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Divergent Evolution in Education for Sustainable Development Policy in the United Kingdom: Current Status, Best Practice, and Opportunities for the Future

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Abstract: This paper discusses the current status of all aspects of education for sustainable development (ESD) across the United Kingdom (UK), drawing on evidence from its political jurisdictions (England, Northern Ireland, Scotland and Wales), and setting out some characteristics of best practice. The paper analyzes current barriers to progress, and outlines future opportunities for enhancing the core role of education and learning in the pursuit of a more sustainable future. Although effective ESD exists at all levels, and in most learning contexts across the UK, with good teaching and enhanced learner outcomes, the authors argue that a wider adoption of ESD would result from the development of a strategic framework which puts it at the core of the education policy agenda in every jurisdiction. This would provide much needed coherence, direction and impetus to existing initiatives, scale up and build on existing good practice, and prevent unnecessary duplication of effort and resources. The absence of an overarching UK strategy for sustainable development that sets out a clear vision about the contribution learning can make to its goals is a major barrier to progress. This strategy needs to be coupled with the

establishment of a pan-UK forum for overseeing the promotion, implementation and evaluation of ESD.

1. Introduction

The idea that education should focus on the links between the quality of the environment and human socio-economic development is well established. As Vare and Scott [1] note, this is premised on three propositions: (i) humans are increasingly living on the Earth in ways that are over-taxing the biosphere's ability to support life; (ii) the growing inequalities between people across the world in terms of access to resources and achieving well-being are both an affront to human dignity and a source of international and intercultural instability. Together, these arguments imply that a different way of socio-economic development is needed: one that will enable everyone to live well, and within the Earth's ability to support us, now and in the future. These are captured by the idea of sustainable development which gained prominence, largely through the *World Conservation Strategy* and the Brundtland Report (*Our Common Future*), that saw sustainable development as a socio-economic process in which "the exploitation of resources, the orientation of technological development and institutional change, are made consistent with future as well as present needs" [2]. Proposition (iii) is that, if the first two issues are to be successfully addressed, education, viewed broadly, is a critical social process, and hence there is a need for culturally and contextually-relevant education for sustainable development (ESD). As UNESCO, the United Nations Education, Scientific and Cultural Organization puts it: "Building the capacity for such future-orientated thinking is widely held to be a key task of education" [3]. The idea of ESD was developed in the 1990s through *Caring for the Earth: a strategy for sustainable living* [4], the 1992 *Earth Summit* in Rio, and *Agenda 21* [5]. The UN's millennium development goals, agreed in 2000, have since become seen as core ESD concerns, and the *Johannesburg World Summit* in 2002 stimulated the UN Decade for ESD (UNDESD 2005–2014), which is now nearing its end.

At this point, it is important to note that, in the late 1990s, the UK government began to devolve responsibility for education and other policy areas to the political jurisdictions of Northern Ireland, Scotland and Wales (see next section). This has allowed a form of "divergent evolution" in ESD to take place across the UK, which enables us to review progress over time, especially in respect of barriers to, and enablers of, change [6]. As ESD can be thought of as a process of learning how to make decisions that consider the long-term future of the economy, ecology and equity of all communities, a comparative critical analysis of ESD implementation within the constituent parts of the UK over the past decade or so (that coincides with much of the UNDESD) is instructive.

The most recent surveys of progress on the implementation of ESD in the UK were undertaken by the UK National Commission for UNESCO [7,8]. This paper builds on that work and sets out a succinct account of the current status of ESD across the UK. It draws on evidence from various sources from England, Northern Ireland, Scotland and Wales, which formed the basis of a 2013 Policy

Brief published by the UK National Commission for UNESCO [9]. The Brief's main purpose was to inform the UK government of progress on the integration of ESD across all of the learning contexts in which issues relating to sustainability can be taught and learned. It also assessed how far the UK had realized the objectives of the UNDESD.

The goals of the Decade [10] can be broken down into four key objectives:

- facilitating networking and collaboration among stakeholders in ESD;
- fostering greater quality of teaching and learning of environmental topics;
- supporting countries in achieving their millennium development goals through ESD efforts; and
- providing countries with new opportunities and tools to reform education.

The UK government signed up to the Decade in 2005, sharing the belief that education has a key role in the development of the values, behavior and lifestyles required for a sustainable future. Reports and international updates on the Decade, for which UNESCO is the lead agency, are regularly issued [11–14].

It is not the purpose of this paper to add to the critical accounts of ESD practice across sectors that are increasingly available [15–22]. Rather, we set out to consider the idea of ESD from the educational policy perspective, and examine the tensions around the enactment of policy in relation to sustainability, and the difficulties inherent in influencing education systems, and society more generally. We take the UK as a multiple case study. In particular, the paper sets out to provide an analysis of progress in support of the UK government's objective for sharing best practice in all learning contexts. This breadth of view has now assumed a much more important policy priority given the UK coalition government's current focus on stimulating economic growth by creating a substantial green economy linked to climate change adaptation UK [23–25], and the Scottish Government's [26] separate and somewhat more extensive commitments. The enhanced national focus on quality and standards in all forms of educational provision is also highly relevant since contemporary evidence [27,28] indicates that good practice in ESD leads to better learner outcomes. It is also timely as UNESCO debates the impact of the DESD and its follow up beyond 2014.

