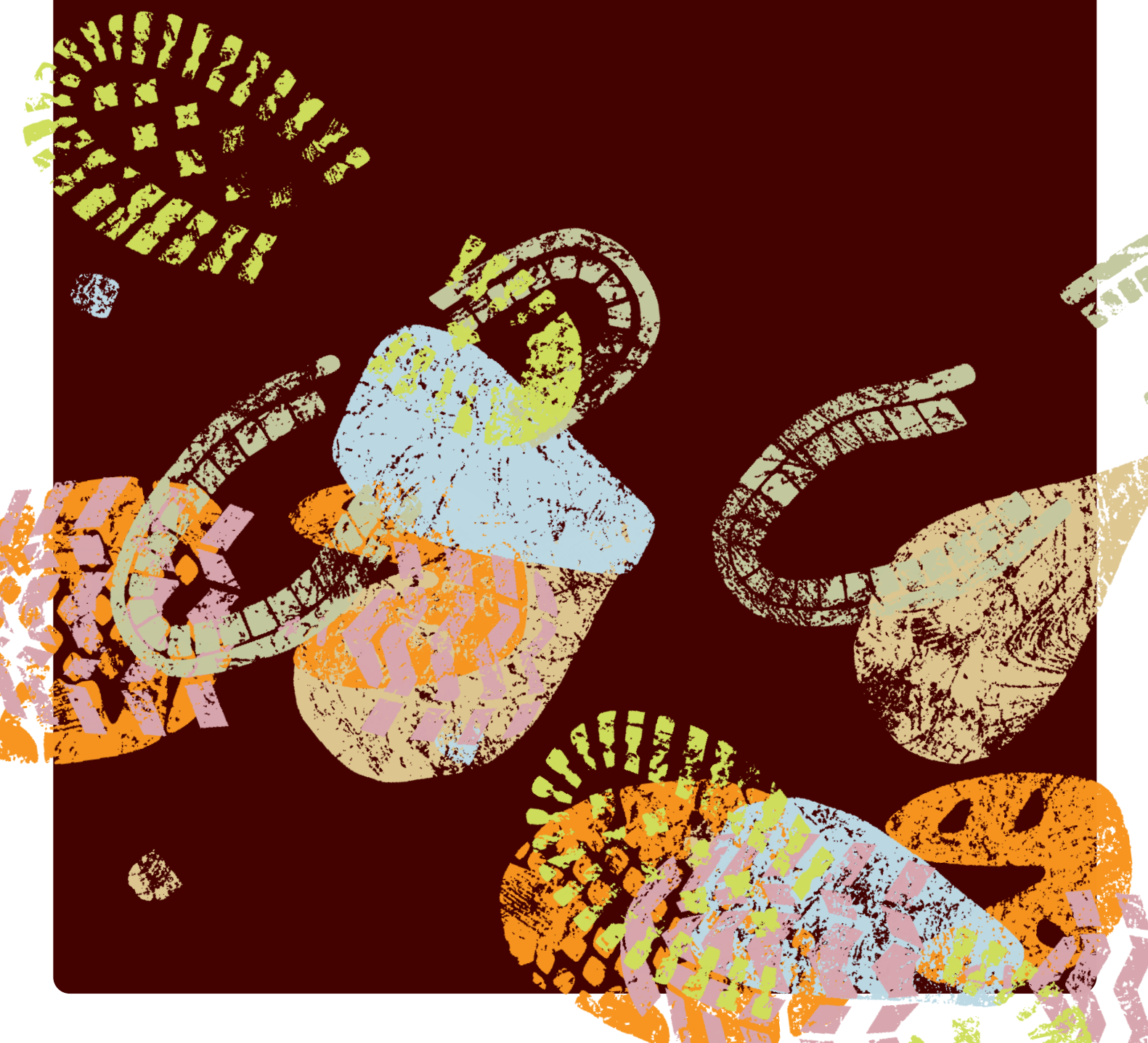


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Leading Sustainable Schools



Leading sustainable schools: what the research tells us

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Contents

<u>Executive summary</u>	<u>07</u>
<u>Introduction</u>	<u>11</u>
<u>Background</u>	<u>11</u>
<u>Rationale</u>	<u>13</u>
<u>Purpose and aims</u>	<u>14</u>
<u>Methodology</u>	<u>15</u>
<u>Research design</u>	<u>15</u>
<u>Literature review</u>	<u>16</u>
<u>Case studies</u>	<u>17</u>
<u>Focus groups</u>	<u>19</u>
<u>Quantitative survey</u>	<u>19</u>
<u>Findings</u>	<u>20</u>
<u>Literature review</u>	<u>20</u>
<u>Case studies</u>	<u>24</u>
<u>Focus groups</u>	<u>30</u>
<u>Quantitative survey</u>	<u>35</u>
<u>Analysis and conclusions</u>	<u>45</u>
<u>Recommendations</u>	<u>50</u>
<u>Bibliography</u>	<u>52</u>

Executive summary

Why do this research now?

Education in England is currently undergoing major changes in almost every part of the system, from the buildings and grounds, the curriculum and assessment, to the relationship between schools and their local communities. The bringing together of both education and children's services into one strategy, Every Child Matters (DfES, 2003), and one department, the Department for Children, Schools and Families (DCSF), has significant implications for schools and the social context within which they operate. Sustainability can provide a framework for integrating these agendas, enabling a more strategic approach to addressing them.

The recent sustainable schools consultation (DfES, 2006) has shown a significant level of support for sustainable development in schools and wider society. In response to the consultation the DfES published their sustainable schools strategy in September 2006, 'Sustainable Schools for Pupils, Communities and the Environment'. To facilitate the widespread take-up of sustainability, it is important to understand how it is led effectively within schools. What values, skills and behaviours do school leaders have to possess and demonstrate to enable their schools to become sustainable schools? This research for NCSL seeks to identify these and some of the barriers to success, as well as developing a better understanding of what practices distinguish sustainable school leadership from excellent school leadership in general.

What was the research for?

The overall purpose of this research was to inform the College, school leaders, policy makers and the wider education community, about the current state of sustainable development in schools and the skills and qualities required by school leaders to move this important agenda forward.

To fulfil this purpose five aims were identified for the research to address:

1. Why and how some school leaders develop sustainable development within their schools, and how this fits within their wider leadership thinking and approach.
2. Evidence of the outcomes of these approaches in terms of: environmental impact, school ethos and student learning and wider outcomes.
3. Evidence of the extent to which sustainable development approaches are a feature of schools nationally and the barriers and enablers to more widespread take-up.
4. The skills, qualities and development opportunities required by school leaders to make sustainable development a reality.
5. The implications of the preceding aims for leadership development and national policy.

How did we do it?

The research was carried out by a project team consisting of colleagues from the Institute of Education in London, Education Direct, Dr Chris Gayford of Reading University, led by WWF-UK. Four strands of research were used to investigate these questions, each with a different focus but all with linked outcomes. These were a literature review, focus groups, case studies and a quantitative survey of school leaders and business managers. A NCSL Leading Practice seminar also contributed to this work.

What did we find out?

Firstly, it is clear that this is a largely un-researched area of school practice. Whilst a number of schools have been working in ways which would be identified as comprising a sustainable or green school, research has focused on short-term outcomes and has tended to be anecdotal. There has been little evaluation of staff or leadership practices which enable successful sustainable development in schools.

From this study, it is evident that leaders who develop sustainability within their school do so with passion and conviction, underpinned by personal values. There is a philosophical and for many, a spiritual dimension to why these leaders engage with sustainability. The survey reinforces this stating that 98 per cent of respondents rated sustainable development in their personal lives as being important or very important. They see sustainability as a broad agenda, including environmental, social, economic and governance aspects of their schools. Indeed, there is a consistent understanding of sustainable development as this 'bigger picture' through all strands of the research. From the case studies, this enables schools to use sustainability as a vehicle for delivering Every Child Matters and building links with the wider local community. We found successful sustainable school leaders place sustainability at the heart of their school, providing an ethos which pervades all aspects of the school and its external relationships.

What do leaders of sustainable schools need to consider?

Their immediate and global community

Successful sustainable schools are involved in many activities beyond the core curriculum, such as Healthy Schools, Global Dimension, Eco-schools, Growing Schools. Leaders of these schools see their role as expanding the school experience beyond the school and embracing the wider world. Successful schools are often inward looking, focussed on attainment and good management, and the survey indicates that most school leaders place the global dimension relatively low on their priorities. However, sustainable schools look outwards to engage with their local communities and have a global perspective. This wider, more inclusive vision is also seen in the strong pupil voice and involvement of pupils in decision-making that we found in many of the case study schools.

Environmental impacts

The case studies and focus groups give many examples of environmental impacts. These range from improving the school campus with art work; tree planting; incorporating renewable energy or sustainable build features; growing food; to changing attitudes and behaviours and creating a deeper understanding of the connection between people and place. These schools actively use their buildings and grounds as learning resources, examples include investigating energy and water use and participating in the planning of new buildings considering their environmental impacts and possible sustainable design features.

School attainment

Learning is central to sustainable schools for all members of the school community, students and staff alike, demonstrating that learning is valued and is a lifelong process. From the case studies, schools are using sustainability to deliver the National Curriculum in ways that are relevant and real to the students, leading to high levels of attainment or value-added progress. The survey results indicates that pupils are key in developing sustainability and there are several supporting comments endorsing their role in driving this agenda in schools. Sustainable schools focus on their sustainable development work as a strength of the school and highlight this for Ofsted inspections, frequently being commended for this work and its impact across all aspects of the school

'Crispin is an outstanding school. The staff, students and parents think so and the inspection team agrees. A unique feature is its superb education for sustainable development.'

Ofsted November 2006

Leadership styles and qualities

The emerging model of green, or sustainable, school leadership builds on what we already know of effective school leaders, but has distinct additional characteristics based on the personal values of leaders who choose to embrace sustainable development. These include fostering participation in decision making, an outward orientation looking beyond the school gates and an optimistic world view.

Distributed leadership

Distributed leadership seems to be the model best fitted to fostering sustainability in schools, with different aspects of sustainable development being led by different members of the school community. By sharing out the tasks many are enabled to participate in the overall strategy, reducing the burden on the head and more deeply embedding sustainability across the school.

The key qualities of a sustainable school leader are that they are optimistic and outward looking. These leaders are conscious of the place of the school in the local and global community. Many of the case study schools have considerable community and international components to their activities. These leaders have an integrated, systemic understanding of the world and their place in it and can communicate this to others. They understand the interconnectedness of society, the environment and individuals within these contexts.

What next?

NCSL leadership courses need to develop characteristics and behaviours which support sustainable schools. Aspects such as addressing values and developing an outward orientation will be challenging but necessary to incorporate.

The quantitative survey reveals a significant mismatch between what schools are saying about the importance of sustainability and what they are doing. The most frequently quoted barriers to implementing sustainability in schools are time and money, which are the usual factors when considering change. Through addressing sustainability of the school campus, including its use of energy and water and the procurement of resources schools can actually produce real budget savings.

Understanding and overcoming the reasons for this apparent incapacity for other schools to act sustainably is an area for further research with school leaders. However, from the focus group discussions, the lack of apparent priority for sustainable development within many Local Authorities and therefore the lack of support for the Sustainable Schools strategy was cited as a significant barrier to taking this work forward.

The benefits and impacts of sustainability on school improvement, such as improved pupil behaviour, achievement and self-esteem are currently under researched, with little long-term evidence available. Whilst sustainable development has the feel of being the right thing to do, we are still awaiting confirmation of this and of other benefits we haven't foreseen. There is also much still to be learned and shared with others researching this field, nationally and internationally, as this is a global issue and concern.

Fundamentally, this is an urgent agenda and there appears to be considerable grassroots support within schools and in the wider community. If this is not capitalised on the opportunity will be lost as other priorities arise and energy and enthusiasm wanes.

Introduction

Background

The Sustainable Development Action Plan produced by the DfES in 2003 was an important first step towards sustainability in the formal education system. This encouraged schools already developing their own sustainable practice to share their experience and support others. The recent Sustainable Schools consultation (DfES, 2006), which received 870 plus responses, has shown that there is a significant level of support for sustainable development in schools and wider society. This has been followed by a Year of Action for 2006 and 2007 and the public endorsement by the DfES of sustainability as a route to school improvement. The importance of a sense of connection with and understanding of the physical environment in which we live, whether urban, suburban or rural, is also central to the new Learning Outside Classroom manifesto (DfES, 2006). This NCSL research is a very timely and important project as the development of leadership for sustainable schools will become central to a successful 21st century education system which enables people to live in harmony with nature.

