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Models of Education for Sustainable Development and Nonformal Education: A Bangladeshi Perspective

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Abstract
The social purposes of education are located in the long term, and oriented towards the construction and maintenance of a sustainable future. This paper focuses on developing country contexts with relatively low formal school enrolment rates, where dropout and failure rates are alarming; many children leave school semi-literate, soon to relapse into illiteracy, with negative consequences for their participation as individuals in the creation of a sustainable world. Since the 1960s, nonformal basic education has offered alternative educational and training activities, with innovative learning methods aimed at the development of practical skills, including matters of health, sanitation, literacy, to be applied in real life situations. Drawing on a five-year empirical study of young people at the point of transition between the nonformal and formal sectors of schooling in Bangladesh, this paper analyses the nonformal education paradigm against a framework of models linking education and sustainable development. Conclusions suggest practical ways forward with which to increase practice for sustainability in the formal education system.

Introduction – Sustainable Development and Education
Sustainable development means ‘development that meets the needs of the present without compromising the ability of future generation to meet their needs’ (WCED 1987: 43). If we assume that ‘human beings are at the centre for concern for sustainable development’ (UNCED 1992: Principle 1), then the centrality of education in contributing to sustainable development becomes clear. Education has long been understood as contributing to the development of human potential as well as social growth (Dewey 1899). It also has been seen as a basic human right and as an integral part of access to political power and participation for men and women (Haq 1997, Torres 1990) and can therefore be considered as an act of socialising individuals for social competences. In particular, in the context of serious questions about sustainability of development processes, education should be contributing to the competence of individuals to participate in and construct a sustainable way of life.

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However, the influence between education and development works in the other direction as well. The unsustainability of development has an impact on schooling, and thereby on individual development. In countries such as Bangladesh, many children have no chance to attend even low-quality primary schools. Dropout and failure rates are alarming; many leave semi-literate, soon to relapse into illiteracy. Given that the result of such failure is often an exclusion from social processes, such poor quality education is part of a vicious circle of unsustainability. Despite this, Bangladesh has made remarkable progress to combating poverty, and the Nobel Peace Prize awarded to world renowned economist Muhammad Yunus and his Grameen Bank is an example how community-base development initiatives can change people’s lives.

**Models of Education for Sustainable Development**

Education is a life-long process for the betterment of human well-being. Education for sustainable development (ESD) is fundamentally about the links between the awareness of the human as a whole in the nature and its supporting social systems and the health of the planet which we inhabit with responsibilities of present and future world. As such then, education is the key to any sustainable development programme:

“Education ... should be recognised as a process by which human beings and societies can reach their fullest potential. Education is critical for promoting sustainable development and improving the capacity of the people to address the environment and development issues” (UNCED 1992: Agenda 21).

How though can education play a role in promoting sustainable development (SD)? Different theories have been used, implicitly or explicitly, in answering this question, and we can group them into three main models:

1. education *about* sustainable development;
2. education *for* sustainable development;
3. critical education *towards* sustainable development

Education *about* SD (model 1 above) dominates many approaches to sustainability in most schools, but it is widely seen as ineffective:

“... albeit many education institutions have incorporated ‘green’ preambles, this was not sufficient to allow principles of sustainable development to leave deep imprints on education as such, or on how education institutions are being run” (de Visser 2002: 12).

Scott and Gough (2003) outline three types of theory linking learning, sustainable development and change, which correspond relatively directly to the three models of education in relation to sustainability that we propose here. In what they identify as Type 1 theories,

“We might, firstly, suppose that all that is needed is an appropriate educational technology to contribute to the solution of environmental problems.... [but] a clear, linear mechanism linking learning to change in a positive way remains elusive and probably doesn’t exist” (ibid.:111-112).

This finding needs to be reiterated, partly because of the widespread persistence of this model in the practice of environmental NGOs and other agencies (Kollmus and Agyeman 2002: 248). So for example, Fishbein and Cappella (2006) suggest that attitudinal change is *necessary but insufficient* to bring about a change in behaviour. Their model shows that a person’s behaviour is influenced by environmental factors
and by their skills and abilities, as well as their intentions – and that intentions are formed by societal norms and perceived self-efficacy rather than just by attitudes (ibid.: 52).

