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Early childhood education for sustainability within Wales

Glenda Tinney and Nicky Hirst

Introduction

The sustainable development agenda continues to be a significant influence across different economic, social, environmental and political sectors (Siraj-Blatchford and Huggins, 2015; Davis, 2015; UNICEF, 2013; Davis, 2010; Tinney, 2010). One important aspect of sustainable development philosophy has been a recognition that education and children play a key part in changing people's behaviour in order to allow for a society and environment which is capable of sustaining life now and in the future (Davis, 2015). Education for sustainable development (ESD) provides an internationally driven agenda to facilitate all members of society's engagement with sustainable development. Bourn et al. (2016) suggests that Wales has been significant within Europe in developing this agenda with its Education for Sustainable Development and Global Citizenship (ESDGC) policy response to the global agenda (Bourn et al., 2016; Bennell, 2011; Bennell and Norcliffe, 2009; DCELLS, 2008a; DELLS, 2006). In Wales, it is now compulsory for all maintained education settings from primary schools to higher education to include ESDGC within their work with all age groups. Since devolution, the Welsh Government has been actively promoting sustainable development and the United Nations Convention on the Rights of the Child (UNCRC), and the recent publication of the Wellbeing of Future Generations Act (2016) re-emphasises the central importance of both rights and sustainability to a prosperous and healthy Wales, and highlights the continued relevance of these areas to young children's education in Wales.

A research study by Tinney (2013) surveyed practitioners' and early years students' views of ESDGC, and the students and practitioners often referred to recycling schemes, composting, greening school grounds, minibeast hunts and the creation of wildlife gardens. Such practical activities are often identified under the ESDGC umbrella and do offer valuable opportunities for children to engage in practical active citizenship within their school or community, with several excellent examples in the case studies accompanying this chapter.

However, this could also limit the view of this educational concept and fail to identify the contested nature and the deeper theory underpinning ESDGC. The Welsh Assembly Government suggests that ESDGC is

about the things that we do every day. It is about the big issues in the world – such as climate change, trade, resource and environmental depletion, human rights, conflict and democracy – and about how they relate to each other and to us. It is about how we treat the earth and how we treat each other, no matter how far apart we live. It is about how we prepare for the future.

(DCELLS, 2008b:4)

Therefore this chapter will explore ESDGC and its underpinning theory and will demonstrate that educational professionals engaging in such work need to be supported to understand the concept at a deeper level than isolated "greening" activities. It will also demonstrate that there are already strong links within the Welsh early years curriculum for 3–7 years olds – the Foundation Phase Framework – for facilitating ESDGC, and that an experiential learning and play curriculum for young children supports the principles and practice of ESDGC.

Context

ESD in Wales and the development of ESDGC

Since the UK Government passed the Government of Wales Act in 1998, the concept of sustainable development has been central to Welsh policy, with the inclusion of a governing statute incorporating sustainable development across all its work and placing a duty to promote sustainable development. In 2000, the Welsh Assembly Government published its sustainable development scheme *Learning to Live Differently* (WAG, 2000) followed by an action plan in 2001 to implement the Scheme (Tinney, 2010).

Bennell and Norcliffe (2009) provide an extensive review of the development of ESDGC in Wales and highlight the role government and non-government organisations, local authorities and initial teacher training education institutions have played in encouraging the inclusion of ESD and global citizenship within the Welsh curriculum prior to and post-devolution. In 2001, the publication of *The Learning Country* (WAG, 2001) announced a significant overhaul of education in Wales and included commitments to sustainability (Bennell and Norcliffe, 2009) as well as a refocus of early years education leading to the development of the Foundation Phase. In 2002, ACCAC published *Education for Sustainable Development and Global Citizenship*, bringing together ESD and global citizenship; it noted nine key concepts pertinent to ESDGC, these being:

- interdependence;
- citizenship and stewardship;
- needs and rights;
- diversity;
- sustainable change;
- quality of life;
- uncertainty and precaution;
- values and perceptions;
- conflict resolution.

(Bennell and Norcliffe, 2009; ACCAC, 2002)

Despite merging ESD and global citizenship for efficiency and effectiveness reasons (Bennell and Norcliffe, 2009), bringing them together highlights, as several authors point out (Smyth, 1995; Foster, 2001; Sterling, 2001; Fien and Tilbury, 1996; Huckle and Sterling, 1996; Symons, 1996), that sustainability should incorporate a diverse range of issues, and not the environment alone. The interconnected values of sustainable development and global citizenship are highlighted by Oxfam (1997) and cited in James (2007:4) as

(1) an awareness of the wider world and a global citizen has a sense of their own role; (2) respecting and valuing diversity; (3) understanding how the world works economically, politically, socially, culturally, technologically and environmentally; (4) participating in and contributing to the community at a range of levels from the local to the global; (5) willingness to act to make the world a more equitable and sustainable place; and (6) taking responsibility for their actions.

In 2006, the Welsh Assembly Government published *Education for Sustainable Development and Global Citizenship: A Strategy for Action* (DELLS, 2006), which integrated ESDGC as a cross-cutting theme linked to personal, social and emotional education, and embedded the subject across the whole curriculum in the formal and informal education sectors, from early years to adult education (see review by Bennell and Norcliffe, 2009). In 2008, *ESDGC: A Common Understanding for Schools* (DCELLS, 2008a) was published and, in response to Estyn's and teachers' concerns that the nine concepts of ESDGC were complicated to deliver, introduced seven interconnected themes instead:

- choices and decisions;
- consumption and waste;

- health;
- identity and culture;
- climate change;
- wealth and poverty;
- the natural environment.

(Bennell and Norcliffe, 2009)

These themes (see Figure 4.1) can also be integrated with the Foundation Phase areas of learning as discussed later in the chapter.

