Education for sustainable development (ESD)
Exploring theoretical and practical challenges
Helen Kopnina and Frans Meijers
The Hague University of Applied Science, The Hague, The Netherlands

Abstract
Purpose – This article aims to explore the challenges posed by the conceptual framework and diversity of practice of education for sustainable development (ESD). The implications of plurality of ESD perspectives and methodological approaches as well variations in ESD practice will be addressed. Critical framework for conceptualizing of ESD which takes environmental ethics into account will be proposed through the discussion of The Ecocentric and Anthropocentric Attitudes Toward the Sustainable Development (EAATSD) scale.

Design/methodology/approach – The paper opted for a general review approach, covering literature that provides an overview of the concepts and practices of ESD, as well as program evaluation studies. Additionally, qualitative evaluation of EAATSD scale with students of higher professional education was conducted, using in-depth interviews and dialogue with individual students as well as classroom discussions.

Findings – It was found that there are wide and inconclusive debates about the aims of ESD based on the critique of sustainable development discourse in general and instrumentalism embedded in ESD in particular. According to the qualitative evaluation, EAATSD scale can be used for testing anthropocentric and Ecocentric Attitudes Towards Sustainable Development in students of higher education. Based on these results, this scale was found to be revealing of the critical view of paradoxes and challenges inherent in multiple goals of sustainable development as well as useful for testing anthropocentric and ecocentric attitudes in students of higher education.

Research limitations/implications – Reliability of the scale needs further statistical testing, and as is the case in conventional EE/ESD evaluations, and consequent research is necessary to improve institutional, national, and international applicability to particular cases. Future research should draw from this critical review in order to devise alternative evaluation tools.

Practical implications – In practice, this implies that currently administered evaluations of generic ESD, while useful in concrete cultural or institutional settings, might be premature. The article concludes with the reflection upon which conceptual, methodological, cultural, and ethical challenges of ESD which should be useful for ESD researchers and practitioners in different national settings.

Originality/value – This article fulfills an identified need to address the paradoxes of sustainable development and to study how ESD can be more effective.

Keywords Evaluation, Sustainable development, Environmental education, Education for sustainable development, ESD debate, Program evaluations

Paper type General review

Introduction
The idea of education for sustainable development (ESD) germinated through the report of the World Commission on Environment and Development (1987) entitled Our Common Future. The United Nations’ Decade for Education for Sustainable Development or DESD (2005-2014) encompassed action themes, including overcoming poverty, achieving gender equality, health promotion, environmental protection, rural development, cultural diversity, peace and human security, and sustainable
urbanization (UNESCO, 2005). The World Conference on Education for Sustainable Development (2009) defined ESD as “an approach to teaching and learning based on the ideals and principles that underlie sustainability” including with key issues as:


In the recent decade, many researchers and practitioners have called for the measures of evaluation of ESD programs (Jacobson et al., 2006; Carleton-Hug and Hug, 2010; Zint, 2011). Monitoring and evaluation was identified as a key strategy for implementing ESD (UNESCO, 2005) and national policy initiatives and strategies related to ESD are underway (Erdogan and Tuncer, 2009). The effectiveness and value of these initiatives, along with the measurement and evaluation of their progress, remain open questions for policy makers, academic researchers and practitioners alike (Reid et al., 2006, p. 22).

Different types or stages of ESD evaluations have been identified, including front-end evaluations, process evaluations, as well as outcome and impact evaluations (Zint, 2011; Schneiderman and Freihoefer, 2012). Drawn from the larger pool of literature on program evaluation, participatory evaluation and empowerment evaluation (Patton, 1994; Stufflebeam, 2001; Scriven, 2002) can be identified in relation to ESD. However, efforts to develop both generic (international) and context-specific (national) ESD evaluations are still nascent (de Haan, 2006; Tilbury, 2007; 2012; Rode and Michelsen, 2008; Zint et al., 2011).

