

**Education for Sustainable Development
and the English School System
Literature Review**



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1. INTRODUCTION TO EDUCATION FOR SUSTAINABLE DEVELOPMENT (ESD)

The concept of Education for Sustainable Development (ESD) arose from the 1992 Rio Earth Summit (UN, 1992). Agenda 21, an outcome of this conference, was the first international document to identify education as a key component in achieving sustainable development goals. Much like the term 'sustainable development' there are varying definitions of ESD often leading to some confusion about the concept. Most academics do however agree that true ESD should have an integrated, inter-disciplinary and holistic approach (UNESCO, 2012). Nevin (2008) provides a definition of ESD highlighting the holistic nature of the concept:

“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”

Nevin (2008: p.50)

UNESCO (2010) provides a similar definition also highlighting the importance of a holistic approach, describing ESD as:

“...widespread in its concerns – sustainable development is about economic, social and environmental concerns affecting our present and future. Education for sustainable development embraces not only learning about sustainable development, but also its furtherance through the adoption of (and thinking about) practices in our daily and professional lives, that contribute to more sustainable (or more accurately, perhaps, less unsustainable) development.”

UNESCO (2010: p.14)

It has been recognised that education should not only be considered as an approach to tackling sustainable development issues, it also has the potential to be a method to promote sustainable development (UNECE, 2005). Agenda 21 (UN, 1992) identified the four most important priorities of ESD as:

- 1 – Improving basic education
- 2 – Reorientation education towards sustainable development
- 3 – Increasing public awareness
- 4 – Promoting training

Historically ESD has been dominated by environmental aspects however, the scope of the education is widening over time to encompass more social and economic aspects of sustainable development. The incorporation of economic and social factors with environmental factors is considered key in achieving true holistic ESD (Nevin, 2008; UNESCO, 2010) as illustrated in Figure 1. ESD involves encompassing key sustainable development issues into all teaching and subsequent learning and considering the environmental, social and economic impacts of these issues. Sustainability issues that are often associated with ESD typically include: climate change, poverty alleviation, resource consumption, food production, biodiversity and conservation.

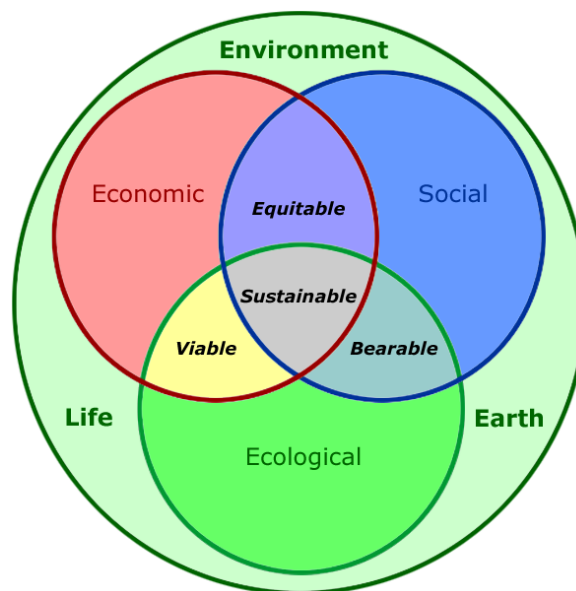


Figure 1 The ESD circle

A diagram showing the necessary interconnectedness to achieve ESD, indicating that economic, social and ecological (environmental) factors are all linked and each are of equal importance.

Source: Education for sustainability (2013)

Education has an important role to play in the future of sustainable development, however it must be acknowledged that it can also become a hindrance if unsustainable practices and models are followed, or through misinformation. Education must be accurate and of excellent quality to create maximum impact and lasting effect for sustainable development (Davies, 2010). Schumacher (1973) proposed that education has the potential to be the most valuable resource for achieving a sustainable future, but unless practiced appropriately this education could also be incredibly destructive to sustainability efforts.

ESD encompasses a wide variety of education and not just the obvious formal education, informal and non-formal education plays an equally important role (Figure 2). Nearly all people will experience informal ESD, particularly through the media, and many will experience all three learning types simultaneously at some stage in their life. True ESD should be engaging and interesting to capture all audiences so that none are excluded despite differing interests and priorities. ESD must also be available, accessible and integrative to all cultures, all levels of society and all degrees of learning (Nevin, 2008; UNESCO, 2012).