Sustainability and sustainable development are difficult concepts to define and describe, they are more often understood by ‘doing’ rather than ‘theorising’ and there is a debate about whether we are considering a goal or following a journey. In view of the dynamic nature of our planet, even without the intervention of humans, it is difficult to imagine a fixed end point for sustainability as the external context is continually evolving. The first widely accepted definition of sustainable development was published in the Brundtland Commission Report (WCED, 1987):

‘Development which meets the needs of the present without compromising the ability of future generations to meet their own needs,’

The UK government’s Sustainable Development Strategy of 2005 ‘Securing the Future’ has broadened this to emphasise the social justice and global dimensions announcing that the goal is to:

‘enable all people throughout the world to satisfy their basic needs and enjoy a better quality of life, without compromising the quality of life of future generations’.

(Defra, 2005)

The Sustainable Schools strategy ‘Sustainable Schools for Pupils, Communities and the Environment’ describes a sustainable school as one:

*‘that is guided by a commitment to care:
Care for oneself
Care for each other (across cultures, distances and time)
Care for the environment (near and far)’*
(DfES, 2006)

This central principle of care is one to which all schools subscribe, the important additional dimension here is the explicit reference to care for the environment. It is this which moves from being a good school to being a sustainable school, and in the context of this research into leadership, it is the greening of excellent leadership.

The perceived disconnection between the way we live and the environment within which we live has allowed the over-exploitation of natural resources; we are either unaware of or disregard the consequent environmental degradation. To adapt to and, where possible, mitigate these changes, we need new ways of relating to our environment. We need new ways of living together, new technologies as well as new thinking and learning. Schools and education have a central role in enabling us and future generations to regain a sense of place and re-engagement with our environment, so we can live sustainably within the limits of our one planet’s natural resources. The children of today will be the citizens of tomorrow, facing challenges and changes in the world which we cannot predict but their education has to enable them live successfully in this new world.

Rationale

Education in England is currently undergoing major changes in almost every part of the system, from the buildings and grounds, the curriculum and assessment, to the relationship between schools and their local communities. There has been a plethora of initiatives and innovations in recent years. The bringing together of both education and children's services into one department and one strategy, Every Child Matters (DfES, 2003), has significant implications for schools and the social context within which they operate. Schools do not exist separately from the community in which they are placed and from which their pupils come. Therefore the importance of working collaboratively with the local community is an essential feature of an effective school.

Sustainability provides a framework which can enable a more integrated approach to addressing these agendas. It can move the school from seeing initiatives as competing for resources to a situation where different initiatives can be mutually supporting, releasing time and resources. The sustainable schools strategy is structured around eight access points, or doorways. Engaging with any of these enables schools to develop sustainable practices, but it is the integration of these into the whole-school approach indicated by the framework which truly builds sustainability. The eight doorways are:

- Food and drink
- Energy and water
- Travel and traffic
- Purchasing and waste
- Building and grounds
- Inclusion and participation
- Local well being
- Global dimension.

(DfES, 2006)

The encouragement from QCA for curriculum flexibility and creativity in teaching and learning provides new opportunities for delivering curriculum content through environmentally linked contexts. There is an increasing awareness nationally and internationally of the impacts of climate change and non-sustainable lifestyles on the environment, and that children and young people are interested and concerned about these issues (UCAS and F4F, 2006).

Growing numbers of teachers and school leaders are interested in how to develop sustainability in their schools and how to maximise the educational opportunities which engaging with sustainability offers. WWF's annual teacher's conference has grown rapidly year on year since the first conference in 2003.

In order to facilitate the widespread take-up of sustainability by schools, it is important to understand how it is effectively led within schools. What values, skills and behaviours do school leaders have to possess and demonstrate to enable their schools to become effective sustainable schools? This research seeks to identify these and some of the barriers to success, as well as developing a better understanding of what practices distinguish sustainable school leadership from excellent school leadership.

Purpose and aims

The overall purpose of this research is:

To inform the College, policy makers, school leaders and the wider education community, about the current state of sustainable development in schools and the skills and qualities required by school leaders to move this important agenda forward.

To fulfil this purpose five aims have been identified for the research to address. The project sought to undertake and support the dissemination of research into:

1. Why and how some school leaders develop sustainable development within their schools, and how this fits within their wider leadership thinking and approach.
2. Evidence of the outcomes of these approaches in terms of: environmental impact, school ethos and student learning and wider outcomes.
3. Evidence of the extent to which sustainable development approaches are a feature of schools nationally and the barriers and enablers to more widespread take-up.
4. The skills, qualities and development opportunities required by school leaders to make sustainable development a reality.
5. The implications of the preceding aims for leadership development and national policy.

The focus of this research is on environmental sustainability in schools, whilst also including social, economic and governance issues in school sustainability, where appropriate. The leadership priority is in the areas of curriculum and campus but the role of community is acknowledged as the research points to a powerful role for community and for sustainable schools as a vehicle for delivering Every Child's Future Matters (SDC, 2007).

Methodology

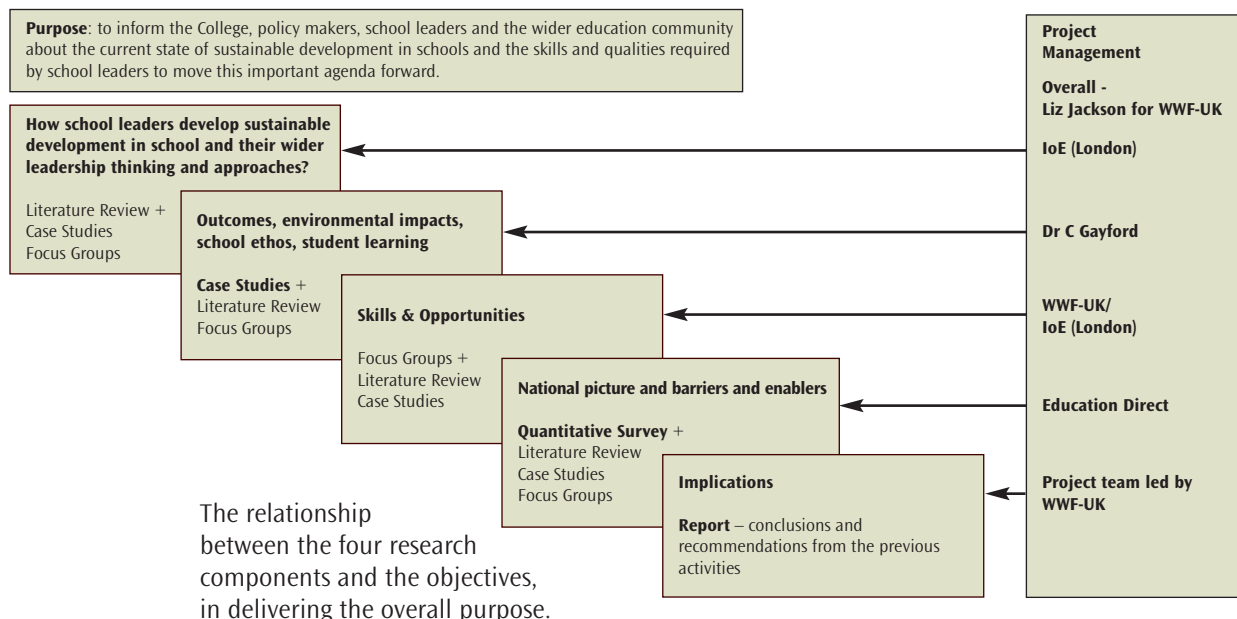
Research design

There are four separate but interconnected strands in the design of this project (see fig 1) each with a different focus. Together they give a broad and comprehensive picture of the current state of sustainable development in schools. They indicate leadership approaches which create sustainable schools and barriers to progress, and its impacts on environment, ethos and learning. The research design is based on seven main research questions that take account of the aims of the study and enable the findings to be organised and analysed in a coherent way.

These are:

1. What are the understandings, beliefs and definitions that are in use about the nature and scope of environmental sustainability?
2. What are the factors that lead to school leaders developing sustainability in their school and what are the barriers to them doing so?
3. What are the skills and competencies needed for leaders to take forward education for sustainability and how do these complement or add to generic leadership skills?
4. What is known about the professional development required to become a leader who promotes and embeds education for sustainability as a school ethos?
5. What are the main features of successful curriculum and campus practice and what do leaders do to enable and promote them?
6. What is known about the impact of sustainable development on environmental impact, school ethos, student learning and wider outcomes?
7. What are the implications of the above for leadership development and national policy?

Fig 1



Literature review

The purpose of the literature review was to identify the potential components of the theory of leadership for sustainable schools. The review drew together an initial search of literature from three of the main sources: Sustainable development, environmental education and educational leadership. It initially aimed to address the following questions:

- What themes and issues are explored in the literature on leadership of environmental sustainability?
- What are the gaps in the published field?
- What does the literature tell us about what motivates and inspires school leaders to develop environmentally sustainable practices especially in their curriculum and campus?
- What does the literature tell us about successful leadership, its qualities, values and behaviour?

In the event, question three is answered more directly by the case study and focus group reports although it is touched on here.

The literature review has been undertaken in an extremely short period of time and strategies have been used to maximise the opportunity to find relevant literature. In addition to the literature already familiar to the authors, electronic searches were conducted using key words such as education for sustainable development (ESD), educational leadership, environmental leadership, leading sustainable schools and various combinations of these. The names of key authors in the fields of educational leadership, environmental education and ESD were also used as the basis for electronic searches. Such searches were conducted using generic internet search engines (Google, Yahoo), more academic orientated search engines (Google Scholar), and searching e-journals available through academic library electronic portals (specifically the Institute of Education, University of London). In addition, steers were sought from key thinkers in the field both in the UK and overseas (see acknowledgments) through email contact and where possible, conversation via telephone and face-to-face.

The literature review first considered the significant themes that provide the context for the review. Prevailing societal concerns, including those of young people, which confirm that this is an appropriate time for considering sustainable school leadership, were identified. Then brief consideration was given to the significance of educational leadership to these debates before focusing more specifically on wider and less contentious issues relating to the emerging field of ESD within the international arena. The policy context for schools in England was next outlined before opening up the review to broader ideological matters and tensions relating to sustainability and education for sustainability as contested concepts. Having sketched out these contextual matters, a number of key themes were identified which were used to inform the subsequent sections of the review.

The later sections focus specifically on the educational leadership literature as it relates to environmental issues and sustainability in the schools sector. It started by looking at literature emerging from the field of educational or school leadership then material identified as transitional, was reviewed. This included either leadership literature which appears to be informed by sustainability discourses but which does not, in the opinion of the authors, go far enough; or literature related to leadership which is supportive of a transition to sustainability. Thirdly, a few references to literature related to leadership for environmental sustainability outside education were discussed. Finally, some key findings were drawn out from the previous discussion and suggestions for future research made.

Case studies

The case studies are of seven schools actively engaged with sustainability. The case studies include one nursery infant school, two primary schools, three secondary schools and one secondary school specialising in students with special needs. Additionally, they cover various types of schools: academy, extended, federations; and new build. The physical and socio-economic contexts range from rural, suburban to inner city and from comfortable to areas of significant deprivation. The schools themselves are at various stages in implementing a whole-school approach to sustainability.

Through previous and current research, there were well established contacts with these schools before the start of this project. They have been visited frequently by researchers and events have been organised to bring together key members of staff to encourage further participation and the sharing of ideas. Five of these schools are involved in a three-year longitudinal study of the impacts of a whole-school approach to sustainability on pupil attitudes being conducted by Dr C Gayford, funded by WWF-UK. Thus, from the start of this research, relationships with the school communities and an understanding of the schools' structures and contexts were already in place.

Dr C Gayford has researched and developed the seven case studies through school visits and telephone interviews with school staff. The conclusions have been developed from this data, building on work from the longitudinal study where this is available.

Much of the information and analysis relates to an overview of the attitudes and actions taken by the headteacher in their leadership role to promote sustainability in their school. In many cases, this also applies to the attitudes and actions of particular members of the school senior management team.

