Education for sustainable development and global citizenship: Leadership, collaboration, and networking in primary schools

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Abstract

The interaction of leadership, collaboration, and networking in the development of Education for Sustainable Development and Global Citizenship (ESDGC) is examined in five north Wales primary schools noted for their ESDGC development. Strong leadership and considerable, but varying, forms of distributed leadership were found in each of the schools. All schools had extensive external networks with a wide range of visitors and community links. However, participation in these networks and in external professional development was largely confined to key ESDGC players. Some schools had designed effective ways of sharing the knowledge, skills, and understanding of key players with their fellow teachers. Where internal collaboration and networking were frequent, the staff appeared to be more knowledgeable about and committed to ESDGC.

Keywords: education, global citizenship, sustainable development, primary schools, leadership, collaboration, networking

Introduction

This study explores evidence for the role and nature of leadership, collaboration, and networking in the development of Education for Sustainable Development and Global Citizenship (ESDGC). It was undertaken as part of a wider doctoral study (Bennell, 2012) that explored issues in the development of ESDGC through case studies of five Welsh primary schools, which had received positive mention for their ESDGC practice. In this larger study, the schools' practice was first examined

against established criteria for ESDGC to ascertain how well the schools were doing; this was followed by a detailed investigation of the influences and dynamics that had shaped their development. Thirteen of the seventeen most commonly elicited factors clustered under leadership/distributed leadership, collaborative working, and networking (including professional development opportunities), all issues promoted widely in ESDGC and related fields as well as in general education. These are the issues discussed in this paper.

The key research question is: What roles do leadership, collaboration, and networking play in the development of ESDGC in primary schools?

Subsidiary questions include:

- What role does the head teacher play?

- Is there distributed leadership for ESDGC? Are there key players?

- To what extent do schools and their teachers have links and partnerships with others outside of the school? What kinds of networking, support, or partnerships are perceived to be most useful?

- If teachers are encouraged to collaborate for ESDGC within the school, to what extent do they collaborate or even support each other?

- Is there evidence that distributed leadership, collaboration, support, and networking impact on teachers' understanding and teaching competence?

Background

ESDGC was first formally introduced to schools in 2002 (ACCAC, 2002), drawing on definitions and values from the fields of development education, global learning, and education for sustainability (e.g. Pike and Selby, 1998; Sterling, 2001). It promoted nine concepts: interdependence, citizenship and stewardship, needs and rights, diversity, sustainable change, quality of life, uncertainty and precaution, values and perceptions, and conflict resolution. Several sets of guidance followed, e.g. from the Inspectorate for Education and Training in Wales (Estyn, 2006) and the Welsh Assembly Government (2006, 2008a). The evolution of ESDGC in Wales is fully described in Bennell and Norcliffe (2011). In the document *Education for Sustainable Development and Global Citizenship: A common understanding for schools* (Welsh Assembly Government, 2008a), the emphasis is on holistic thinking and connectivity between local and global issues and across the school. There was also a move from learning through concepts to developing skills, pupil participation, and future dimensions through themes (wealth and poverty, identity and culture, choices and decisions, health, natural environment, consumption and waste, and climate change). Schemes such as the Welsh Network of Healthy Schools, Eco-Schools, an

international initiative that encourages pupils to engage with environmental and sustainable development issues, and Global School Partnerships (DFID Global School Partnerships, 2008), which encourages sustainable, equitable partnerships between schools in the UK and schools in the global south, are all recognized as contributing to ESDGC. Emphasis is placed on five common areas: commitment and leadership, learning and teaching, school management, partnerships and community, and research and monitoring. The document emphasizes that ESDGC is 'part of the ethos, pedagogy and organisation of the school', 'a whole-school approach to education to which all subjects can contribute', and 'something which requires coordination across the whole school' (Welsh Assembly Government, 2008a: 5). It states that 'it is essential that leaders establish a vision for [ESDGC in] the school', and that 'responsibility for ESDGC needs to be shared' (11). It stresses that 'it is the partnerships that are built within schools and with external organisations that will help ensure the success of ESDGC' (18).

The ESDGC common understanding document was delivered to schools at the same time as the pupil-centred, skills-based revised curriculum for Wales (Welsh Assembly Government, 2008b) and the *School Effectiveness Framework: Building effective learning communities together* (Welsh Assembly Government, 2008c). The latter promotes integrated tri-level working between schools and other elements of the education system, professional development, high quality leadership, systems thinking, working with others, and networks of professional practice (12).

Literature review

Leadership and collaboration have also been widely suggested as key components in general school development and change (e.g. Teddlie *et al.*, 1989; Harris, 2008a) and within the fields associated with ESDGC (e.g. Sterling, 2001; Inman and Burke, 2002; Jackson, 2007; Harris, 2008b; Scott, 2013; Hunt, 2012). Both the personal characteristics of leaders and their actions receive attention. For example, in the ESDGC fields it is suggested that leaders often have certain qualities, e.g. they are optimistic, passionate about sustainability, they have an integrated, systemic understanding of the world (Jackson, 2007), and they are innovative, risk-taking, resilient, flexible, valuing a diversity of views, and committed to learning by everybody (Inman and Burke, 2002; Scott, 2013). However, Hargreaves *et al.* (2011: 21), writing on schools performing beyond expectations (PBE), add: 'PBE leadership ... is about having the ability to maximise leadership potential at all levels in the organisation through the power of example, persuasion, personality and passion.'

ESDGC and related educations, with their multiple, interconnected focus areas and emphasis on participative, democratic approaches, naturally lend themselves to distributed leadership approaches; see, for example, Apple and Beane (1995)

for democratic schools, Hunt (2012) for global learning, Sterling (2003), Jackson (2007) and Scott (2013) for sustainability in schools. Harris (2008b: 40) stresses that '[l]eadership for sustainability is not based on hierarchies or power bases but rather is a collective set of influences that overlap and connect… Leadership for sustainability is distributed leadership.'

Also, Ofsted (2008), Enabling Effective Support – Southwest (EES–SW) (2007), Symons (2008), and Hunt (2012) noted the positive effects of having a special coordinator for ESDGC-related matters. Distribution of leadership is not simply the sharing of tasks. It builds on the varying expertise and passions of staff, helping them build their own leadership qualities and pursue their own ideas. Harris (2008a) notes certain key characteristics of distributed leadership: a clear vision shared across the staff, leadership shifts according to need, and individuals who perceive themselves as stakeholders. Jackson (2007) notes how this sense of ownership is important in order for a change to become embedded within practice. Harris (2008a) also stresses that the success of distributed leadership is not guaranteed, but depends on the nature and quality of the leadership.