One of the possible explanations is the lack of conceptual and consequently methodological unity within the research and practice of ESD. While plural perspectives on ESD are encouraged (Gough and Scott, 2007; Læssøe and Oßman, 2010; Wals, 2010), plurality of these perspectives reveals the lack of researchers’ and practitioner’s agreement on what ESD is or what it is not (Stevenson, 2006). The growing body of literature about the relationship between environmental education (EE) and ESD indicates that there might be a potential tension between the objectives of EE and ESD (Hesselink et al., 2000; Breiting, 2009; Johnson, 2011; Wesselink and Wals, 2011). While the earlier forms of EE embodied by UNESCO’s International Environmental Education program (1975-1995) could be characterized by concern with “ecological justice”, defined by Low and Gleeson (1998) as “justice between human beings and the rest of the natural world”, the Educating for a Sustainable Future program (UNESCO, 2005) focuses on environmental justice, which concerns the distribution of environmental benefits and burdens among human beings.

In the Belgrade Charter document (UNEP and UNESCO, 1976) EE’s objectives are summarized as:

- **Awareness.** To help individuals and social groups acquire an awareness of and sensitivity to the total environment and its allied problems.
- **Knowledge.** To help individuals and social groups acquire basic understanding of the total environment, its associated problems and humanity’s critically responsible presence and role in it.
- **Attitude.** To help individuals and social groups acquire social values, strong feelings of concern for the environment and the motivation for actively participating in its protection and improvement.
• **Skills.** To help individuals and social groups acquire the skills for solving environmental problems.

• **Evaluation ability.** To help individuals and social groups evaluate environmental measures and education programmes in terms of ecological, political, economic, social, and educational factors.

• **Participation.** To help individuals and social groups develop a sense of responsibility and urgency regarding environmental problems to ensure appropriate action to solve those problems.

By contrast, the objectives of education for sustainability (EfS) can be summarized as promoting:

• **Human sustainability.** Maintaining human capital such as health, education, knowledge.

• **Social sustainability (organizations and networks).** Maintaining social capital.

• **Economic (financial) sustainability.** Keeping capital intact.

• **Natural (environmental) sustainability.** Protecting natural capitals (e.g. water, land, air, minerals, etc.) (Schroter, 2010).

“Environment” is thus represented as “natural capital” used by humans and no intrinsic value of non-human species is recognized. As opposed to earlier nature or conservation study that used to dominate EE practices in the early 1970s, infinitely complex forms of “environment” (including the entire biosphere or just the species; including or excluding humans as part of an ecosystem) have been outlined in recent debates (Kopnina, 2012a).

Another explanation for the difficulty in evaluating ESD arises from the need to address not only generic ESD programs, in large part “inspired” by UNESCO, but also national and local variations in ESD programs. Context and scale are important “relativizers” of the way ESD might be practiced circumstantially. Nations where ESD is practiced differ greatly in their institutional settings which are in turn embedded in the wider socio-cultural processes that encompass both formal and informal forms of learning (Zarger, 2010; Anderson, 2012).

This article sets out to argue that the underlying concepts driving ESD fall short of broader environmental conservation concerns and then draw on literature on evaluations to describe the consequences of evaluating programs. For this purpose, two types of evaluations will be discussed. The first one is the research on evaluation in general (e.g. ESD practices versus ESD programs). The second one is concrete program evaluations which focus not as much on practices but on specific versus generic programs. Evaluation implications of the theoretical and practical challenges of ESD will be addressed. This will be done by drawing on the broader program evaluation literature and addressing the questions:

• What promise do approaches such as participatory evaluation and empowerment evaluations hold for evaluating ESD programs?

• What does the program evaluation literature suggest for evaluating “Western” programs in developing countries?

This article aims to view evaluations “from the bird’s point of view” and inquire: “what are we actually teaching in ESD”, and related to it the question of what is actually being
evaluated? The implication of this examination is the critical review of the very foundation of ESD through evaluating objectives, cultural specificity and methodology of all ESD programs. We shall first address the theoretical challenges: the relationship between EE to ESD and the plurality of ESD perspectives, consequently addressing the differences in ESD practice in different national contexts. We shall than reflect upon the implications of theoretical and practical challenges on the efficacy of evaluations of ESD.