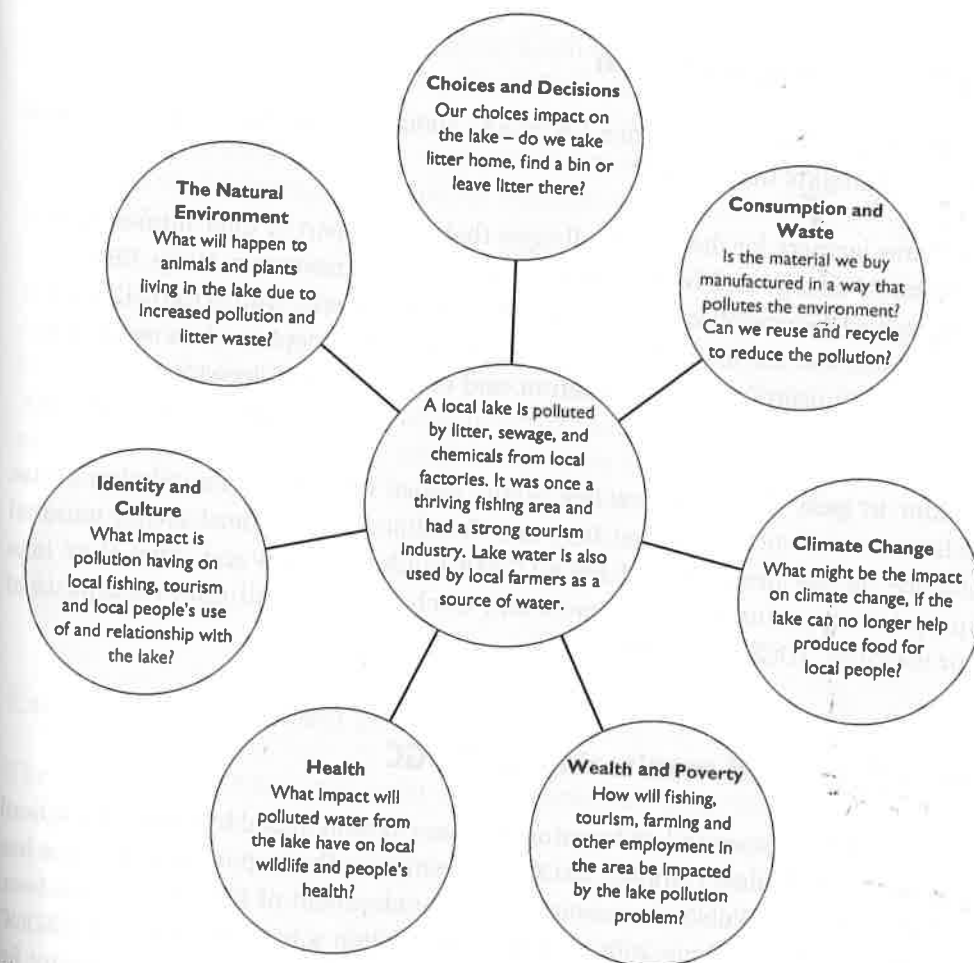


Figure 4.1 The seven interconnected themes of ESDGC with illustrative examples
Adapted from Tinney (2010) and DCELLS (2008a)

DCELLS (2008a) highlights the importance of the fact that ESDGC is cross-curricular, interdisciplinary and not simply an “add on” subject, and links these ideas to five common areas needed to practically implement ESDGC across the whole setting:

- leadership and commitment;
- learning and teaching;
- school management;
- partnerships and community;
- research and monitoring.

Teacher training education

The Welsh Government guidance (DCELLS, 2008b) to teacher trainees and new teachers highlights that ESDGC

prepares learners for the new challenges that will be part of their futures such as climate change and international competition for resources. Helps them to understand the complex, interrelated nature of their world. Builds the skills that will enable learners to think laterally, link ideas and concepts such as needs and rights, and uncertainty and precaution, and make informed decisions.

(DCELLS, 2008b:4)

In order to gain Qualified Teacher Status, those training as Foundation Phase teachers must demonstrate that they are “familiar with the most recent national guidance on the promotion of ESDGC” (DCELLS, 2009:40) and “that they take appropriate opportunities to promote and teach ESDGC in all relevant aspects of their teaching” (DCELLS, 2009:114).

The delivery and monitoring of ESDGC

In 2010, ESDGC became a key learning outcome to be assessed by Estyn (the school inspectorate in Wales) (Tinney, 2013) demonstrating the importance this area has been given by the Welsh Government. The development of ESDGC has also been monitored by Estyn since 2006 (Estyn, 2006), when a baseline study of ESDGC in Wales noted that many schools engaging with ESDGC were concentrating far more on issues linked to sustainability and environment despite ESDGC theory incorporating a far broader brief in terms of global citizenship and stressing the

interrelationship of environmental, social, economic and cultural issues key to sustainable development.

Estyn notes in its 2009–2010 annual report that

at its best, ESDGC has helped learners to become aware of a range of perspectives on sustainable development and global citizenship and has provided learners with the knowledge, understanding and skills to make their own judgments... The most successful providers ensured that ESDGC programmes of work were not confined to a few subjects or courses but reflected the values and practice of the provider across all its work. Working closely with the community was another feature of such good practice.

(Estyn, 2010:10)

However, this report also noted that there “were many misunderstandings about what ESDGC involves and there was too much stereotyping and over-simplification, especially in relation to global citizenship” (Estyn, 2010:11). In 2014, Estyn reviewed ESDGC delivery again and suggested that although there was evidence of a more holistic view of ESDGC, more needed to be done to make cross-curricular links, and that practitioners required support and staff development to deliver ESDGC effectively.

In 2009, the government published *One Wales, One Planet* (WAG, 2009a) which integrates sustainable development across all sectors of government, including education, and has made a commitment to further training and resourcing of ESDGC. In 2016, the Welsh Government introduced the Wellbeing of Future Generations Act (2015) in order to make sustainable development, well-being and rights central organising principles of public services in Wales. Recent developments to education outlined in the Donaldson Report (2015 cited in Bourn et al., 2016:15) included “developing learners as ethical, informed citizens of Wales, and the world” as one aim of education in Wales, and thus ESDGC is likely to provide a future context for education in Wales.

Early years education and ESDGC

The Foundation Phase was built on a theoretical base influenced by child-led approaches, socio-constructivism and specific international pedagogical approaches such as Reggio Emilia, Forest School and Te Whariki (DCELLS, 2008c, revised by the Welsh Government in 2015). However, in Wales the early years context is complicated because children can enter the Foundation Phase at 3 years old in school or in maintained or non-maintained pre-school settings such as private nurseries or Flying Start provision. The literature associated with ESD and early years education is also international, reflecting the holistic nature of the field, and

is often linked to countries where children do not start school until they are 5 years or older (Davis, 2010). Therefore, much of the ESD literature from an international pre-school context has more relevance to young children in the often school-based Foundation Phase in Wales.

Parallels of ESDGC philosophy and early years education principles

Several authors highlight the common parallels between early childhood education and the principles of ESDGC, noting an emphasis on holistic, interdisciplinary, integrated, relevant and child-led learning (Hedefalk, Almqvist and Ostman, 2015; Peterson and Warwick, 2015; Warwick and Warwick, 2015; Dymment et al., 2014; Prince, 2010; Davis, 2009; Hagglund and Pramling Samuelsson, 2009; Pearson and Degotardi, 2009; Elliott and Davis, 2009). Davis (2009), however, highlights that ESD is not well developed within early childhood research literature, and Elliott and Davis (2009) highlight that the integration of ESD into early childhood practice has been slow. Elliott and Davis (2009) suggest that this is linked to the misconception that young children are unable to deal with abstract and complex issues, and that efforts to encourage children's interaction with nature and the outdoors have not made adequate connections with respecting the environment, or sufficient interconnections between children and their world. Cutter-Mackenzie et al. (2014), Elliott (2012) and Edwards and Cutter-Mackenzie (2011) note that ESD integration with early childhood may also be hampered by an overly child-led play/developmental focus, suggesting that in the context of ESD,

1) play-based learning needs to draw on and recognize children's existing cultural competencies; 2) acknowledge and actively include the role of the adult educator in connecting children's play activities to particular conceptual and content-based ideas; and 3) promote the importance of teacher planning for learning in relation to children's play and the acquisition of content knowledge.

(Edwards and Cutter-Mackenzie, 2011)

These arguments provide a socio-cultural agenda (Cutter-Mackenzie et al., 2014; Vygotsky, 1972; Rogoff, 2003) in terms of linking ESDGC and early childhood, with Pramling-Samuelsson and Kaga (2008:12) noting that successful ESD for early childhood "must be rooted in the local concrete reality of young children" and Pearson and Degotardi (2009:104) adding that children should be "nurtured in achieving skills that will enable them to contribute productively to the sustainability of their social and physical environments". Davis et al. (2009) have developed

recommendations for the development of ESD within early years education and care and suggest key principles linked to: equality of access to education and lifelong learning; partnership working and working with parents and the wider community; professional development of practitioners; whole setting sustainability approaches; and active implementation of ESD values into the curriculum and support of research capacity within the field. These objectives support the common areas of ESDGC noted earlier; in the context of the Foundation Phase in Wales, and Estyn's (2014) concerns regarding practitioner understanding and knowledge, they also support the need to provide support and training for practitioners to be confident and motivated to engage children with the key principles of ESDGC.