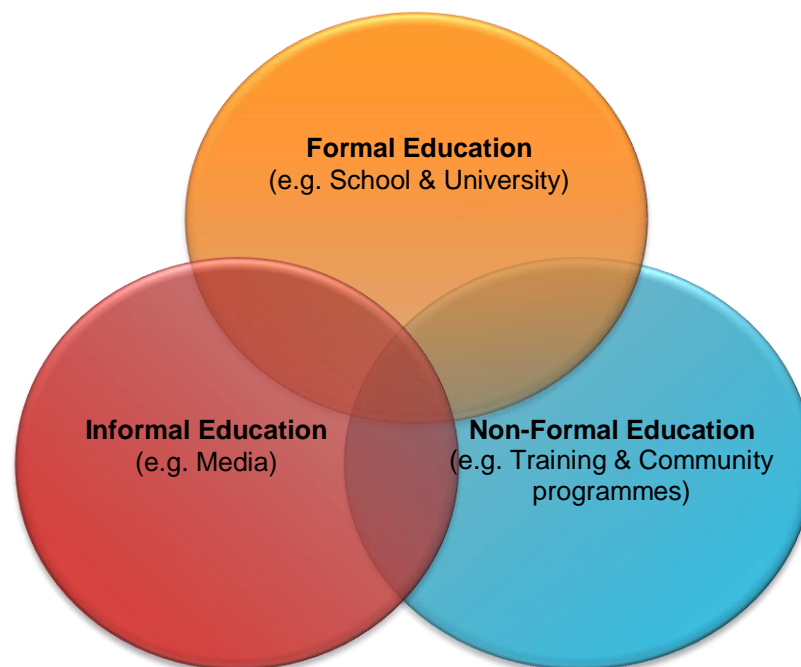


Figure 2 Types of learning

ESD encompasses all types of learning: Formal, Informal and Non-formal. The joining circles indicate that all these learning types are interlinked and can happen simultaneously or separately.

Diagram based upon: RSIPO (2006) and Knowledge Jump (2014)

It is a common misconception that ESD only involves the teaching of sustainability issues. A key component of ESD is providing people with key competencies and skills such as the promotion of values, decision making and critical enquiry (Davies, 2010; Nevin, 2008; Tilbury & Wortman, 2004). The combination of key skills and knowledge of sustainability issues enables the learner to feel empowered and motivated to be able to develop opinions about the world and in turn, make decisions about subsequent actions and behaviour change (UNESCO, 2012). Reflective ability is also considered key in providing

people with the ability to shape the world by reflecting upon the impact of their actions (Rauch & Steiner, 2006). In summary ESD should provide all people with the knowledge and skills to create a sustainable future not only for themselves, but for the whole planet and all who reside on it.

2. THE HISTORY AND DEVELOPMENT OF ESD

ESD has its origin in the environmental education sector and it is acknowledged that many people still consider ESD as a branch of environmental education today (Sterling 1999, UNESCO, 2014). Environmental education has its roots in the early 19th century and has historically been defined as the appreciation of nature, involving the observation and preservation of outside environments. Through time this education has developed and started to encompass conservation education, opening up to more scientific investigation (Carter & Simmons, 2010) reflecting the environmental education that's recognisable today.

ESD as it is recognised today started to develop in the late 1980s, when the term 'sustainable development' first appeared in the Brundtland report, the outcome of the UN General Assembly in 1987, providing the most well-known and acknowledged definition of sustainable development as:

"...development that meets the needs of the present without compromising the ability of future generations to meet their own needs."
WCED (1987: p.43)

Since the first use of the term 'sustainable development' it has generally been accepted that education is a key component of sustainable development, but this was not specifically stated until the 1992 Rio Earth Summit (UN, 1992). One key outcome of this conference, Agenda 21, in section 26 titled: 'Promoting education, public awareness and training', specifically identifies education as a tool to achieving sustainable development (UN, 1992: p.320). Throughout Agenda 21 there is reference to the concept of education, giving the indication that education should be embedded into strategies for sustainable development. Alongside Agenda 21, UNESCO published their own report on the progress of ESD for the decade of 1992-2002, highlighting the significant role education has played in sustainable development so far and the potential for the future, proposing a future direction for the development of ESD (UNESCO, 1992).