In relation to policy, however, because of the contested nature, purposes and status of sustainable development, there must be dilemmas inherent in our understanding of ESD. It follows that any policy analysis is beset by a number of conceptual issues and not least by how sustainable development itself is conceptualized. Viewed as an instrumental attempt to square the circle between economic growth and environmental protection, it continues to be criticized [29,30], and is the reason some educators view ESD with hostility [31,32]. Others remain more positive, seeing sustainable development as a process through which we can try to learn to live more in tune with the environment, and ESD as a means to aid this transition; that is, sustainable development is seen as a learning process through which we can (if we choose) learn to build our capacity to live more sustainably, and to learn from the future as it emerges [33–38]. In this sense, it is not enough to say that sustainable development and such learning need to go hand in hand. Rather, it is crucial to recognise that sustainable development will not be taking place where learning is not happening. From a public policy perspective, the kind of ESD that is promoted will depend on the view of sustainable development that is espoused, or whether one is espoused at all.

Our case studies of the four different part of the UK in the next sections illustrate how these tensions play out in relation to current education policy and the support of other learning activity.

2. The UK Political Context

The UK has a partially-devolved political constitution. In addition to the London-based UK government itself, there are devolved administrations and directly-elected parliaments in Northern Ireland, Scotland and Wales. Although the degree to which these can raise taxes, if at all, and the extent of their devolved policy responsibilities, varies significantly, each has responsibility for primary, secondary and tertiary education provision and funding, and each can augment the UK's policies on sustainable development with administration-specific arrangements. There is no separate devolved administration for England, which is governed through the UK parliament and civil service. It follows from this settlement that different education, and hence ESD and sustainable development, policies exist in the four constituent parts of the UK.

A key aspect of how the political landscape has changed in the UK since the 2010 survey was the UK general election that year. This resulted in the formation of a coalition government for the UK whose education (and other) policies are influenced by a guiding philosophy for smaller and less directive government [39] which has meant that overt, central policy support for a range of issues has been either withdrawn or reduced. Sustainable development and ESD are cases in point. For example, whilst the DfE website illustrates some of the benefits of a sustainable school, and contains relevant resources, ministers stress that it is up to schools to decide whether such a focus is important to them. As implied above, this only applies to the English context. In a similar way, the UK government withdrew central funding from the Sustainable Development Commission, which had the statutory remit of advising it on all matters relating to sustainable development; as a result, it, and the focused, critical friend, advice it offered, ceased to exist.

3. The UK ESD Context

It is clear from a range of UNESCO publications [3,10–12] that all sectors can make a contribution to ESD. Schools can expose all young people to foundation ideas and skills that prepare them for roles as future citizens. Universities have a key research role, higher and further education can contribute through their close links with employers and the professions, and a specialist focus on employment-related education and training. Community-based ESD activity can be crucial in making a difference to people's lives. Yet, it is equally clear [14] that none of this is yet done systematically or well enough to be effective. Nor is the purpose of the UN Decade, and the role of UNESCO in promoting this, widely enough understood or appreciated, and it has had a mixed influence and impact on many of the learning contexts in which sustainability might be taught and practiced. It is clear from recent research [7–9] that this is as true of the UK, taken as a whole, as it is elsewhere.

There are differences across the UK, however, and the analysis of the current status of ESD across the UK's four administrations, which follows, sets out key differences along with recommendations to enhance the key role of education in furthering the UK government's evolving objectives for a more prosperous and sustainable future [40,41]. Before this, a broader view is taken, including that established by the recent UNESCO UK ESD reports.

A 2010 UK study [8], which built on the 2008 one [7], offered an analysis of the strengths and weaknesses of ESD provision at the Decade halfway point, providing a general overview of activity in key areas, including noteworthy policy changes and significant events and achievements, and new research and literature. Its purpose was to provide a broad view of key drivers that could inform ongoing research about UK progress on ESD and the DESD. In the first half of the Decade, there was a wide range of sustainability-focused interventions within civil society by government, businesses, trade unions, academia, third sector organizations and professional groups. These focused on changes in policy, regulation and practice, in areas such as carbon reduction, in the use of Fairtrade products, social responsibility, energy savings, waste reduction, *etc.*, and the 2010 report noted that many would have learned a great deal about sustainability and its promotion through this.

Many of the key points highlighted in that report remain pertinent. These include:

(1). The scope for mainstreaming sustainable development learning into government operations, and for government departments to enhance their collaboration over ESD, and render it more coherent, remains considerable.