Devolved leadership without collaboration can lead to a series of disjointed initiatives. Harris (2008a, 2008b) stresses that effective distributed leadership incorporates collaborative approaches. It thus has many common characteristics with learning communities. Stoll (2004) uses Mitchell and Sackney's (2000: 9) description of a learning community: 'A group of people who take an active, reflective, collaborative, learning-oriented, and growth-promoting approach toward the mysteries, problems and perplexities of teaching and learning'. Collaborative approaches build on constructivist ideas (Vygotsky, 1962), where individuals are believed to construct new knowledge from their experiences. Many different reasons are given for encouraging collaboration, including: developing communities of practice that enable existing and new members of a group to learn (Lave and Wenger, 1991), an outcome also noted for distributed leadership (Harris, 2008a); enhancing teachers' professional development (Darling-Hammond and McLaughlin 1995); enabling the sharing of meanings (Blenkin *et al.*, 1997); and deliberately aiming for change in an integrated, purposeful way (Harris, 2008a). Some of these could perhaps miss opportunities for innovation by adhering to established norms. Within the fields of sustainability, however, a commonly cited reason for collaboration is exposure to new ideas, ideologies, complexities, and multiple rationalities that can spark new ideas and transform practice (Sterling, 2001; Scott and Gough, 2003). Engeström (1999) and Mezirow (2000) note the potential transformative effects of such exposure on groups and individuals respectively. Penuel *et al.* (2009), in an intensive study of two high schools, found that the school with strong inter-staff relationships worked

more efficiently with innovation. In a study of schools and sustainability, Jackson (2007) found:

> *Good school leaders encourage staff and students to contribute ideas and they foster a climate of participation and teamwork. This gives a sense of empowerment and enthusiasm at all levels within the school.*

Jackson, 2007: 28

Collaborative working is not always straightforward. For example, Little (1990) found that collaborative cultures are often achieved mainly through the extraordinary efforts of individuals, and that they become vulnerable if those individuals leave. Stoll (2004) notes that learning communities within schools can often become limited when there is a limited flow of new ideas from outside. Stoll *et al.* (2006) and Vescio *et al.* (2008) confirm that the most effective and innovative learning communities have a much wider scope involving not only schools but also members of the community and other related organizations, a finding confirmed in the field of ESDGC and sustainability by Estyn (2006), Jackson (2007), EES–SW (2007), and Gayford (2009). Shallcross and Robinson (2007), in stressing the importance of action for change, call these multi-faceted communities 'communities of action'. In their model of school development for Education for Sustainable Development (ESD) they place the community, rather than the school, at the centre.

There are also situations where teachers learn by talking informally and perhaps incidentally about their work, e.g. social networking (Carmichael *et al.*, 2006). Portes and Sensenbrenner (1993) suggest that the norms of helpfulness and obligation that arise among individuals who interact frequently lead to access to expertise and resources that would otherwise be less easily available.

The literature suggests that the nature of school leadership, together with collaboration and networking within schools and with others outside of the school may be important factors in the development of ESDGC in schools. The investigation of this is now described.

Methodology

The study was based in north-west Wales, a region that has received substantial support for ESDGC development and that has some nationally recognized ESDGC primary schools. It takes a largely qualitative, interpretive approach, focusing on teacher interviews, an associated survey, and teacher social network analysis in five primary schools in north-west Wales. The collection of data was carried out by the author from March 2010 to January 2011.

The schools chosen fitted certain criteria. The selected schools attained a good standard of education according to recent inspection reports and local authority

advisors, they were recognized for their positive ESDGC practice either by Local Education Authority officers, school inspectors, or by NGOs and national organizations, and they were of varying size, in different types of location, some rural, some in or close to towns. One school was in Anglesey and the other four in Gwynedd; however, all came under the jurisdiction of the same school advisory body. To aid anonymity, they were given pseudonyms based on a group of small mountains in north Wales, i.e. Faban, Llefn, Gyrn, Bera, and Drosgl. All schools worked bilingually through the medium of Welsh and English. Faban was the only school with a high percentage of pupils with ethnic origins other than English or Welsh. The schools characteristics are given in Table 1 below.

Table 1: Description of the case study schools

	Faban	Llefn	Gyrn	Bera	Drosgl
Number of pupils	233	244	100	26	96
Number of teachers	11	10	6	2	7
Situation	town	village adjoining small town	village, rural	rural	village, rural
% free school meals (Combined county average 15%)	well below average 4%	higher than average 21%	below average 10%	well below average 4%	about average 13%
Pupils of ethnic origins other than English/Welsh	high	very low	none	very low	very low

Confirmation of schools' ESDGC practice

As a prelude to this study, information was collected to verify whether the schools were indeed practising ESDGC in an appropriate manner. This is described fully in Bennell (2012). Examples of pupils' work, teachers' plans of work, and school policies relating to ESDGC were examined. All schools were members of schemes that were said to contribute to ESDGC, i.e. all were members of the Healthy Schools Scheme and of either Eco-Schools or Gwynedd and Anglesey Green Schools (this scheme was similar to Eco-Schools and is now discontinued). All schools had an evident global dimension. Four schools had ESDGC policies that permeated the whole school ethos, and all had activities relating to ESDGC occurring throughout the school in classrooms and during events. In each school there had been initial concentration on specific areas of ESDGC, followed by wider development. Three schools, Faban, Llefn, and Gyrn had established global school partnerships, and these had provided a major cross-curricular stimulus for ESDGC practice. The latter two schools had attained the highest 'accreditation' level of the British Council International School Award, and Llefn had been used as a national example of how to embed a global

partnership across the curriculum. Drosgl had initially put much emphasis on its Eco-School development in the older age groups of the Foundation Phase (ages 5–7); Bera had begun with the development of the Foundation Phase (ages 4–7) and was recognized nationally for its achievements in that area. Further, Gyrn was noted for its pupils' ESDGC entrepreneurial activities; Llefn for following pupils' interests; Faban, a multicultural school, for its work on diversity. In Llefn, Gyrn, and Bera particularly, many ESDGC-related visitors were used to enhance teaching and learning. Teachers were enthusiastic and frequently mentioned that ESDGC came in naturally. Teachers were also asked about their views on how their ESDGC practice had impacted on pupils. Answers included beneficial effects such as an increase in enjoyment of learning, interest, motivation and enthusiasm, support with making decisions, the ability to consider alternative points of view, and an increase in self-esteem. A series of focus group interviews were held with year 5 and 6 pupils in each school; these included all pupils in Gyrn, Bera, and Drosgl and a selection of pupils in Faban and Llefn. They focused on pupils' knowledge and understanding, values, attitudes, dispositions, and views of the future. The two sets of information were compared. Judgements on the schools' level of ESDGC practice were made with reference to three sets of criteria, namely Oxfam (2006), Welsh Assembly Government (2008b) and Gayford (2009). Although there were variations between schools, all were judged to be carrying out a good range of appropriate ESDGC activities. Most pupils in the focus groups displayed a good range and understanding of ESDGC-related issues as well as valuing diversity, the environment, and being critical thinkers. Some cases of stereotyping were noted especially in the smallest rural school.

Initial survey of teachers
All teachers were first asked to fill in a questionnaire to gather personal information and to acquaint them with topics which would be raised in their interviews.

Semi-structured interviews with head teachers, teachers, and support staff
One interview framework was designed for head teachers and another for other teachers; extra questions for the ESDGC coordinator were added to the latter. The interviews were designed to be impartial but friendly, and open-ended to allow the views of the interviewees to be heard freely; all were carried out through the medium of Welsh. The interviews of head teachers and ESDGC coordinators lasted for around 40–60 minutes; teacher interviews took between 25 and 35 minutes. They were recorded by an audio device and then simultaneously translated to English and transcribed. Every teacher was interviewed with the exception of Llefn, where only seven of the ten teachers were available for interview; however, two of the remaining three teachers completed the survey, giving some useful information.

All teachers were asked a specific question, i.e. 'What would you say have been the most important factors in the school's development of ESDGC?' They were first given the opportunity to name some factors without prompting and then asked to consider a list of possible factors compiled from a literature review and from Local Education Authority officers' suggestions. These were:

- the head teacher's drive
- the dedication, or interest, of other teachers
- attention to planning
- teacher collaboration
- training events
- peer mentor support
- networking with other schools
- case studies from other schools
- visitors to the school
- taking advantage of specific opportunities that arise
- guidance from the Welsh Assembly Government or the inspection body, Estyn.

Factors mentioned in other parts of their interviews were also noted. The interviews also asked about the teachers' levels of interest, understanding, confidence, and competence in ESDGC, the nature of any professional development or support received, the role of key players in the school, and the extent of co-working between teachers. Head teachers and coordinators were also asked further questions about ESDGC implementation at whole school level.

