Student Teachers' Attitudes towards Education for Sustainable Development

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Introduction

In 1992, the need for sustainable development was endorsed at international level when 180 world leaders signed up to Agenda 21 (UNCED, 1992). Education was recognised as crucial to its achievement and, in September 2000, education for sustainable development (EfSD) became an explicit feature of the statutory primary curriculum. In practice, however, the implementation of measures outlined in Agenda 21 has been slow. Rhetoric about the need for sustainable development abounds but this is not universally understood, acknowledged, nor converted into practice. Ofsted has only recently indicated its support for whole school commitment to EfSD and there is little in the national curriculum (with its emphasis on transmitting factual knowledge and raising standards in basic skills) to support pupils' active participation. The government's latest primary strategy (DfES, 2003) mentions neither EfSD nor Geography, which has a major role in promoting it.

Nevertheless, issues such as the development of genetically modified crops have prompted 'genuine misgivings about food, nature, progress, science and technology . . . even democracy itself' (Vidal, 1999, 6). In 2002/3, 4000 primary schools registered to take part in the Eco Schools programme, and primary age children have consistently voiced their concerns about sustainability issues. If teachers are to capitalise on this concern and introduce effective EfSD, they need to possess appropriate knowledge and understanding, along with certain values and attitudes. This research aimed to elicit initial teacher education (ITE) students' understanding of sustainable development and their attitudes towards EfSD and how these related to their perception of the primary teacher's role. These findings would be used to inform the planning of new ITE modules in geography and in the wider curriculum.

Literature review

Attitudes to sustainability issues

Commentators fail to agree on the meaning of sustainable development and how it might be achieved (Redclift, 2002). Definitions of sustainable development reflect different ideological positions and
interests. Many would agree with the Qualification and Curriculum Authority's (QCA) statement that it involves ensuring a better quality of life for everyone now and for generations to come whilst protecting the environment (http://www.nc.uk.net/esd). However, that this should also include high levels of economic growth is not so generally accepted.

Steiner (1996) claims that through events such as Band Aid more is known about inequality and positive development than ever before. Environmental groups also flourish. Social theory suggests that as societies are modernised and as environmental risks increase, people become more reflexive and critical (Huckle, 1996). However, other commentators perceive a ‘sense of despair and apathy’ about the state of the environment (Plant, 1995, 253) and sustainable development is viewed as an impossible goal, given today's consumer society. Moreover, many people lack understanding of the complexity or relevance of global issues and the close ties between human activities and the environment (Norris Nicholson, 1996). Maiteny (2002) suggests that pro-environmental behaviour will only endure if it is rooted in a significant personal experience rather than a response to regulations, incentives or anxiety.

A high level of awareness or knowledge, or even the 'right' values do not necessarily lead to 'informed behaviour'. Posch (1993) discovered many inconsistencies between ITE students' 'values in action' and their espoused values and for a variety of reasons such as the cost of 'green' products, as well as laziness and apathy. The type and level of concerns expressed by ITE students appear to be no different from those of the public at large. They seem to have little awareness or understanding of issues such as power relations, which cause or contribute to the world's resource problems, and are confident that science and technology will solve environmental problems (Hicks & Holden, 1995). ‘Green citizenship’ is seen in terms of individual action, maintaining the status quo and involving activities such as recycling rather than political action (Campbell & Davies, 1995). Wilkins' study (1999) of student teachers revealed a high level of political disenchantment and cynicism. They felt powerless to effect change and found citizenship a negative concept.