(2). Climate change was a particularly strong driver of ESD. This was partly a result of the government's increased engagement in climate change-related matters, including establishment of a dedicated ministry, and a national media campaign on carbon reduction, but also because of the increased engagement of non-governmental organizations (NGO) and grassroots actors on climate change. There was concern that this strong focus on climate change obscured the broader focus of both sustainability and ESD. Resisting the reification of something such as climate change education that might rival ESD, was seen as important, as was seeking to ensure that where climate change was a legitimate learning focus, within formal programs of study, for example, its purpose was to help learners gain plural perspectives on the scientific and other issues, appreciate their possible implications, and think about what their own intellectual and practical responses might be.

(3). There are continuing tensions between campaigning, activism, awareness-raising and behavior change (the last of these is still strongly encouraged by government) and more open-ended, and open-minded, learning in relation to sustainability through an exploration of inherent subtleties, complexities and uncertainties by which learners can be helped to come to their own understandings, values and commitments to action. Whilst it is clear that there were those who sincerely believed that it is too late for this liberal view to be taken, the evidence that people do not react well to preaching or doom-laden messages was considered compelling, as was the value that educationalists have a responsibility to explore the complexities of issues and encourage dialogue across disciplines, interests and sectors.

(4). Networks and partnerships for ESD in higher education were well established, encouraged by the Higher Education Academy (HEA), funding councils, the National Union of Students (NUS), and professional networks. Partnerships for ESD across schools also flourished, in particular through regional and devolved administration networks that involve government and non-government stakeholders working in partnership. Sustainable school, Eco-school and global learning programs enjoyed support and popularity from government and non-government stakeholders. Across sectors, there was a clear need for a greater focus on teaching/learning

whilst acknowledging that estates, procurement, management more generally, and research, do themselves give scope for learning: a point that funding councils acknowledge.

(5). Whilst ESD was growing in post-16 learning sectors, it was at an early stage of development in adult and community learning, though there were excellent examples of practice in these settings. Although some vocational provision has made significant progress in integrating ESD into its courses, in many other sectors the integration had been slow or non-existent. Although there was increasing interest shown by the professions in how to incorporate sustainable development into continuing professional development, this remained a minor initiative when set against professional training as a whole.

(6). There was a lack of connection, and hence little synergy, between learning experiences in formal education and what might be learnt through community involvement and third sector capacity building. The growth of the Transition Network [42,43] represents one example where community led innovation was beginning to be supported by academic research. Another dimension was a tendency to see change focused around what individuals and families can do, ignoring that many issues and decisions are only amenable to more concerted social action. Developing social action skills through practice in real-life contexts was seen as a tangible example of where connection between sectors is indispensible.

(7). There was a growth in ESD-related events such as conferences and seminars, with an increase in the number of research and evaluative studies on ESD, though not on post-16 learning and skills. However, whilst the phrase ESD was increasingly used, this did not imply a shared understanding. More research was seen as necessary on where the main gaps in ESD were across the UK, and to show differentials in progress and level of activity and action to support policy in the different sectors. One prominent gap, for example, was the lack of an overview of progress made (as opposed to actions taken). No agreement on major gaps, and ideas on how they might be plugged had been forthcoming.

The paper now examines current ESD policy and practice in each of the UK's four political jurisdictions.

4. Wales

In Wales, the terminology used is Education for Sustainable Development and Global Citizenship (ESDGC), rather than ESD. Wales is unique in the UK in having sustainable development written into its constitution through the Government of Wales Act, 2006 [44].

The Welsh Government (WG) is committed, via a Sustainable Development Bill currently being consulted on, to make sustainable development a "central organizing principle" [45] for all activities and decisions of the government and public bodies in Wales, including schools, colleges and higher education, and also to create an independent sustainable development body for Wales. During early consultation on the Sustainable Development Bill, ESDGC stakeholders were quick to point out the absence of any mention of education as a means of supporting sustainable development. They argued that the lack of convincing evidence of the mainstreaming of ESDGC thus far suggests the need for further statutory support for it.

Since 2009, the picture for ESDGC has changed, possibly reflecting a wider cooling of interest or support. This was evidenced by the transfer of responsibility for ESDGC to the European and International Education section within the government Department for Education and Skills (DfES). Education for sustainable development and global citizenship is no longer managed as a stand-alone agenda, but is now considered to be mainstreamed in wider government sustainable development obligations. Currently explicit responsibility for ESDGC and sustainable development sits within the remits of two government departments, the Department for Education and Skills and the Department for Environment and Sustainable Development. A challenge remains to ensure that education is seen as a powerful means by which sustainable development can be implemented in all policy areas.

4.1. Education for Sustainable Development in Formal Education in Wales

To begin the process of creating a more sustainably literate and globally aware population, the Government originally appointed an ESDGC Champion to work with all education sectors and the youth sector. ESDGC—A Strategy for Action was published in 2006 [46] and updated in 2008 [47] for implementation across all the sectors. Five themes were agreed for the Strategy which remain current: Commitment and Leadership; Learning and Teaching; Organizational Management; Partnerships and Community; and Research and Monitoring. A series of documents were developed in 2008 by the Welsh Government to support the Strategy including a Common Understanding for the Youth Work Sector; ESDGC in the Further Education Sector in Wales; A Common Understanding of ESDGC in Adult and Community-based Learning; ESDGC—A Common Understanding for Schools and Information for teacher trainees and new teachers in Wales [48].