Case study schools

The Coombes Infant and Nursery School

School Road
Arborfield
Reading
Berkshire RG2 9NX

Headteacher: Mrs Susan Rowe
No on roll: 235
Rural school
Ages: 3 to 7 years

Bowbridge Primary School

Bailey Road
Newark
Nottinghamshire
NG24 4EP

Headteacher: Mr David Dixon
No on roll: 461
Urban school
Ages: 3 to 11 years

Meare Village Primary School

St Marys Road
Meare
Glastonbury
Somerset BA6 9SP

Headteacher: Mrs Debra Eveleigh
No on roll 122
Rural village location
Ages: 3 to 11 years

Crispin School

Church Road
Street
Somerset
BA16 0AD

Headteacher: Mr Paul James
No on roll: 1022
Small rural market town
Ages: 11to16 years

Federation of Durham Community Business College & Fyndoune Community College

Durham Community
Business College
Braken Court
Ushaw Moor
Durham
DH7 7NG

Headteacher: Mrs Anne Lakey
No on roll: 560
Semi-rural school
Ages: 11 to 16 years

Fyndoune Community College

Findon Hill
Sacriston
Durham
DH7 6LU

No on roll: 424
Semi-rural school
Ages: 11 to 16 Years

The Academy of St Francis of Assisi

Gardeners Drive
Kensington
Liverpool
L6 7UR

Headteacher: Mr James Burke
No on roll: 565
Inner city school
Ages: 11 to 16 years

Glebe School

Hawes Lane
West Wickham
Kent
BR4 9AE

Headteacher: Mr Keith Seed
No on roll: 184
Suburban school
Co-educational 11-16 [SEN School]

Focus groups

Focus groups of school leaders who are developing environmental and sustainable practice in their schools were convened in three geographic regions: Leeds for the north; Birmingham for the midlands; and Oxford for the south. These groups were convened through regionally based contacts WWF-UK has been working with through developing a regional network of communities of practice in learning for sustainability. The aim was for groups of 10 – 15 participants but due to the short notice and half-term holidays, one of the groups fell short of this, with only 4 participants. The other two groups both had 10 participants.

The groups were guided through a series of activities designed by WWF-UK to facilitate the discussions and draw out the information sought to fulfil the research brief.

The groups were facilitated by a member of WWF staff and the data was collected by a colleague from the Institute of Education (London). Participants had a journal to record their ideas and responses to personal reflection activities. Plenary discussions were then held and captured on flip-charts and a parallel research journal.

Data from the participants' journals, the flip-charts and the research journal were collated and analysed initially by the IoE researcher. This draft report was then discussed and developed by the WWF and IoE Focus Group team to ensure different perspectives were considered, producing a more complete report.

Quantitative survey

A question set of eight tabulated questions and two text questions was constructed through a process of consultation between Education Direct and the Project Board to ensure that the data collected fulfilled the requirement. This is a difficult area to research by self-completed questionnaires as the variable nature of the interpretation of sustainability and related issues allows for different understandings and responses if questions are not clearly expressed. The questions asked respondents, amongst other things, how their establishment is addressing a range of different areas, what influences exist in their schools, what barriers they are facing and what the role of a leader is in terms of developing a sustainable school.

The survey was mailed out to 6,984 establishments. A further 9,150 establishments were sent an email copy of the covering letter with a link to a downloadable copy of the survey which they could post or fax back.

Although contingency for a telephone campaign to remind schools about the survey was in place, this was not needed as the response levels were significant and robust from an early stage and this continued through to the closing date. In total 1,739 questionnaires were returned prior to the deadline representing more than 10 per cent of the sample. Only the data from the eight tabulated questions were quantitatively analysed. The text questions were reviewed for common themes and significant issues and ideas arising from the responses.

Findings

Literature review

The literature review was undertaken in a very short period of time and must be seen as only a first consideration of the existing material that might underlie the theory and practice of leadership for sustainable schools. What we have discovered is the rich variety of sources that relate potentially to this new theory and are there to be drawn on, from environmental, spiritual, community, ecophilosophical, pedagogical, organisational and leadership literatures, some examples of which we have represented here.

The authors both work in different ways in the field of sustainability and have not been comfortable at times with a brief to look predominantly at the 'green' dimensions of school leadership knowing that current approaches to sustainability always include the social, global, development, economic and governance factors as well. At times it has not been possible to consider the 'green' (by which we mean environmental or ecological sustainability) dimension on its own. However, this is an appropriate focus for NCSL to have asked of the project as we believe that the place of, and our connection with, the biosphere is probably the most neglected aspect of sustainability and certainly of our education programmes.

'We are becoming more ignorant of the things we must know to live well and sustainably on the earth'

David Orr (1994)

Summary of the main findings from the literature review

What are the qualities, values and behaviours of successful leaders?

- Currently there appears to be an almost complete lack of research literature specifically relating to school leadership and sustainability. However, leadership for sustainable schools is not totally new. It is theory and practice developed from and building on existing best practice in school leadership, for example, direction setting, giving momentum, influencing, meaning making, coherence building, innovation and knowledge creation. It also draws on each of 'The Seven Strong Claims for Leadership' (Leithwood et al, 2006a) but with adaptation for and application to environmental sustainability.
- The emphasis in sustainability is often on ethical matters, including personal beliefs, attitudes and values. Consequently sustainability

cannot be purely intellectual. School leaders have an important role in direction setting, and clarifying the crucial connection between both the direction and the underlying values. The vision and values of the sustainable school are re-orientated towards greater ecological awareness, responsibility and openness to the environment by leaders. These support the implementation of the eight doorways identified in the sustainable schools agenda (DfES, 2006).

- The concept of sustainable development is contested in the literature with a range of interpretations and weighting. Leaders for sustainable schools are clear about their own understanding and how this relates to the purpose of the school, in order to communicate this effectively and to build consensus amongst all members of the school community. Identifying the personal and collective values that underpin environmental sustainability is a crucial task for leading sustainable schools. These are drawn from the environment and its needs rather than just the needs of learners and the school, important as those are.
- Stakeholder participation is a central principle of sustainable development. Models of leadership which are democratic, inclusive and distributed are not just a matter of style or preference but essential to embed environmental sustainability in schools. This has considerable implications for educational leadership and the need to develop the leadership potential of all, including; teachers, pupils, parents, governors and members of the local community.
- Some of the existing literature on sustainable leadership provides an insight into the conditions and climate that will support the practice of sustainable school leadership. Leadership for sustainability has a strong, explicit focus on the learning of pupils, staff, the community and leaders both as stakeholder groups and as a collective.
- It is striking that schools are often presented as entities discrete from the wider community. Successful sustainable school leaders have an outward orientation and develop the contribution they can make to environmental restoration and sustainability in partnership with the community. The school grounds and buildings are often used as a starting point for sustainability. By extending the thinking and influence to the local community schools can take on a leadership role locally. This accords clearly with the ECM and sustainable schools agendas of the government. Existing literature (Riley, 2008 forthcoming) suggests that urban leaders who already engage with and learn from their community are well on the way to developing a model that could include the environment more explicitly in its endeavours and thinking.

What are the themes and issues explored in the literature on leadership of environmental sustainability?

- The field of education for sustainable development has a very important contribution to make to the theory and practice of leading sustainable schools. This is as yet largely un-researched but includes knowledge about the human-biosphere relationship, the sustainability of that relationship and the action that needs to be taken to restore it. Some key themes emerge in relation to sustainability and need to inform leadership. These include a global sense of place; humans as integral, inextricably connected and dependent on the social environment and biosphere; the needs and rights of future generations and environmental justice. Sustainability also contributes to the pedagogical principles of participation, decision making, problem-solving and learning in real contexts. Professional development about these needs to be holistic, including the intellectual, emotional, spiritual and practical aspects.
- The policy context for sustainability in schools gives an important impetus for the development of leading sustainable schools. If the 'Sustainable Schools Doorways' (DfES, 2006) are to be drawn on and turned into action they need to be part of a whole-school approach that is everyone's responsibility to implement and not left to the co-ordinators of sustainability, science or geography to manage alone or in their own operating spheres.
- Leaders of sustainable schools have developed systemic concepts, an awareness and understanding of basic feedback systems in their professional learning. This enables them to see a crucial aspect of their role as educating and working within the whole of which humanity is a part of our relationship to the biosphere. Key ecological features of systems thinking include relationships, interdependence and diversity. These encourage what may be described as joined-up thinking that has wider relevance and relates directly to sustainability.
- In the longer term leading sustainable schools will be developed from models of social organisation that are emerging in the organisational literature for schools, that will sustain it and open it up to a dynamic relationship with the environment.
- There are models of leadership in the field that could be usefully drawn on to develop the theory of leading sustainable schools, in particular, systemic, democratic, adaptive, evolutionary and servant literature.

Additional findings

- In the field of sustainable development, there is a growing sense that educators and school leaders in particular are a crucial group of stakeholders with a vital role to play. Especially in the involvement and education of pupils about the issues and enabling them to take a leadership role in the school and the wider community.
- Whilst there is a global groundswell of opinion across the world that we are in a crucial period in the history of humanity, the school leadership literature is only beginning to reflect this concern.
- An important aspect of sustainable school leadership is to ensure that there is a strong perspective given to environmental concerns, education and action when curriculum review and development is undertaken in schools as currently promoted by QCA. Young school leavers show particular concern over issues relating to sustainability and feel that until now the education system has not addressed this matter and has failed them (UCAS/F4F, 2007). The experience of pupils and students is that campus and place is rarely a focus for study. They also learn about environmental injustice purely theoretically, without being expected to do anything about it and seldom working with real-life problems. Significantly, they lose a sense of wonder and delight in living in a beautiful world and their own shared responsibilities in it.

Professor David Orr's principles of ecoliteracy conclude this review:

- All education is environmental education.
- Environmental issues are complex and cannot be understood through a single discipline or department.
- Education occurs in part as a dialogue with a place and has the characteristics of good conversation.
- The way education occurs is as important as its content.
- Experience in the natural world is both an essential part of understanding the environment, and conducive to good thinking.
- Education relevant to the challenge of building a sustainable society will enhance the learner's competence with natural systems.

(Orr, 1991)

Case studies

There are common features and practices across all the schools, regardless of their size, context or the age group taught, these are collated here. In order to facilitate more rapid appreciation of the range of qualities of leadership, both within the report and the relevant appendix, these qualities have been arranged as consistently as possible under five headings: -

- i) the vision
- ii) delegation, participation and support
- iii) enabling (including resourcing)
- iv) motivating, planning & monitoring
- v) wider perspectives

The problem with any division of this kind is that it can often appear arbitrary as to which sub-division some of the particular qualities are assigned. The schools included among the case studies are all regarded as already excellent or improving schools. They represent a good cross section of phase, geographical location and socio-economic contexts. All the schools are either excellent or improving schools. Schools such as Crispin, Glebe, Coombes, Bowbridge and Meare have a history of excellence, delivered through their sustainability ethos. Others such as St Francis and the Durham Federation are using sustainability as an approach to achieving school improvement.

The main findings in relation to effective sustainable school leadership:

The vision

1. Sustainable development is given a broad interpretation, not only to include aspects of care for the environment but also matters such as healthy lifestyles, social inclusion, respect for diversity and difference as well as justice and human rights.

Meare Primary School

A broad view of sustainability is taken in creating a whole-school approach. This includes healthy and safe lifestyles, respect for diversity and tolerance of difference, encouraging participation, interaction with the local community as well as ways of more directly understanding the environment and protecting it. The environment is also used as a vehicle for developing basic educational skills among the pupils. The school is currently working to achieve their Healthy School status.

2. Sustainability is given a central and well integrated position in the curriculum and ethos of the school and it is seen as a vehicle for delivering the government's Every Child Matters agenda as well helping with the socialisation of pupils and making an important contribution to school improvement.

Glebe School (SEN)

The curriculum and management of the school is based strongly on the Children Act 2004 Every Child Matters: Change for Children programme. The head is clear about this and he is supported in this by many of the teachers and learning support staff. The latter play a particularly important part in the life of the school. Through the leadership of the head the school provides a caring environment where difference is acknowledged and each student is valued. The geography specialist teacher is also the education for sustainable development co-ordinator. He is supported by the head who values the approach and emphasis that are applied to this area of the curriculum, which are consistent with and enhance the general ethos of the school. The head is willing to provide the resources of some additional staff time and financial assistance to facilitate developments in sustainability.

The Coombes Infant & Nursery School

The school's concept of ESD is that it links closely with the socialisation of children and provides the potential for education in a real-life setting, allowing plenty of hands-on experience. Developments in the school have been largely with the children's involvement, including building a labyrinth, planting and harvesting. The underlying thinking behind Every Child Matters is also immediately apparent when talking to the head and when walking round the school. Caring for and valuing each other is a recurrent theme and emphasises the importance placed on diversity by the head.

3. Good school leaders are able to articulate clearly their concept of sustainability to a wide audience of teachers, support staff, students/pupils, parents, governors and the wider local community.