Awareness of ESD has gradually increased over time as the term has developed and become more accepted and supported by many international organisations such as the United Nations (UN) and the Organisation for Economic Co-operation and Development (OECD). A key turning point for ESD occurred in 2002 at the World Summit on Sustainable Development (WSSD) in Johannesburg. The outcomes of this summit proposed that education needs to play more of a significant role in sustainable development and that this education needs to be directed at all levels, formal and non-formal, and on a local and global scale (UN, 2002). This led to the development of the UN Decade of Education for Sustainable Development (DESD) which commenced in 2005. The DESD was started with the aim to tackle the outcomes of the 2002 summit: to promote and raise awareness of the significance of ESD across the world. UNESCO believe that the DESD, due to finish at the end of 2014, has already indicated that education is playing a critical role for future development, by creating awareness and promoting behavioural changes (UNESCO, 2012). It is hoped that an evaluation of the DESD will provide a critical insight into the level and success of ESD all over the world.

3. THE FORMAL EDUCATION SECTOR IN ENGLAND

3.1. School system structure and type

A significant part of formal education in England is the school system. All children in England are entitled to and required by law to receive formal school education from the ages of 4 to 16. The school system is structured whereby each age group is allocated to a school year and a collection of years are allocated to a Key Stage. The route a young person may take through formal education is dependent mostly upon location; the most common route is from primary school to secondary school. For more details and other route options refer to Table 1.

Table 1: The English school system structure

Age	Year	Key stage	State school establishments ¹			Qualifications and/or exams
0 to 5	Early Years Foundation Stage	-	Nurseries & Pre-schools. (Some Primary/ First/ Infant schools have a 'Reception' year for ages 4-5)			-
5 to 6	1	1	Primary	First	Infant	-
6 to 7	2	1	Primary	First	Infant	Key stage 1 SATs
7 to 8	3	2	Primary	First	Junior	-
8 to 9	4	2	Primary	First	Junior	-
9 to 10	5	2	Primary	First	Junior	-
10 to 11	6	2	Primary	Middle	Junior	Key stage 2 SATs, 11+ ²
11 to 12	7	3	Secondary	Middle	-	-
12 to 13	8	3	Secondary	Middle	-	-
13 to 14	9	3	Secondary	High	-	Key stage 3 SATs
14 to 15	10	4	Secondary	High	-	GCSEs
15 to 16	11	4	Secondary	High	-	GCSEs
16 to 17	12 (lower sixth form)	5	Secondary	High	Further Education College	AS-Levels, A-Levels, NVQs, National Diplomas
17 to 18	13 (upper sixth form)	5	Secondary	High	Further Education College	AS-Levels, A-Levels, NVQs, National Diplomas
18+	-	-	University / Vocational Training	Higher Education Institutions	College	Degrees, National Diplomas, NVQS

¹Classification of school establishment is dependent on the location. Some secondary/high schools do not have the option of Year 12 and Year 13 (Sixth form) and other alternatives are available such as college or apprenticeships. Independent schools have their own separate pathways/system.

² 11+ exam is for entry to state grammar schools.

(Adapted from: Gov.uk, 2012; British Council, 2004)

There are many different types of school establishments in England which determine how the school is managed, maintained and who has control over the school. See Table 2 for a breakdown of the most common school establishment types and Table 3 other less common school establishment types.

Table 2 The most common school establishment types

School Type	Description
Free School	Independent schools funded by the government and need to meet set requirements. Do not have to follow National Curriculum. These are new schools where there is a parental demand.
Traditional/ Sponsor Led Academy	Independent schools funded by the government and need to meet set requirements. Do not have to follow National Curriculum. Often these schools are those that have been performing badly and are handed over to a new provider.
Academy Converter	Independent schools funded by the government and need to meet set requirements. Do not have to follow National Curriculum These schools choose to opt out of Local Authority control and tend to be high performing.
Community	Entirely maintained and run by the Local Authority. Must follow the National Curriculum.
Foundation and Trust	Maintained by the Local Authority and run by a school governing body. Must follow the National Curriculum. More freedom to make changes than a community school.
Voluntary Aided	Maintained by the Local Authority and run by a school governing body. Must follow the National Curriculum but have more freedom over Religious Education. These schools are usually faith schools, this often influences the admission criteria. School land is often owned by religious organisations.
Voluntary Controlled	Entirely maintained and run by the Local Authority. Must follow the National Curriculum, but have more freedom over Religious Education. These schools are usually faith schools and the school land is often owned by Religious organisations but the Local Authority sets the admission criteria.
Independent or Private	Independent from local and national government. Funded by school fees or endowments. These schools do not have to follow the National Curriculum.