Over 90% of all schools in Wales are registered on the Eco-schools program, which is managed by Keep Wales Tidy. Much of the support for schools, colleges, (as well as youth and adult groups, businesses and the public) in Wales comes from national or regional member-led organizations. A leading one in this context is Cyfanfyd [49], an NGO, which promotes ESDGC in the school, lifelong learning and youth work sectors with the support of the Department for International Development. The ESDGC schools network, operating under the auspices of Cyfanfyd offers teachers, lecturers and others professional development, resources and coordination.

Many schools and colleges have developed excellent practices in terms of environmental management which link to the formal and non-formal curriculum, and have succeeded in gaining various levels in the Welsh Green Dragon environmental management scheme, with eight further education colleges reaching the highest level. A small number of further education colleges have been very successful in the UK-wide Green Gown Awards with Coleg Gwent and Pembrokeshire College being particularly active. Welsh higher education success in these awards has diminished recently.

In the most recent version of the national curriculum for 11–19 year olds in Wales (2008), ESDGC is one of the five themes in the personal and social education (PSE) framework. This aims to foster positive attitudes and behavior towards sustainable development and global citizenship. The framework sets out measurable learning outcomes for ESDGC for pre- and post-16 phases. Local education consortia formed in 2012 have begun to coordinate ESDGC in their regions, for example, the South East Wales Sustainable Education Network.

The education inspectorate in Wales, Estyn, has published guidance on inspecting ESDGC in schools [50], and for adult community-based learning and youth work [51]; their self-assessment guidance for further education colleges and Welsh for Adults centers includes a section on ESDGC. More recently, Estyn has published sector-leading practice in outdoor schools and wellbeing linked to sustainable development. In January 2012, the Minister for Education and Skills remitted Estyn to undertake a two-year thematic report on ESDGC delivery in schools to support future planning and development of ESDGC. The National Grid for Learning (NGfL) developed web pages containing links to resources, support and guidance on implementing ESDGC in schools alongside case studies and examples of good practice.

The Higher Education Funding Council for Wales (HEFCW) strongly supported the higher education sector in evaluating its curricula for ESDGC content and related learning outcomes [52], in developing and implementing an environmental management system, and funding the development of a set of ESDGC indicators for higher education in Wales (the ESDGC development framework).

4.2. Education for Sustainable Development in Non-Formal Education and the Community in Wales

In 2010, the Wales-wide Regional Centre of Expertise in Education for Sustainable Development (RCE Wales), was approved by the United Nations University. RCE Wales has a membership drawn from higher education and the higher education funding council, voluntary agencies, the government and a range of private and public sector organizations. The Centre is coordinated from Swansea University. Initial projects supported by the RCE have focused on food sustainability and energy.

On a regional level, the Swansea Environmental Education Forum (SEEF) provides ESDGC resources for schools, youth and adult groups, businesses and the public and runs the Swansea Sustainable Schools Scheme. Cardiff has the Cardiff Sustainable Education Network (CSEN), which works with schools, colleges and the public in the capital city. Various higher education institutions have links with these groups.

Cyfanfyd [49] has produced a toolkit for youth workers to support the engagement of young people in ESDGC. Other organizations, including the YMCA in Wales, UNA Exchange, and theatre groups such as Messupthemess, have projects in communities supporting global citizenship education.

5. Scotland

Sustainable development is one of the Scottish Government's key national performance outcomes and features in many aspects of government policy. A greener and fairer nation is one of their overarching strategic objectives [53], and it has set ambitious targets for reductions in greenhouse gas emissions through the Climate Change (Scotland) Act 2009. In these processes, the government has emphasized the importance of societal change towards a sustainable future and highlighted the role of education in informing that process.

5.1. Education for Sustainable Development in Formal Education in Scotland

The Scottish Government has made a substantial commitment to the UN Decade of Education for Sustainable Development. It has stimulated activity in Scotland through policy initiatives and the core

justification for these has been laid out in a series of documents, the most recent of which, Learning for Change [53] sets out expectations of schools, universities and colleges, and communities, highlighting that "creating a sustainable future for Scotland will require widespread understanding and huge cultural change—and the key to achieving this is education for sustainable development".

In 2011, the incoming government made a manifesto commitment to explore the concept of One Planet Schools [54]. This signaled an intent to help schools move towards a One Planet future—where they will gradually reduce their use of resources and develop a values orientation that addresses sustainability. The intention is to take a whole school approach to this through the integration of three equally important facets—education for sustainable development, global citizenship, and outdoor learning. A ministerial advisory group report, Learning for Sustainability, was published in December 2012, and Scottish ministers responded in March 2013, accepting all 31 recommendations, almost in full [55]. The report's recommendations articulate with the work of the now independent General Teaching Council for Scotland (GTCS), which has revised its professional standards (December 2012), requiring all teachers to address "learning for sustainability" (defined as for One Planet Schools) in their teaching. This is a significant development that will require a national commitment to pre-service and in-service training of all members of the profession [56].

