Clare Adult Education Centre's 'Environmental Trends and Impacts' programme, Kimmage Development Studies Centre's 'Economics of Sustainability' programme and ECO-UNESCO's Further Education and Training Awards Council (FETAC) accredited module entitled 'Introduction to Sustainable Development'. In the youth sector, the National Youth Development Education Programme and the ECO-UNESCO 'Youth for Sustainable Development' programme were acknowledged as good practice initiatives in youth work.

Other programmes and initiatives included the Trócaire and City of Dublin Vocational Education Committee (CDVEC) Curriculum Development Unit Citizenship Studies Projects, the Royal Institute of the Architects of Ireland Continuing Professional Development programme, the Just Forests 'Wood of Life', the Global Action Plan (Cork) 'Ecosaver programme' and

the Cultivate Centre in Dublin, which runs various courses including the Community Powerdown Toolkit.

In initial teacher training the work of the Ubuntu Network, based in the University of Limerick, was highlighted based on its support of the integration of development education (DE) and ESD into post-primary Initial Teacher Education (ITE) in Ireland. The Development and InterCultural Education (DICE) project also works in ITE at primary level. A significant development since the compilation of the research project has been the certification of a Regional Centre for Expertise at the University of Limerick following an application led by the Ubuntu Network in conjunction with DICE on behalf of a network of groups (http://www.ubuntu.ie/).

The research project also identified potential new opportunities for the delivery of ESD within the education system. For example, at present there are opportunities available within the primary school curriculum, in subjects such as social, environmental and scientific education (SESE) and social, personal and health education (SPHE) to promote ESD. Moreover, the nature of the curriculum and the flexibility of class timetabling allow the teacher to focus on the interrelationship between subject areas, which makes the integration of an ESD approach easier.

The secondary school system offers some opportunities for the integration of ESD, however, second level timetabling and structure do not easily allow for links to be made between subject areas, which is an integral element of ESD. Curriculum areas such as civic social and political education (CSPE), geography, science, social, personal and health education and some areas of business studies provide the best opportunities for ESD integration. There are new developments in the Senior Cycle with a review underway highlighting available opportunities for the delivery of ESD.

Traditionally the higher education system in Ireland has comprised the university sector, the technological sector and the colleges of education, all of which are autonomous and self-governing, although substantially funded by the state. In recent years, a number of independent private colleges have appeared and grown although there has been limited progress in some third level institutions in addressing the issue of a whole school approach to ESD. On the other hand, many third level institutions have introduced courses in sustainable development: the Masters of Science in Sustainable Development at the Dublin Institute of Technology, the new doctoral programme at University College Dublin, Waterford Institute of Technology's Sustainability and Environmental Awareness For All (SEAA), Tipperary Institute's Bachelor of Arts programme in Rural Development and American Business College's module on sustainable business. These courses and programmes are often oversubscribed and interest is growing

all the time. It is also important to note that some education initiatives are leading to action on ESD issues. There are a growing number of organisations becoming involved in various cross-cutting themes, such as climate change.

At an international level, there are varying degrees of work underway in the area of ESD. In 2005, UNECE member states adopted the UNECE Strategy for ESD (UNECE, 2005) as an operational tool to implement ESD which committed governments to incorporate sustainable development themes into their formal, non-formal and informal educational systems. As a result, there are now many countries in the EU where national action plans and strategies in ESD have been developed and are being implemented. The UK's Sustainable Development Education Panel developed a draft strategy in 2003, which continues to be used as a foundation for sustainable development action plans in different departments (The Sustainable Development Education Panel, 2003). Among other countries which have completed implementation plans for the Decade of ESD are Finland and the Netherlands (Finnish National Commission on Sustainable Development, 2006; Ministerie van LNV, 2004). Beyond Europe, Australia, New Zealand and Canada have a strong tradition of environmental protection and conservation, with Australia having just published a new strategy for the Decade (Department of the Environment and Heritage, 2006).

The research also explored existing frameworks in Irish and EU contexts and explored areas where ESD could build on existing work and be incorporated therein. Ireland does not have a strong tradition of environmental education in terms of government policy. This is unusual compared to the rest of Europe and countries such as Australia and Canada where ESD has built on environmental education. In Ireland however, there is a strong tradition of development education as reflected in the new Irish Aid strategy on development education which also provides useful opportunities for exploring ESD (http://www.irishaid.gov.ie).