Despite the opportunities highlighted earlier of integrating ESDGC and the early childhood curriculum, Fien (2007) outlines the debate over whether young children have developed the cognitive skills required to think about complex world problems and therefore may not have the knowledge to reach an informed view. However, Siraj-Blatchford and Huggins (2015), Duhn (2012) and Tinney (2010) provide evidence that, as with many controversial or difficult subjects, it is possible to start thinking about sustainability at an emotional and cognitive level appropriate to the child. For example, research by Page (2000) investigated the hopes and fears of 4- and 5-year-old children in Australia in terms of their futures. These children demonstrated an awareness of environmental problems such as global warming. Elm (2006 cited in Hicks and Holden, 2007) presented interview data with 4–6-year-olds where the children referred to issues and problems linked to litter and the natural world in considering their community's future. Engdahl and Rabusicova (2010) provide a detailed international survey which identified young children's (under 8 years old) thoughts and concerns regarding sustainable development. Therefore, as Elliott and Davis (2009) argue, it is a misconception to consider young children as unable to deal with abstract concepts. Sterling (2001) suggests that learners are not "empty vessels" and that they already have their own view on sustainability issues, influenced by their parents, community and the media. This is also the view of Davis (2009), and Pearson and Degotardi (2009) highlight the importance of a child's own social cultural context. Palmer and Suggate (1996) go further to suggest that a child's early views and/or misconceptions in terms of understanding their relationship with the world are a good platform to develop more accurate and detailed understanding of complex issues when the children are older. In terms of ESDGC and the Foundation Phase in Wales, children will have a variety of socio-cultural contexts, and often the practitioner will be able to learn much from the children's narratives. For example, a child brought up on a farm in a rural area may have an early understanding of life-cycles, food production and the natural environment beyond that of other children and adults in the classroom. Such experience could be used to develop shared understanding with peers.

Symons (1996) suggests that young children may benefit from being provided with a learning environment that supports self-worth, communication and cooperation, indicating that children with high self-regard are likely to be more altruistic, generous and sharing, all concepts related closely to the sustainability agenda. Children who are supported to express their thoughts more clearly and listen to others may have more positive attitudes to other people, and therefore will be better equipped to discuss and debate the complicated issues which form part of ESDGC as they grow older (Symons, 1996). In the next section the Foundation Phase areas of learning will be discussed in more depth; however, it is worth noting here that the central significance given in the revised curriculum document (Welsh Government, 2015) to children's rights, inclusion, social development, well-being and cultural diversity suggests that they may offer the foundations on which young children can build the respect and empathy for each other, the environment and society, which underpins ESDGC philosophy.

Early years context in Wales

Foundation Phase Framework: the early years curriculum in Wales

The Foundation Phase Framework is a play-orientated, holistic curriculum for children 3–7 years old, emphasising the development of skills and knowledge and building on a child's previous experiences (Welsh Government, 2015; DCELLS, 2008c). The framework emphasises diversity, equality and partnerships with a child's home environment (DCELLS, 2008c). There are seven interconnected areas of learning, which are cross-curricular:

- Personal and social development, well-being and cultural diversity;
- Language, literacy and communication skills;
- Mathematical development;
- Welsh language development;
- Knowledge and understanding of the world;
- Physical development;
- Creative development.

Foundation Phase and ESDGC

At one level traditional links between "knowledge and understanding of the world" and ESDGC can be seen within the Foundation Phase in terms of learning

about lifecycles, the natural world and their impact on the environment. These are illustrated in Figure 4.2. However, as noted by authors such as Davis et al. (2016), Tinney (2010) and Symons (1996), ESDGC should link across all subject areas and not within traditional geography/biology/science disciplines alone. Bennell and Norcliffe (2009:18) state that ESDGC "is strongly implicit in the new Foundation Phase", and, as noted by Tinney (2010), there are clear similarities between the principles of ESDGC and the Foundation Phase. For example, the Foundation Phase has at its centre the holistic development of the child and aims to develop "their skills across the curriculum, building on their previous learning experiences, knowledge and skills" (DCELLS, 2008c:4). This mirrors the ESD emphasis on integrated, holistic and interdisciplinary learning, which builds on children's previous experiences rather than viewing them as empty vessels to be filled with knowledge (Pearson and Degotardi, 2009; Sterling, 2001). The Foundation Phase emphasises that "the experiences that children have had before the setting/school need to be recognised and considered" (DCELLS, 2008c:5) and that settings should provide "a meaningful, relevant and motivational curriculum for their children". Again, this reinforces ESD's ethos of learning about issues which are relevant to the child's context (Pearson and Degotardi, 2009). The Foundation Phase framework also promotes an active, discovery-based curriculum "promoting discovery and independence" (DCELLS, 2008c:4) where "as children learn new skills they should be given opportunities to practice them in different situations, to reflect and evaluate their work". The *Learning and Teaching Pedagogy* document also highlights that "empowerment is seen as a central concept so that children are better equipped to take greater charge of their lives in order to enhance their self-confidence, competence and self-esteem" (DCELLS, 2008d:5). This emphasis on independence, reflection, activity, self-worth and confidence would provide the skills Symons (1996) suggests young children require to discuss and engage with some of the world's problems.

The Foundation Phase guidance documentation suggests that "positive links between the home and providers of care and education, and [an] appreciation of parents/carers as the children's first educators" (DCELLS, 2008d:5) are significant in supporting a child's learning. Strong links between the child's community and their school or setting is also at the heart of ESD (Davis et al., 2005). As noted by Tinney (2010), a child's learning and development of recycling behaviour at school can promote the same at home when joint projects linking children and parents support each other's understanding and motivation in this area. If a child is creating a wildlife garden at school then the parents can be involved in creating the project with them. More importantly parents and the wider community's involvement in children's learning allows for an exchange and discussion of ideas, beliefs and values where practitioners can also learn from other people's views of sustainability.