(Adapted from: Gov.uk, 2014a; CAB, 2014; NSN, 2011)

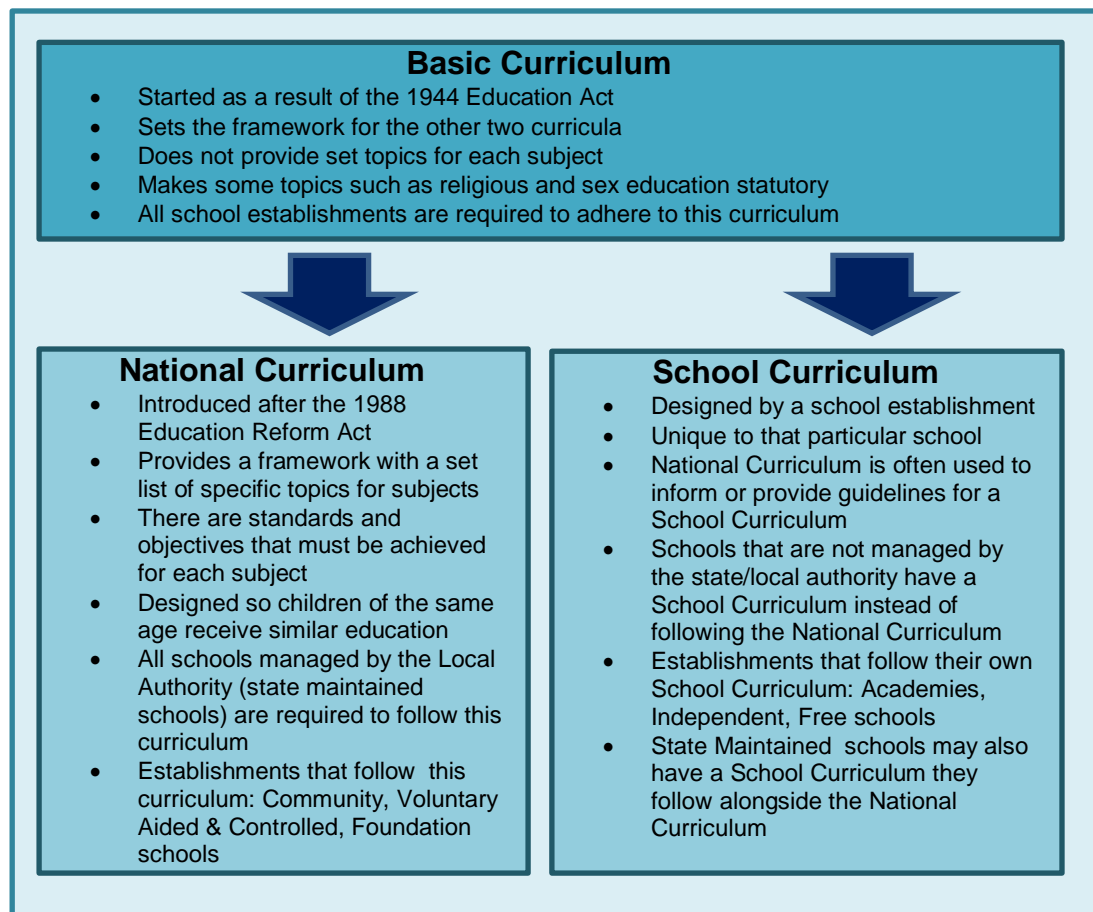
Table 3: Alternative less common school establishment types