Analysis of teacher interviews
Two techniques were used to analyse these interviews. First, for each school, files were compiled to enable a rapid overview of teachers' backgrounds, roles, and responsibilities. Secondly, the qualitative data from all five case study schools was analysed using NVivo-8 (QSR International, 2008). This allowed for efficient and transparent analysis of the large quantity of data collected and facilitated a clear audit trail. The data analysis occurred in several stages after Bazeley (2007) and Saldaña (2009), i.e. broad coding, coding by perspective, noting trends, reviewing and re-coding, seeking relationships.

Mapping of teachers' conversations about ESDGC

An approach modified from Carmichael *et al.* (2006) was used to study teachers' networking. Three tables were devised that asked teachers with whom, and how frequently they discussed ESDGC (1) within the school, (2) outside of the school, and (3) with LEA officers. They were asked to note the method of discussion, for example face-to-face or email, and also the general topic of discussion. They were asked to talk through their thoughts as they completed the forms and prompted where necessary.

Social network analysis

Using methods broadly similar to those used in the studies by Fox and Wilson (2008) and Penuel *et al.* (2009), the data from the questions on networking were plotted in sociograms using the modelling facility of NVivo-8. Frequency of discussion, i.e. daily, weekly, monthly, or yearly, was denoted by link lines of different thickness. It was intended to use different coloured lines for different kinds of discussion, for example, day-to-day chat, planning, and support, but teachers' comments were too general to make this meaningful.

Examination of school documentation on ESDGC

Head teachers were asked to share documentation, such as school development plans, policies, and other strategies that contribute to ESDGC. In addition, school websites, where available, were scanned for reference to ESDGC and related activities.

Findings

The analysis draws on the 33 interviews with teachers and 34 survey responses. Of the 17 most commonly mentioned factors in ESDGC development, 13 clustered under leadership/distributed leadership, collaborative working, and networking. Although these varied between the schools, some consistent factors arose. These included: motivation and support of the head teacher (21 of 33 teachers), the role of the ESDGC coordinator (21of 33), visitors to the school (21 of 33), teachers working together (13 of 33), developing an international partnership (13 of 33), and professional development experiences (10 of 33). The ESDGC guidance (Welsh Assembly Government, 2008a) was emphasized by head teachers and/or coordinators in Faban, Llefn, Gyrn, and Bera. These key issues are discussed below.

Leadership

The role of the head teacher

All head teachers displayed positive attitudes towards ESDGC, and all were said to be key players, motivated and supportive; they also all cited their own personal interests as motivation for their development of ESDGC. This agrees with the findings of Hunt (2012). In Faban, three teachers (2F, 3F, and 4F) indicated that perhaps they would not be doing ESDGC without the head teacher's motivation, for example: 'I would say the motivation of the head teacher to be honest, interest, isn't it. Yes everything starts with the Head' (Teacher 3F). In Bera it was notable that their most recent inspection report paid particular attention to the all-round excellence of leadership.

These head teachers had put many actions into place to encourage the development of ESDGC. These included: the appointment, or in one case recruitment, of a coordinator to oversee ESDGC development; further, distribution of leadership, putting ESDGC on the agenda of staff meetings, encouraging teachers to collaborate, discussion of ESDGC with senior management and governors, auditing and giving attention to ESDGC in school development plans, policies, and strategies for ESDGC, supporting professional development for teachers both within and outside the school. Many of these actions were described by Symons (2008) as part of the formalization of ESDGC in schools.

Distribution of leadership for ESDGC

There was evidence for distributed leadership in all of the case study schools, although its nature varied from school to school. Four of the five schools, i.e. all except Drosgl, had named ESDGC coordinators. These coordinators were cited as key players in three schools, i.e. in Faban (10 out of 11 teachers), Llefn (7 out of 7 teachers), and Bera (both teachers). All coordinators had received substantial good quality professional development from, for example, development education centres, local education authorities, and Global Schools Partnerships training courses, and all appeared to have a good understanding of ESDGC. They were also aware of areas that still needed development.

In the two larger schools, Faban and Llefn, the coordinators were highly praised for their leadership by a large number of teachers. Both coordinators were longstanding in their roles (from around 2005), first being called Global Citizenship coordinators and then renamed ESDGC coordinators as the term became more widely recognized. They had put great efforts into developing good teaching practice and their school's international partnerships, bringing visitors into the school, and supporting other teachers with portfolios of work and feedback from courses. In Llefn the head teacher described her coordinator:

> *She's very, very special. She has the vision, and we have meetings and discuss the way forward, but she works tirelessly. ... But also, you know, she's the one that goes under the skin of this subject, and who's very knowledgeable.*

Llefn head teacher

This teacher had not only lived abroad for many years, but had also been strongly supported by the local development education centre as a mature trainee teacher, and later attended many courses on ESDGC methodology and developing partnerships. Her enthusiasm, drive, and understanding of the topic are reminiscent of characteristics of transformative individuals (Giroux and McClaren, 1986) and of leaders in democratic schools (Inman and Burke, 2002).

In the two smaller schools with ESDGC coordinators there was more mutual responsibility. In the very small school, Bera, although the coordinator had the overview of what was happening with ESDGC in the whole school, the two teachers agreed that they were both key players with much responsibility shared. In Gyrn also, although there was a named coordinator who audited ESDGC and oversaw the Green and Healthy School aspects, the head teacher remained very engaged and proactive in developing new initiatives. Moreover, he stressed that there were no key players and that all teachers play a part, discussing ESDGC weekly in staff meetings:

> *We have always been sharing responsibilities, everyone has a responsibility for things they do. ... [We have] discussions ... where everyone puts their ideas in. That's a good thing.*

Gyrn head teacher

The ESDGC coordinator agreed with this.

In all schools there was also considerable evidence of further distributed leadership, with teachers having responsibility for specific aspects of ESDGC. For example, in Faban, teacher 7F led on Personal and Social Education (PSE) and developing activities such as gardening; Teacher 8F was responsible for developing and teaching a unit on diversity in all Key Stage 2 classes; teacher 3F was the coordinator for the Green School and Eco-School schemes; other teachers also contributed specific, diversity-related aspects of ESDGC across the school through art, music, and dance. This was a good example of teachers leading and taking responsibility for different areas of learning. Teachers also frequently mentioned how they enjoyed taking responsibility for their own classroom ESDGC planning.
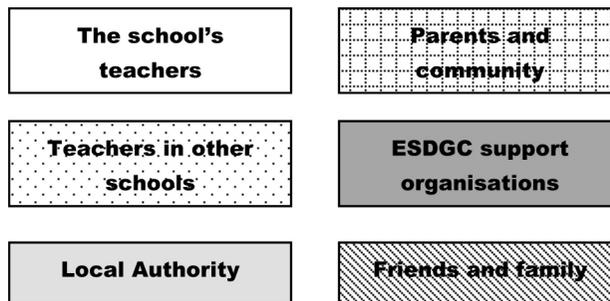
In Drosgl, the only school without a named ESDGC coordinator, there was still evidence of some distributed leadership with one teacher coordinating PSE aspects, another coordinating Eco-School, Healthy School, and Fairtrade School, and another initiating a Turkish school link. However, as will be seen later, the distributed

leadership elements of sharing practice and collaborating (Harris, 2008a) did not appear to occur substantially in this school.