Delegation, participation & support

4. Good school leaders are able to delegate effectively the role of carrying the sustainable development agenda forward in the school. The amount of delegation and division of roles depends on the size of the school.
5. Support from the governing body is obtained, usually with one or more governors taking special responsibility for and interest in sustainability in the school.

Bowbridge Primary School

There is clear support from the governing body. The head keeps them informed and he considers that in recent times their understanding of sustainability has increased. Two of the governors monitor sustainability within the school. There is strong support for professional development of the staff by the head and governors

6. Similarly the support of parents is obtained and their practical assistance sought for special projects and events.
7. Good leaders in sustainability particularly encourage student participation in decision making and consequent action. This is normally through a school council with as much student control as possible and with recognisable outcomes that are carried forward to completion.

Bowbridge Primary School

An important principle is that pupils are given increasing responsibility as they progress through the school. There is a well established school council. Speaking to pupils informally, they claim that it is effective, with a considerable amount of the control in their hands. They accept that a final veto is necessary from the teachers, particularly in cases where there are issues of health and safety or cost. One reason for its effectiveness is that there is good communication to the whole school; suggestions can be included on agendas for meetings and the outcomes of meetings are well publicised. Another important feature in the success of the council is that there are tangible outcomes delivered relatively quickly, which help to maintain enthusiasm. All of this contributes to maintaining pupil enthusiasm and involvement.

Enabling (including resourcing)

8. Time is allowed for CPD and detailed planning in relation to education for sustainability; signalling that it is a valued aspect in the life of the school and that it is a collective responsibility for staff.

Crispin School

Those directly involved with leading sustainability have a well-formulated concept of the nature of this aspect of the curriculum, which has three aspects: **social, economic and environmental**. They are able to communicate to other members of the staff. Overall, they appear able to obtain co-operation and enthusiasm from a large section of the staff. Staff professional development, including the induction of new teachers, is now carried out (since July 2006) to ensure that each appreciates their particular role in delivering education for sustainability.

9. Additional resources for sustainability initiatives are provided, often through funds from outside the school.
10. Effective sustainability uses the management of the buildings and grounds as a vehicle for explicit teaching and learning about practical issues of sustainability. Often the role of the school administrator or bursar and caretaker are important here and their involvement is negotiated.

Academy of St Francis of Assisi

The design of the academy had the brief to make it both a landmark building and to champion best practice in environmental design with material selection to minimise environmental impact. The building is also to offer itself as an educational resource where possible. The environmental strategies are to be clearly evident to students and staff, allowing for interaction and monitoring as part of the curriculum. Outputs are given on an electronic display board in the central cyber-café area. Among the features are rainwater harvesting, banks of photovoltaic cells, a large solar atrium, sedum and brown roofs with indigenous flower mixes. The academy has stated specialisms in science, the environment and sustainable ways of living.

11. Effective sustainable school leadership usually involves providing opportunities for students to care for and make improvements to their immediate environment in practical ways and at the same time ensuring that the rationale for these activities is clear.

Motivating, planning & monitoring

12. Good school leaders maintain a high profile within the school. They are easily recognised by staff and students. Their manner is encouraging but at the same time enquiring about ideas and initiatives; in this way maintaining momentum to ensure that progress continues.
13. Successes in relation to sustainability, including awards achieved and funds obtained, are celebrated within the school and communicated to the local community.

Meare Primary School

The school has recently participated in and been successful in a number of competitions that relate to sustainability. These successes have been celebrated both in the school, the local press and occasionally in the national press. This has helped to raise the profile of sustainability in the school and further encouraged staff and pupils as well as providing some additional financial resource for more environmental projects.

14. 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.

Crispin School

The head is relatively new to the school and whilst he does not take the lead in relation to ESD he is highly supportive. This support extends to the governing body where there is a member appointed to have a direct interest in sustainability. More direct responsibility is delegated to one of the deputy heads who is well motivated and has oversight of this aspect of the school's provision. There is a designated education for sustainability development co-ordinator (a significant post that was instituted in 1997). They are further supported by a team with associated responsibilities, an assistant head oversees student participation and several assistant teachers coordinate activities such as Fair Trade, links with Brazil or the link with Kenya. There are shared responsibilities with a fairly substantial team involved.

15. Good leaders of their schools ensure that there is a mechanism for regular review and monitoring of progress in sustainability as well as general educational achievement against well thought out development plans.

Wider perspectives

16. Effective leadership in sustainability usually involves developing meaningful and often reciprocal relationships with the local community, including local businesses.

Academy of St Francis of Assisi

The Academy draws its students from a deprived local community. Links or outreach to the local community is stated as an important aim of the academy. In order to build on positive relationships, last summer there was a large fair organised by the school. This had a strong social focus and drew on the skills of staff and students to provide stalls and entertainment. It was attended by many hundreds of people from the local community and considered a success. The intention is to continue this type of activity and make it an annual event. A development forum, which includes the police and community groups has been organised for the large park that adjoins the academy. The deputy head is a member of the committee and student involvement is intended in the future.

17. Effective leadership in sustainability often involves encouraging the school to become associated with major national or international initiatives, such as Eco-Schools, Healthy Schools, Global Gateway or WWF's Learning for Sustainability.

Glebe School (SEN)

The school has developed its policies for including sustainability in the curriculum and management of the school by working in collaboration with different 'stakeholders' who have a direct interest in the school. This includes staff, students, parents, governors, as well as those more removed from the day to day running of the school, such as the Bromley Garden Project [BGP], WWF and Eco-Schools. The Eco-Schools Green Flag was achieved in 2003 and they are committed to submitting for this on a regular basis.

18. Leaders who promote links with schools or communities in distant parts of the world, particularly in third world countries, usually find that this results in a range of benefits to their students. Some of these benefits, include improved international understanding and encouragement to undertake a wide variety of entrepreneurial activities.

Federation of DCBC and Fyndoune Community College

Their understanding of the nature of sustainability is broad and includes the eight Doorways identified in the Sustainable Schools National Framework and also consideration of both schools within their local communities. Health, safety and security, active citizenship and inclusion as well as social enterprise are considered important and there are good links with local business and the local authority departments. The global dimension has been addressed through a link with schools in Russia and Bangladesh (DCBC) and with a local community in Ghana (FCC). The latter is an interesting example where students sell water in bottles within the school and use the profits to help pay for clean water supplies in Ghana, where they have created a link. The students have also addressed the problem of recycling the plastic water bottles after use and this has involved them negotiating with the local authority.

Focus groups

The research question set has been used as the headings and format for analysis. Key evidence from the groups is presented with exemplary participant quotes and there is a brief discussion at the end of each section.

"I used to think sustainability was a strand through all we do. It is now a lever to inspire people achieve the five core areas of our school – ECM, learning (pupils and staff), values, wider community and cross-curriculum."

Why school leaders develop sustainable development in their school

There are a number of reasons why teachers and school leaders start their journey towards sustainable development, common ones are listed here:

- Significant life experiences before teaching – childhood experiences of the environment or experiences with other cultures and countries on travels and trips abroad.
- Educational choices – at school or university (eg geography, science and religious disciplines) and occasionally CPD courses, supported the development of their interest.
- Modelling – either seeing other schools that were actually doing it or through a related activity. Significant role models or mentors in their professional or personal lives were also important.
- Enthusiasm of others – described as a snowball effect drawing people in and creating a shared energy around sustainability.
- Personal passion – some teachers have seen leadership in sustainability as a vehicle for promoting their personal passion not just as a route to career advancement. It is not a self-serving agenda, through the engagement of children and the whole-school they can make a difference in their local, global community, environment and for the future.

"Sustainability in schools gives me the opportunity to make a difference in my professional life."

- Coherence building – sustainability was seen as an integrating concept which can make connections and links between all the elements in the school. Participants reported a variety of interests as starting points, however, as they spend time developing their journeys and careers, the big picture starts to emerge, for some in quite a philosophical or spiritual way. Sustainability can enable them, especially those in a headship role, to make broader and deeper connections bringing the school-life together.

“Sustainability is not an add on – rather an important learning process for all young people – thank goodness we are addressing these issues, despite the lateness of the hour”

‘All this goes way back, sustainability is now an overarching concept that satisfies my beliefs.’

The added bonus is that education for sustainability was identified by participants as high-quality education. It motivates and enthuses children, making intellectual demands on them and encouraging them to work and act collaboratively.

“ECM equals ESD.”

“...it’s about children asking deeper questions.”

How school leaders develop sustainability in their school

Six key areas were identified, these are:

1. Small steps – there are many different starting points for schools which can develop into wider and deeper sustainable practices.

“Always, follow through the initiatives and build the next phase otherwise it will be lost.”

“Don’t give up! Rome was not built in a day, but a little bit was.”

2. Formalisation – use formal school structures to give sustainability status and to ensure its continuation and progression eg appoint a sustainability co-ordinator, set a budget.
3. Engagement of people – raising awareness through inspiring people and using communication strategies to disseminate the benefits for the school and community.

“I facilitate the process of developing sustainability by collecting and disseminating information to stakeholders as appropriate, providing opportunities for development to take place and providing motivation and leadership.”

4. Curriculum development – primarily through leadership of specific curriculum subject areas. Cross-curricular development needs creativity and a flexible approach.
5. External relationships – develop partnerships with external organisations (Non governmental organisation and local authorities), links in the local community and internationally. Work with other schools and people who could inspire them.
6. Strategic – sharing people’s perceptions of sustainability and auditing what was already happening in the school could lead to the celebration of successes, development of action plans and wider recognition of sustainability. Creating a shared vision was a theme that was discussed through all the groups and activities.

These processes do not include some of the softer ways in which leaders have led sustainability in their school but demonstrate elements along different journeys. Some of these appear to be laudable but nevertheless are limited initiatives, this is especially the experience of those in middle leadership. Others were able to integrate these elements leading to the embedding of sustainability in their school. The ability to do this depended on the amount of control they had either as the head or through distributed leadership.

Outcomes and impacts for the school

Each group shared their perceived outcomes for the school, we have combined them into the seven clusters. We have not separated the impacts according to staff or pupils but this was done by some groups.

1. Understanding, knowledge, awareness – pupils and staff understanding of the issues of sustainability.
2. Engaging, involving and doing – active participation in sustainability; engagement created a huge amount of enthusiasm and interest, it was a motivator.
3. Attitudes, voice and empowerment – a deeper change in people from their involvement in sustainable practices, for example the rejection of a throw-away society.

“A more positive attitude from students and staff which has led to inspired behaviour.”

“Deeper understanding of issues and a willingness to act upon that deeper understanding.”

4. Communication, connecting and networking – making connections within the school and beyond, harnessing people’s talent and creating a shared vision.
5. Impact beyond the school – as an extension from the above there was the concern people have for the world and their desire to do more to improve social and environmental justice.
6. Teaching and learning skills – creating different schemes of work, new pedagogy and using their school and grounds as a learning environment.

“The creation of a range of experimental, practical and functional resources plus learning experiences for many people.”

“Greater pupil engagement in the curriculum through increased use of the ‘outdoor classroom.’”

“Teachers recognition that complex issues require creative thinking about pedagogy.”

7. Physical impact – school-based activities – this might be the expected outcome of this work, however it was only one element of impact. The types of things mentioned included environmental improvements as well as energy and water saving leading to financial savings.

It is not just environmental impacts that participants perceived as significant but sustainability also has a strong emphasis on the personal learning of pupils, staff and beyond. This is not just intellectual learning but moves into the attitudes and values of people. It has the potential to impact on the school ethos.

Barriers and enablers – for widespread uptake

We took at barriers and enablers together as they often are the inverse of each other.

Lack of time and money is always indicated as a core barrier to any innovation. However, the core need for developing sustainability in schools is to build the expertise of staff by providing time for coming together to create shared visions and practice.

“It’s across everything – we meet regularly and involve as many people as possible.”

Although the **size of the agenda** can be seen as a barrier, once mastered through distributed leadership and a broad range of staff sharing responsibility, this can be overcome.

The perceived **rigidity of the formal education structure**, including SATS and Ofsted is seen as a major barrier, this runs alongside the number of initiatives for schools. An open and creative curriculum is necessary for sustainability to become a reality; however there is a tension between this and a desire for regulation and accountability.

One participant is looking for a future where:

“DfES and Ofsted eventually judges the school on sustainability across the curriculum plus the wider community. So, senior management will be forced into making sustainability central to the life of the school.”

A crucial element in enabling change is **support**, be it from inside the school ie senior management, or externally through the local authority or nationally through policies. It seems there is a need for permission and legitimacy to carry out sustainability in schools.