School Type	Description
Grammar	Admissions are based on academic ability. These may be any of the above school establishment types but usually are run by a trust or council.
Special schools	Schools for disabled children assessed under the Statement of Special Educational Needs (SEN). These schools can be any of the above establishment types although usually tend to be maintained under the Local Authority or Independent.
University tech colleges	Specialist subjects are taught, a mix of practical and academic. Courses are often sponsored and the curriculum is determined by the work placement employers and the college.
Studio schools	Project based learning with the support of local employers and careers coaches. Curriculum is very skills focused.
City tech colleges	Maintained and run by national government or companies. Curriculum is very practical and skills focused. These schools are free Independents and found in urban areas.
State boarding	These can be any of the above school establishment types. There is a fee for pupils living at the school and priority tends to be given to those who need it the most.
Alternative Provision schools (incl. Pupil Referral Units)	These are schools for those pupils who cannot attend the other school types for various reasons (e.g. exclusion, behavioural, illness etc.) These schools are run by a management committee and have freedom over curriculum. Local Authorities have a duty to provide education for those aged 4-16 who are unable to attend mainstream school.

(Adapted from: Gov.uk 2014a; CAB, 2014; NSN, 2011)

3.2. Curriculum structure and formal education sector regulation

There is a curriculum system which provides schools with a direction and course of study in order to achieve the necessary and desired educational aims and outcomes. There are three types of curriculum that make up the entire curriculum system in England, Figure 3 provides more details.



(Adapted from: HC Children, Schools and Families committee, 2009; Gov.uk, 2014a & 2014b; NSN, 2011)

Figure 3 The English school curriculum system

In 1998 the Governmental Sustainable Development Education Panel (SDEP) was formed to drive ESD forward in all curricula and propose the best way forward for this (Huckle, 2006; Sterling, 1999). In 1999 the National Curriculum was revised, incorporating some of the proposals of the SDEP. As a result of this, the term 'sustainable development' was included in the revised primary and secondary curriculum, stating that the curriculum:

“...should develop their (students) awareness and understanding of, and respect for, the environments in which they live, and secure their commitment to sustainable development at a personal, local, national and global level”

DfEE (1999a & 1999b: pg. 11)

Aspects and topics of ESD were also incorporated into the primary and secondary National Curriculum through the subjects of Science and Geography. The revised National Curriculum also incorporated sustainability aspects within non-statutory support guidance for Personal, Health and Social Education (PSHE)/Citizenship. In both primary and secondary curriculum documents there was also the presence of a specific section on ESD (DfEE 1999a & 1999b; Pg. 12). Schools were encouraged to show a commitment to sustainable development in education and practice, and asked to encourage amongst learners an understanding and respect for the environment and people.

The National Curriculum tends to be revised when a new political party comes into power. The current National Curriculum framework has been revised under the coalition government and is due to be implemented in September 2014. The reasons that have been identified for doing so are to: better prepare students for their life after education, raise literacy and numeracy competencies to ensure it reaches employers' and higher educators expectations, and to ensure the education system in this country keeps up with the rest of the developed world (DfE, 2013a; Dominiczak, 2013).

In the latest revision the term 'sustainable development' has been completely omitted from the National Curriculum. There are still some sustainable development aspects that are incorporated within the three key subjects mentioned previously (DfE, 2013b; 2013c). It could be argued that there are links to sustainable development in the new National Curriculum through preparing pupils to be educated and responsible citizens. These links however, are very loose and subject to bias. The act of preparing children to be citizens could have the potential to be detrimental to the future sustainability if unsustainable practices are followed. A risk acknowledged both by Schumacher (1973) & Davies (2010).

The new National Curriculum provides an outline of the specified learning outcomes and core knowledge levels that pupils must achieve however there is now increased flexibility for teachers of the choice of topics in each subject in order to achieve these. There is the potential for teachers to adapt topics and lessons to incorporate sustainability issues with clever linking to curriculum.