Education for sustainable development

Different assumptions are made about EFSD theory and practice. For some, it involves simply acquiring knowledge of issues and developing concern. The DfEE/QCA (1999) state that pupils should be taught the skills, knowledge, understanding and values to participate in decision-making as part of education for active citizenship. Others see it as a process involving personal and societal change. It should be holistic, action-orientated, issues based, socially critical, participatory, empowering and reflective, and incorporate a futures dimension (Tilbury, 1995). Some commentators maintain that education should advance particular ends or ideologies such as sustainable development (Fien, 1993; Huckle, 1991). Jickling & Spork (1998) on the other hand assert that education should teach about sustainable development and develop skills to participate in debate about its nature. Several problems associated with innovation in formal education have been raised and there is no agreement as to whether formal...
education can actually achieve sustainable development. Standish (2003), for example, is critical of 'new agenda' geography with its emphasis on values and attitudes. He favours a 'traditional' approach: pupils should be taught about systems and different countries and develop skills to formulate their own opinions rather than be told how to think and act in relation to the world around them. Several commentators observe that ITE students (and teachers) are rarely involved in critical reflection concerning wider ethical, social and political issues and abstract concepts (Dunne, 1993) and indeed find it difficult when asked to do so.

**Concepts of education**

Several different ideological orientations (which are influenced by strongly held values), as to the nature and purpose of education have been identified. Theories of teaching and learning are likewise expressed in different ways. Biggs (1994), for example, describes a quantitative theory which involves transmission of facts, skills and competencies and a 'surface' approach to learning. A qualitative theory on the other hand, involves 'deep learning' within a constructivist model, with pupils learning actively and the teacher scaffolding their learning. In practice, however, neither ideological orientations nor theories of teaching and learning are exclusive. A strong form of EfSD would favour a constructivist model but in practice this may also involve the transmission of facts.

**ITE students' perceptions of teaching**

People enter teaching for a variety of reasons, from influencing children's thinking to the prospect of long holidays. Some see it as an 'ethical endeavour' (Steiner, 1996). Most students enter ITE courses with fixed ideas about teaching which are resistant to change when challenged by either their tutors or school experience (Bramald et al., 1995). Students also reveal a limited and unproblematic view of teaching and learning: learning, for example, is equated with the acquisition of factual knowledge and the use of traditional methodologies is favoured. QCA schemes of work should be followed to the letter to avoid criticism from Ofsted (Townsend, 2001). Other researchers have identified discrepancies between students' beliefs and practice. Their beliefs are unobservable until translated into practice, yet practice does not necessarily indicate their beliefs (Dunne, 1993).

**Research method**

**Methodology**

The research was undertaken using a qualitative or interpretative approach. This was seen as appropriate mainly because the aims were to identify, describe and understand individual perceptions and seek insight rather than focus on statistical analysis. A qualitative approach can also incorporate a flexible research design: theory need not be superimposed on the data collected but can emerge from
it (Burgess, 1985). It is also an appropriate approach to use within research concerned with EfSD, which has a strong values base and emphasises personal as well as societal change.

The sample

The research involved ten volunteer students in their final year of a three-year ITE course. It was felt that third year students would have more 'life experience' and would have begun to formulate ideas about the role of a primary teacher. They represented a range of ages and backgrounds.

The method

The key research method used was semi-structured interviews. This was used for a number of reasons. It is seen as a particularly appropriate strategy within a research methodology with essentially interactive and interpretative characteristics. It is also often used in a small-scale enquiry with limited time and resources in a situation where the researcher is an actor (Robson, 1993). Used rigorously, qualitative interviewing combines the complexities of factual and emotional responses in a richness of communicated understandings which can't be found in other technical rational means of data collection' (Day, 1993, 126). In the event, it proved to be a flexible method, enabling interesting or unexpected responses and underlying motives to be explored and producing a large volume of 'rich' data from a small number of individuals. Each student was interviewed for approximately half an hour. They all agreed to the interview being tape-recorded. This was felt to be the most unobtrusive and straightforward method of data collection and worked well, enabling the interviewer to concentrate on what the interviewee was saying and respond appropriately.

Qualitative interviewing has potential problems of bias and the legitimacy of qualitative data has often been questioned. However, Gilbert (1993) considers that the effects of interviewers on the validity and reliability of data can be overstated: limited guidance and direction from an interviewer do not constitute misdirected probing. Moreover, a desire for objectivity can sometimes be unproductive, producing a conventional and unreflecting answer rather than evoking a deeper and more thoughtful response. Cohen, Manion & Morrison (2000) point out that interviewees rarely have insight into the causes of their behaviour. They may be unaccustomed to putting their feelings into words; they may not admit to socially undesirable traits; or they may be over-polite, answering what they anticipate the interviewer wants to hear. The former did arise during the interviews and students struggled to answer some questions. However, their responses did include comments with which they knew I would not agree or which could be considered as not 'politically correct'.