The recent major revision of the curriculum in Scotland, Curriculum for Excellence (CfE) [57], and its phased introduction has allowed ESD to be fully integrated into many aspects of the curriculum, particularly in technologies, science and social subjects. More broadly, CfE provides the overarching philosophical, pedagogical and practical framework and context in which ESD ought to be applied. One of the four core capacities of all learners defined in Curriculum for Excellence, that young people should become responsible citizens, signals a strong impetus towards living sustainably and equitably.

Sustainability is often a feature of the informal or extra-curricular work of Scottish schools, and almost all schools are registered with the government-supported Eco-school scheme [58], with nearly 50% having achieved a green flag. Other initiatives, such as the John Muir Award, Rights Respecting Schools, Fair Trade Schools and Forest School have also facilitated a wider understanding of ESD in schools. However, as these are not curricular initiatives they are not available to all school pupils, and there is a clear tension between the valuable role of the third sector and core mainstream provision.

5.2. Education for Sustainable Development in Non-Formal Education and the Community in Scotland

A range of initiatives has been established to encourage local communities to engage with sustainable development. These non-formal education streams have been successful modes of learning and of embedding sustainable development across Scotland. The Climate Challenge Fund (CCF) made £37.7 m available to communities in the period 2008–2012, supporting 345 communities across Scotland to take action on climate change and thereby deriving educational benefits [59]. A proportion of all future CCF will support projects run by and for young people; this activity will be titled the Junior Climate Challenge Fund.

In addition to Scottish Government funded initiatives, schemes to build sustainable communities have increased in strength over the years, embracing a "for themselves, by themselves" philosophy, such as those supported through CADISPA (Conservation and Development in Sparsely Populated Areas) [60]. Since establishment in 1987, CADISPA has supported grass-roots community-led initiatives across

rural Scotland and offered guidance on how to address sustainability issues in local areas through a focus on experiential and non-formal learning through place-based action research

The Transition Town movement [61] has had some impact in communities with a growing number of groups in Scotland. There have also been projects in university communities at the University of Edinburgh and the University of St. Andrews. The St Andrews project [62] has worked effectively with both the university and the local town community, recently winning a grant for joint sustainability projects. A United Nations University recognized Regional Centre of Expertise in Education for Sustainable Development (UNU RCE) for Scotland was approved in December 2012 [63]. It has the support of the Scottish Government and will maintain momentum as we approach the end of UNDESD, providing new opportunities for collaborative working between practitioners, academics, government and civil society. Indeed a key feature of the Scottish Government's response to "Learning for Sustainability" is a commitment to establish a "Learning for Sustainability Implementation Group" that will implement the recommendations of the report, working "in partnership with the UN Regional Centre of Expertise to take forward shared objectives" [55].

6. Northern Ireland

Responsibility for Sustainable Development policy in Northern Ireland currently resides within the Office of the First and Deputy First Minister (OFMDFM), which takes a convening role for policy formation and strategic direction. In 2010, OFMDFM published the latest Northern Ireland sustainable development strategy, Everyone's Involved [64], and its related Implementation Plan [65], into which all government departments in Northern Ireland made contributions and commitments. However, there is little evidence in action of a strong commitment by the Northern Ireland Executive to sustainable development as a key policy driver. Since 2007 ESD has been a statutory requirement within the school curriculum and falls under the aegis of the Department of Education.

6.1. Education for Sustainable Development in Formal Education in Northern Ireland

At primary level ESD is built into the World Around Us statutory area of learning, whilst for 11 to 14 year olds, it is included in the statutory areas of learning for Life and Work and Environment and Society. Related key aspects of the Northern Ireland curriculum are Education for Mutual Understanding, and Education for Local and Global Citizenship. Schools and teachers are provided with a series of resources designed to help explain and encourage sustainable development principles within a pupil's overall learning experience. A good practice guide developed by the Interboard Education for Sustainable Development Group [66] was produced partly as a response to the beginning of the UN Decade for Education for Sustainable Development.

Schools are encouraged to adopt an approach to ESD that takes on more than a curriculum focus. The school buildings and building regulations, management of school resources, waste management, and active travel, for example, should all be actively encompassed within a framework for sustainability, alongside the development of strong links with the local community, other local schools and businesses, and the community and voluntary sector. A report in relation to ESD across a sample of schools in Northern Ireland [67], highlighted the central role of strong and inspirational leadership in establishing ESD as part of a whole school ethos, ensuring that ESD is effectively integrated into

school development plans, giving a clearly defined role to an environmental coordinator in schools, and involving all staff (teaching and non-teaching) in taking the lead in developing ESD.

It was hoped by many that a mandatory commitment to Sustainable Development would be included in the 2010 Education (school development plans) Regulations [68]. However, despite the inclusion of a sustainable development clause in the consultation paper, this did not happen. Rather, an annex to the final regulations allows for a more ad hoc, school-by-school, approach to develop.