UNESCO’s Decade of Education for Sustainable Development emphasises values as a starting point:

“The overall goal of the DESD is to integrate the values inherent in sustainable development into all aspects of learning to encourage changes in behavior that allow for a more sustainable and just society for all” (UNESCO 2005a).

This emphasis on values opens up debate, but the link from discussion of values to changing practice can be as misunderstood as the role of attitudes in changing behaviour (Fishbein and Cappella, 2006).

In contrast, Robinson and Shallcross (1998) in arguing for ESD (our model 2 above) say that,

“There is a clear commitment in education for sustainable development to changing attitudes and practices so that actions are more consistent with sustainability in whatever sense this term may be locally constructed. It is through the primacy of actions that the ultimate evaluation of the success of any educational programme for sustainability will be made” (p.70).

Education for sustainable development is about practical and contextualised learning in how to live a better life and to care for the present and future of the globe. Many commentators appear to see such a model as a close relative of Model 1; according to our data this is to overlook the power of a good (or bad) example on the way learners behave.

A framework proposed by Vare and Scott (2007) has some similarities with the models identified in this paper. What they call ‘ESD 1’ corresponds to the first two models that we have identified here, though we consider it useful to differentiate them for reasons already discussed. Vare and Scott’s ‘ESD 2’ involves building the capacity to think and act critically in relation to sustainable development, an educational approach that we summarise under the heading critical education towards sustainability (model 3 above). Scott and Gough (2003) term these ‘Type Two theories’ (p.113) and suggest an association with approaches which draw on emancipatory ideas such as Freire’s conscientisation (1972). In this way, the question of sustainability expands into the issue of what is to be sustained and for who? We can answer that the environment is to be sustained, for the purpose of human well-being. This leads to a focus on community level participation and implementation, and Freire’s (1972) contribution to debates about pedagogy are very significant here because of the links which he establishes between oppression, conscientisation and dialogue, in the context of communities which represent often conflicting interests. This suggests that holistic, integrated strategies for ESD are required which promote an awareness of issues concerned with local and global ecological crisis as well as human well-being through community action and participation.

In practice, different worldwide organisations appear to have adopted various mixed theoretical approaches. For example, the World Bank’s DEPWeb takes an approach
which begins with problematising the notion of sustainability, showing how there are likely to be tensions and contradictions in any strategy.

“The Development Education Program (DEP) team designs tools and resources to help teachers and students, principally at the secondary school level, study -- and think critically about -- the often complex social, economic, and environmental issues of sustainable development affecting their countries, their regions, and the world” (World Bank Group 2001).

In summary then, the first model, education about sustainable development, provides awareness which generates changes in attitude and then in behaviour. The second model, education for sustainable development, focuses on actions which change attitudes and build awareness for life and then so develop lifelong practice. The third model, critical education towards sustainable development, emphasises generating knowledge through critical action, and the development of active and critical citizenship.

![Figure-1: Change Models of Sustainable Development through Education](image)

**Methodology**

This paper draws on data from a five-year doctoral study of young people’s transition from nonformal education to formal education sectors in Bangladesh. The doctoral study was a mixed method interpretative longitudinal study on the challenges of school transition experienced by young people. Bronfenbrenners’ ecological systems theory (1979, 1992) was used as a theoretical framework by putting individual students at the centre of the focus. Six nonformal primary and two formal high schools were purposively selected in two distinct geographical locations namely Bogra and Narsingdi district. A sample of two cohorts from the both formal high schools were chosen for the quantitative part of the study, which is not discussed here. This paper relies on data from the twelve in-depth longitudinal case studies of
students moving from nonformal schools into the formal sector. The data was generated for the doctoral study through pre-transition and post-transition activity questionnaires\(^3\), and through a photo-elicitation interview, classroom observation and interviews with students, teachers, NGO workers and parents (Shohel 2008).

**The Bangladeshi Education System**

The Bangladeshi education system is heterogeneous and very complex in nature as many forms of education have been permitted to develop and co-exist. Mainstream formal education takes three forms - Bangla medium general education, English medium British education and religion-base education. Along with these three, there is another form of formal education called vocational education. Formal education is divided into three tiers- primary, secondary and higher education. In parallel with formal primary education, non-government organisations (NGOs) have developed a nonformal primary education sub-system to promote access to education for disadvantaged young children in Bangladesh. The primary objective of nonformal primary education is to prepare students to enter or re-enter into the formal education sector. After completing nonformal primary education, the graduates move to formal high schools to carry on their further formal education. In this way nonformal education is complementary to formal education for disadvantaged children in the country.