Evidence of external collaboration and networking

This section draws on evidence from teacher interviews and the network analysis of teachers' ESDGC conversations. The analysis of schools' external networks (Figures 1a–d and 2) confirmed that all of the schools, and particularly Gyrn and Llefn, had extensive networks. All regularly worked with a set of organizations and members of the local community, e.g. the local Development Education Centre, environmental and community groups, health workers, Local Education Authority officers. A notable feature of all five schools was that they were also flexible in their approach, using opportunities as they arose. Visitors and international partnerships were the third and fourth most frequently mentioned positive factors in the schools' development of ESDGC (16 out of 34 and 12 out of 34 teachers respectively); in Llefn, seven out of eight teachers mentioned visitors as a key factor in ESDGC. This latter school was outstanding for the way in which it enriched its partnerships with schools in the Caribbean and China by bringing in a great variety of relevant visitors, e.g. teachers from their partner schools, members of the local Chinese community, and even Benjamin Zephaniah, a well-known Jamaican-born poet, writer, and musician. In Llefn, Faban, and Gyrn, visits to international partner schools were promoted as a mode of professional development and a large number of teachers were given this opportunity (this is discussed further below).

Figure 1: Key to teachers' external networks (Figures 1a–d) and internal/external networks (Figure 2)

The school's teachers	Parents and community
Teachers in other schools	ESDGC support organisations
Local Authority	Friends and family

Note: Each box denotes a different type of contact. A letter and number, e.g. 2L, denotes the teacher. Two-way arrows show a discussion, one-directional arrows indicate a more supportive relationship.

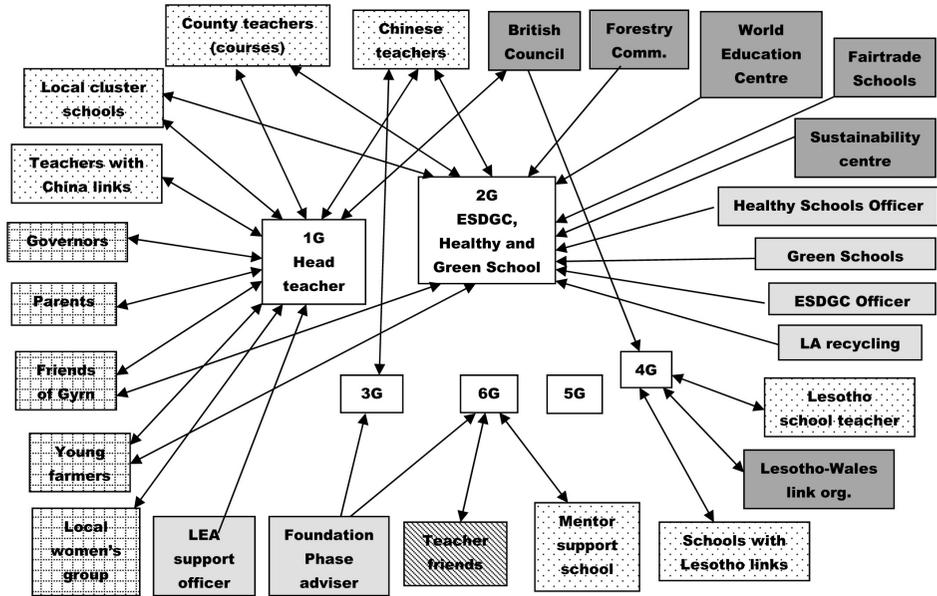**Figure 1a: Gyrn teachers' external networks**

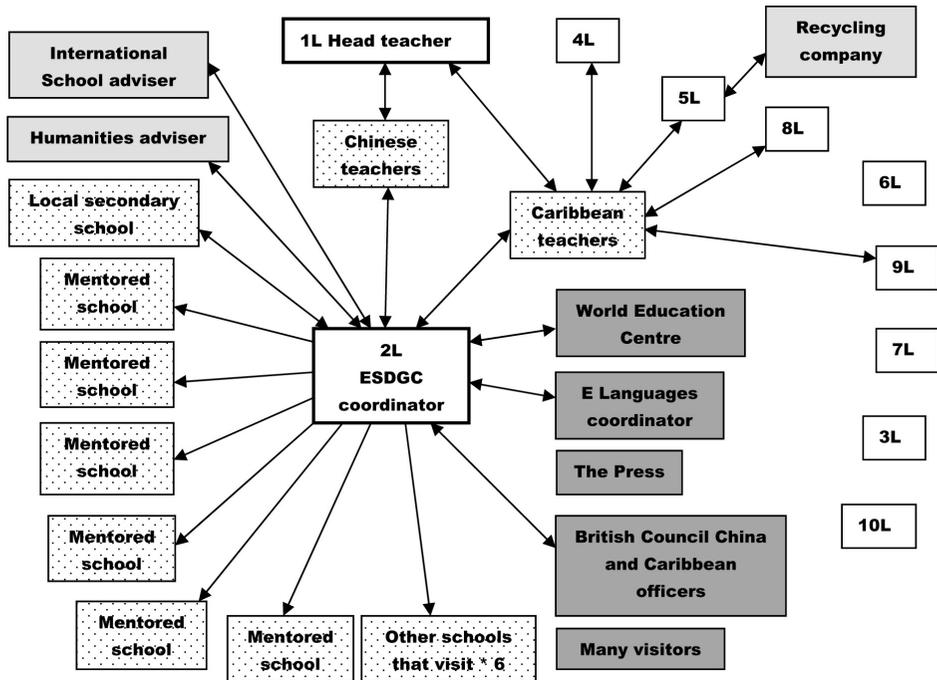**Figure 1b: Llefn teachers' external networks**

Figure 1c: Faban teachers' external networks
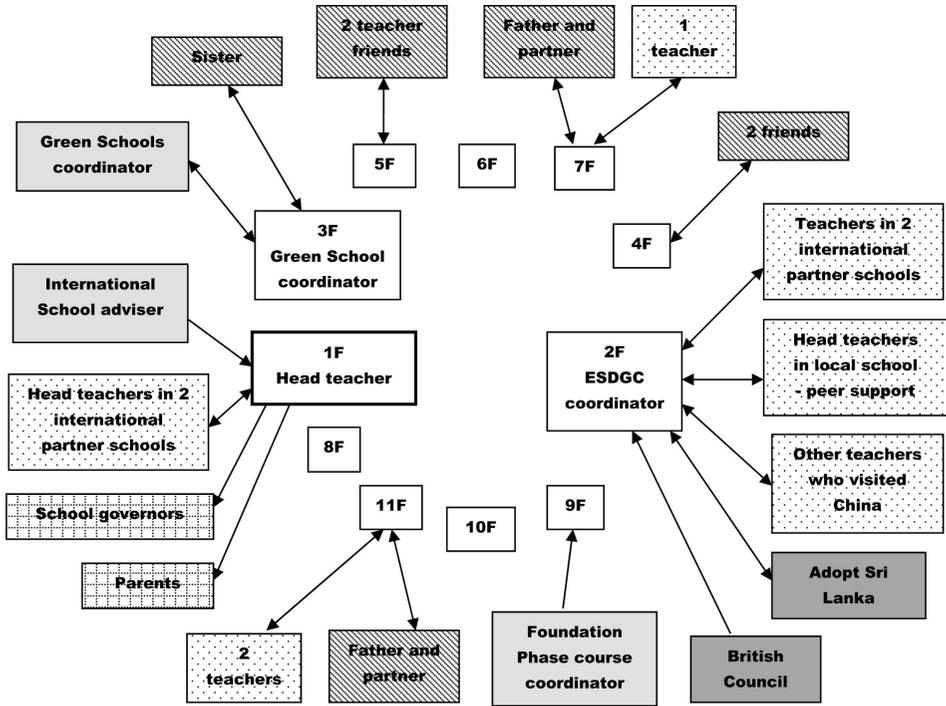