"Schools are strongly encouraged, in preparing their school development plan, to address ways in which they might promote sustainable development through the schools teaching and learning, leadership and management and engagement with its community" [69].

In January 2009, the Department of Education published, Schools for the Future: A Policy for Sustainable Schools [70]. Whilst this document does reference sustainable development principles and the Northern Ireland Sustainable Development Strategy, it is clearly describing sustainability in different terms. As the document itself states (p. 3), "The focus of this document is on the longer term viability of schools provision". This, for many, was seen as a missed opportunity for developing a wider culture of ESD in and around school communities in Northern Ireland. In the Northern Ireland Executive Sustainable Development Strategy Implementation Plan 2011–2014, "Focus on the Future" [71], the Department of Education has undertaken to ensure that the provision of learning and skills "responds to the needs of the low carbon economy" (p. 40), whilst also acting as the lead department in extending the "implementation of sustainable development within all schools and other educational establishments" (p. 42). The Department clearly states that ESD has a critical role to play in delivering these objectives. The Eco-schools program has over 840 registered schools in Northern Ireland, accounting for 69% of all schools. Of these 261 have achieved green flag status and in the past academic year 97 schools either achieved or renewed their green flags [72].

In higher and further education, a number of ESD initiatives have been taken. The Environmental Sciences Research Institute at the University of Ulster [73] focuses on the organizational and other barriers to implementing ESD; on staff and student awareness and understanding of sustainability issues, and on student-led climate change initiatives. Ulster has also made significant advances on its estates, investing heavily in energy conservation and the installation of renewables. Queen's University Belfast's Institute for a Sustainable World [74] is an international center for interdisciplinary excellence in education and research which aims to provide innovative solutions through science, engineering and the social sciences to the challenges of one-world living.

Northern Ireland colleges have been quick to implement their curricular response to climate change and the economic opportunities presented by green technologies. Specialist courses on wind, biomass and marine energy technologies are widely available. Belfast Metropolitan College [75] has established EnviroMET as part of the College's response to staff and student feedback during the Change Management Review process in 2010 to demonstrate the College's commitment to the principles of sustainable development throughout all areas of its curriculum and corporate activities.

6.2. Education for Sustainable Development in Non-Formal Education and the Community in Northern Ireland

Such success as there has been in advancing ESD in Northern Ireland during the Decade has been marshaled by the NGO sector. The Royal Society for the Protection of Birds and the Red Cross have been especially active and a broad coalition of organizations, under the banner of the ESD Forum [76], embraces the universities, several local authorities and government agencies, as well as a range of NGOs. The Forum provides valuable networking opportunities, training events and regular communications for its wide membership base. Where there is genuine ESD activity in Northern Ireland, it has been fostered by these groups. Their influence and resources enable committed teachers to deliver some excellent work in schools.

A commitment to highlight and encourage ESD principles was contained within the 2008–2011 Northern Ireland Program for Government, through a Sustainable Development and Environment awards scheme [77]. OFMDFM, in partnership with the Department of the Environment has hosted IMPACT Awards in 2010 and 2012 [78] recognizing and rewarding young people from schools and community groups across Northern Ireland. Some excellent projects served to underscore the critical role of enthusiastic, committed teachers—most winning entries were the result of exemplary extra-curricular activity.

7. England

As has been noted, following the UK election in 2010, the government emphasis on sustainable development has been reduced. Climate change is not the strong driver it was largely because of the uncertainty over the government's actual position in relation to this, and to its own extant policy commitments. Non-governmental organization (NGO) and business engagement on climate change, on sustainable consumption, and on transitions to a low carbon economy, remain strong, however, as does many NGOs' commitment to helping the public learn about sustainability and make a difference on the ground.

The approach to ESD in England, as promoted through the UN Decade, has been patchy. Policy has been partial, and at times modest in its ambition and impact, and the extent to which ESD as a phrase and idea was ever promoted and adopted, varied across sectors [8,9].

A number of possible reasons suggest themselves for this. Is it that there is little agreement on what effective ESD is, with insufficient evaluated practice to draw on? Alternatively, is it that the phrase ESD has been used without careful statements of meaning that would have helped practitioners engage with it on their terms, and in relation to their own interests and needs. Or has ESD been reified and presented as something substantive to be adopted ("mainstreamed"), rather than as a means of influencing, enhancing and improving existing education provision, and raising its quality, which research across sectors illustrates that it is effective at doing? A combination of these constraints may well have been influential, though operating differently across sectors.

A significant challenge remains of helping practitioners and policy-makers understand the purposes of the Decade, and ESD, and its importance to their own work. Whether the goal is to just make small changes at the margins of educational experience, or to build on this, fundamentally to transform that

experience and the institutions that provide it, is unresolved. Unsurprisingly, this uncertainty mirrors that in the wider society in relation to sustainability itself.