The objective(s) of ESD
Existing tools and methodologies for measuring and evaluating the initiatives in ESD are often derived from indicators developed in the fields of citizenship education, conservation education and particularly EE (Reid et al., 2006; Wals, 2009; The Earth Charter, 2011). McKeown and Hopkins (2003) have argued that ESD is not likely to replace EE but become one of its important goals. Other authors have argued that ESD has become the dominant perspective of EE (Sauvé, 1996, p. 29). Other scholars tend to conflate EE and ESD objectives (Eilam and Trop, 2010; Årlemalm-Hagsér and Sandberg, 2011). Evaluations of EE sometimes include topics of “sustainability” as evidenced by the volume on EE evaluations (Jacobson et al., 2006), and special journal issues (The Journal of Environmental Education 1982, 13(4), New Directions for Evaluation (2005, 108), Journal of Evaluation and Program Planning 2010, 33(2)), as well as on-line resources such as Auditing Instrument for Sustainability in Higher Education (AISHE, 2014): www.eauc.org.uk/audit_instrument_for_sustainability_in_higher_educ, My Environmental Education Evaluation Resource Assistant (MEERA): www.meera.snre.umich.edu (Zint et al., 2011); Place Based Environmental Education Evaluation Collaborative: www.peecworks.org. Since it is argued that evaluations of ESD can benefit from the “lessons learned” from EE evaluations (Zint, 2013), comparison of objectives of EE and ESD seems warranted.

As in the case of EE, one of the main challenges of evaluating ESD programs has been that many have not had clear aims and measurable objectives, nor have these objectives been clearly (Zint, 2011). Lucas (1979) distinguished between aims of education “in”, “about” or “for” the environment in order to avoid misunderstandings about the intended type of EE. Similarly, distinctions were drawn between ESD, sustainable development education (SDE), learning for sustainability, and EfS. The inherent complexity of the term “environment” and the very definition of “sustainability” fits within the broader purposes of ESD. Fien (1993) asserts that every type of education has instrumental ends and Lotz-Sisitka (2004, p. 47) asserts that:

[...] there appears to have been an increased “instrumentalism” in the UNESCO discourse over the past ten years as the boundaries of education towards sustainability have increasingly been confined to ESD.

ESD programs are supposed to focus on the “triple bottom line, finding a balance between social/economic/environmental (SEE) aspects of sustainable development” (Stevenson, 2006). Jickling (2005) warns that ESD risks becoming instrumental in indoctrinating students about the idea of “progress” formulated by agencies that claim to know what development (in the broadest sense of the word) is.

In relation to developing countries, many observers have noted that the idea of “progress”, “modernity” and “development” is relative and that the enterprise of development actually creates social inequalities and imbalance between humans and
environment (Lewis, 2005; Giddens, 2009). The current sociopolitical climate of education favors an approach to teaching and learning in which test preparation and scripted curricula are often the order of the day (Hillocks, 2002; Marshall, 2009). This focus on standardization and high-stakes testing has led to a narrow view of what counts as teaching and learning (Franciosi, 2004; Hargreaves, 2003; Lipman, 2004; Luke, 2004; Ravitch, 2010; Stewart, 2010) and ultimately fails to inspire critical and creative pedagogies. Therefore, formal (Western) education may be complicit in creating “monocultures of the mind” (Shiva, 1993) in which the new “holy grail” of the dominant political elites, the consumerist culture, is perpetuated (Blaser et al., 2004), and culturally specific ways of relating to each other as well as to plants and animals is undermined (Black, 2010; Baines and Zarger, 2012).