The Foundation Phase "gives opportunities for children to be listened to and their meaningful suggestions acted upon" (DCELLS, 2008d:17). Definitions of education for sustainability and the ESDGC curriculum also agree that active participation and citizenship are important (Huckle and Sterling, 1996). This is also an underpinning principle of the UNCRC: article 12 notes the child's voice and freedom to express his/her views (Tinney, 2010). The devolved Welsh Government was the first in the UK to appoint a Children's Commissioner with a view to advocate and support children's rights and participation, and has instituted numerous practical initiatives including school councils (WAG, 2009b) and other forums where school children are given responsibility for developing school initiatives. The international Eco-Schools programme has also provided eco-committees so that children and adults can work together and have a voice in making decisions. However, in these fora, the participation of Foundation Phase-aged children may be superficial (Symons, 1996). A recent smallscale study by Tinney (2013) asked 17 Foundation Phase teachers from different settings about the age of children involved in school councils and eco-committees. The teachers who were questioned highlighted the age policy for joining eco-committees/school councils, with eight (50%) indicating representation in Year 2 or above, two (12.5%) in Year 3 or above, three (18.8%) in Year 1 or above, and three (18.8%) from reception class upwards. Merriman et al. (2014) produced an evaluation of the Eco-School programme in Wales, and they have also demonstrated that, of 30 primary schools questioned, 40% did not have representation from 3–6-year-olds on the school eco-committee. A key principle of ESDGC is pupil participation and action (Tinney, 2010; DCELLS, 2008b; Sterling, 2001), which is also underpinned by the Welsh Assembly Government (WAG, 2009b) school council guidance, and not being involved in the democratic processes that decide school action may thus hinder children's engagement with ESDGC. Therefore, other mechanisms alongside school councils may be necessary to ensure the participation of early years children in all schools. Hart's (1997) ladder of participation model highlighted the different aspects of children and young people's role in decision making. Hart suggests that meaningful participation allows children to initiate their own ideas in particular programmes or projects, where they direct the work themselves or share the decisions with supporting adults. For very young children initiating ideas may be difficult; however, shared decision making with supportive adults and older children is possible, and links closely with the ideas of Vygotsky (1978) and Bruner (Wood, Bruner and Ross, 1976) regarding the role of adults and peers in supporting and scaffolding young children's learning. Authors such as Clark and Moss (2011) also highlight the importance of listening to young children's viewpoints by using a variety of different methods, such as photography, drawing and observation, linked to the mosaic approach, which allow for young children's participation in a way appropriate to their age and development. Årlemalm-Hagsér and Davis (2014) also note that

the contemporary early childhood curriculum can lack a mechanism to support children's active contribution to political processes.

The "personal and social development, wellbeing and cultural diversity" area of learning of the Foundation Phase (DCELLS, 2008c:17) provides opportunities for children to value themselves, each other and their environment. They are given opportunities to "communicate and reflect on the decisions made in stories, situations or personally, suggesting alternative responses" and to "ask questions about what is important in life from a personal perspective and from the perspective of others" (DCELLS, 2008c:17). They are also given the opportunity to "talk about the choices available to individuals and discuss whether the choices available make a decision easier or more complex" (DCELLS, 2008c:17). ESDGC also depends on understanding different beliefs, values and behaviour. "Creative development" is another area of learning where "valuing children's original ideas is particularly important to their personal and social development and well-being as it enhances their self-esteem" (DCELLS, 2008e:5). Where this is practised, it rewards uniqueness and difference and perhaps also allows children to view the world in different ways. In doing so children can think creatively, be open to different approaches and incubate the skills they will need throughout life to engage with complex global problems and the realities of sustainable development.

For example, as Symons (1996) discusses, recycling programmes are questionable if the children have not been able to question and discuss the why, what and how of recycling. Educators and learners need to be able to ponder the bigger questions. Are there better alternatives to the plastic bottle; would a jug of juice and glass cups be more sustainable? Why is society so throwaway, can society learn from the past and does changing our behaviour beyond simply recycling offer a better future? The opportunity to think about alternative scenarios and ideas will be easier in a learning environment where young children begin to appreciate that the world is full of complex decisions where they have the opportunity (as the Foundation Phase encourages) to question and reflect on their own values and decisions. Facilitation is therefore key to ESDGC and also central to the Foundation Phase approach where the practitioner "is a facilitator of learning, with the child at the heart of learning and teaching" (DCELLS, 2008c:12).

Children may be discussing issues the adults themselves are unsure about and Symons (1996) advises that educators require good sources of information which are up to date and relevant in order to support their engagement with children on different aspects of sustainability. Dymont et al. (2014) also demonstrate that professional development opportunities amongst early years practitioners could increase the capacity to deliver ESD effectively. Educators also need to acknowledge that this field will often start as problem solving and end with problem finding, where the children's questions and reflections churn up new areas to explore (Brighouse cited in Symons, 1996). Practitioners will need to acknowledge

that they do not and cannot be “all knowing” and will learn with and from the children, which reflects global sustainability itself, where the issues facing human beings are constantly evolving and changing. In Wales, Norcliffe and Bennell (2009) note the important contribution non-governmental organisations have made to the early and continued development of ESDGC, and such organisations and initiatives provide significant continued support for practitioners in delivering ESDGC across the Foundation Phase. For example, Tinney (2010) suggests many settings work in partnership with education officers or sustainability experts from other organisations. Such organisations provide practical, active learning opportunities which link closely to ESDGC, as well as other aspects of the Foundation Phase curriculum. One project that helps engage children and the wider community with sustainable development is the Eco-Schools initiative. This is an international, award-based initiative which encourages children and young people to take key roles in decision making and participation in areas linked to litter, waste minimisation, transport, healthy living, energy use, water use, school grounds and global citizenship. Merriman et al.’s (2014) evaluation of Eco-Schools in Wales noted that the Eco-Schools initiative was seen as the practical vehicle by which to deliver the themes of ESDGC by several practitioners. Forest Schools in Wales have also provided valuable long-term outdoor experiences that also develop children’s ecological and practical sustainability awareness. Forest School leader and volunteer training courses include units that make pertinent links to ESDGC areas. Foundation Phase practitioners who attend such training can build their confidence to develop such initiatives in their settings. Fairtrade schools, British Council schools and healthy school schemes also provide young children with opportunities to see different perspectives and ways of living, and they highlight the importance of partnership working to the ESDGC curriculum. Several organisations also provide opportunities for education-based students and teacher trainees to improve their own knowledge of ESDGC through field visits, guest lectures and volunteer opportunities, thus enabling them to improve their own sustainability awareness (Tinney, 2010). As Tinney’s (2013) smallscale study suggests, organisations such as Amnesty International, Oxfam, Natural Resources Wales, National Museum and National Botanic Garden of Wales can provide the knowledge and understanding that Estyn (2014) noted was not always demonstrated by practitioners. For example, one participant in the study suggested that in her training events, “They [teachers] do not necessarily make the links themselves, but see the links we make” (Tinney, 2013:54). Another participant noted that his/her organisation was planning to create materials highlighting how ESDGC can fit into different areas of learning such as numeracy and literacy, making it easier to create tailored resources to support early years practitioners. Other comments included: “Developing educators’ understanding of the wider links between ESDGC and the curriculum. Making it ordinary, becomes acceptable, and they will think it is

obvious” and “In one sense, the cross-cutting nature of ESDGC means that many activities in the early years setting have some connection to important ESDGC principles. However, we need to ensure that teachers and practitioners are able to highlight those connections, to give them weight and context” (Tinney, 2013:54). A Foundation Phase teacher also suggested that ESDGC is “not a lesson but part of the school’s principles. Part of any good primary school” (Tinney, 2013:54).

Opportunities provided by ESDGC to encourage all areas of learning

When Tinney (2013) explored the perceptions and interpretations of barriers to ESDGC by teacher trainees and those already working within the early years sector/Foundation Phase, the results highlighted challenges that were linked to a lack of time within the current curriculum and the fact that ESDGC was perceived as an “add on” or extra subject; for example, practitioners reported: “Not enough time as other curriculum areas need coverage”; “It can be difficult to incorporate it into lessons”; “There isn’t enough time/space in the curriculum to fully teach ESDGC”. Merriman et al.’s (2014) Eco-School evaluation also suggested that some practitioners would value more support in making links to specific areas of learning such as numeracy and literacy. Appendix 2 therefore offers an example of a resource that could support practitioners. It outlines a pizza making activity which demonstrates the opportunities to develop skills linked to all Foundation Phase areas of learning, as well as ESDGC at the same time. The revised Foundation Phase curriculum (Welsh Government, 2015) also supports the statutory National Literacy and Numeracy Framework, which embeds literacy and numeracy across all areas of the curriculum, and it would therefore be beneficial if practitioners recognised when literacy and numeracy is also supported by ESDGC. Providing practitioners with support to embed ESDGC themes into everyday practice would be a valuable INSET opportunity and teacher training courses should also promote the cross-curricular aspects of ESDGC.