Scale is a key structural factor in widespread take-up. The difference in size of the staff may contribute to the difference in the uptake of sustainability between primary and secondary schools. Another structural factor is where it is led from; senior or middle management and the leadership model the school has adopted. Nearly all heads that have developed this extensively see their model of leadership as distributed leadership.

Skills and qualities for leading sustainable schools

Four major areas of skills and qualities have emerged:

1. Visioning and purpose, especially one that is co created and shared.
2. Determination, drive and commitment that sits behind this purpose.
3. The ability to empower and include everyone through listening, communicating, influencing, inspiring, enthusing facilitating as sustainability is about people owning their future.
4. A sense of resilience, risk taking and flexibility to deal with the change that they feel is needed in schools.

Quantitative survey

There was a very high level of response – 1,739 questionnaires were returned prior to the deadline. Three quarters of the completed questionnaires came for primary schools and the other 25 per cent from secondary, reflecting the ratio distributed and demonstrating a similar level of response from both phases. Headteachers comprised the majority of respondents with approximately 75 per cent of returned questionnaires. This is a much higher percentage than anticipated and indicates that sustainable schools is an issue of interest and priority for many schools.

The questionnaire comprised eight tabulated questions and two text responses. The overall significant features of the analysis of the tabulated eight questions are given here with, where appropriate, accompanying graphs showing variance in response between primary and secondary phases and between different school roles of respondents. The text responses have been reviewed and significant trends and comments are included here.

Q1. How relevant do you consider these areas to be in making schools more sustainable?

Fig 2

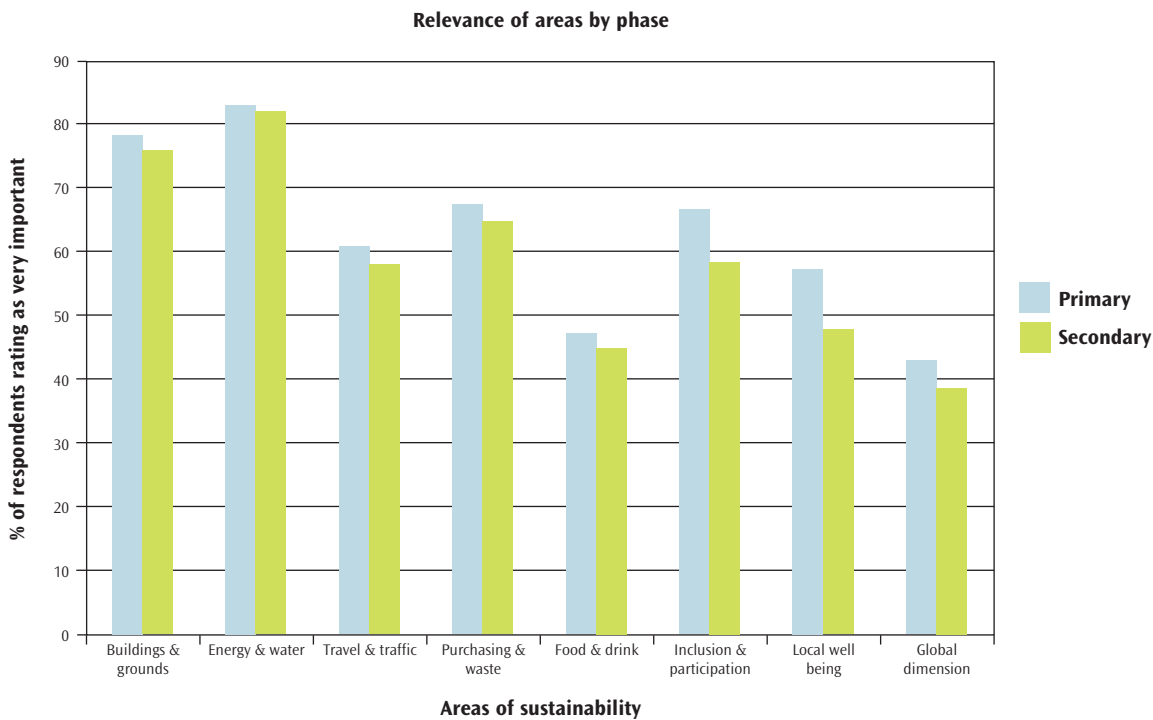
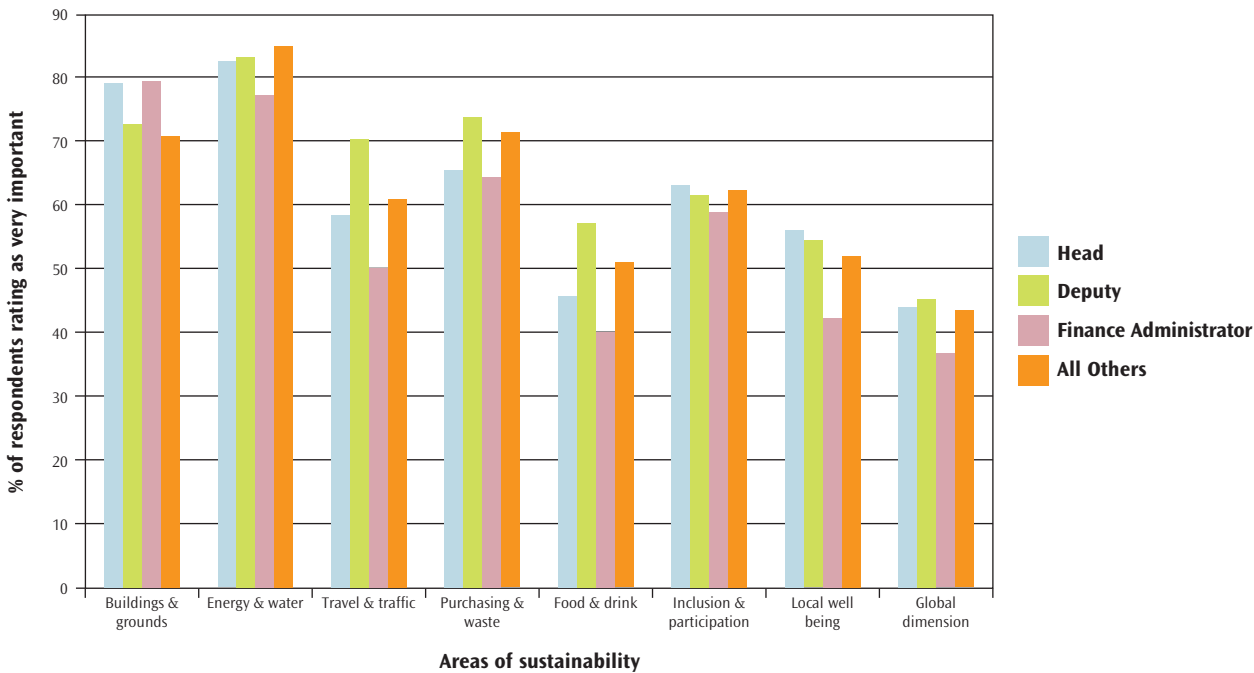


Fig 2 shows that all eight doorway themes from the sustainable schools framework were felt to be relevant to sustainability. Energy and water was rated most important, global dimension was the least. There is little difference between the phases, with secondary school placing slightly less emphasis on inclusion and participation and local well being than primary schools. This could be due to a stronger curriculum focus of many secondary schools compared with the socialisation and child development elements of primary.

The perceived importance of energy and water may well reflect the current focus on climate change and energy, which is more evident than issues around the global dimension. It is a pointer to the need to ensure that schools are encouraged to take an integrated approach to sustainability. However, as all areas were considered to be important or very important, there does appear to be an awareness that all eight doorways have a role in developing sustainable schools.

Fig 3 Relevance of areas by role

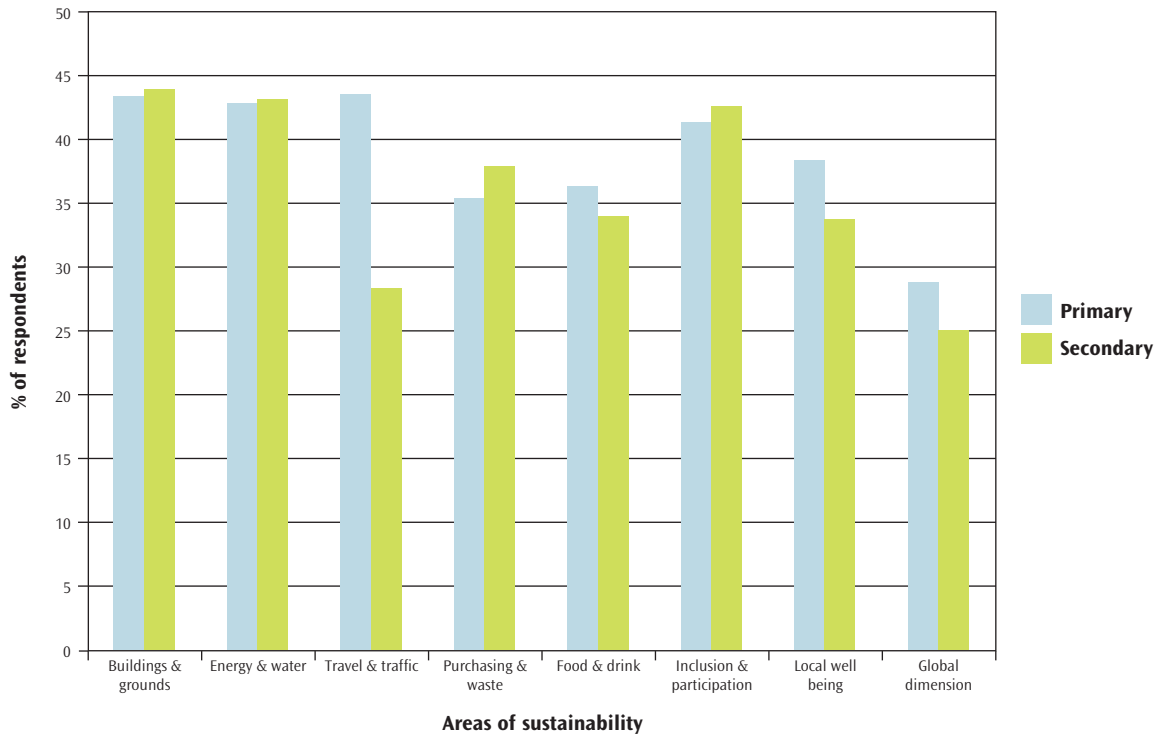


When considering differences due to respondents’ roles (fig 3) in school again energy and water and buildings and grounds top the list but there are some differences, especially between deputies and finance administrators. For example, travel and traffic is a much higher issue for deputies which probably reflects that this is an area of responsibility often delegated to deputies.

Q2. How actively would you say your own school is addressing these areas in terms of sustainability?

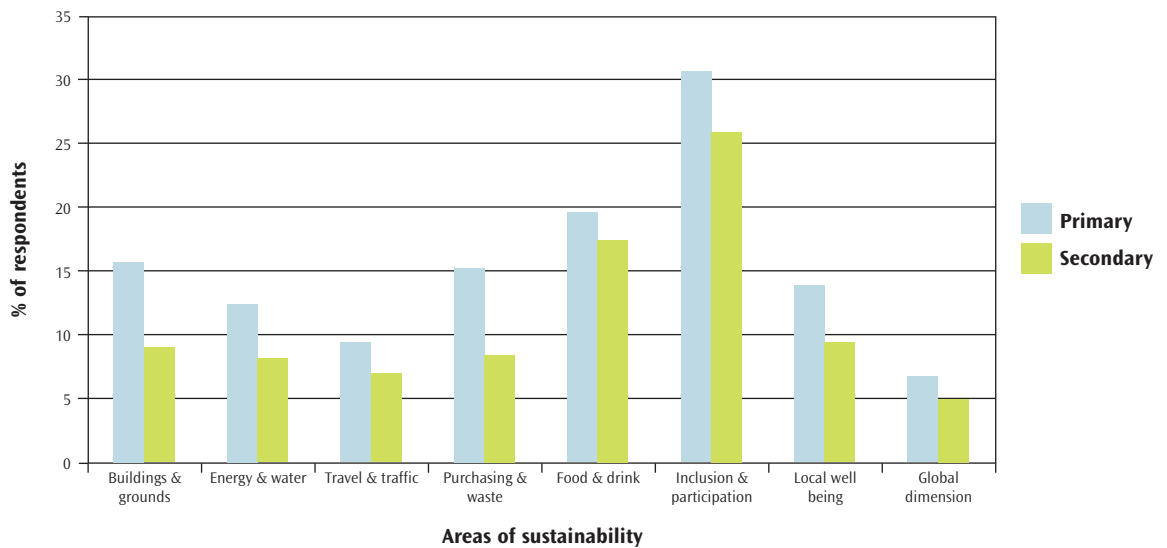
When considering which the priorities are to address (fig 4), buildings and grounds and energy and water were the highest priority areas, which reflected their rating in importance (Q1). Similarly, global dimension was seen as the lowest priority.