Related concern is that mainstream discourse on sustainable development tends to ignore the deep ecology perspective (Naess, 1973) and exhibit anthropocentric bias (Kopnina, 2012a) arguably absent from traditional societies’ learning practices (Anderson, 2012). In the case of ESD in Africa, Lotz-Sisitka (2004, p. 1) acknowledges that mainstream sustainable development discourse espouses:

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\ldots \text{anthropocentric view of environment, in which environment is viewed as “goods and services” within a market-oriented framing of environment as a commodity or resource for human consumption. African societies (and other societies) attribute other values to environment, not only economic value.}
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Associated with these questions, another concern needs to be raised, namely, who are the “sponsors” or “donors” of ESD and what are their objectives?

In an article on development evaluations, Patton (1994, p. 312) reflects:

Regardless of political-economic system, the dominant motif of modern government worldwide is planning. That means assessing needs, identifying solutions, targeting populations, setting goals, procuring resources, implementing programs, and, of course, evaluating results [\ldots]. Of course, imperfections exist: inadequately assessed needs; fuzzy and conflicting goals; poorly defined targets; insufficient resources; and sloppy implementation. But those are precisely the problems evaluations expose.

Zint (2011) reflects evaluating ESD programs can have a variety of potential benefits, such as meeting ESD program’s accountability needs by providing evidence that they are achieving their objectives. It is acknowledged that such accountability information is already required by many donors and will increasingly be needed to receive continued program support (Zint, 2011, p. 5).

ESD program donors are governments and corporate elites (Crossley and Watson, 2003; Jickling and Wals, 2008) or powerful NGO’s (Blum, 2009). ESD financiers at the national levels could be government ministries concerned with “development”, as well as “commercial partners” involved in development enterprise through their trade operations (Lewis and Kanji, 2009). According to its critics, the mainstream discourse on sustainable development originates from the “big players” such as The World Bank, the IMF, and the governments of the neo-liberal consumerist societies (Mosse, 2010). These organizations were criticised for promoting the oxymoronic goal of maintaining economic growth, re-distribution of wealth and keeping the health of the ecosystem intact (Rees, 1992; Mander and Goldsmith, 1996).

While “raising the standard of living” may be nebulous shorthand for the worthy aim of ending severe deprivation, translated into shared understanding and policy the
expression is a euphemism for the global dissemination of consumer culture – the unrivaled model of what a “high standard of living” looks like. But to feed a growing population and enter increasing numbers of people into the consumer class is a formula for completing earth’s overhaul into a planet of resources: for ever more intensified uses of land and waterways for habitation, agriculture and farming; for the continued extraction, exploitation, and harnessing of the natural world; and for the magnification of global trade and travel (Crist, 2012, pp. 141-142).

In the article challenging the practitioners of ESD, Jickling (2005, p. 252) inquires whether ESD really has the capacity to challenge the status quo and would it not contribute more to sustaining present global inequities, given its corporate and political sponsorship?

It is also questionable whether the objective of balancing social, economic and environmental triad is achievable, and whether human equality and prosperity as well as population growth can be achieved with the present rate of natural degradation (Giddens, 2009). Would the expansion of the “economic pie” to include the most dispossessed not include even more natural resources being consumed? In this regard, ESD objectives can be found empirically questionable (in propagating having your cake and eating it approach to both maintaining “growth” and preserving natural resources). Critiques of top-down development projects have noted that foreign aid, structural adjustment programs and programs to promote development may have caused more harm than good in exacerbating global inequalities and have largely failed in addressing ecological crises (Goldsmith, 1996; Shiva, 1993; Easterly, 2006; Bodley, 2008; Oliver-Smith, 2010). From this perspective, ESD’s aligning its objectives with the goals set by donors can be ethically objectionable.

Additionally, it seems that concerns with depletion of resources, equity in distribution of resources, as well as human health and welfare exclude consideration of an ecocentric perspective and reduces “environment” to that which only serves social and economic interests of human beings (Spring, 2004). An overtly anthropocentric view of biodiversity is summarized in The World Bank’s mission statement on environment and sustainable development.