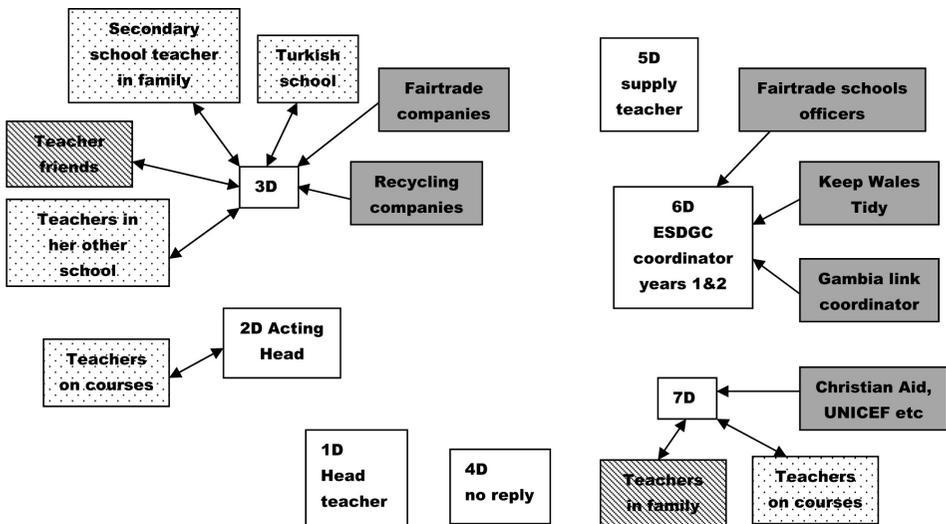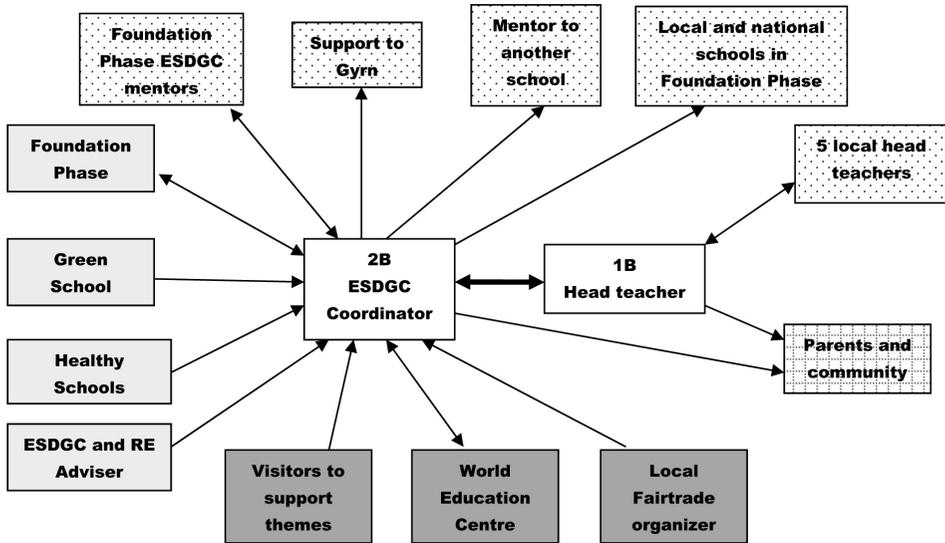## Figure 1d: Drosgl teachers' external networks

Figure 2: Bera teachers' internal and external networks

Note: The arrow shows daily conversations between the two teachers.

Apart from the international visits, it was the head teachers and ESDGC coordinators who had the majority of contacts in these external networks. This was particularly notable in Llefn (Figure 1b), where the very proactive coordinator dealt with nearly all external networking. The experienced ESDGC teachers also often shared their experiences with other schools. For example, teachers from four schools had contributed to Local Education Authority or other similar training sessions, and ESDGC coordinators from three schools had acted as ESDGC mentors to other schools on a local development education centre project. Some of these teachers kept in touch even after the projects had finished. Bera also forged its own ESDGC early years support system with other small local schools. These networking teachers had gained much experience and had been exposed to new ideas; however, in order to both share these experiences and involve other teachers, good internal communications were essential.

Evidence of collaboration and networking in school
In all schools there was evidence of some teacher discussion about, and collaboration on, ESDGC. However, the degree to which this occurred varied notably between schools; in some schools only certain teachers collaborated, whilst others were more involved in 'talking about ESDGC'. The largest proportion of teachers mentioning 'teachers working together' as a factor in ESDGC development were in Gyrn (5 out of 6 teachers) and Bera (both teachers). The internal network analysis confirmed this. In Gyrn (Figure 3a), there was a daily flow of discussion from the head teacher

(based in the junior section) through to the infants section, and other staff discussed ESDGC plans and projects weekly in staff meetings. In Bera, where the two teachers discussed ESDGC daily, Teacher 2B noted:

> *Cooperation of teachers? You definitely need that … Oh, there needs to be [cooperation] … with the head teacher, definitely, in a small school, because you work together don't you.*

<div align="right">Teacher 2B</div>

In the two larger schools, more teachers in Faban (4 of 11) mentioned working together than in Llefn (2 of 8); however, the detailed network analysis indicated less *frequent* ESDGC communication in Faban than in Llefn. The Llefn head teacher and ESDGC coordinator said that their approach was strongly based on team work, with regular dedicated staff meetings and teachers discussing, sharing and regularly appraising each other's work. There was also evidence of some conflicting views in this school, with one teacher challenging the emphasis on teacher travel to partnership schools; this led to a change of practice with greater concentration on internet communication. The internal network analysis (Figure 3b) confirmed that the head teacher and the ESDGC coordinator talked daily; the coordinator talked daily with the other Key Stage 2 teachers including Teacher 5L, the newly qualified teacher whose ESDGC development she was supporting. There was two-way discussion between most members of staff in both infants and junior sections at least weekly or monthly. The head teacher, ESDGC coordinator and Key Stage 2 teachers worked intensively together on their Jamaican and Chinese school partnerships and, together with the other teachers, brought a global dimension to classes right across the school. In contrast, in Faban, the internal network analysis (Figure 3c) showed less frequent discussion of ESDGC across the whole school, with the conversations between the head teacher, ESDGC coordinator and teachers being monthly rather than weekly or daily as in Gyrn, Llefn, and Bera. Although the teachers in the Key Stage 1 section, where the ESDGC coordinator was located, discussed their work at least monthly, often planning activities together, they talked much less frequently with Key Stage 2 teachers. Within the Key Stage 2 section of the school, only the PSE coordinator and the teacher who taught the Key Stage 2 diversity unit discussed their topics weekly; they planned activities together and both were aware of how their work fitted into ESDGC. So, although there was substantial devolvement of leadership in this school, there appeared to be less frequent discussion and collaboration between teachers than in Gyrn and Llefn. There was, however, evidence of a strategic support system for key teachers (Figure 4); this is discussed below.

In contrast to the other schools, in Drosgl no teachers mentioned 'working together' as a factor in ESDGC development, although there was one mention of 'planning together'. Three teachers here did not complete the networking questions, but there

were enough responses to give an indication of the situation. The analysis (Figure 3d) shows a sparser network of discussion about ESDGC than in the other schools. There was some daily or weekly discussion, mostly centred on teacher 6D who organized whole school ESDGC events, and between two young teachers (3D and 5D) discussing an emerging school link with Turkey. Teacher 6D gave the impression that the head teacher had been a driver of many ESDGC activities and that his absence (at the time of interviewing), subsequent staff changes, and the lack of a coordinator had contributed to the situation found there. As Harris (2008a) suggests, overreliance on one key leader can lead to a sense of incoherence when he is removed.

Figure 3: Teachers' networks in school. Key to frequency of contacts in Figures 3a–d

| daily —— daily | weekly — weekly | monthly ········· monthly |

Note: A letter and number e.g. 2L denotes the teacher. Two-way arrows show a discussion, one-directional arrows indicate a more supportive relationship. Since almost all teachers spoke at least yearly, these arrows have been removed for ease of viewing.