Providing specific support linked to young children’s needs

Another barrier noted by practitioners and trainees in Tinney’s (2013) study was that ESDGC was a complex subject which could be too difficult for young children to engage with; this reflects similar concerns noted in the international literature (Duhn, 2012; Tinney, 2010). It is also apparent from discussion with those working in organisations linked to the environment, conservation, human rights and

poverty equality that support ESDGC delivery that some organisations do tend to concentrate on older children. One participant noted that this was a result of funding priorities that were responding to the Estyn (2006) baseline report which noted secondary education was less effective at delivering ESDGC. However, when Tinney (2013) analysed some of the websites for the organisations represented, there was evidence of resources targeted at children in the Foundation Phase age group, and there was also an acknowledgement by one participant that she knew that teachers themselves adapted their resources to the appropriate age and level. Some teacher trainees noted that it was a challenge to do ESDGC themes with children in an interesting way (two participants); however, several participants from organisations who supported ESDGC suggested that the focus on hands-on experimental learning was ideal to engage children's interest and enquiry, and it is therefore pertinent to suggest that such organisations' ideas and resources are publicised more widely for educators to utilise. For example, Oxfam's and Amnesty's education websites provide resources which could be the basis for stimulating early childhood ESDGC sessions and thus may need to be promoted further. Merriman et al.'s (2014) Eco-Schools evaluation also highlighted practitioners who would like to have more resources and ideas tailored specifically to the Foundation Phase. The evaluation did, as part of its final report, provide examples of lesson plans that could be more pertinent to young children. However, it was also interesting to note that the focus in ESDGC on partnership working is not always linked to external organisations supporting settings. In Tinney (2013), two participants working for external organisations suggested that they would value training and shadowing early years experts in order to improve their delivery of ESDGC with younger children and within the Foundation Phase. One said:

From the point of view of delivering programmes, familiarity with 3–7 year olds – especially the younger end of the range. Developing the necessary teaching skills and techniques. We are not specialists in this age range and it is one where particular skills are necessary for effective learning to take place. This might be achieved by training sessions, shadowing teachers in schools to see best practice which I feel would be enormously beneficial to all concerned.

(Tinney, 2013:Appendix 8)

Another suggested: "Working more with teachers and the age group. Talking to teachers and spending time testing ideas with schools" (Tinney, 2013:Appendix 8). These suggestions also provide opportunities to create new resources sharing expertise and could also offer research and monitoring opportunities, forming part of the common areas of ESDGC delivery.

The Welsh cultural and language context

In Wales, the Curriculum Cymreig promotes the Welsh landscape, heritage, culture and arts which make up today's multicultural Wales (Welsh Government, 2015), and this offers a rich seam of discussion linked to ESDGC themes. There is also a commitment by the Welsh Government to promote the Welsh language and thus an opportunity for practitioners and children to promote bilingual and multilingualism. In terms of ESDGC, it also allows children to have a different interpretation of their natural environment, for example, when using both English and Welsh names for different plants, animals and places. It can also give insights into inclusion and rights related to minority languages and cultures, which may support insights linked to conflict and inequality. For young children whose first language is Welsh, or in provision supporting Welsh language development, having high quality bilingual provision in the field of ESDGC is essential and underpins the concerns of inclusion and rights supported by sustainable development. The author is herself a Welsh speaker and from personal experience it is clear that accessing Welsh medium training, or guest speakers in schools and nurseries that support ESDGC, is not always possible. Personal experiences and reflections as a Forest School volunteer have highlighted a need to encourage more Welsh speakers in support of ESDGC delivery to ensure that young children and practitioners can continue to work bilingually and through the medium of Welsh. This should also ensure parity for Welsh medium and English medium provision.

Whole school/setting ethos

Some authors, such as Sterling (2001), Davis (1998), Huckle and Sterling (1996), Fien and Tilbury (1996) and Huckle (2012), suggest that ESDGC cannot be instructed or practised in a vacuum. Symons (1996) stresses that children who see unsustainable practice in their settings are less likely to change their behaviours and attitudes, even if positive ESDGC activity is part of the curriculum. Sterling (2001) argues that educational settings need to take a whole organisation approach and make sure ESD is practised by all staff rather than a dedicated few. Tinney (2010) suggests a need for organisations to reflect and question the role of early years settings such as Foundation Phase schools, nurseries and Cylchoedd Meithrin in reinforcing unsustainable behaviour or not doing enough to support sustainable outcomes. For example,

- How do children travel to the setting?
- Is there a walking bus or all children driven to school?

- Do school events such as discos and parties depend on selling mounds of junk food and plastic drink containers?
- Are school grounds developed to encourage growing food or encouraging wildlife?
- How are children encouraged to think creatively and consider alternative viewpoints?

Edwards and Cutter-Mackenzie (2011) highlight how young children model their practitioners' behaviour and Tinney's (2013) feedback from ESDGC professionals also suggests a need for positive role models where the practitioners' values and behaviour will influence the children they teach. Merriman et al. (2014) also explored the significance of including all staff and community members in the Eco-School's work in terms of governors, LSAs, caretakers, dinner staff, parents, local businesses and community representatives and not being exclusive to teachers/practitioners caring for children. Although not always the case in practice, the evaluation noted that, in terms of a whole school working, an inclusive approach allowed for better communication and delivery of Eco-School outcomes. As noted previously, when young children do not have access to school democratic fora this can also inhibit an effective whole school approach.

Learning with nature

One important strand across all areas of learning within the Foundation Phase curriculum is learning outdoors (DCELLS, 2008c). The importance of outdoor learning experiences has long been established in the early years sector (Edwards and Cutter-Mackenzie, 2013; Elliott and Davis, 2009), and several authors (e.g. Froebel, 2005; Dewey, 1998; Ouvre, 2003; Bilton, 2004; White, 2007; Knight, 2009; Joyce, 2012) have noted the benefits for holistic development which being outdoors provides children. Several publications (Davis, 2015; Knight, 2009; White, 2007; Bilton et al., 2005; Bilton, 2002) also highlight the importance of developing outdoor experiences and provision in early years settings. The Welsh Government has also developed specific guidance linked to outdoor learning in the Foundation Phase (DCELLS, 2009) and learning in the natural environment (DCELLS, 2007).