The World Bank’s mission is to alleviate poverty and support sustainable development. Biological resources provide the raw materials for livelihoods, sustenance, medicines, trade, tourism, and industry. Genetic diversity provides the basis for new breeding programs, improved crops, enhanced agricultural production, and food security. Forests, grasslands, freshwater, and marine and other natural ecosystems provide a range of services, often not recognized in national economic accounts but vital to human welfare (http://go.worldbank.org/08H25N3QY0).

In its focus on integrating social and economic interests with those of environmental protection, ESD represents a radical departure from the original EE in taking the focus on solving environmental problems towards social equity issues (Kopnina, 2012a). In contrast to the earlier efforts of environmental educators to promote conservation and address anthropogenic causes of environmental degradation (UNEP and UNESCO, 1976), ESD reveals anthropocentric bias that obscures the aims of EE outlined in The Belgrade Charter (Kopnina, 2012b).

Sustainable development discourse seems to embrace anthropocentrism, which entails human moral superiority vis-à-vis other species. It reserves moral consideration exclusively to human beings, judging our acts towards nature on the basis of how they
affect us, not on how they affect other beings (Eckersley, 2004). The values acknowledged to nature are instrumental in character, in the sense that the natural environment is only useful in as far as it provides resources that can be used to satisfy human wants (Lundmarck, 2007). For example, while ethical assumptions underlying sustainable development condemn practices like child labour, gender, class, ethnic and racial discrimination, daily mechanized slaughter of farm animals for human consumption is rarely disputed (Shepard, 1993). While combating social problems are acknowledged in all ESD objectives, speciesism (discrimination against other species) is considered to be a non-issue as overview of ESD indicators suggest (Reid et al., 2006). In fact, recent articles call for “humanizing” education by highlighting the ways in which environment “benefits humans, and focuses on the social dimensions of environmental problems and their solutions” (Strife, 2010).

There are thus two serious challenges associated with the fuzziness of ESD objectives. One is that ESD objectives may not be recognized as “acceptable” by researchers and practitioners seeking instrumental ends of education. Second, these objectives are only relevant in Western “developed” societies where the idea of the triple bottom line seems to be relatively undisputed. In addressing the first issue, we may reflect that since the objectives of ESD are not always clear and in some cases contested and criticized, opening ESD up for multiple interpretations and thus plural evaluative standards might lead to misguided efforts in measuring something that has questionable value. In regard to the second issue, we need to examine whether literature on ESD, dominated by Western or “developed countries” case studies, excludes studies by anthropologists of EE.

On local contexts and cultural relativism

The common methodologies of program evaluations include the National Foundation for Educational Research’s (NfER) study of the implementation of the “citizenship” curriculum in England (Kerr, 2006), or the BLK “21” programme in Germany (de Haan, 2006) as well as generic EfS checklists (Schroter, 2010). However, it is not clear whether these national evaluation studies or best practice examples can be universally applicable in other nations, as many anthropologists have pointed out (Owens, 2012). Extensive work on classroom ethnography (starting with pioneering research involving direct observation of the classroom by Smith (1969)) involves ethnographic researcher to enter the world of his “subjects” through participant observation (Carspecken and Walford, 2001) it has not yet fully employed in formal education settings to address ESD. The Ways forward section of this article will discuss how such methodology can be useful.

Nations where ESD is practiced differ greatly in their socio-political priorities, as do the forms of democracy surrounding their educational institutions, as well a host of other historical, socio-cultural, political, ecological, and economic factors. Some types of ESD focused on social equity and health might be more appropriate in some circumstances, for example, the issues concerned with reproductive health in developing countries; while more environment-effects issues might be more appropriate in others, such as the issues concerned with consequences of high level of consumption in more affluent Western societies (Kopnina, 2011a, c). Diversity of institutional settings can also be interpreted in the context of wider socio-cultural influences in which both formal and informal learning takes place (e.g. see recent work of anthropologists in the field of EE (Zarger, 2010; Efird, 2011; Kopnina, 2013; Anderson, 2012)).
More saliently, anthropological involvement with the complexity and inherent contradictions of development (Lewis, 2005; Mosse, 2005), as well as the propensity of many anthropologists to analyze field sites in developing countries, add valuable data on how ESD in developing countries differ from that in developed ones. In terms of overarching objectives of ESD, anthropologists offer unique critique of educational practices in general and “sustainable development” in particular that might have been forced upon indigenous tribes (McElroy, n.d.) or entire “developing countries” by neo-colonial regimes. Many anthropologists are skeptical of education for predefined (Western development) goals, as interviews conducted in the documentary film “Schooling the World” reveal (Black, 2010)[1]. The film explores the hidden assumption of cultural superiority behind education aid projects, including ESD, which overtly aim to help children “escape” to a “better life” and abandon traditional way of environmental learning and social cohesion.