The interview

Piloting enabled research questions to be refined, probes to be tested and techniques to be evaluated and modified. Subsequently, a framework of mainly open ended and exploratory questions was

http://www.geography.org.uk/eyprimary/primaryresearch/researcharticles/
prepared in which the students could elaborate their ideas but which would also to provide the data required. The questions focused on their perceptions of education and teaching and their knowledge and understanding of sustainable development.

- What do you see as the primary teacher's role? Which values and attitudes do you want to teach or develop?
- What do you think about the future? Do you think that sustainable development is achievable? How much do you think you know about global issues? Do you do anything to be a 'green citizen'?
- Do you think that EfSD should be a feature of primary education?

Analysis of the data

The analysis of the data was consistent with the general underlying philosophy of the research, that it is descriptive and interpretative. The interview tapes were transcribed in full. The data were divided into sections and each section was coded in order to identify categories. Descriptive codes were used which were mutually exclusive and covered all options. Patterns or themes were then identified in the data. Some codes, categories and themes had been suggested by theory, intuition and piloting but others were generated by the data: for example, it had not been anticipated that students would raise introducing a whole school initiative as a significant problem. The findings are presented in terms of impressions which were gained. Little reference is made to numbers as the main concern was to identify and describe a range of behaviour and opinions rather than how many hold the view or how strongly.

Findings

A number of findings emerged from the study. Those discussed here relate to the role of primary education, sustainability issues and attitudes to education for sustainable development. Student comments are used to inform the findings.

The role of primary education

Most students were adamant about the importance of teaching children 'basic skills' (literacy and numeracy) either because that was what was expected of them or because they saw them as crucial to children's future.

'you can't get anywhere in this world (without them)'

Some also saw social skills as a basic skill. However, the provision of a 'broad and balanced curriculum' was also seen as essential, as was the development of 'the whole child'. Teaching children to be reflective and critical was seen as fairly important, helping them to become independent thinkers.
'so they can reflect on a variety of issues and ideas and be critical about them, how it relates to their own lives'

Most students appeared to see themselves as transmitters of society's values, with parents receiving little recognition of the part they might play in this.

'children don't always come to school with the right values'
'you do have to teach children things (values and attitudes) - you can't just let them develop it themselves all the time'

The students were unanimous in identifying attitudes towards other people ('respect') as the most important area to be developed. They all saw addressing values and attitudes as something they would be proactive about, by including it in their planning where appropriate as well as a more unstructured, informal approach.

'presenting alternatives to what they've experienced and letting them make their own minds up about different issues'

Most of the students hoped that their teaching 'would make a difference' but they disagreed over the influence that a teacher has over children.

'a lot of children think that what the teacher says is gospel'

**Sustainability issues: knowledge, understanding and attitudes**

All except one of the students were unreservedly positive and optimistic about their personal futures. In terms of the future of the planet and the human race, there was a mixed response and most felt it was out of their control.

'nah - don't believe a word of it (media reports on predicted ecological disasters) - it will happen one day but not while I'm alive - hundreds, maybe thousands of years down the line'

Most students tended to see any problems as 'out there' and not really relevant to them. There was, however, some indication that they felt they should 'do something'.

'this is a really bad attitude - by the time anything awful happens we won't be around but I do think we should make more of an effort for future generations'

Issues like war, ethnic cleansing and the unequal distribution of wealth were identified as the most significant, rather than environmental problems.
'so many people with so much, so many with nothing'
'(global warming) doesn't worry me...I'm sure technology will grow and solve problems'

Sustainable development was seen as idealistic and everyone saw it as difficult to achieve.

'it's a nice idea but unrealistic'
'if it's not happened up to now with all the attempts that have been made I can't see it happening in the future'

Numerous obstacles were identified, including lack of interest (unless the effect could be seen locally) and expense as well difficulty in understanding the issues involved and knowing what to do.