Fig 4 Sustainability areas considered very high priority by phase



Despite being identified as the most important factors when thinking about making schools more sustainable, energy and water, buildings and grounds and purchasing and waste were deemed to be ‘already satisfactorily in place’ by less than 15 per cent of establishments. Inclusion and participation had the highest score on this question, global dimension and travel and traffic were the lowest scoring. Across the board secondary schools rated all the areas as less ‘in place’ than the primary schools.

Fig 5 Sustainability areas already satisfactorily in place by Phase

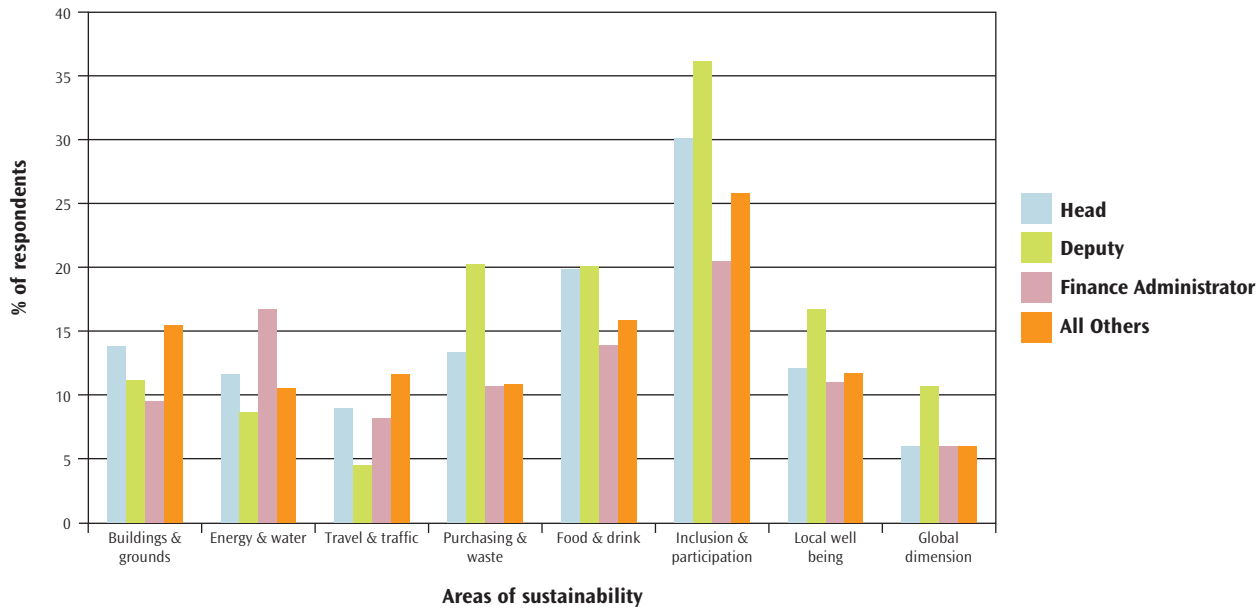


There is an evident mismatch between importance, priority and satisfactorily in place for the eight themes. This may be due to a multiplicity of factors, beyond the scope of this research. For example, the relatively high satisfactory rating for inclusion and participation may well be due to this already being a priority for schools through other policies such as ECM, which could also reflect why it not seen as so important within the sustainable schools framework. Conversely the consistently high scoring for energy and water may reflect issues such as the need to cut energy bills for reasons beyond an ethical approach to sustainability. Audits of energy and water use can reveal significant areas of waste, showing the lack of a satisfactory current position, and raise the priority for addressing this as there is advice and a range of improvements available so actions can be taken.

The travel and transport theme is somewhat anomalous as it is seen as important and a priority but is very poorly addressed, despite schools being encouraged to develop travel plans which have a sustainable focus. It would be interesting to investigate this further to explore the barriers.

Interestingly the two most outwards looking themes, global dimension and local well being, are both generally lower scoring than the others. This resonates with the perception in the literature review of schools tending to be inward looking and separated from their local contexts. This is more the case in secondary phase, which reinforces this perception as they tend to have direct involvement with the local community, for example, through parental support in class, than occurs in primary. Also secondary is more fragmented by subject so areas such as the global dimension are seen as falling into specific curricular rather than across the school.

Fig 6 Sustainability areas already in place by role



Analysis by role (fig 6) shows some variability in responses which largely reflect the responsibilities associated with these roles. Deputies and heads see inclusion and participation as in place at a significantly higher level than other roles, which is unsurprising as these roles usually lead in the development and implementation of policy in this area. Likewise finance administrators see energy and water as being better in place than other staff who may be less aware of how these areas are managed.

Overall the inconsistencies appear not to reflect a lack of importance but may be more to do with the ability or ease with which schools can actually act ie what are the barriers to overcome or enablers which support the school? These could include funding, problems engaging others, lack of knowledge of ways forward and conflicting local authority priorities.

Q3. What are the influences in your school and what are the strengths of those influences to develop a Sustainable School?

Fig 7 Strongest influences in developing a sustainable school by phase

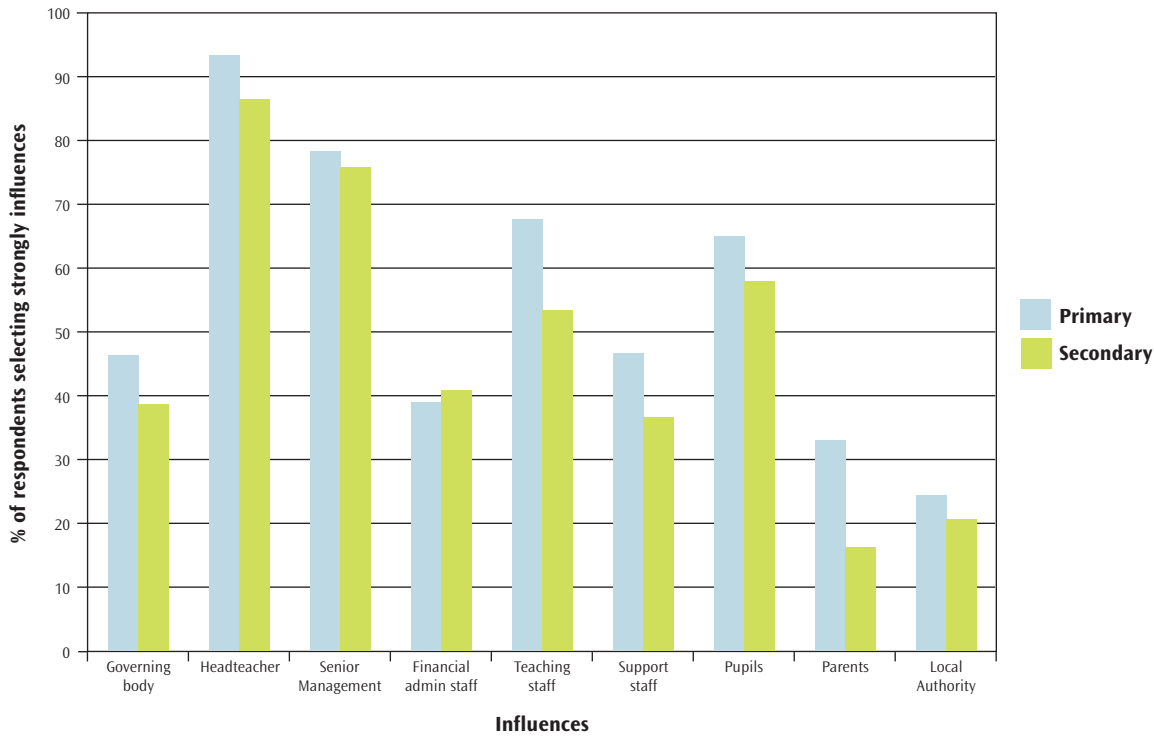


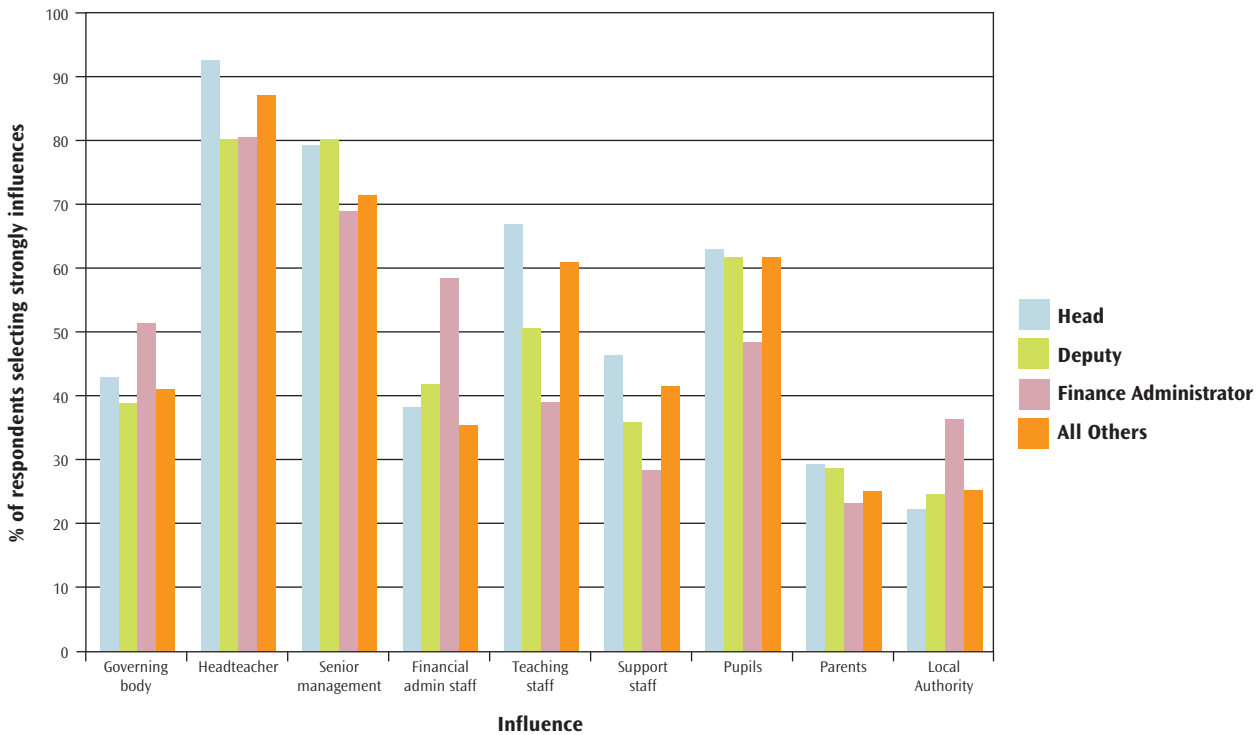
Fig 7 shows that heads are seen as the most influential person in the school. More interestingly teachers and pupils are rated as having pretty much the same, high level of influence. Parents and the local authorities were identified as the least influential, though primary schools see parents as having a greater influence than secondary schools. Both phases follow pretty much the same pattern with finance staff having slightly more influence in secondary than in primary phase.

The high rating for heads confirms their central role in leading sustainability in school, which supports the need for appropriate training in sustainability for school leaders. The fact that pupils are seen to have a high level of influence in developing sustainable schools indicates that they need to be included in the decision making within schools as they develop sustainable practices. It also reflects their interest and enthusiasm for this agenda.

As parents appear to have a low influence, possibly because they are not actively engaged with schools or because they are not engaged with sustainability, the perceived higher level of pupil influence could be turned out to draw parents into the school community. School-community links are seen as fundamental to developing sustainable schools.

The lack of local authority influence may indicate the lack of awareness of the sustainable schools strategy in local authorities. This has been cited in other strands of the research as a barrier to developing sustainability as there is no effective support for schools in some areas from their local authority. This is not true of all, there are some very effective and supportive authorities.