**Formal Education about Sustainable Development – links to Model 1**

Formal primary education is provided for the majority of children and young people in Bangladesh, with a Gross Enrolment Rate (GER) of about 96.5 per cent (UNESCO 2000). Formal education generally represents the model of education about sustainability, with several steps coming between the educational experience and practical implementation by young people. Control and influence by central state institutions, particularly through a centralised curriculum (Robinson 1999) makes it difficult for formal schools to adapt to local priorities, or to experiment with alternative approaches appropriate to their social and environmental context. In addition, the formal education system is very rigid, with outdated curricula. Formal education fails to relate knowledge and action. During an observation in formal school we noticed that the class teacher was giving a lesson from a home economics textbook about household weekly duties regarding cleanliness and disposal of things. Surprisingly the very problem she was raising about the household was present in the classroom.

“I am surprised when she is talking about daily duties for household. She is reading from the book that you need to sweep the house everyday to take away dust and make your house neat and clean. But I see most of the benches and table are full of dusts. Classroom floor is full of papers and leaves. Now she is explaining weekly household duties. She is saying to the students that you need to dispose your broken furniture and other unnecessary things. If those are not in use, then you might give someone or store them in safe place. But I see inside the classroom there are some broken benches which also dangerous for students, they might hurt themselves by the sharp edges of those broken furniture.’’ [Observational field notes, Formal high school, Bogra 2006]

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\(^3\) Activity Questionnaire is a kind of innovative survey tool which involves different sort of activities to stimulate research participants to express their views through brainstorming and discussion with their peers. In this case activity questionnaire survey was conducted among students to get more insightful data about their experiences of schooling.
Such examples of the mismatch of words and action form part of the hidden curriculum that teaches students the powerful but unfortunate lesson that as you gain more influence, what you say is more important than what you do.

There is another related and unfortunate consequence of formal education: the large number of unemployed graduates who are focused only on getting a good job:

“I was admitted to the high school to get a good job. That’s my dream. I hope one day I’ll get a job which will help me to improve my life.” [Activity questionnaire data, Bogra 2006]

However, the number of graduates far exceeds the number of jobs available. In response to our question as to why some parents do not want to send their children to school, an NGO worker said:

“When you ask the parents about it, they say: you see my neighbour’s son got education, even he finished his college education but didn’t manage to get a job. He is hanging around and burden for his father. Because he got some education, now he can’t work as a day labourer. Most parents don’t value education. Also they don’t see a good reason to send their children to schools.’” [Interview, NGO worker, Bogra 2005]

For many young people then, their formal education has the unintended consequence of narrowing their work prospects, as well as reducing their engagement in local activities.

**Education for and towards Sustainable Development – Models 2 and 3**

Given that the formal education system has never addressed the needs of the whole population in Bangladesh, there has been, since the 1960s, a flourishing nonformal education sector engaging in a wide range of educational and training activities organised outside the formal school system (Shohel 2004). In this trend, innovative learning methods are aimed at the development of practical skills, including matters of health, sanitation, literacy, to be applied in real life situation. This now accounts for approximately 8 per cent of primary school enrolment (Ahmed et al 2007) – higher in geographically remote areas and among socio-economically disadvantaged groups. Nonformal education is based on the pedagogy from the ideas of transformative learning and participatory democracy (Shohel 2008, Schugurensky and Myers 2003). In relation to sustainable development, nonformal education facilitates public involvement in resource management and policy formation, as we will demonstrate through some examples below.

We divide the activities inherent in nonformal education relating to ESD into two main areas: through the curriculum, and through social action as part of the community.

1. **Through the Curriculum**

Much of the daily practice of nonformal education is for sustainable development (model 2). NGOs have adapted the nonformal curriculum to fit local needs, and as a result the nonformal primary curriculum is more life-oriented than the formal primary curriculum, although they have the same roots. One of our respondents said:
“Though we have to follow government curriculum for our nonformal primary schools, we reduced the formal curriculum, but add different components which are relevant to the students’ life and which will be very useful for them in future. We use local materials in schools which are available locally. We run the school shifts according to the parents’ opinions. In the same classroom different students can do different activities which are completely impossible in formal schools” [Interview, NGO worker, Narsingdi 2004].