Much discussion of the outdoors in the early years has, however, until recently, concentrated on the benefits the outdoors provides the child (Tinney, 2010). It is also crucial to acknowledge that outdoor experiences for young children can also benefit the natural environment and promote caring instincts in young children for nature and for other people (Haas and Ashman, 2014; Prince, 2010; Elliott and Davis, 2009; Vaealiki and Mackey, 2008). For example, research suggests that adults who are now working in environmentally related professions cite positive

early outdoor experiences as significant to their environmental learning, development and awareness as adults (Palmer, 1992; Tanner, 1980). This is also explored by Wilson (1997b) and Louv (2008), who suggest that just being in natural spaces provides a backdrop to empathise with nature. Wilson (1994 cited in Wilson, 1997a) maintains that humans have an innate love of, and bond with, the natural world, which he refers to as "biophilia", and indicates the importance of children experiencing natural environments. Louv (2008) also indicates that children suffer from "nature deficit disorder" in a world where they are unable to interact and play in wild places. Work by Simmons (1994) and Wilson (1994 cited in Wilson, 1997a) goes further, suggesting that children who are not given opportunities to be outdoors build up fears and phobias of the outdoors. Wilson (1994 cited in Wilson, 1997a) interviewed a group of 30 preschool children (3–5 years old) and asked them questions about their understandings, attitudes and feelings towards the natural world; most children had very negative views of nature, being scared of some animals and plants, fearing sickness from being out in the rain and indicated being violent towards insects and young birds. Sobel (1996) suggests that the fear of the natural world or "ecophobia" can be countered by allowing children the opportunity to be in "special natural places", thus building positive experiences in the outdoors that may support them to know and care about nature.

Sustained and regular opportunities in nature can provide a challenge for Foundation Phase practitioners. Interacting with nature requires living areas with plant and animal life, not simply concrete playgrounds or very limited space outdoors. Partnership working with programmes such as Forest School can provide regular outdoor experiences; however, Wilson (1997b) notes that a child needs to take ownership of his/her special space. Children should be allowed to "create, change and personalise" the environment (Wilson, 1997a), which allows them the opportunity and time to develop positive thoughts towards the natural world (Wilson, 1997b). Maybe yards and playgrounds can also be a nature haven but this involves commitment, community support and children's active participation and planning (Moore, 1989) to convert concrete into a garden or wild area. Children who have been involved in a meaningful way in designing and planning their nature experiences are often more likely to look after and protect such places than if they have been planned for them or their involvement has been tokenistic (Hart, 1987 cited in Symons, 1996). Working with organisations such as Natural Resources Wales, the Conservation Volunteers and Groundwork can provide the expertise and manpower to support settings in developing natural space for the Foundation Phase.

Elliott and Davis (2009) also make a strong case that nature itself must be viewed from an ecocentric perspective in order for early childhood and ESD to be mutually reinforcing. This approach suggests that for outdoor experiences to be beneficial, practitioners in the Foundation Phase need to value nature intrinsically. For example, sometimes incidents happen where living things are damaged

For outdoor experiences to be beneficial, practitioners in the Foundation Phase must value nature themselves and consider their own responses. Sometimes incidents happen where "creepy crawlies" are squashed, played with or moved from their habitat by young children. Does the practitioner ignore this or make it a learning opportunity? Consider the rich opportunities for discussion in questions such as:

- How does the snail feel being carried away from its home?
- Would we like to be carried away with no warning from our homes and friends?
- Do we have the right to play with living things?
- Why was the snail squashed, did it do you any harm?

Figure 4.2 Encouraging empathy and respect for the natural environment

(Adapted from Tinney, 2010)

or moved from their habitat by young children. Practitioners in the ESD paradigm must consider how such experiences can be used to foster respect for the environment and to ensure damage to the environment from outdoor learning is limited (see Figure 4.3). Vaealiki and Mackey's (2008) observations of outdoor learning in New Zealand have also demonstrated that children being able to care for nature and living things can also encourage empathy for other children (see Figure 4.3).

With early childhood and ESD underlining the values of learning in nature, it is unsurprising that Haas and Ashman (2014) and Davis (1998) suggest that those working with young children should ensure that the natural outdoor spaces that are available to children are sufficient. They also argue that parents and the wider community would benefit from being part of such experiences, especially at a time when children spend very little time with nature because of parental fears regarding increased traffic, accidents and "stranger danger"; health and safety and litigation worries in settings and public spaces (Gill, 2007); and the pull of television and other media keeping children indoors (Palmer, 2006; Davis, 1998). As emphasised by Chawla (1998) and Wilson (1997b), early years practitioners

A young boy in a New Zealand kindergarten was having difficulty bonding with the other children and was often angry and frustrated. Time in a natural setting helped him to calm down. One day he found a dead monarch butterfly and cradled it in his hands. The other children were interested and gathered around him. The young boy was learning empathy through caring for the butterfly, but the other children were also seeing him in a different light, as a caring child in his response to the dead animal rather than the angry and frustrated "loner" of before. Caring for nature has a ripple effect impacting on the wider relationships of young children. As educators we must always ensure that such empathy can be fostered by encouraging restful and dignified treatment of living things (Vaealiki and Mackey, 2008).

Figure 4.3 The ripple effect (adapted from Tinney, 2010) based on Vaealiki and Mackey (2008)

Ellen is 5 years old. She brings the empty case of a dragonfly from an activity outdoors. She is very excited to show this to her teacher. She found it on the weekend when out walking and is very curious to find out what it is. The teacher asks Ellen what she has brought in. When her teacher sees what Ellen has brought in she instinctively reacts by saying "O ych a fi, you should put that in the bin".

- What would you have done if you were the teacher?
- What opportunities are there here to engage with ESDGC?
- If you had never seen a dragonfly case before is there any research you would undertake in order to support Ellen and her curiosity?

Wider talking points:

- How can you keep yourself informed and up-to-date?
- Can we always answer children's questions?
- Should those working with young children question their own beliefs and attitudes?

Figure 4.4 Case study adapted from Tinney (2010)

can support children engage in nature experiences if they allow children to plan and make decisions relating to their outdoor learning. Being outdoors is only part of the ESDGC agenda however, and, as Symons (1996) and Davis (1998) stress, environmental awareness should be considered in the context of social, economic and cultural issues and not in isolation. Elliott and Davis (2009:70) also caution that an over-emphasis on outdoor play in nature, or the suggestion that it is "sufficient to address the challenges of sustainability" is inadequate; for Foundation Phase practitioners, being outdoors is not sufficient, it is essential to also model behaviour which promotes learning, enquiry and respect for the environment. The example given in Figure 4.4 may have links to the outdoors but does not necessarily promote the principles of ESDGC.

Conclusion

Theoretically, integrating ESDGC and early years practice in Wales seems straightforward due to the similarities between the pedagogy and principles of the Foundation Phase and ESDGC; however, it requires the support of practitioners and families/community, cross-curricular working, and a commitment to recognising the rights, inclusion and competence of young children to start exploring ESDGC themes. It also depends on providing effective support and training for those delivering ESDGC, a whole setting approach and well developed Welsh and English medium provision.

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CASE STUDY I

San Sior as an Eco-School

Eco-Schools is an initiative which encourages children and young people to engage in their environment by allowing them the opportunity to actively protect it, and Eco-Schools are advocates for ESD. An evaluation of the Eco-Schools Programme in Wales (Merriman et al., 2014:vi, viii) highlighted Wales as "one of the most successful Eco-Schools Programmes internationally", and one of the recommendations cites "the value of senior managers having an understanding of the holistic learning value of the programme . . . as opposed to merely gaining the award as a 'tick box' exercise". Ysgol San Sior is a unique primary school, located in Llandudno, North Wales, with Eco-School Green Flag status, and the school is cited in the evaluation (Merriman et al., 2014:72) as an example of good practice. Head teacher Ian Jones exemplifies the whole school ethos at San Sior with his leadership and vision and he cites article 24 of the UNCRC (UNICEF, 1989), with its emphasis on the right to "a clean and safe environment". The Green Flag is symbolic of the sustainable ethos of the school, which is characterised with focused support for "action learning" or "learning by doing" (Eco-Schools, 2015/16:7).