'if I could afford it I would have solar power on my roof'
'Is buying an artificial Christmas tree best?'
'I'd like to do something but I don't know what'

'Human nature' was seen as the main obstacle: people were selfish or too set in their ways and would not be prepared to change. Some students also believed firmly in the status quo.

'people wouldn't be prepared to make a conscious effort - drop in standard of living - only little things like energy saving light bulbs - people aren't willing to give up their creature comforts'
'you've always got to have rich and poor people for society to work'

The students acknowledged that many people had little control over their lives, but thought that this did not apply to them. Some saw voting as important; others expressed political disenchantment, lack of interest, cynicism and powerlessness to effect change.

'I don't get too involved - it's a bit of an ostrich thing - I suppose it's wrong and this is why things don't get altered, it's out of your immediate control - other people will sort it out'

Although most of the students claimed to watch or listen to news programmes or glance at newspapers, no one could recall, for example, demonstrations at the latest world summit. They all considered their level of knowledge about global issues to be limited although this was not necessarily a concern. Acquiring knowledge was mainly seen as information for teaching rather than as knowledge which an individual should have.

'I feel I should know more - children are expected to discuss and debate current issues'.

All except one of the students undertook one or more 'green' activities such as consciously seeking out recycled and CFC products; recycling newspapers, bottles and plastic bags; saving energy (switching
off lights). One student demonstrated an awareness of 'fair trade' products. However, environmental considerations were not necessarily the driving force but rather lack of choice or financial reasons. A range of obstacles was identified, from inertia to lack of money.

'It's difficult when values are one thing and money's another'

Attitudes to EfSD

There was unanimous agreement that, in terms of process, EfSD was highly desirable. Each student highlighted one or more features such as active or collaborative learning.

'active learning - (children) learn and remember by doing something'
'collaborative learning . . . I like the idea of that . . . if you believe in change, then people have to work together'

For most students, their responses reflected at least some of the ways in which they already approached teaching and learning. They thought that EfSD could be satisfactorily included not only within geography but across the curriculum in spite of the subject focus of the national curriculum.

'children seem to get more out of (cross curricular work)'

The idea the EfSD was not just cross-curricular but should permeate a school's ethos was also received positively: it would make the experience 'real' for children and thus be more motivating.

'otherwise it would be hypocritical - you can't just talk about it in the classroom and not do anything'

There were, however, some reservations about whole school initiatives.

'it wouldn't be easy to implement in schools - it would need . . . the support of all the staff which is not always easy'

None of the students dismissed the socially critical dimension of EfSD as inappropriate.

'it's good to encourage children to think that they could make a difference'
'I really like the idea of kids getting involved in life, in society, in the issues involved'

However, they expressed a number of reservations. They thought the teacher's agenda should not be paramount and there were mixed feelings about investigating local issues.
they're not just kicking up a fuss because the teacher's learning objective is to write a letter of complaint

All students identified the potential for clashes between school and parents or other members of the local community. Doubt was also expressed about children questioning the way they live, which could be interpreted as critical of parents.

you wouldn't want a child to be ostracised because he comes to school in a car

The importance of a carefully thought out and 'balanced' approach was emphasised: teachers should have sufficient background knowledge, and children adequate information to listen to each other then make up their own minds. A need for training, for example on dealing with controversial issues in the classroom, was identified.

**Discussion**

The students' responses suggested that they saw a primary teacher as a 'reflective practitioner' with a moral purpose, engaged in the development of the whole child and not merely as a technician, which much of their training might have led them to believe. They drew from different theories as to the role of education and approaches to teaching and learning. For example, they considered that some transmission was necessary but that a constructivist approach was also appropriate, with children being involved in active, reflective and co-operative learning. Developing values and attitudes was viewed as important as teaching what they saw as 'the basics' although this was seen in terms of people and their relationships with each other, rather than attitudes towards the environment. They demonstrated some inconsistencies in their belief in children's autonomy. Initially it would appear that they would support a liberal approach as proposed by Jickling & Spork (1998). However, in then stating that certain values and attitudes should be taught they seemed to be leaning towards the deterministic approach of commentators such as Fien (1993) or 'well intended indoctrination'. There seemed to be an assumption that their values were the 'right' ones, acceptable to all.