All schools in England are regulated by the Office for Standards in Education, Children's Services and Schools (Ofsted), an independent organisation regulating the formal educator sector reporting directly to the government. Ofsted sets a key framework for a school inspection and an inspector will visit the school to collect evidence based on this framework and publish inspection reports on the status of that school. The full Ofsted report for schools allocates a grade to a school indicating the quality of education, performance and achievements on a scale of one (outstanding) to four (Inadequate) (Ofsted, 2014)

There was a drive in sustainable development incorporation into the Ofsted school inspection framework in the late 2000's, with numerous reports being published. However, this drive in sustainable development dwindled in 2010 (Ofsted, 2008; 2009; 2010), with little sustainable development regulation being incorporated currently within inspections. Ofsted do state that the reporting of sustainable development in educational establishments is integrated within the main inspection framework where appropriate rather than as a separate report or grade (Ofsted, 2010). Part of this inspection framework includes the preparedness of learners for the future and their ability to make life choices (Ofsted, 2010), which is only a very loose perceived link to sustainable development. This means the ESD within a school cannot be determined through Ofsted feedback. However, Ofsted do recognise and publish evidence of good practice in ESD to encourage other establishments to do the same (Ofsted 2012; 2013). This indicates that sustainability education is perceived, by Ofsted, as advantageous and beneficial to schools and learners. Ofsted (2009) have also produced evidence indicating that the incorporation of sustainability within schools can be linked to improved behaviour, attitudes to learning and attendance amongst pupils, research by Gayford (2009) supports this.

There is no solid evidence to suggest that the Ofsted rating of a school impacts or reflects the level ESD within a school. Ofsted have identified however, that lessons involving sustainability have been graded as 'good' or 'outstanding' and nearly all schools implementing sustainable development in some way have improved by at least one Ofsted grade (Ofsted, 2008). There is no evidence of cause and effect, so it cannot be identified if the Ofsted grade influencing the ESD or the ESD influencing the Ofsted grade.

3.3. Linking formal education and ESD

The school type (Tables 2 and 3) could potentially have an influence on the level of ESD at some school establishments such as Academies (not stat maintained, as such establishments have freedom from the National Curriculum and the responsibility of creating their own School Curriculum. This could provide the potential for both opportunities and pitfalls for sustainable development education in schools. If a school governing body has a particularly strong interest in sustainable development it is likely that the School Curriculum will reflect this. Alternatively, if a school governing body has no particular interest in sustainable development, it may be completely excluded from the School Curriculum. As such schools are not required to follow the National Curriculum; it may be that some of the aspects of sustainable development that are included in this curriculum are excluded from the School Curriculum also.

The revised 2014 National Curriculum may also influence the level of ESD within a school because of the increase in teaching flexibility. Again this could provide both opportunities and pitfalls for sustainable development. The incorporation of sustainable development topics and issues within a school can be greatly influenced by a teacher's choice. A teacher with a particular interest in sustainable development may incorporate more sustainability aspects into their teaching, however one who is not as interested may not incorporate such aspects at all. This has the potential to lead to inconsistency of ESD between year groups and also between classes in the same year group but with different teachers. This contradicts the holistic nature of ESD whereby the education

needs to be consistent and cross-curricular (across all disciplines) (Ballantyne *et al*, 2001; Nevin, 2008; Davies, 2010).

Research does indicate that incorporating ESD within a school's curriculum can have positive impacts on the pupils, parents and staff. A study of a school in Hertfordshire, England that centred their School Curriculum around ESD found that it had a positive impact on the attitudes, behaviour and lifestyles of not only the staff and pupils, but their parents and families as well. This ESD curriculum was found to be so successful that the local council published and shared it with all schools in the County to try and encourage further implementation (Weston *et al*, 2009; HCC, 2008).

4. THE ECO-SCHOOLS AWARD SCHEME

There are a wealth of initiatives and resources for schools in regards to sustainable development topics from numerous organisations, charities and businesses in varying sectors e.g. energy companies, oil companies and wildlife charities. These vast resources, although providing helpful and useful information for schools, can often give conflicting and misleading information. This can lead to the disengagement of schools or the teaching of biased information, which can unintentionally lead to unsustainable practices (Davies, 2010; Schumacher, 1973). The most common initiative associated with sustainable development amongst schools is the Eco-Schools Award.

The Eco-Schools Award is an international scheme that was introduced in the UK in 1995, overseen by Keep Britain Tidy. The scheme provides a sustainable development framework for schools to follow in order to achieve differing levels of awards: Bronze, Silver and the Green Flag. Schools can register and self-assess for the Bronze and Silver award, however to achieve the top Green Flag award schools must be visited and assessed.