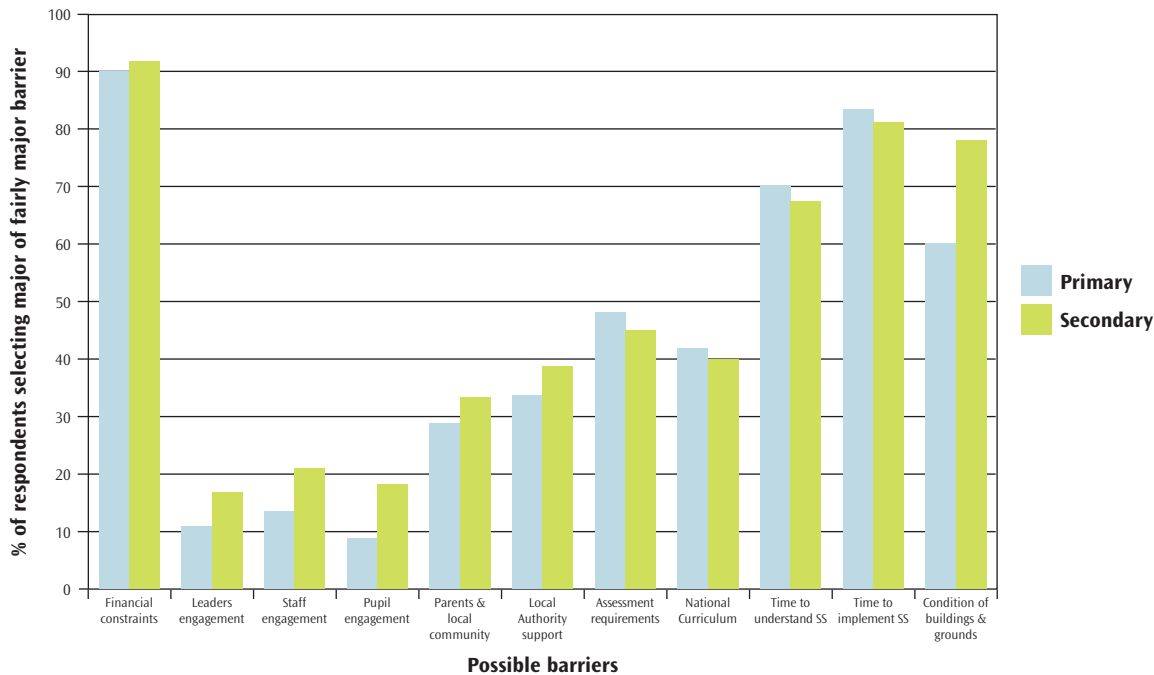
Fig 8 Strongest influence in developing a sustainable school by role



The responses analysed by role (fig 8) shows some interesting results. Finance administrators score themselves, governors and local authorities more highly than the other roles, probably reflecting their experience of who controls the school budget and therefore available resources for investing in sustainability. All the other roles see local authorities as having the least influence which supports views from the focus groups that local authorities in general do not place sustainable schools as a high priority nor do they provide much active support to schools, in fact they can be a significant barrier.

Q4. What are the barriers to you implementing more sustainable schools practice in your school?

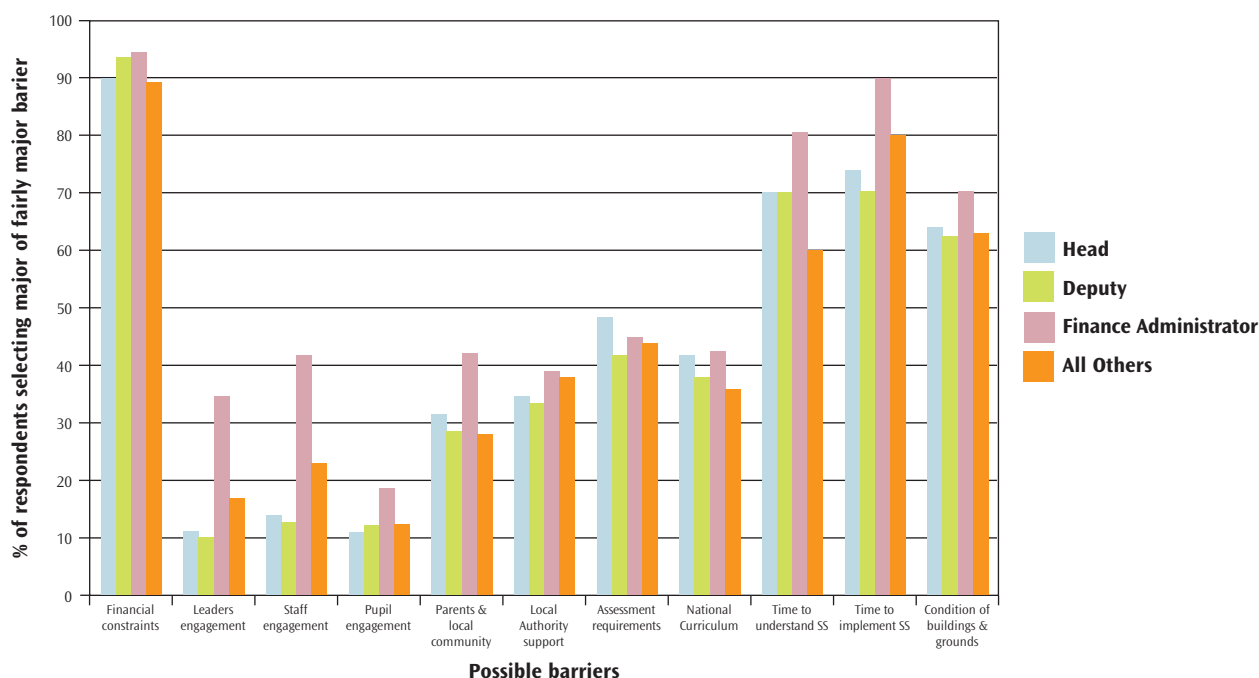
Fig 9 Greatest barriers to developing sustainable by phase



Barriers (fig 9) again reflect anticipated responses with financial constraints rated as the most significant by a large proportion of the respondents. There are two time options, one for implementation and the other for understanding the requirements of sustainability, taken together time is as significant as funding. A further, but less frequently cited barrier was the conditions of the school buildings and grounds and this is seen as a more significant barrier for secondary schools. This phase difference may be due to issues arising from Building Schools for the Future where sustainability features have tended to be early casualties to any budgetary constraints.

Interestingly, none of the school stakeholder groups was considered to be a significant barrier. In fact, pupil engagement was the least significant barrier which, coupled with their potential influence, indicates the value in enabling them to actively participate, and even lead, aspects of sustainability within the school. The size and range of the responses means this must be considered to be the case for both secondary and primary pupils. This is clearly an important finding and the overall view that the school community is positive about sustainability suggests that school leaders working in collaboration with other stakeholders to address perceived barriers could be a productive way of encouraging further development of sustainability in schools.

Fig 10 Greatest barriers to developing sustainable schools by role



The finance administrators (fig 10) see the possible barriers which involve other stakeholders as bigger issues than other respondents. This could be due to the limited direct contact which these members of the school community have with other stakeholders and their day-to-day role which is often seen as constraining or limiting the activity of others as they hold the purse strings. This possibly indicates the need for all members of the school community to be included in decision-making around implementing sustainability so everyone has the opportunity to share their concerns and to hear from others perspectives.

Q5. Which statement most applies to the leadership ethos of your school towards major policy decisions such as sustainable schools?

The evidence on leadership style in relation to decision-making processes in the schools indicates a strong trend towards collective and consultative approaches, often involving consultation with the whole staff. In a very few cases, heads make decisions on their own. However, a larger proportion made decisions either after consultation with the senior management team or with the governors.

There is a difference between the two phases with this trend to more inclusive processes more apparent. Secondary schools show more decision-making at management team level with less whole-staff consultation. This could be due to the differences in the numbers of staff as primary schools are generally much smaller than secondary schools.

The size of the school will affect the ease with which consultation can be carried out across whole staff teams. It is clear from the evidence of this survey that the majority of schools favoured a more participatory approach to making decisions about implementing sustainability. This leadership approach accords with the inclusive and participatory principles of sustainability. If a whole-school concept of sustainability is to be adopted it will be important to gain the support of all the stakeholders at an early stage.

Q6. As a leader how do you rate the importance of the sustainable schools strategy?

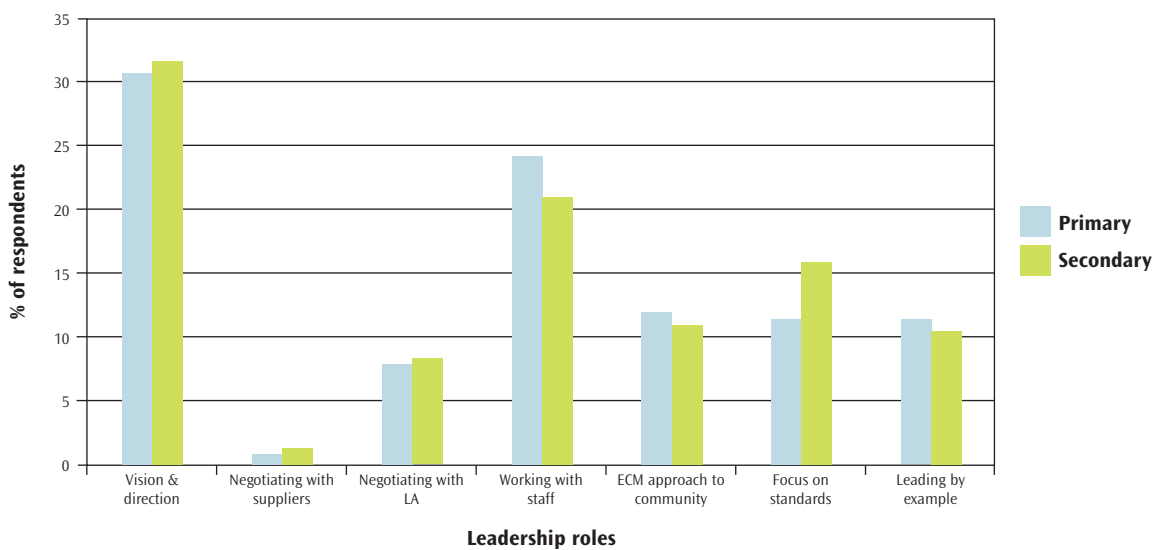
The sustainable schools strategy was considered as important by virtually all of the respondents. This corresponds with the responses to question one but again brings up the issue of the mismatch between what schools are saying about the importance of sustainability and what they are doing, as indicated by their response to satisfactorily in place. Understanding and overcoming the reasons for this apparent incapacity to act on their sense of importance around this agenda is an area for further research with school leaders.

Q7. How do you rate the importance of sustainable development in your home values and personal life?

Similarly, virtually all respondents (98 per cent) considered that sustainability was important in their personal lives. It is encouraging that so many acknowledge the importance of sustainability in their wider lives. Teachers are role models in school and their wider local community. Pupils are quick to pick up on any signs of a disconnect between behaviours espoused in class and those demonstrated outside.

Q8. How do you see the key role of a leader in taking forward a sustainable schools strategy in your school?

Fig 11 Leader’s role in implementing the sustainable schools strategy by phase



The key roles of school leaders in taking forward the sustainable schools strategy were considered to be creating the vision and providing direction as well as working with staff to help integrate appropriate approaches in the classroom and elsewhere (fig 11). How the vision is created links back to the leadership styles indicated in question five. This would suggest that a participative process, enabling staff, and possibly other school stakeholders, to take part in developing the vision would be beneficial.

Matters relating to some of the practical details, such as negotiating with suppliers were not seen as part of the leader’s role.

Q9. What one thing do you think would have a major influence on your ability to deliver the best sustainable schools strategy you would like for your school?

and

Q10. Do you have any other comments you would like to make?

These two text-based questions have been taken together as there were many repeated and overlapping responses. Only a small percentage of respondents completed these questions so no detailed quantitative analysis has been undertaken, rather there has been a qualitative review to identify common issues, trends or other significant points raised.

The problems of time and money are again cited several times and these are clearly a major barrier for some schools. Two other barriers which were repeated here as well as under question four are conditions of the school buildings and the lack of local authority support.

New points raised were initiative overload and a lack of knowledge or confidence among school leaders on how to take sustainability forward in their school, even when they were keen to do so.

There is clearly a need emerging from this survey for local authorities to provide more and better support to schools to enable them to deliver sustainability. This need can range from helping rather than hindering recycling by schools, to knowledge on issues linked to Building Schools for the Future and providing capacity-building training on how to use the sustainable schools strategy as a framework to help deliver other initiatives, especially Every Child Matters.