Davis (quoted in Black (2010)) argues that the spread of Western-style formal education undermines indigenous culture and knowledge, and enforces a sense of inferiority in local people as they struggle to achieve the Western (industrialist and often corporatist) goal of “sustainable development”. While formal education becomes more valuable in local communities, traditional knowledge becomes devalued (Baines and Zarger, 2012). Norberg-Hodge (quoted in Black (2010)) adds that while traditional education taught sustainability as a way of life, present forms of education may educate students for what The World Bank and the UN see as the only way to lead to “developed” lifestyle.

Implications
We may now return to the question in the Introduction: what does the program evaluation literature suggest for evaluating “Western” programs in developing countries? First of all we want to make clear that we are not able yet to give a clear definition of evaluation (vs research) and more specifically, how to define evaluation consistently with program evaluation. To give such a definition another analysis is needed which will be developed in the follow-up research.

On the basis of the information presented in this article, it can be said that cross-cultural as well as ethical investigation of ESD’s impact on local communities needs to be made before evaluation of ESD can be conducted in non-Western, “developing” or other contexts. Since evaluation practice can still fall the victim of fallacious ideologies, the distinction between two kinds of evaluations: summative and formative, can be useful (Scriven, 2002). According to Patton (1994, p. 312), summative evaluations judge merit and worth: the extent to which desired goals have been attained; whether measured outcomes can be attributed to observed interventions; and the conditions under which goals were attained that would affect generalizability and therefore intervention dissemination. Formative evaluations help programs get ready for summative evaluation by improving program processes and providing feedback about strengths and weaknesses that appear to affect goal attainment. Both generic objectives (such as protection of environment) and local contexts and interpretations can help to inform both summative and formative evaluations.

In terms of content of ESD programs, the issues concerned with reproductive health might be more appropriate in developing countries; while the issues concerned with consequences of high level of consumption may be more appropriate in more affluent Western societies (Kopnina, 2011c). Diversity of institutional settings does not imply
a student-teacher dyad in a formal setting but can also be interpreted in the context of wider socio-cultural influences in which both formal and informal learning takes place (Kopnina, 2013). EfS, seen from a wider anthropological perspective, could thus be conceived as something that used to (in traditional societies) happen outside of institutional confines and does not necessarily involve any formal structures promoted by (Western) sponsors or donors. While formal ESD can present ancient traditions and indigenous knowledge as “backwards” it may be argued, “these peoples, these cultures”, are not failed attempts at being us – they are unique answers to the fundamental question, “what does it mean to be human and alive?” (Davis quoted in Black (2010)). Such a position on ESD will be much harder to evaluate.

Methodology of ESD
Once the aims of ESD are established, another challenge is to devise the most efficient and strategic method of achieving these objectives (Rickinson, 2001, 2003). The most important challenge is didactic: what are the best available teaching methods, keeping ESD’s objectives in mind?

As in the case of EE programs, ESD programs have had mainly activity and output objectives rather than outcome and impact objectives. According to Zint (2011, 2013) when EE programs have had outcome objectives, they tended to have environmental knowledge and attitudinal outcomes, often equating them with behavioral outcomes. Reasons for this include that many programs have been based on the assumption that changes in environmental knowledge and/or attitudes lead to changes in environmental actions and have not drawn on behavioral change models (Heimlich and Ardoin, 2008) or critical literature exploring the attitude/behavior gap (Booth, 2012). Social psychology and environmental anthropology literature has challenged the assumption that knowledge equals change in attitudes, motivation and behavior, suggesting that there is a large gap between people’s knowledge of environmental problems and their motivation to behave towards their resolution (Booth, 2009).