Figure 4.5 "If he licks you, he is checking you out" (child comment, 2016)

The school offers exemplary opportunities for engagement in real world experiential learning and the children work on a daily basis with a menagerie of animals including chameleons, chickens, tortoises, several species of gecko and exotic frogs, "preparing the next generation of Steve Backshalls, David Attenboroughs and Iolo Williamses" (Ysgol San Sior, n.d.). This also mirrors Tinney's (2010:12) assertion that "young children will be tomorrow's politicians, economists and environmentalists". The school website is characterised with a wide remit to support children to develop their confidence, skills and knowledge related to the natural world around them whilst promoting "apprentice style challenges to inspire and promote entrepreneurial skills and develop each child's creativity" and "to be fully literate and to be able to participate in a bilingual society" (Ysgol San Sior, n.d.). Ian Jones (2013) celebrates the "knowledgeable" children, who love showing visitors the reptiles which are housed in three (7ft) glass display cabinets in the school foyer. Tinney (2010:17) asserts that "Adults will need to acknowledge that they do not and cannot be 'all knowing' and will learn with and from the children. Often there will be more questions than answers but this reflects global sustainability itself where the issues facing human beings are constantly evolving and changing". Whilst the head teacher is very knowledgeable,

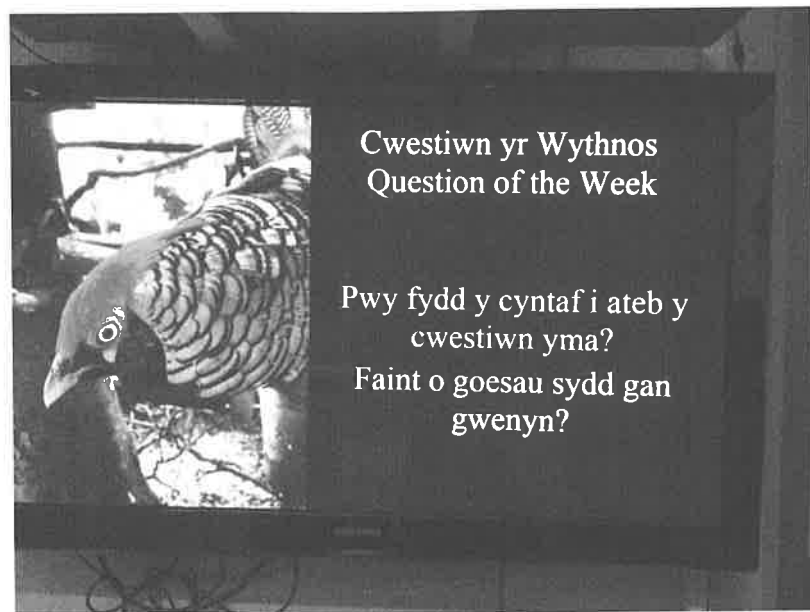


Figure 4.6 Question of the week at San Sior

the pedagogical approaches observed within San Sior moved beyond expert–novice interactions with the children and encouraged an active engagement in the learning process.

Ian Jones also champions the value of giving children the responsibility of caring for creatures in the school environment, and he claims that the unique school focus offers children the “insight into the living world that they could not possibly acquire from reading a book or surfing the internet” (Jones, 2013:57). In an age of advancing technology, there is increasing concern that children today are passive and, as such, they are having less interaction with their natural world, instead gaining the majority of their knowledge through a screen (Louv, 2010) and “unlike television, nature does not steal time; it amplifies it” (Louv, 2010:7). Ian Jones also tacitly captures the liberating aspect of technology with reference to the Reggio Emilia notion of “border crossings” (Rinaldi, 2006), as the children embrace technology to “research the particular demands of each animal and create an information sheet showing which part of the world it is from” (Jones, 2013:57).

The potato project at San Sior

The grounds of the school are a source of great delight for the staff and children alike and as a reflection of Piagetian pedagogy, the environment is utilised by the children on a daily basis and acts as “the third teacher” (Oates and Grayson, 2004).

The grounds house a rustic area with a butterfly garden, a bee hive, minibeast hotels and a pond where the children regularly pond dip. These natural habitats are juxtaposed with more formal areas where classes take responsibility for tending the gardens. On a recent visit to San Sior, Diane Boyd and Nicky Hirst accompanied students from Liverpool John Moores University, who spoke to the children about their school and their love of the natural environment. The children were consistently secure in their ability to talk to adults about the value of understanding the biodiversity within their unique school environment.

Cameras in bird boxes encourage the children to view the blue tits raising chicks and the school carries out exciting potato trap projects in the insect garden, “linking the school with other schools from every corner of the globe” (Ysgol San Sior, n.d.). Here, the digital environment is multifarious with clear connections between technology and the natural environment, and this exploration of biodiversity offers opportunities for the children to communicate directly with children from other parts of the world. Tinney (2010) notes how “for most people and particularly young children it is very difficult to think about far away problems in abstract terms” and the potato trap project supports experiential learning and an interconnectedness within a global context.



Figure 4.7 Children and students pond dipping

The potato trap project was instigated so the children could discover different types of invertebrae around the world. See the clear instructions from the children at San Sior www.sansior.co.uk/potato-trap.

- Cut the potato in half, hollow out the potato with a spoon whilst leaving some potato for the insects to eat;
- Place the two hollowed halves together and create two holes at the top so the bugs can get in and out;
- Plant the potato in a damp place with the holes pointing up and make sure that the holes are visible;
- Leave the potato in the ground for two weeks and then remove the potato and record to share with children completing the activity in other parts of the world.

The children share data using video recordings, photographs and shared PowerPoint slides.

Figure 4.8 The potato trap project

The Foundation Phase

Tinney (2010:2) highlights that there are "strong links within the Foundation Phase curriculum for facilitating ESDGC and that an experiential learning and play curriculum for young children dovetails closely with the principles and practice of ESDGC".

At San Sior there are a plethora of opportunities for young children to become aware of aspects related to the three traditional key pillars of sustainable development: environment, society-culture and economy (Brundtland, 1987) within a playful pedagogical context. Wilson (2012:84) is eager to assert that adults shouldn't "use a 'Save the Earth' approach with young children as this can lead to serious oversimplifications of the issues" and, in her opinion, "it can also lead to feelings of fear and helplessness on the part of children". However, Tinney (2013:12) cites Murdoch (1992) who argued that, as with many controversial or difficult subjects, it is possible to start thinking about sustainability at an emotional and cognitive level appropriate to the child. At San Sior the children are absorbed in positive experiences with nature and the built environment.

The school advocate dedicated weeks to whole school investigations such as "environmental week" and "chicken week", where children and staff work collaboratively within a whole school approach. The weekly foci support the ethos of the school and illustrate how children scaffold each other to develop a deep awareness of environmental issues. As Inoue (Davis and Elliott, 2014:88) states, "ECEfS should not be seen as a 'new' educational issue, added successively to the existing curricula but should be advanced through an integrated and transformative approach". During chicken week

in the nursery, the staff considered how Humpty Dumpty could be used as a vehicle to support the exploration of ESD through science experiments using hard boiled and raw eggs to consider hypothesis and active engagement. ESD is not only a content area that traditionally is linked to environmental education, but is also a way of working with children (Pramling Samuelsson, 2011; Davis and Elliott, 2014) that addresses aspects from the three key pillars of sustainable development: environmental and ecological concerns, social and cultural implications and economic aspects (Brundtland, 1987).