Analysis and conclusions

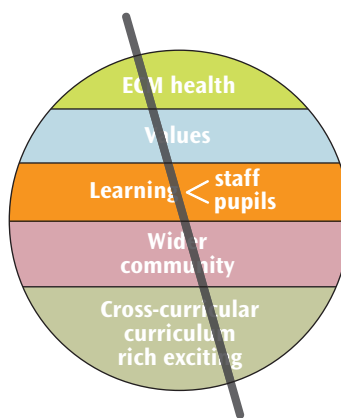
This research was undertaken to address five aims and inform the College, policy makers and the wider education community of the current state of sustainable development in schools, indicating the skills and qualities required by school leaders to move this important agenda forward.

Sustainable schools can encourage new models of leadership, such as shared and distributed leadership. These models of leadership provide professional development opportunities for school staff, providing potential future school leaders. This is an increasingly important concern for schools as there is a shortage of leadership supply. The case studies have shown that these schools tend to be learning organisations, supporting reflective and collaborative learning amongst the school community and with the wider local community, with the school's leadership modelling and explicitly valuing learning. We have found that these schools consequently also have close links with their local communities which produce important social benefits, especially in the light of growing concerns about the perceived alienation of young people and the disconnectedness of society. This contrasts with the responses to the survey where most schools consider local well being as one of the lower priorities and this is more marked in secondary schools.

Addressing the sustainability of the school campus, including the use of energy and water and procurement of resources, can produce real budget savings. This is appreciated by the finance administrators who are already addressing this area, as indicated by their responses to question two in the quantitative survey. Several of the case studies show that these benefits can be enhanced by including student participation in the decision-making processes as important learning experiences and a deeper understanding of the issues around these decisions will be generated. Sustainable schools are underpinned by a strong sense of spiritual and moral purpose created by a shared vision throughout the whole school community, leading to collective responsibility for maintaining the physical and social attributes of the school. The importance of vision is a strong common theme in all the research strands.

Why and how school leaders develop sustainable development within their schools and how this fits within their wider leadership thinking and approach.

From this research it is evident that leaders who develop sustainability within their school do so from a sense of personal conviction and passion, underpinned by personal values. In the focus groups, participants told of how these arise from earlier life experiences such as interactions with nature and the environment, educational experiences or through living in different cultures. There is a philosophical and for many, spiritual dimension to why these leaders engage with sustainability. This is also why they see sustainability as a broad agenda, including environmental, social, economic and governance aspects of their schools and personal lives. There is a consistent understanding of sustainability as this bigger picture in all strands of the research, including the quantitative survey, though there may be some variability in the depth of understanding of the underlying principles.



Sustainability as a core or cross-cutting theme, envisioned by a focus group participant.

Four strong leadership themes have repeatedly come out of the four strands of this research. These are similar to those of any effective school leader, as identified in the literature review:

- Vision and purpose
- Determination and commitment
- Resilience, persistence and risk taking
- Inclusion and enabling others

However, in the sustainable school context, school leaders who develop this successfully have additional characteristics. They place sustainability at the heart of their school, as an all-encompassing ethos including all aspects of the school and its external relationships. They also use sustainability to deliver other initiatives, including core priorities, such as literacy and numeracy. This means these schools are involved with other activities such as Healthy Schools, Global Dimension, Eco-schools and Growing Schools. These leaders see their role as expanding the school experience beyond the school and embracing the wider world. The case studies and the focus groups provide examples of this wider engagement.

A strong emphasis is placed on the development and inclusion of all the school stakeholders, supported by a participative approach to decision-making. The support of governors and parents is a significant factor in sustainable schools. Interestingly, governors and parents rate lowly in terms of influence in developing sustainable schools in the survey (Q3), suggesting that many schools undervalue the contributions these groups can make to the ethos of the school. Time is made available for staff to come together and share ideas, skills and knowledge. Regular review and monitoring against school development plans and self-evaluation forms are undertaken. These actions indicate, both internally and externally, that sustainability is a priority and is valued by the school.

The outcomes of the sustainable approaches in terms of environmental impact, school ethos, student learning and wider outcomes.

The literature review found that most school leadership research is around schools as discrete institutions and was largely inward-looking, focusing on internal structures and roles. To some extent, this could also be seen in the quantitative survey where the two outward orientated doorways, local well being and global dimension, were given comparatively low priority. Successful leading sustainable schools have an outward orientation and look to build relationships and to act beyond the school. Through engaging with the wider community they develop positive two-way relationships, including with local businesses (see case studies). This provides benefits to the school, through new curriculum opportunities, improved social relationships inside the school and between the school and community, as well as more obvious fundraising potential.

New pedagogical approaches, including student participation in curriculum planning and an emphasis on collaborative learning between school staff, and between schools as discussed in the focus groups, is highly motivating for all those involved. This also builds shared visions and understandings which then support the sustainable ethos of the school.

The development of student participation through formal structures such as school councils, or less formally, fosters a sense of collaboration and shared vision. It also builds skills for active citizenship and a greater enthusiasm for learning.

There are many obvious environmental impacts. These range from improving the school campus, incorporating renewable energy or sustainable build features, growing food to changing attitudes and behaviours and creating a deeper understanding of the connection between people and place.

The literature review found that there is very little research evidence demonstrating the impacts of sustainability on school improvement or pupil attainment. This is due to a lack of long-term study in this area as it has not been seen as a priority and schools which have opted for a sustainable ethos are often looking for achievement in broader areas such as effective socialisation of pupils rather than improved SAT scores. There is a three-year parallel study currently underway by WWF-UK on behalf of DCSF looking at the impact of education for sustainability on pupils with Ofsted looking for the impact on pupil attainment. This is due to report late 2008.

The extent to which sustainable development approaches are a feature of schools nationally and the barriers and enablers to more widespread take up

From the quantitative survey and the focus groups, there is a growing and acute sense of the need to address sustainability in schools. Very nearly every questionnaire rated the sustainable schools strategy as important or very important (98 per cent). Again, there was an agreement that a broad range of issues, as indicated by the doorways, were important but they are not being acted on. The importance of this to schools is also borne out by the fact that over 75 per cent of the questionnaires were returned by the headteacher.

The perceived barriers to this action were common from the survey and focus groups and to a lesser extent, the case studies. The most important is lack of time to develop the planning and staff development, as implied by following a distributed leadership approach. This lack of time is due to the higher prioritisation of other school concerns, such as the perceived requirements of the National Curriculum, assessment and Ofsted. The focus groups and the participants at the leadership for sustainable schools Leading Practice seminar also felt there was a need to be given permission from DCSF to take on behaviours and approaches seen to support sustainability as these may not fit with a narrow understanding of current education norms.

However, schools which are successfully working through a sustainability approach and ethos, use this as a vehicle for delivering the National Curriculum in ways that are relevant and real to the students, leading to high levels of attainment or value-added progress. They also focus on their sustainability work as a strength of the school and highlight this at Ofsted inspections, frequently being commended for this work and its impact across all aspects of the school (eg Crispin, case study). Some people's barriers are other people's enablers.

The focus groups concluded that there is a tension between seeking external, regulatory drivers such as inspection and assessment which would raise the priority of taking sustainability seriously in schools, against the need for this to be an open, deregulated, creative approach. This was reiterated at a regional leadership meeting which considered leading sustainable schools, where again perceived restrictions from the National Curriculum and accountability to the local authority and Ofsted were given as significant barriers to implementing sustainability. But Ofsted and government driven initiatives such as Every Child Matters were also seen as potential enablers for sustainability.

The skills, qualities and development opportunities required by school leaders to make sustainable development a reality.

The key qualities of a school leader who successfully takes the sustainability agenda forward are that they are optimistic and outward-looking. These leaders are conscious of the place of the school in the local and global community, as evidenced by the case study schools, many of which have considerable community and international components to their activities.

They see the development of themselves and others as fundamental to their leadership and seek to develop personal and shared values which underpin environmental sustainability. Consequently, they promote supportive learning environments which allow experimentation and risk taking, again this can be seen described in the practice of the case study schools. The importance of leaders to be risk takers was also expressed by participants at a recent Leading Practice seminar on leadership for sustainable schools.

The model of leadership which seems best fitted to fostering sustainability is a distributed model in which different aspects of sustainability may be led by different members of the school community. By sharing out the tasks, many are enabled to participate in the overall strategy, reducing the burden on the head and more deeply embedding sustainability across the school. This may be easier in primary schools where there is already a greater tendency for decisions to be made in consultation with whole-school staff consultation than in secondary schools. The practical difficulties due to size of staff may be the main issue here but secondary schools do need to develop better inclusive processes as there is a risk of staff feeling excluded or that the sustainability agenda is not part responsibility.

One of the focus group participants described this style of leadership as being like geese migrating:

Wild geese - travel 70% further by working as a team and will take turns at leading the V



These leaders have an integrated, systemic understanding of the world and their place in it and can communicate this to others. They understand the interconnectedness of society, the environment and individuals within these contexts.

The literature review does conclude with a possible emergent model of leadership for sustainable schools showing the changes in orientation needed from the current leadership paradigm to that proposed:

'...if school leadership is to take on the challenge of championing environmental sustainability in anything more than a token way, then it needs to be more available to connect to the environment, the community and the bio-region of which it is a part of and to draw its inspiration from them in framing its education goals. This is the basis of greater "outward-lookingness" that is likely to be a key quality of community and leading sustainable schools and is what is meant by working with context in the organisational literature.'

(Reed & Morgan, 2007)

Recommendations

The implications of this research for leadership development and national policy.

The challenge of the next decade will be to take environmental sustainability from its current partial status in schools to being embedded; from the personal commitment of a few to being the responsibility of everyone; from being an additional priority to being a fundamental way that a school thinks and acts; from it being part of some people's personal beliefs to becoming a set of collective properties; from looking inward to looking outward and lastly from a set of doorways to a whole curriculum.

A key area of national policy must be to develop the capacity of local authorities to support schools in developing sustainable schools. These bodies can be very successful at this but currently it only happens where a few passionate individuals who already have this capacity are in place. Many schools, as seen in the survey, see local authorities as a significant barrier to sustainability.

There is also a lack of awareness amongst schools that this is a major DCSF strategy so it is being lost in the plethora of other concerns they have to address. Although many see this as an issue of importance and concern, few have any practice in place.

Recommendations for NCSL

There are several straightforward recommendations which can be made to NCSL. Clearly, there are opportunities for developing sustainability within leadership courses provided by the College. Unlike the current optional module provided to school business managers, this should be central to any course and should encompass both developing a deeper understanding of sustainability and practical skills to implementing this into their school. However, whilst some fundamental characteristics of leadership for sustainable schools, above and beyond those of generic effective leadership, have been identified, a more complete model of sustainable leadership is still to be described. There may be key aspects such as addressing values and developing an outward orientation which will be challenging to incorporate into courses.

The literature review, focus groups, quantitative survey and the Leading Practice seminar all surfaced concerns about a knowledge gap around sustainability concepts. Whether this is best addressed through any particular course or through networking with external experts who can support specific needs, such as advice on sustainable building design or better recycling is a debatable point. There are many experts around but finding time to locate the best or nearest can be a problem, perhaps this is where community links and distributed leadership can help. NCSL's Leadership Network could also enable shared resources, contacts and practice by coming together around a focus of sustainability.

The College has a key role in celebrating and disseminating good sustainability practice, which it is already starting to do. Helping other parts of the education system, including various parts of the DCSF, to build a coherent approach to sustainability through CPD across the workforce and within new school models such as extended schools and federated schools is another role for NCSL. This should be supported by research into the impacts of different leadership models in supporting and developing sustainable schools.

Recommendations for national policy.

Clearly, from all strands of the research there is a message coming through that the status of the sustainable schools strategy needs to be raised. How this is best done has not been a part of this work, but the lack of status is seen as a barrier to engaging with the strategy. Participants at the Leading Practice seminar spoke of needing permission from DfES to do this – the permission is there but the message is not getting out.

A consistent and coherent approach to sustainability has to come from all parts of the education system (DfES, QCA, TDA, NCSL, local authorities etc) to reduce school leaders' initiatives burden and to demonstrate the integrative and supportive nature of sustainability in delivering other priorities. The 2007 DfES Sustainable Development Action Plan is a step in the right direction for this but needs a clear implementation plan.

Local authorities were seen as both enablers and barriers, but sadly more often as barriers. There needs to be direction from DCSF that this is a high priority agenda and local authority officers need to be able to promote and support sustainability in their schools. It may well be that there is a lack of confidence and capacity in local authorities to do this, so this capacity must be put in place, possibly through a programme of training and certainly through networking and sharing good practice – there are some exemplary local authorities out there.

Fundamentally, this is an urgent agenda and there appears to be considerable grassroots support within schools and in the wider community. If this is not capitalised on, the opportunity will be lost as other priorities arise and energy and enthusiasm wane.

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