The students' responses to questions about sustainable development supported much of the literature. Their views ranged from denial of any crisis to concern; any problems were in the future, elsewhere or not relevant to them, and would probably be solved by science and technology. This perhaps could be explained by Cross' notion (1998) that teaching is an 'optimistic' activity. Human nature and society were viewed as incapable of change and people's basic greed was seen to conspire against sustainable development ever being achieved. They appeared to have little awareness of current events or issues. As their information came largely from 'low-level' media information they were not aware of global systems and the structural forces which circumscribe people's choices and actions. They equated quality of life with consumption and although they undertook a variety of 'green' activities, these were seen in terms of individual action, rather than involvement in political action and questioning the

http://www.geography.org.uk/eyprimary/primaryresearch/researcharticles/
status quo, very much supporting Campbell & Davies' findings (1995). These were also activities which involved little effort or changes to their basic lifestyles and seemed to be quite arbitrary, unrelated to any knowledge they might have had of particular issues. Their reasons for not doing more are similar to those [such as helplessness, inertia and cost] identified by other researchers. Although some were more interested in voting than others, their feelings of cynicism, disenchantment, disempowerment and inability to effect change also reflect other findings.

In terms of EfSD, the students did not appear to regard education as an opportunity to 'change the world'. They were in favour of several features of EfSD, such as collaborative learning and learning actively through enquiry in geography or investigation in science, and in most cases were already using these approaches. Cross-curricular work was seen as something which should be developed rather than as problematic. This is, perhaps, somewhat surprising, given the focus on subjects both in school and in the students' training and the difficulties other students have identified in implementing cross-curricular themes (Lyle, 1996). However, the students interviewed had all recently been assessed as very competent teachers and perhaps they were now able to make links between subjects as an effective approach to teaching and learning. They were realistic about the difficulties of introducing innovation into primary schools, especially if this involved whole school commitment. They expressed some reservations about encouraging children to be socially critical but had no hesitation in stating that this was an appropriate approach to take and that children should become involved in real issues. This was seen as an empowering experience for children which would demonstrate that 'active citizenship' could make a difference as well as making learning more relevant and meaningful. However, they did emphasise a balanced approach rather than Fien's (1993) commitment to promoting actively values and attitudes which are seen as essential to sustainable living.

Conclusion

Much research suggests that a verbal response is a problematic indicator of action (Gilbert, 1993). The students may have claimed that they would engage their pupils in, say, practical, issues-based learning, but there is no way of knowing whether this will be the case. Whether or not they will engage with any form of EfSD can only be inferred from their responses as it concerns a hypothetical situation in the future.

The students' responses indicated that they would be predisposed towards a committed form of EfSD, at least in terms of process. However, they demonstrated little of the requisite knowledge, understanding and attitudes. Little concern or awareness of the need for sustainable development was evident and although they might have been happy for their pupils to take a socially critical approach, the students did not appear to see the need to engage in the process of change themselves.

The research only considered the views of a small group of students who may not be representative of all those engaged in ITE. However, the findings suggest that considerable input would be required to
enable these students to engage effectively with EfSD. To make EfSD solely schools' responsibility would seem to be problematic, given the patchy nature of good practice. For ITE to enable students to prepare their pupils for life as global citizens requires developing both their subject knowledge and pedagogic skills. Suggestions have already been made as to how EfSD could be addressed within ITE (Shallcross & Wilkinson, 1998). It is perhaps now time to move on and evaluate the impact and effectiveness of input on EfSD within ITE. This research could be seen to imply that if ITE students emerge with the knowledge, understanding, skills, values and attitudes to address EfSD once in the classroom, then all will be right with the world. However, it should be noted that if EfSD is to be pursued with some hope of progress, then it needs to be seen as part of a process involving the whole school community.

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