There are many theories to explain the widespread rhetoric-behaviors gap between what seems to be desired by general public and what is actually happening (Kollmuss and Agyeman, 2002). Because environmental problems go to the heart of domestic policies, such as energy and transport policy, citizens appear to live in a paradoxical situation where society increasingly talks about the seriousness of environmental problems although concerted action is missing (Lidskog and Elander, 2010, pp. 32-33). Giddens has noted that modern society is confronted by a number of social, political, and other problems and may fail to prioritize something that seems too abstract and too unpleasant – such as ecological crisis (Giddens, 2009). If people were also asked to choose between different priorities, such as combating climate change or ensuring that no jobs or economic benefits are lost, people tend to choose social and economic priorities over what seem to be more distant worries about environmental protection (Lundmarck, 2007).

Booth (2012) reflects:

People often become activists when they or those close to them are under threat. Those likely to suffer most from climate change, including other species and future generations, tend to elicit less felt concern.

Clearly, then, educating people to care about environmental problems does not equal raising their motivation, let alone providing guarantees of their participation in
combating these problems. What type of methodological approach is then needed for ESD to achieve its objectives? Which methods are then available to make students not only knowledgeable but also involved and motivated?

In “lessons learned” from evaluations of EE programs, Zint (2013) reflects that many strategies adapted by EE researchers and practitioners could be applicable to the case of ESD. Many methods were proposed: learning in nature (Kahn and Kellert, 2002; Korhonen and Lappalainen, 2004; Wells and Lekies, 2006), social learning (Wals, 2007), action competence (Breiting, 2009; Jensen and Schnack, 1997), citizenship (Kerr, 2006), and dialogical learning (Meijers, 2009; Kuijpers and Meijers, 2009), and variations and combinations of those. These approaches reflect the trend in developing “democratic” (Læssøe and Öhman, 2010), “pluralistic” (Wals, 2010), and “participatory” (McDuff and Jacobson, 2001; King, 2005; Huckle, 2009) approaches to EE combining active student involvement with empowerment (Fetterman and Wandersman, 2005). It has been also noted that strategically important EE needs to involve what social psychologists termed “public sphere” environmentalism (Stern and Dietz, 1994). Through this approach, students are taught not just about personal actions and responsibility but competency for collective actions targeted to pressure government in taking decisions that go beyond the sphere of influence of individual citizens (Chawla and Cushing, 2007).

While this strategic approach might be very useful for EE, its relevance for ESD, and particularly evaluation of the best strategy to achieve ESD objectives (however defined) is less evident. When ESD objectives are defined “from top down” (involving UNESCO initiatives and guidelines) it is unlikely that students of ESD will be encouraged to engage in public sphere actions that may in fact challenge the top down perspectives. On the other hand, if students are encouraged, empowered and otherwise motivated to participate in the process of co-creation of the ESD program objectives, there is no guarantee that they will come up with the most strategic decisions in regard to social, economic and environmental challenges. According to Patton (1994, p. 313), such participatory approaches would imply that participants themselves should play a major role in the goal-setting and achieving their own goals. These are the types of processes will be reflected upon in the section on “ways forward” and the discussion of the scale for evaluating objectives of sustainable development.

Other methodologies, such as “learning from nature”, might actually avert student gaze from the social and economic objectives of ESD and stimulate them to question human superiority over nature or instrumental approach to “natural resources”. Learning to understand and respect nature through interacting with it might be a legitimate objective for EE, but not necessarily for ESD. Without critical reflection on what ESD entails (and whether the triple bottom line or SEE approach is useful), evaluating ESD methodology could only inform us what works best in teaching a certain perspective, not in how empirically valid or ethically sound this perspective is.