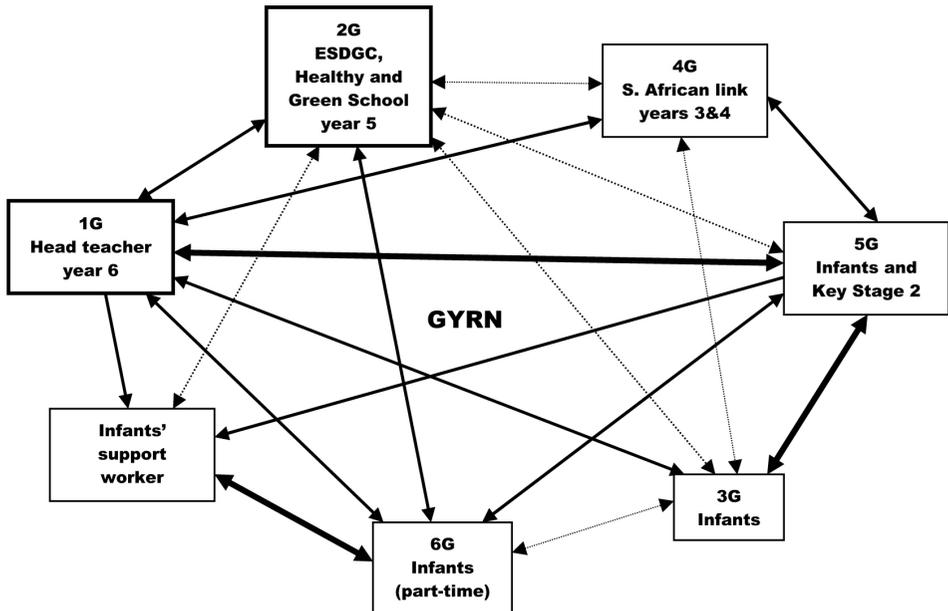### Figure 3a: Gyrn teachers' networks in school

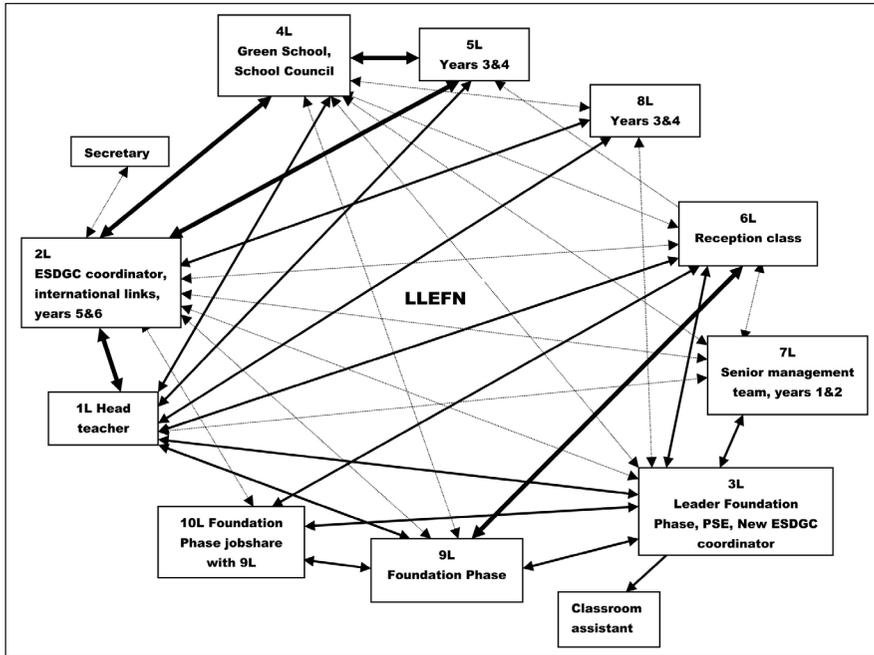## Figure 3b: Llefn teachers' networks in school

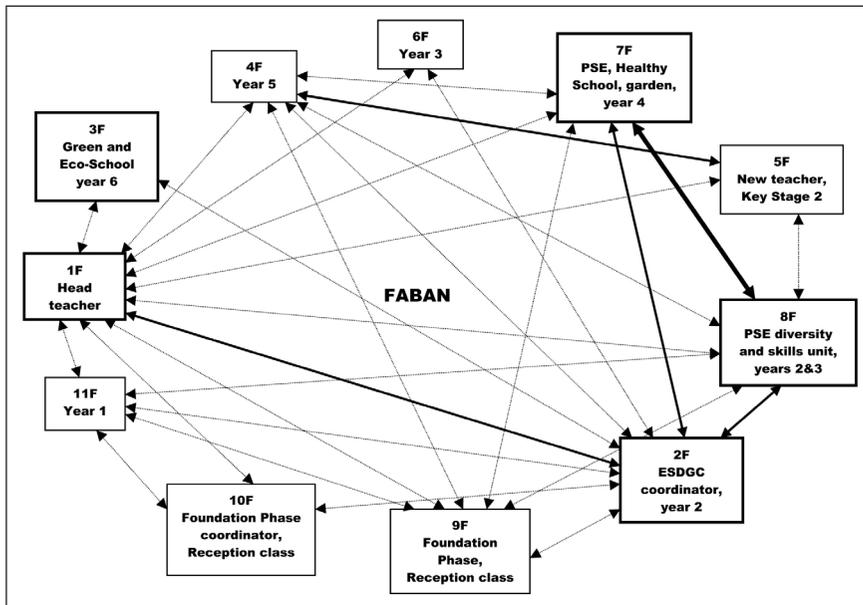
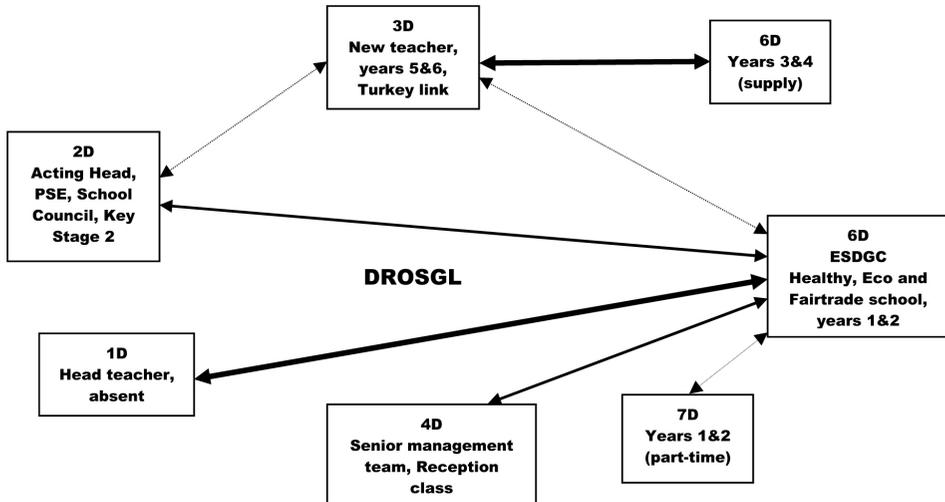## Figure 3c: Faban teachers' networks in school

Figure 3d: Drosgl teachers' networks in school

Some of the teacher conversations occurred as part of dedicated ESDGC support for teachers. There was evidence of this in four schools, i.e. Faban, Llefn, Gyrn, and Bera, where many teachers made complimentary comments about the support received. Methods of support included using portfolios of work to help teachers who were moving from one class to another, supporting new teachers in their induction sessions (Faban and Llefn), and providing feedback to the entire staff on courses attended. In terms of international visits, the Faban head teacher, who was raised in south-east Asia, noted:

> *I think it helps if maybe someone gets to go to a different country as well, especially if they are not of the [same] culture, or don't understand. It helps them understand.*

> Faban head teacher

However, drawing on her own experience, she recognized that this was just a part of the teachers' learning; she did not, however, explain whether teachers had any special preparation for their visits. Pupils in this school seemed quite distant about their partner pupils, suggesting that the link was not really engaging them. In Gyrn and Llefn there was evidence of teacher preparation. In Gyrn, Teacher 4G supported other teachers with adaptable international partnership teaching materials. In Llefn, shortly after he had received his ESDGC induction from the very experienced coordinator, Teacher 5L was sent on a visit to their Caribbean partner school as a learning experience; he also discussed his experiences afterwards. This echoes comments by Martin and Griffiths (2012) about the need for professional development to enhance teachers' international visits and avoid issues such as

stereotyping. Certainly the pupils in these two schools were very engaged and insightful about their partner schools and countries.