There are 17,404¹ schools in England registered with the Eco-Schools Award scheme, however of this number only 1,557¹ have achieved the Green Flag status (5,796 have achieved Silver and 5,090 Bronze)¹ (Eco-Schools, 2014a). This indicates that although the scheme has been popular with registrations, the number of schools striving for and achieving the top Green Flag status is very low in comparison. The reason for this low number is unknown, but it could be speculated that the new £200 cost of the Green Flag status, due to a recent decrease in government funding, is likely to be a contributing factor (Eco-Schools, 2014b).

The Eco-Schools Award scheme gives an insight into the level of sustainable development interest and incorporation within schools; however it cannot be assumed that just because a school has not registered with the scheme and not achieved the Green Flag that the school is not incorporating ESD. The scheme

¹ As of 27th May 2014

is optional, and some schools may choose not to sign up for whatever reason, but that does not indicate a lack of commitment to sustainable development.

There has been little evaluation into the impact of the Eco-Schools Award in England. Research of the Eco-Schools Award in other countries has identified many benefits for schools taking part. Benefits for the pupils include: increased communication skills, positive changes in attitudes towards the environment, personal empowerment and motivation to act or create change. Additional benefits for the school have been noted as: providing extra teaching opportunities and making a positive contribution towards the local environment (Kadji-Beltran, 2002).

5. WHY TARGET ESD AT YOUNGER GENERATIONS?

Many sustainability organisations aim their educational efforts at younger generations and acknowledge children as their key target audience (Sutherland & Ham, 1992; Damerell *et al*, 2013). Young people are easier to target than adults because all people of these age groups are already in a formal education setting, and it is often difficult to access large numbers of adults from all areas of society in one setting and not just those interested in the subject (Vaughan *et al*, 2003; Ballantyne *et al*, 1998). Organisations also aim their education efforts towards young people as there is often more funding available for this demographic Ballantyne *et al*, 1998). Adults also have many other priorities, commitments and often lack the available time to partake in such activities (Ballantyne *et al*, 1998).

Evidence indicates that attitudes and opinions towards the environment develop at a relatively early age and once formed are not easily changed (Bryant & Hungerford, 1977). If these attitudes are developed at a young age there are fewer negative behaviours to unlearn and there is a greater period of subsequent positive influence later in life (Leeming *et al*, 1997). This indicates that targeting a young audience is beneficial in promoting the development of respect and positive attitudes to sustainable development.

Evidence suggests that the education children receive in school can be transferred to their families subsequently indirectly influencing attitudes, opinions and behaviours (Damerell *et al*, 2013; Ballantyne *et al*, 1998). It has also been found that children's natural optimism and enthusiasm can inspire positive change in parents (Unilever, 2013), and many parents are motivated to change their behaviour due to a desire to create a better future for their children (Ballantyne *et al*, 1998). The extent of this generational transfer is influenced by many factors one of which is culture (Unilever, 2013), as it has been found that some cultures are less accommodating of young people as agents of positive change (Mitchell *et al*, 2009).

The most successful youth ESD projects have been identified as those where there is parental or local community involvement. This allows the ESD message to be expanded to a wider audience and can also overcome some cultural barriers by including all members of the community, allowing more people to learn and get involved (which is an important factor of ESD). Uzzell (1999) proposed that schools should be utilised as windows of opportunity in connecting both pupils and the community with ESD. This link to the idea that ESD aimed at young people is effective, but should not always occur in isolation and be complemented by multiple approaches (Scott & Oulton, 1999).

There are circumstances where the inclusion of ESD within school has not always had a consistent positive effect on the local community. Research by Weston *et al* (2009) found that much of the surrounding community of an eco-school felt it was the responsibility of the school to manage sustainable development in the local area and not just the school site. Many of the local residents subsequently blamed the school for the environmental problems within the local area, causing tension between the school and the community despite the school's efforts to diffuse this.

It has been argued that just simply providing information and knowledge about sustainability issues is not enough to create action (Owens & Halfacre-Hitchcock, 2006). For ESD aimed at children to be of any value it must be consistent, of a high quality and adopt particularly engaging, active and novel methods. Ballantyne *et al*, 2001; Duvall & Zint, 1997; Vaughn *et al*, 2003). ESD aim at younger generations can be a slow process and many years may pass before those being educated can become significant influential policy makers (Vaughn *et al*, 2003). This means the method is not appropriate if immediate behaviour change is necessary (Damerell *et al*, 2013; Duvall & Zint, 2010) as this form of ESD is more likely to create a gradual snowballing effect.