7.1. Education for Sustainable Development in Formal Education in England

This reduced government focus on sustainable development has resulted in increased uncertainties amongst educational institutions and practitioners about how much emphasis to place on sustainability within teaching and learning. Active Department for Education (DfE) support for a school focus on sustainability no longer exists, despite evidence of its effectiveness. Global learning programs do continue to be promoted by the Department for International Development (DfID) [79] and non-government stakeholders, but a focus on sustainability within these has never been emphasized. Commitment on the ground is strong, however, though rarely yet part of mainstream practice. There are, however, compelling examples of innovation.

The Department for Education website [10] says: "Multiple sources of evidence suggest that being a sustainable school raises standards and enhances young people's well-being." Networks and partnerships in schools include Sustainability and Environmental Education (SEEd), which provides a wide range of professional and school development activities for teachers and schools. Activities include conferences, webinars, a policy forum, and a curriculum project with monthly discussions. The Sustainable Schools Alliance, which SEEd supports and which was endorsed by the 2011 Natural Environment White Paper [80], encourages schools to put sustainability at the heart of their thinking. Previous commitment by the Office for Standards in Education (Ofsted) [81] to sustainability and the curriculum, and the link to the quality of teaching and learning, has diminished since 2010. The role of the lead inspector for this area ceased in January 2013. The government's guiding philosophy for smaller and less directive government [39] means that central encouragement and legitimation is now much reduced.

The Defra Natural Environment White Paper [80] encouraged learning outside the classroom, and welcomed the educational work of the environmental NGOs that promote this. Eco-schools claims considerable "reach" into English schools with 16,676 registrations (>70%), but there is no proven impact on either learning, or on schools' effectiveness as sustainable institutions. It remains comparatively straightforward to gain and retain green flag status.

The English university funding council (HEFCE) [82] is becoming less focused on supporting the development of sustainability-focused learning and teaching within institutions, passing this responsibility to the Higher Education Academy (HEA) [83]. However, the commitment of the Academy to sustainable development, through institutional vision and policies, is much less than that of the funding council. The Environmental Association of Universities and Colleges (EAUC) supports further and higher education activity through, for example, Learning in Future Environments (LiFE) [84] and the Sustainability Exchange [85], each funded by HEFCE through its Leadership, Governance and Management Fund (now ended, though not evaluated). This has also supported work on ESD and the quality assurance of educational provision, though this did not focus on the quality of education provided.

The HEA has an ESD Advisory Group [86], and funds a number of innovative projects such as the Green Academy [87], which promotes institutional development. It convenes policy think-tanks, and has a part-time academic policy officer. HEFCE still takes its carbon-reduction targets seriously,

however, some think to the detriment of a wider focus on sustainability. Benchmarking research in 2008 has not (yet) been followed up.

Recent research by the National Union of Students (NUS) and the HEA [88] shows a majority of students wanting to learn about sustainability, because of its potential impact on their employability, and the Quality Assurance Agency (QAA) for HE has recently published a code of practice for teaching and learning which includes reference to ESD [89].

The Learning and Skills Improvement Service (LSIS) was supported by the national Skills Funding Agency in driving change. The LSIS strategy and action plan [90] responded to a "growing appetite in the sector to understand, apply and champion sustainable thinking and practice". Through this, LSIS has provided sustainability-focused programs, including ones with a learning focus; for example, Leaders of the Future in Sustainable Development, and the Sustainability Leaders' Toolkit. The Learning and Skills Improvement Service also worked also worked with EAUC in developing the SORTED online sustainability resource. It is to be replaced in 2013 by the FE Guild [91].

Post-16 sector (FE colleges and work-based learning) provision on sustainability remains patchy. Vocational provision in construction has made significant progress in integrating sustainability into its courses with an emphasis on environmental sustainability challenges, for example by developing skills and knowledge in low-carbon technologies, management of natural resources *etc*. In other areas, the integration has been slower, in part because sustainability is perceived as being less relevant, and in part because skills tend to be seen as those demanded now, rather than in an emergent "green" economy. There are also perverse incentives in place because of funding and performance systems.

In both HE and FE, despite notable progress by some institutions, there is considerable scope for a greater focus on the integration of sustainability efforts across campus, curriculum and community in a way which acknowledges that estates, procurement, management more generally, and research, when taken together, give scope for learning about sustainability, especially when integrated into the formal curriculum.

7.2. Education for Sustainable Development in Non-Formal Education and the Community in England

A range of networks provide professional and institutional support. These include the Sustainable Development Alliance for Learning and Skills [92], the Sustainable Development and Youth Work Forum [93], and the National Youth Agency [94]. There are also government, business and charity partnerships; for example, Business in the Community, Forum for the Future, and the Ellen MacArthur Foundation.

There is still considerable activity in the NGO sector in support of schools and in relation to adult, community, youth and voluntary activities but there is a lack of connection and little synergy between learning experiences in formal education and those in community involvement and third sector capacity building. The Transition Town movement is a prominent example of social learning through community-led innovation. Awareness of the work of the UN's Regional Centers of Expertise (RCE) is low, and it is unclear what they have achieved. Similarly, regional support for ESD and the Decade is not as comprehensive as it was. The South West Learning for Sustainability Coalition [95] is a notable example of regional collaboration across sectors.