Faban had an interesting support system (Figure 4). The experienced head teacher supported the ESDGC coordinator and key ESDGC teachers, i.e. 2F (ESDGC coordinator), 3F (Eco-School), 4F, 7F (PSE and Healthy School), and 8F (Key Stage 2 diversity unit). In turn, the ESDGC coordinator supported most teachers, Teacher 7F supported the less experienced Teacher 8F, and 8F and 4F supported new teacher 5F. These support systems could be viewed as emerging communities of practice with less experienced teachers working with, and learning from, others with more experience. However, the linear nature of Faban's support system may have had a diluting effect on information exchanged, particularly as the flow moved from more experienced teachers to those less experienced.

Figure 4: Faban school: Teachers' views of whom, within the school, had helped and supported them
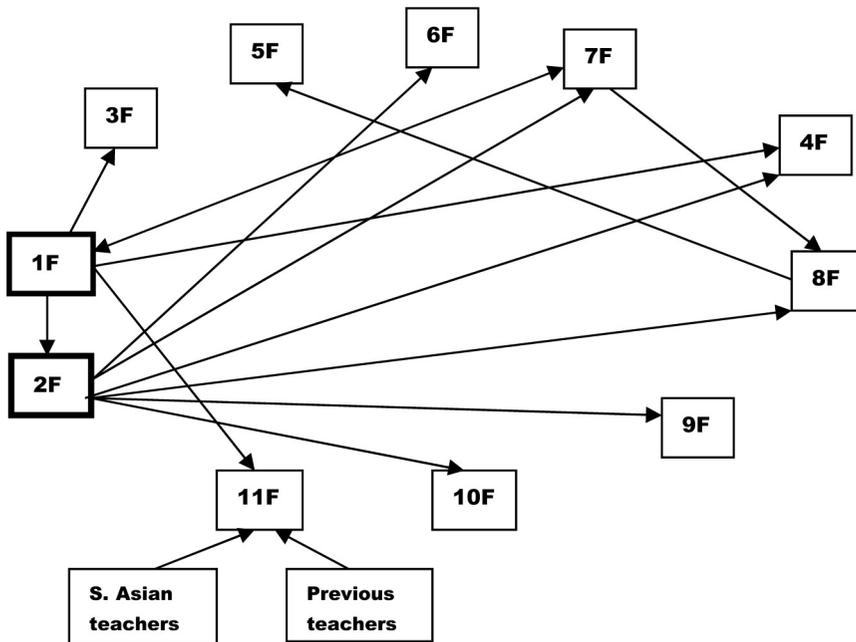
Involvement of the senior management team and school governors
Discussion of ESDGC by the senior management team was specifically mentioned in Llefn and Drosgl. In Llefn, ESDGC was said to be regularly discussed by this team, whereas in Drosgl it arose occasionally in subject discussion. The board of governors in all schools was kept up to date with reports on ESDGC progress except in Drosgl,

where, again, matters relating to ESDGC were reported under subjects. All governors were said to be supportive and in Bera, Llefn, and Gyrn positively proactive. For example, Bera had a link governor for ESDGC who dealt with specific ESDGC issues, and the Llefn and Gyrn governors offered support and a welcome to many of their visitors. However, despite the governors' support, in all schools there was a sense that they were reacting to the head teachers' enthusiasm rather than leading from the front. Unfortunately, it was not possible to interview any of the school governors to hear their own views.

Evidence for the impact of distributed leadership, collaboration, and networking on teachers' individual professional development

The evidence above has shown that all schools had some forms of ESDGC leadership and distributed leadership, all had extensive external networks, and four had sound evidence of teachers working together. Although the teachers involved generally believed that these factors had influenced their schools' development of ESDGC, this does not in itself guarantee good quality ESDGC. Levin (2008) suggests that substantial change would be unlikely to occur without knowledgeable and competent teachers. Was there evidence that any of these factors had impacted positively on teachers' own professional development? How well did teachers understand ESDGC, and how competent and confident did they feel about introducing it in teaching and learning?

When teachers were asked about what had affected their own professional ESDGC development, there was a notable difference between responses of head teachers/ESDGC coordinators and those of other class teachers. Reflecting the findings above on external networks, head teachers and ESDGC coordinators named a large number of quality professional development opportunities, many of which came from sources outside of the school and involved forms of networking. These included: attendance at ESDGC professional development courses and conferences run by the local development education centre and Global School Partnerships (DFID Global School Partnerships, 2008), where they heard inspirational speakers, saw examples of practice from other schools, and were exposed to ESDGC methodologies; ESDGC-specific networking events, informal discussions with teachers; working with other organizations; Local Education Authority support; and working in, and visiting, other countries. Teacher 2B from Bera also noted how she had gained confidence from being an ESDGC mentor and still remained in touch with other mentors, frequently exchanging ideas, an example of a community of practice emerging from distributed leadership (Harris, 2008a).

In contrast, class teachers emphasized experiences and support received *within* their schools; just over a fifth noted professional development courses. Their in-school

experiences, which could be described as situated learning (Lave and Wenger, 1991), included teaching experiences (12 teachers; 6 in Drosgl), dedicated support from other teachers (15; none in Drosgl), and designated responsibilities such as coordinating related school award schemes (7), i.e. part of distributed leadership in the schools. The dedicated support in Llefn, Faban, and Gyrn from the experienced coordinators and head teachers should have been able to give them a balanced view of ESDGC; however their other experiences could well have focused them on particular elements of ESDGC and left them with an incomplete understanding of it. In Llefn, Faban, and Gyrn all teachers involved in visits to international partner schools listed this as a formative experience (10), and from their comments there was some evidence of teachers' reflective learning from these. However, as noted by (Martin and Griffiths, 2012), their learning could be incomplete without appropriate training. Such in-depth training was found in Gyrn and Llefn; however, as noted above, in Faban teachers received only short periods of feedback from courses.

Teachers were then asked how well they felt they understood ESDGC, how interested they were in it, and how confident and competent they felt about introducing it. To investigate their actual understanding, teachers were also asked for their definitions of ESDGC and if and why they felt it was important. There was again a difference between responses of head teachers/ESDGC coordinators and other class teachers. In Faban, Llefn, Gyrn, and Bera, the head teachers and ESDGC coordinators were all 'very interested', felt 'very' confident and competent about introducing it, and felt they understood it well; their descriptions of ESDGC and its importance confirmed the latter. However, all other teachers, including the key ESDGC teachers in Drosgl, were only 'a little' or 'quite' interested and only a few felt 'very confident' or 'very competent' in ESDGC. Notably, in Faban and Drosgl the *majority* of class teachers felt only 'quite' or 'a little' confident and competent.