It must be noted that research in this area has been predominately focused on observational qualitative data creating fairly inconclusive results, with little statistical evidence (Damerall *et al*, 2013; Duvall & Zint, 2007). There have been attempts to produce quantitative evidence but results still remain inconclusive and only preliminary links can be suggested (Damerall *et al*, 2013).

6. THE FUTURE OF ESD

The development of ESD, particularly in the formal setting, has been very slow and minimal. It is believed that ESD still has a long way to go before being truly embedded as a fundamental component of the education system (Benedict, 1999). It has been argued that efforts to introduce various ESD programmes have been very marginal and met with varying levels of success and programmes of ESD are often inconsistent and short-term (Sterling, 2001).

Many academics argue that such ESD efforts are not enough to achieve true sustainable education. Instead, it is believed that an entire paradigm shift is needed and there is a need to critically reflect on the way we live our lives; changing our perceptions, attitudes and habits (Cranton, 1996). This paradigm shift in education needs to be from linear and transmissive learning to transformative and inter-disciplinary learning (Cranton, 1996; Sterling 2001). In order to achieve a paradigm shift a holistic rethink is necessary to create a new understanding and appreciation of ourselves as citizens of the earth, and our place in nature now and in the future (Sterling, 2001). Many academics agree that this paradigm change in thinking needs to be tackled in formal educational establishments, and that such places have the opportunity and potential to explore paradigms and create change (Sterling, 2001; Hooks, 1994). In order to achieve this paradigm shift, current education needs to be refocused and incorporate key skills to encourage critical thinking, compassion, reflection and spontaneity (Sterling, 2001).

Although such a paradigm shift is seen is the ideal, realistically it is likely to be a change that will not happen in the short-term and be an ongoing process. There is the risk that a paradigm shift may not gain the support of many education professionals, as many people are not comfortable with transformative learning and find that it can be frustrating, uncomfortable and sometimes emotional (Cranton, 1996; Moore, 2005; Ball, 1999). Despite these drawbacks, transformative learning has the potential to produce many positive outcomes including: personal empowerment, increased compassion and respect for the environment and other people (Taylor, 1997).

ESD needs to be implemented with ease and with the support of the educational community to be most successful and to better accommodate an entire paradigm shift. If a transformative paradigm shift is perceived as difficult and uncomfortable it is unlikely to gain the necessary support and get educators on-board with such changes (Mezirow, 1997).

Sterling (2001) believes that the time for such changes in education is now and the time remaining to achieve this in order to reduce and reverse the negative global impacts on the planet is critically declining, stating that:

'..the qualities, depth and extent of learning that takes place globally in the next ten to twenty years will determine which path is taken: either moving towards or further away from ecological sustainability'

Sterling (2001; pg. 12)

7. CONCLUSION

This literature review gives an introduction and overview of ESD, and provides an outline of the existing school system in England in an attempt to identify where sustainable development education fits into this.

It has been identified that there are many benefits for aiming ESD at children within the formal education sector. The level and success of current ESD incorporation within schools in England however, remains relatively unknown and lacks solid evidence as to the current situation. There is also little research to suggest what affects the implementation and success of ESD within schools. It can be concluded that ESD in the English school system lacks monitoring and evaluation, with little quantitative research available.

Schemes like the Eco-Schools Award can be seen to be beneficial and provide a small insight into the level of ESD occurring within a school; however this is not enough alone to get a true holistic view of the current level of ESD in schools. The content of National Curriculum shows where sustainable development best fits in to subjects, however the flexibility of the curriculum does not allow us to gain a true insight of the level of sustainable development education covered in schools. The increasing numbers of non-state maintained institutions such as academy converters also clouds this further, with an increasing number of schools gaining more control over their own School Curriculum. There are theories that suggest that simply implementing ESD practices within the existing education system is not enough and that a whole paradigm shift is required to achieve true ESD, however the practicalities and realities of such a change remain uncertain.

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