In business, industry, and the professions, the green economy is a growing focus of professional development, although it is still a small aspect of professional training. The idea that educating educators and trainers ought to be the priority of priorities is an old UNESCO ideal, but there is little sustainability-related activity in mainstream programs that focus on the professional development of teachers in schools. The Teaching Agency, which sets out this curriculum for school teachers, continues to show no interest in sustainability.

8. Discussion and Conclusions

Since 2010, government emphasis on sustainable development and ESD policy has diminished in England and Northern Ireland, although not necessarily in institutional practice. In Wales, the sustainability bill is seen as a major feature of Welsh Government policy, although there is evidence of less policy emphasis now being given to ESD. As a consequence, encouragement of ESD through policy in these jurisdictions has become less prominent. The exception is Scotland where the devolved government has placed a much greater emphasis on social equity and the environment as key policy targets. The Scottish Government has set itself the target of making Scotland a world leader in securing its own energy needs from renewable sources and sees this as a significant driver for job creation and addressing social inequality. Here ESD is seen by the government as playing an important strategic role in implementing its policy objectives. The unique role the independent GTCS has played in promoting learning for sustainability is a further key driver in distinguishing Scotland from the rest of the UK.

In Northern Ireland, Wales and England the reduced central emphasis on ESD is partly explained by a degree of ambiguity about [i] what policy ought to be in relation to education and training more generally, and in particular, about what role they might play in supporting the emerging green economy; and partly because of [ii] the prevailing UK government view [39] that supports smaller and less directive central governance, giving more responsibility to institutions at a local level. This has resulted in a loss of policy coherence across government and continues to lead to mixed messages and confusion for many of those in formal and non-formal educational contexts. Further, responsibility for policy formulation on sustainable development is often shared across several government departments and whilst, in principle, this is no bad thing, in practice it leads to a narrow focus and silo approach to sustainable development. It can also lead to less commitment to its implementation and a lack of coherence in policy. In this respect, the role of ESD in support of the objectives of a sustainable society is often marginalized, for example in the development of indicators [96] where there are currently no meaningful learning-focused ones.

Networks and embryonic communities of practice tend to be within sectors. This is a problem for those engaged in strategic policy-making in terms of how to promote, influence and help link and coordinate learning and sustainability within and across the diverse learning contexts. There are no educational institutions, which have set out through policy and practice to embrace a restorative process in relation to natural and social capital as exemplified by the University of British Columbia [97]. Education and skills funding agencies should explore how such innovation could be promoted.

Whilst there is much to celebrate in terms of activity levels in developing initiatives and projects under the banner of ESD, much of this is through relatively small initiatives and shifts in policy, none of which are, in themselves, too demanding of government or individuals but which are unlikely,

ultimately, to lead to a more sustainable society. Modest incrementalism may be too little too late, if we are to drive a more fundamental reform of our economy, and our society towards a sustainable and climate-resilient future.

We think that a number of recommendations that relate to the UK as a whole flow from this, and these are now set out:

(1). It is essential to develop an overarching UK Strategy for sustainable development which sets out a clear vision about the contribution learning can make to its sustainable development goals.

(2). ESD would benefit from an overall strategic framework that puts it firmly at the core of the education policy agenda in all of the jurisdictions in the UK, as this would provide much needed coherence, direction and impetus to existing initiatives, and scale-up, and build on, existing good practice. Importantly, at a time of austerity it could help prevent unnecessary duplication of effort and resources, and it is encouraging to note that the UK government has begun to explore how best to exchange best practice in productive ways between the devolved administrations, amongst practitioners from across education sectors and civil society organizations [10].

(3). As yet, there is no coherent view at policy or practice level about how ESD can most appropriately be experienced by learners, in a progressive sense, from, say the age of 4 to 21 and beyond. A commission set up to examine and report on this question would help institutions plan effectively.

(4). A pan-UK forum should be established for overseeing the promotion, implementation and evaluation of ESD across the UK, with a clear remit to work collaboratively with the UK government and all three devolved administrations, whilst respecting their jurisdictional policy remits.

Looking more broadly, the UNESCO Executive Board met in October 2012 [98] and expressed its preference for the creation of a program framework to follow up the UNDESD. The Board resolved that this should cover the period to at least 2021, address education at all levels and in all forms, be based on a comprehensive sustainable development agenda, and encourage strategic focus and national commitment.

We think that UNESCO should review how effective the Decade has been in supporting the implementation of ESD. Most evidence indicates a rather ill-focused and half-hearted awareness campaign leading to a patchy impact. We recommend that the program framework should place more emphasis on promoting the good practice that has taken place in recent years; communicating and celebrating those successes that have become embedded in mainstream educational provision and which have contributed directly to enhanced quality through improved learner outcomes and achievements.

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Conflict of Interest

The authors declare no conflict of interest.

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