The process of developing a National Strategy of Education for Sustainable Development is underway in Ireland which will provide a framework for ESD implementation in tandem with a review of the National Strategy of Sustainable Development. Comhar's recommendations on the review of the National Sustainable Development Strategy include the implementation and resourcing of an action plan for ESD, the embedding of ESD principles in the curriculum at all levels, the integration of ESD into professional training at all levels, and adequate and appropriate recognition of ESD's importance within the strategy (Comhar SDC, 2007). The National Steering Committee on Education for Sustainable Development comprises representatives from a variety of organisations including three major government departments: the Department of Environment, Heritage

and Local Government, the Department of Education and Science and the Department of Foreign Affairs. This is an example of a collaborative working model between departments and provides an excellent opportunity for the growth of education for sustainable development in Ireland.

What is the relationship between ESD, EE and DE?

The relationship between environmental education, education for sustainable development and development education is complex, and the three often display more similarities than differences. All three are essentially concerned with behavioural change through education and the promotion of values, attitudes and understanding. A core value promoted by the three sectors is respect: respect for yourself, respect for others, respect for the world we live in and respect for the planet. However, a closer examination of each sector suggests that each has a primary aim or focus that sets it apart from the others.

Environmental education developed from the concern that human development was having profoundly damaging effects on the natural environment and its primary aim is the protection and conservation of the environment including natural habitats and ecosystems. Development education's primary concern is the reduction of poverty, the promotion of social justice and the improvement of quality of life for people. It addresses basic human needs and links local and global actions.

Development education focuses on interdependence and interconnectedness between people on both a global and local perspective but does not traditionally extend this to ecosystem interdependence or specific environmental concerns. DE primarily focuses on social issues of human rights, social injustice, human poverty and world citizenship. It is concerned with the building of knowledge, understanding, skills, attitudes, values and behaviours necessary to enable people to critically examine the world, its development and to act to make it a more just and equitable place. It has much in common with other forms of social and political education (DCI, 2003). Human rights education, peace education, multicultural education, education on race and race issues, environmental education and ultimately citizenship education all have overlapping features and concerns with development education, although each has its own distinct character and focus.

Education for sustainable development's primary concern is the improvement of the quality of life for people without damaging the environment. Therefore although all three 'educations' have much in common they differ in their primary goal. The relationship between ESD

and other educational sectors is the subject of ongoing debate with the latter often regarding ESD as being 'part of' their education. Moreover, what many regard as the closest sector to ESD - environmental education - is not necessarily content to be seen as an equivalent to ESD. Many believe that ESD should embrace all these educational sectors to a certain level and, with sustainable development assuming increasing importance in policy and educational contexts, there will be a need for each of these sectors and their practitioners to explore more closely the commonalities between them.

Education for sustainable development expands upon the social and human rights dimension in DE and other educational sectors to include a strong environmental focus. ESD shares many similarities with DE and addresses issues such as climate change, oil shortages, water pollution, the need to maintain biodiversity as well as poverty alleviation and human rights. ESD and DE also employ similar methodologies including: critical thinking and problem solving, experiential learning, role play, guided interpretation, debate, futures thinking and participatory decision making. ESD also helps to develop links between the lives of people locally and in the developing world and encourages us to link our actions at a local level to the needs and management of the planet and its population.

The underlying principles of ESD as outlined by UNESCO highlight the importance of respect and care for life in all its diverse forms: this involves the protection and restoration of the earth's ecosystems, respect for the dignity and human rights of people, respect for the rights of future generations and respect for cultural diversity.

On the basis of the inter-sectoral relationships described above can we suggest that ESD is the umbrella for many of the other 'educations' or is ESD an element of all these 'educations'? This question is likely to sustain further debate but we can suggest that in the future these forms of education begin to identify areas of commonality with each other, begin to work more collaboratively in areas of common good and work more closely to achieve their goals. Each sector may be concerned with an ultimately different goal but working together in the achievement of areas of common good is likely to result in a more strategic approach and more beneficial outcomes. Education for sustainable development can provide the space for this collaborative work to unfold.

Education for sustainable development in ECO-UNESCO

ECO-UNESCO is an environmental education and youth organisation. As such, the environment plays a central role in the definition of ESD, while still placing great importance on the education of young people which is

participative, inclusive and facilitates their own decision-making. As an affiliate of the World Federation of UNESCO clubs, centres and associations, ECO-UNESCO places great importance on a global perspective in our conception of education for sustainable development to examine how our actions are connected to the world at local, national and international levels.