In our activity questionnaire survey, each and every respondent mentioned aspects about school which they do not like, relating to cleanliness, health and safety issues, such as dirty toilets and bathrooms, dusty benches and ceiling fans, and smells from the nearby chicken farm. Though in most cases in nonformal primary schools they did not have facilities like toilets, bathrooms, tube-wells or ceiling fans, their active participation made them more aware of the value of caring for their environment. In response to our question about the differences between formal high school and nonformal primary school, one of our respondents wrote:

“The difference between high schools and primary schools are: In primary school we use to sweep and clean the toilets before starting the class. But in high school we do not need to do anything.” [Activity questionnaire data, Bogra 2006]

In our interviews, nonformal graduates in the formal high school said that they liked the big field attached to the school, the large school building, different classes and large student population. However, in discussing the school environment, some of them said that they did not like the dirty toilets, or the filthy tube-well area. One student reported that she did not use those facilities because they were unhygienic and bad for health. Another student said:

“The tube-well area is so filthy! Sometimes children leave loo near to the tube-well. They also use tube-well for cleaning themselves after shitting nearby which is disgusting and hazardous for public health because other people are using the same tube-well for drinking water. Even I can’t think how they do it.” [Interview, Nonformal graduate student, Grade VI, 2005]

In contrast, when we asked a formal primary graduate about the situation he said, “It is very normal here in this high school. In my primary school it was even worse then our high school. We’re used to it.” [Interview, Formal graduate student, Grade VI, 2005]

The relatively practical emphasis in the nonformal school has advantages for teaching and learning in a community context where interactions between school and community are very influential and fruitful for students’ development. In parents’ meetings, ‘parents and teacher discuss the children’s progress, attendance, cleanliness and hygiene, the responsibility of parents towards their children, and any school problems requiring parental attention’ (BRAC 1997: 3). In the formal school, by contrast, such links are neither acknowledged nor valued. The home is often seen as a source of problems, rather than affording the potential for mutual positive influence. But promoting children’s motivation to achieve at the expense of others, is a problematic goal of schooling (Shohel and Howes 2008).
This discussion highlights the distinctiveness of the nonformal curriculum in terms of its relevance, humanism and flexibility (Shohel and Howes 2008, 2005) and shows how it is valuable in creating opportunities for education for sustainable development (Shohel and Howes 2006). In these examples, the focus is on issues of public health and environmental quality. But the contribution of nonformal education in relation to sustainability is not limited to this active engagement in good practice, as we now show.

2. Through Social Action as Part of the Community
Sustainable development involves taking into account the social structure within which any change must take place. Social action has many origins, so that it is never a simple matter to predict when an individual or group will take it upon themselves to act in a particular way. Nonformal education can accommodate such complexities and incorporate such social action into its practice at the grass-root level. In this way it represents education towards sustainable development (model 3).

It is useful to contrast the formal and nonformal education systems, in terms of their connection and orientation to the community. Formal education tends to have physical links into the social systems which are seen as making up communities (Bell and Newby 1971) rather than a strong orientation to the principle of human well-being which is characteristic of the philosophy of nonformal education. The following comments by formal high school students coming from nonformal primary schools are therefore indicative:

“No one bothers. The classroom is full of rubbish and dust. It might contribute to our illness. But who cares? I think you now know how difficult to stay a classroom like that. The smell come from the nearby chicken farm is disgusting. They have no right to build a farm next to the high school. They are powerful, therefore, they don’t care about anyone. Even the chairman of the Union Parishad⁴ doesn’t say anything, or put pressure on them to move it from here [from behind the school building]. I think we should do something about it’. [Interview, Nonformal graduate student, Grade VII, Bogra 2006]

This nonformal graduate clearly expresses an awareness of the social context of the school, and further, that these features represented injustices which should not be tolerated, such as the location of the chicken farm. More significantly though, he sees himself as someone with the agency and voice to take action in this situation. This is the sense of the following extract as well:

“If I become Head Master⁵, hope one day inshaallah⁶, I’ll definitely bring changes to this school. I won’t sit down in the room, talking to other people or reading newspapers, not taking care of our school and my students and colleagues, like our head sir⁷ does. Rather, I’ll visit each and every classroom regularly to see whether everything is ongoing according to plan.’’ [Activity questionnaire data, Bogra 2006]

⁴ Union Parishad which is also known as Union Council is the lowest level local government in rural areas in Bangladesh.
⁵ In Bangladesh people normally use ‘Head Master’ in stead of ‘Head Teacher’.
⁶ It is an Arabic phrase, which means ‘by God’s will’ and most Muslims use it in their conversation.
⁷ The norm in Bangladesh is that pupils call their male teacher ‘sir’.
The experience of these young people seems to show that nonformal education affords an opportunity for young people (and their teachers) to integrate existing cross-curricular issues such as health education, personal and social education, economic and industrial understanding and environmental education. There are signs among these young people of the development of environmental and political awareness leading to reflection and action at the local level. A greater realisation of this potential would involve the integration of environmental education and development education with practitioner base life-skills education and training for a wide range of occupations, constituting an holistic and viable education for sustainable development. This combination is not just a content issue, but an ideological and an epistemological task which involves a locally derived empowerment process. This focus on the local is a recognition that for most of the world’s population, both ethically and spatially, the local is their most important global action field (Freire 1972).

Conclusions – Reconfiguring Formal Education
To understand education and development in relation to the community, we need to know how stakeholders make sense of their own roles by appealing to what are often individual paradigms and processes. Whilst we are quick to recognize the value of formal educators’ expertise as being located within the process of enabling learning (Jeffs and Smith 1990) what is currently neglected is the way in which educational institutions impact (for good or ill) on the delicate social ecology of communities, individuals and educational institutions which interact with and are part of them.

The arguments and evidence presented in this paper suggests that a greater understanding of the model of nonformal education raises a critical awareness of many of the unfortunate features of the dominant model of formal education, in relation to notions of education for and towards sustainable development. The problematic nature of pupils’ transition from nonformal into the formal education sector is indicative of the maintenance within the formal sector of a dangerously limited view of what processes within schooling are to be valued and taken seriously. For example, children are normally sensitive to hypocrisy and are skillful critics of gaps between policy and practice (Titman 1994). Data from this five year longitudinal study show that students who made transition from the nonformal primary to the formal high schools spoke up about the school environment and health and hygiene issues (Shohel and Howes 2005). It is not just what was ignored in the formal schools which was significant to these young people, but the undervalued positions in which they found themselves.

We have illustrated ways in which the process of nonformal education entails the articulation and educational reconciliation of the collective and communitarian dimensions of people’s experiences and expectations. As such, nonformal education is based upon ‘active citizenship’ (Allen 1992) which involves individuals leading independent lives as ethically accountable individuals. This ethical accountability is achieved through effort to gain considered, reflective choices on the type of life to live. This kind of reflection is predicated upon informed decision making. This informed position requires knowledge not only of what the individual is going to do but also what consequences are likely to follow from the action(s) (Crick and Lister 1974). White (1983) describes it as ‘education in power’ or, as Crick (2000, 1975)
suggests, it is established on the practical values of freedom, toleration, fairness, respect for truth and respect for reasoning (Robinson and Shallcross 1998: 73).

As we have shown elsewhere (Shohel and Howes 2008, 2007) the motives which inform individual and community action are caused by forces outside the individual in direct or indirect ways (Bronfenbrenner 1979, 1992). Social groups, communities and possibly societies as a whole are constantly reproduced, modified and transformed by the actions of individuals who are the members of these social groups and communities. This has implications for the role and location of schools as institutions involved in education towards sustainable development. We have seen how schools may be catalysts of change but not without being connected to a wider social base. The experiences from Bangladesh suggest that nonformal education can supplement knowledge, skills, perceptions and values associated with sustainable development without adding substantial costs to formal education system, not only to Bangladeshi education system but also to other developing nations which are seeking to promote education for sustainable development. As an alternative approach to basic education, the nonformal education sector as a whole thus increases pressure for change in the wider education system. Through ongoing efforts to increase access to basic education and continuing education, the country is making progress in education for sustainable development and moving toward more equitable and sustainable society.

References