There was also a notable difference between schools in the class teachers' understanding of ESDGC. In Llefn, Gyrn, and Bera, despite some teachers not being confident about introducing it, their definitions demonstrated a broad understanding of ESDGC. In contrast, in both Faban and Drosgl several teachers said they did not fully understand it and their incomplete definitions confirmed this; most teachers did, however, also express an interest in learning more. This situation may have arisen due to inadequate support, infrequent discussion and lack of time devoted to it. In Faban, the ESDGC coordinator said that she had not yet shared the ESDGC common understanding with teachers and in Drosgl the senior teachers were only just becoming familiar with it themselves. Additionally, this latter school did not have a coordinator to promote ESDGC. Discussion of ESDGC in these schools was less frequent than in the other schools; the Faban head teacher said it was difficult to feed back information from a whole day's course in a brief session. However, it is also

possible that teachers' incomplete understanding arose because these two schools were deliberately concentrating on certain areas of ESDGC. Faban is a multicultural school and, at the time of the study, was giving substantial attention to developing its work on diversity; in Drosgl much attention was given to the Eco-School aspects because of the head teacher's interest in that area.

Discussion

It has been shown that leadership, distributed leadership, internal and external collaborative networks, and learning support mechanisms did feature in the case study schools, although to varying degrees. In the schools where these aspects were strongly developed, they were perceived by teachers to be important factors in their school's ESDGC development. Certain features stood out in the findings. First, the motivated and enthusiastic head teachers were responsible for putting many of the key features for ESDGC development in place in school structures. It was they who decided to develop ESDGC, recruited able coordinators, further distributed the leadership, and decided how much time should be given to staff development, collaboration and support. Where the schools' ESDGC development would have been without them is uncertain.

Secondly, the strong roles played by the ESDGC coordinators in Llefn and Faban was greatly appreciated and ensured that ESDGC was developed in imaginative ways and communicated across the school. The further distribution of leadership in all schools was perceived by some teachers to have helped their ESDGC development, and helped them develop leadership skills in areas of ESDGC. However, these aspects alone did not guarantee that these teachers all understood ESDGC well, or in its entirety.

Thirdly, all schools had a large number of partners and extensive external networks, with these being used to enhance teaching and learning. However, negotiation with partners, extensive external professional development opportunities, and the giving of support to other schools was mostly confined to ESDGC coordinators and some head teachers. Had these experiences been shared more extensively by teachers, this could have helped them avoid staleness and would have enabled them to access new ideas and viewpoints, a desirable situation for transformation of practice (Engeström, 1999; Scott and Gough, 2003; Stoll, 2004). Certainly, all of these teachers appreciated their experiences and all had a very good understanding of ESDGC and the confidence and competence to introduce it. However, a key issue was how to inform and involve other teachers whose ESDGC learning was usually confined to their situated learning within the school.

Fourthly, the key difference in schools where all members of the teaching staff were very knowledgeable about ESDGC appeared to be in the amount, the quality,

and the frequency of the time given to reflective professional enquiry on ESDGC in school. This agrees with the findings of Jackson (2007). This time consisted of personal teacher in-school development, teacher support, and opportunities for staff to discuss issues and plan together. In two schools in particular, Llefn and Gyrn, frequent, dedicated time was given to ESDGC development. All teachers were involved in discussions, substantial support was given to the induction of new teachers (Llefn), and preparation given for international school visits. Without actually being present in the staff meetings it was difficult to assess the depth of discussion that went on; however, there was some evidence in Llefn for questioning of practice. This again reflects Engeström's (1999) notion of expansive learning, where wider alternative contexts are constructed through the meeting of ideas, and the 'conflictual *questioning* of the existing standard practice' (69). There was little evidence of contrived collegiality (Hargreaves and Dawe, 1989); most teachers seemed to appreciate working together. These schools also displayed behaviour reflecting the qualities of both communities of practice (Lave and Wenger, 1991) and learning communities (Stoll, 2004). The size of the school staff did not appear to be an indicator of this way of working; rather it seemed to depend on the level of priority given to ESDGC by the ESDGC coordinator or head teacher. It was notable that in the school without an ESDGC coordinator, and where the head teacher was also absent, there was little collaboration and also low teacher understanding. This points to a dichotomy suggested by Little (1990): while collaboration can lessen the vulnerability of initiatives promoted by lone, enthusiastic individuals, collaborative cultures are often achieved through the extraordinary efforts of those very individuals, and thus can become vulnerable if those individuals leave.

Finally, in addition to supporting those within their schools, several of the key ESDGC teachers provided considerable amounts of support for other local schools, forming wider communities of practice and helping all involved to access new ideas. There were also signs of some informal social learning (Fox *et al.*, 2007), where teachers from different schools kept in touch after formal projects had finished. Their increased familiarity could have helped release social capital and tacit knowledge as suggested by Carmichael *et al.* (2006). This external interaction occurred mostly as part of externally-promoted NGO projects; there were few signs that the School Effectiveness Framework's (Welsh Assembly Government, 2008c) encouragement for collaboration between schools had impacted on ESDGC development.

The schools' ESDGC development can be compared to some existing indicators in Wales and further afield. Together with their distribution of responsibility and the involvement of senior management and governors, four schools, Faban, Llefn, Gyrn, and Bera, appeared to have leadership at the 'embedded' level for ESDGC in schools (Welsh Assembly Government, 2008a: 45). They displayed similar characteristics

to those described for the leadership of sustainable schools by Scott (2013) under 'Towards restorative'; this was particularly notable in Gyrn with its strong teacher interactions. In Drosgl, the lack of an ESDGC coordinator and subsequent, infrequent discussions between members of staff would suggest that this school is more aligned with Scott's second level of 'some assimilation' and the 'developing' level of the Welsh Assembly Government (2008a: 45).

Sterling (2003) and Scott (2008) suggest a top level where a complete transformation in learning at whole school level has occurred and the nature and purpose of the school is seen in a different way. It was felt that, although major changes to ethos had occurred, none of the schools in this study had been really transformed in this way. However, all of the schools displayed some of the characteristics of Sterling's transformative education (Sterling, 2001: 38). For example, although there was still some 'control kept at the centre', all had examples of 'local ownership' with teacher, pupil, and parent and community involvement; they were 'responsive and dynamic' and saw ESDGC as an 'on-going process' with 'change over time'. Emphasis was also on teacher and pupil learning rather than transmissive teaching. Several took part in 'democratic networks' and all used 'language of appreciation and cooperation'. Llefn was thought to be closest to being transformative in terms of its flexible, pupil-led approaches, with Gyrn following closely. This reflected the approaches of both ESDGC and the pupil-centred revised curriculum for Wales (Welsh Assembly Government, 2008b).

On an individual teacher level, some teachers did appear to have changed their views substantially, although the term 'transformed' would seem too strong. Certainly many mentioned experiences that could be said to have the potential to be transformative (Mezirow, 2000). These included exposure to other cultures, inspirational speakers, and ESDGC methodologies. However, these experiences were combined with others and none could be pinpointed as being key to change on its own. This is not unusual; Mezirow (1995) suggested that transformative learning is the result of 'an accumulation of transformations in meaning schemes over a period of time' (50).

As a final consideration, although it is undoubtedly desirable for all teachers to be well-versed in ESDGC, and, ideally, to have received good quality external professional development, this may not be practicable for all schools. In a busy school, with many different curriculum aims to satisfy, and with limited funds for professional development, the 'efficient' solution may be to substantially develop one or two teachers in ESDGC and to devolve specific areas of ESDGC learning to a variety of other teachers. Where schools could make substantial improvements is in utilizing the multitude of external opportunities that are available and improving the level and quality of internal support and collaboration. By giving more time for

reflective interaction between the specialized ESDGC teachers and other teachers, who also have their own strengths and interests, they could enthuse teachers, develop new ideas for dealing with the complexity and breadth of ESDGC, and enrich the learning environment for pupils.

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Acknowledgements

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