Central to all of the work of the organisation is the empowerment of young people and the protection and conservation of our environment from a local and global perspective. The aims of the organisation are to raise environmental knowledge, awareness and understanding in young people, the promotion of the protection and conservation of the environment, and the personal development of young people (http://www.ecounesco.ie). In essence ECO-UNESCO examines the 'bigger picture' in respect to issues such as environment, development and global justice. This 'bigger picture' is translated into local and personal action by enabling young people, their leaders and their teachers to explore the links between their lives, the environment and the global context.

Moreover, ECO-UNESCO's work is innovative and has tried over the years to develop programmes and services that are coherent, engaging, empowering and support the development of skills in critical thinking and analysis. Examples of the programmes delivered by ECO-UNESCO include the Young Environmentalist Awards which encourage groups to undertake a local environmental action project to encourage citizenship as well as the development of skills and awareness raising in environmental protection. The ethos of the ECO-UNESCO club is to encourage groups of interested young people to participate in local environmental protection with the opportunity to link with the international network of UNESCO clubs and centres. These clubs and centres are located in the global North and South and provide an opportunity for young people to develop links in the developing world.

Education for sustainable development also works toward social inclusion and this is the focus of ECO-UNESCO's ECO-Choices programme, a drugs prevention and awareness initiative that highlights the environment's key role in the well-being of people and delivers empowering environmental action projects to young people. The ECO-Choices programme uses action projects, outdoor education and personal development work to encourage young people to take an active role in their environment.

One of the most recent ECO-UNESCO programmes is the Youth for Sustainable Development programme. This uses a variety of methods to inspire, empower and engage young people in sustainable development. The programme comprises a peer education programme, which is a youth-led initiative where young people between the ages of 12 and 18 are given the

opportunity to develop knowledge of their environment and learn skills to communicate and engage with their peers. This programme also includes a whole organisation approach manifested in the development and delivery of a training course for organisations primarily focused on the youth sector with an opportunity to expand to other sectors. This will include a sustainability audit whereby organisations will be encouraged to review their practices and develop policies and programmes that promote sustainable development.

A third element of this programme is exchange. As an affiliate of the World Federation of UNESCO Clubs, Centres and Associations (WFUCA), we place great emphasis on the global perspective of ESD where our actions are connected to the world at a local, national and international level. This will provide young people with the opportunity to create links with young people in a developing country through the UNESCO club network. Another element of the programme is the development of an ESD newsletter and webpage (http://www.ecounesco.ie/youth_sustainable.aspx). The programme covers many of the elements of ESD where global and local dimensions are addressed. Consultation with young people prior to delivery enables us to feed their views into the programme content. The programme also works with some 'at-risk' youth groups and therefore aims to ensure its relevance to those in more marginalised communities.

Programmes like Youth for Sustainable Development are good examples of education for sustainable development. They address the needs of the target group and provide them with an opportunity to feed into the programme development. The methods used in the programmes are transferable to any ESD programme including schools' initiatives and community development work. Moreover, the development of practical skills such as teamwork, communication skills and critical thinking is also encouraged. The local to global dimension is also important to any ESD project to promote understanding that local actions can have global consequences.

Conclusion

An overview of ESD in Ireland shows that the quality of programmes and work delivered is of a very high level. Moreover, the diversity of programmes offered at present provides a good basis for any action plan on education for sustainable development and useful opportunities for inter-sectoral collaboration on common issues and areas. The debate about the relationship between ESD, EE and DE looks set to continue but in the short-term these education sectors need to network, share their practice and learn from each other.

Stop Climate Chaos, a climate change campaign network, has brought together a variety of organisations - environmental, development, youth, church, etc. - to campaign together for the reduction of greenhouses gases. This is a good example of inter-sectoral co-operation on an issue of common concern where the groups involved have agreed on strategies to achieve the network's primary aim of introducing a climate change law to reduce greenhouse gas emissions, limit global temperature increases to two degrees or less, and support developing countries to adapt to climate change.

Each of the groups involved in the campaign may be drawn from different sectors and have different reasons for affiliating, but are working together for a common good. The climate change campaign could serve as a model of good practice for environment, development and sustainable development educators in how they can work together in a network for the pursuit of shared goals. Innovation and new projects in ESD and across all related education sectors need to be encouraged and developed to engage civil society groups in actions toward a sustainable world.

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