The children were also mindful of the economic implications for the school as the eggs are sold to families and the local community and are worth 25 pence per egg! Tinney (2010:12) notes how Wales has brought ESD and global citizenship together, highlighting that sustainability should bring together a diverse range of issues, not simply the perception that ESDGC is about the environment alone. ESDGC is one of the areas Estyn evaluates during school inspections, highlighting the importance this area has been given by the Welsh Assembly Government. ESDGC guidance highlights the importance of ESDGC being cross-curricular, interdisciplinary and not simply an "add on" subject (Tinney, 2010).

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CASE STUDY 2

Ysgol Glan Gele: a whole school ethos

Ysgol Glan Gele is an infant school set in the thriving market town of Abergele in North Wales. The school provides Foundation Phase education for children aged 3–7 years old (Ysgol Glan Gele, 2017). Eco-Schools is an international programme designed to promote sustainable development through education and awareness raising that leads to action locally; Keep Wales Tidy manages the programme (Merriman et al., 2014). The school boasts an Eco-School Green Flag award and the children's voices are at the heart of this case study with an exploration of the participatory ethos related to their involvement in the eco-committee and the school's Fairtrade committee. On a visit to



Figure 4.9 Conversations with the Fairtrade committee

the school in 2016, tutors from Liverpool John Moores University talked to children about their child-focused committees and the following vignettes offer some insight into our conversations and the links to sustainability within early childhood education.

There is a great deal of talk around sustainability at the moment and Ysgol Glan Gele has an active Fairtrade committee where the young children raise money for various charities. In a chapter related to sustainability within early childhood education in Wales, Tinney (2010:17) cites Symons (1996) who suggests that young children benefit from being provided with a learning environment that supports self-worth, communication and cooperation, indicating that children with high self-regard are likely to be more altruistic, generous and sharing, concepts related closely to the sustainability agenda.

Fairtrade is a global movement with a strong and active presence in the UK, represented by the Fairtrade Foundation (Fairtrade Foundation, n.d.). The iconic Fairtrade mark is recognisable for some consumers and is sometimes erroneously referred to as the "Fairtrade logo". The logo featured strongly in our conversations with the children who noted their advocacy for the Fairtrade products.

For very young children initiating ideas may be difficult; however, shared decision making with supportive adults willing to listen to their needs and opinions is possible and links closely with the ideas of Vygotsky and Bruner regarding the role of adults in supporting and scaffolding young children's learning (Tinney, 2010:15).

The young children we spoke to were able to articulate reasoned and thoughtful arguments around Fairtrade products and Davis reminds us that when "revisioning" children's rights, we should consider what she terms "dimension 2 – recognising children's agentic participation" and acknowledge that children "know the world in alternative (not inferior) ways to adults" (Davis and Elliott, 2014:25, 26). This recognition is captured in the Foundation Phase curriculum with its focus on experiential

"We have Fairtrade coffee mornings so we can use the coffee from the farmers."

"We sell stuff, make food and raise money for other people who need it."

"Fair means enough for everyone."

"If someone got 2 and you only got 1, that wouldn't be fair."

"Fair is everyone joins in."

"Farmers grow vegetables for us and they get a fair price."

"It's like the shells on the beach, if you pick more than you need, you can share with your friends."

Figure 4.10 The children (aged 5–7 years) were keen to establish their perceptions around what is "fair" with the following insights into their realities around equity

"It's on the bananas in the shop."
 "The bananas have Fairtrade stickers on and you can peel them off."
 "They do coffee, chocolate and lots of other stuff."
 "I tell mummy, look it's the Fairtrade bananas!"
 "Buying the Fairtrade ones means the farmers get money."
 "I tell mummy to buy the Fairtrade ones and you can see the picture."
 "If someone has got 4 cans and you gave 2 away, that would be fair."
 "Making sure everyone joins in."

Figure 4.11 Children's comments related to Fairtrade products

learning, the development of thinking skills and the UNCRC (Prowle, Davidge-Smith and Boyd, 2016), and adults working with children in this phase need to consider Margaret Donaldson's (1978) post-Piagetian research related to "human sense" and social cognition. It is important to develop authentic conversations with young children and, as adults, we may occasionally need to "decentre" and see things from the child's vantage point. The "stickers" on the bananas were noted by the children and the Fairtrade sticker logo imbued with social significance from their understanding of the "Fairtrade" events within the school context. Discussions are a regular feature of the Fairtrade committee and the teachers have recognised that the local experience of shopping with the family made contextualised "sense" to the children and the broader notion of global economics is considered in meaningful ways.

Penn (2011:169) considers how Fairtrade is a popular concept with the purchase of goods from small producers who "get a decent rate for their labour" and "who are not exploited and whose products are local and sustainable". Fairtrade also implies ethical consumers, people who are concerned about the conditions under which trading takes place.

Davis and Elliott (2014:1) highlight the need to treat young children as active agents of change with the promotion of "children working authentically in the exploration of topics and issues of interest to them". Tinney (2010:13) reminds us,

If a child is learning and developing recycling behaviour at school but this is not promoted at home then joint projects linking children and parents can support each other's understanding and motivation in this area. More importantly parents and the wider community's involvement in children's learning allows for an exchange and discussion of ideas, beliefs and values with a wider group of people where teachers can also learn from other views on sustainability.

Indeed, the Welsh Foundation Phase gives opportunities for children to be listened to and their meaningful suggestions acted upon (DCELLS, 2008).

When we consider children's influence in the shopping habits of their families, children are indeed agentic in the decision-making processes. Albon and Mukherji (2008:105) offer a cautionary argument about 'the 'green' or ethical consumer perspective on food and eating' and suggest that some people construct a sense of identity from purchasing certain products, including Fairtrade. However, they also make the sociological connection to life choices, highlighting that ethical consumerism may not be possible for all and people need to be in the "material and political position to make them" (Giddens, 1991 cited in Albon and Mukherji, 2008:105). This is also reiterated by Tinney (2010:17), who notes

the reality where settings often work within local authorities which are influenced by government. Young children and their teachers may decide that they would like to use recycled materials for crafts, use less packaging in snack time drinks and only stock Fairtrade snacks. This can only be implemented if the local authority allows settings purchasing autonomy as they are often constrained by procurement policies for schools.

As Davis (2014:33) notes, education for sustainability is "more than social critique" and there is a need for "critical and transformative pedagogies" which "encourage problem solving, participating, making decisions and having choices".

Remember, children who are supported to express their thoughts more clearly and listen to others have more positive attitudes to other people, and will be better equipped to discuss and debate the complicated issues which form part of ESDGC themselves rather than relying on a didactic approach (Symons, 1996). Davis (2009) highlights that early childhood education and environmental education (and, we would argue, ESDGC) have several parallels in terms of their philosophical and pedagogical approaches with an emphasis on holism, interdisciplinary and integrated curriculum, and active, relevant and child-led learning. It is therefore alarming that much research on children and education for sustainability in fact ignores the role of young children as active participants in sustainability despite examples of innovative work in practice (Tinney 2010:13).

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