Benett (quoted in Zint (2011)) proposed that ESD programs should first identify the SEE conditions they seek to address, then identify the practices that can change these conditions, as well as the knowledge, attitudes, skills, aspirations (or intentions) that can foster changes in these practices. However, if neither objectives nor methodology involved in achieving these objectives are critically examined, evaluating ESD programs may lead to questionable outcomes.
Proceed or not to proceed?
While evaluations of EE programs have been demonstrated to help meet EE objectives (Jacobson and McDuff, 1997; Norris and Jacobson, 1998; Jenks et al., 2010; Zint et al., 2011), the case of ESD evaluations may be more complex. This complexity stems primarily from the fact that the very objectives of ESD need further critical reflection. Since the time of the publication of the Belgrade Charter there have been heated discussions particularly in the Journal of Environmental Education and Environmental Education Research about the “ends” of ESD. In the article “Environmental education research: to what ends?” Jickling (2009) argues against the post-structuralism claims that education has no meaning and no ends, other then the ones that are subjectively ascribed to it. After cautioning about perils of prescribing research agendas, Jickling suggests that key normative questions exist at the intersection of “education” and “ethics”, and that they point to an area of research that deserves more attention. Remarkably, while Jickling (2009, p. 215) does discuss the interceptions of ethics and environmental ethics, as well as ethics and education, he does not address environmental ethics in relation to EE, although he does argue that normative questions need to be recognized as important areas of inquiry and that the most value laden ideas concern “ethics” and “education”.

In reflecting upon the objectives of ESD, cross-cultural applicability and issues associated with the most efficient methodology of teaching, evaluating ESD programs may need to meet a number of challenges presented by the theory and practice of ESD. The very underlying ideology of ESD needs to be urgently evaluated in order to disclose not just particular programs’ objectives and monitor its progress, but in order to:

- make an international (including non-Western countries) inventory of different forms of ESD’s ideology and practice;
- assess how much of this diversity still “fits” the collective notion and practice of ESD; and
- provide insights for the very legitimacy and relevance of the underlying ideology of ESD globally.

Considering that “education is affected by globalizing ideologies” and that “ideologues are unshakeable in their belief that they are on the trail to truth – and therefore to the solution to our problems” (Jickling, 2005), what needs to be evaluated, perhaps are not necessarily the programs themselves, but programs’ underlying assumptions, ideologues, and implicit objectives.

The objective of these evaluations should be broader then just accessing efficacy of ESD in concrete national or institutional contexts. Through this “bird’s point of view” the very foundation of ESD needs to be critically examined through evaluations that address objectives, cultural specificity and methodology of all ESD programs. It would be desirable if these evaluations were accompanied by interdisciplinary review involving ethical and cross-cultural assessment. Kopnina (2011a, b, c, 2012a, b, 2013) rejected the usefulness on goal-free evaluations as they were not found to be suited for ESD. Participatory and empowerment evaluations were found most suitable for the task.

Ways forward
In the recent evaluative study of EE published in this journal, Schneiderman and Freihofer (2012) used the new ecological paradigm (NEP) questionnaire for tackling environmental attitudes. NEP has been a reliable instrument in several previous studies,
has measured other populations’ attitudes toward the environment (Dunlap, 2008), and was linked to evaluation of EE program by the researchers. However, previous studies of NEP did not find to address deep ecology values or explicitly engaged with the interface between environmental ethics and sustainable development (Lundmarck, 2007; Kopnina, 2011b, 2012c). Therefore, one way forward is the scale for measuring attitudes to sustainable development and using various methodological strategies to discuss these with students of higher education (Kopnina, 2012a). At the core of this methodology is the participatory evaluation of students’ comprehension of sustainable development. The Ecocentric and Anthropocentric Attitudes Toward the Sustainable Development (EAATSD) scale is used as an opener for a classroom discussion about what sustainable development is, how subjects such as biodiversity conservation, perception of environment, priorities of addressing social and environmental problems are framed (Kopnina, 2012c). Methodologies of classroom ethnography (Owens, 2012), participant observation (with researcher as a lecturer) and dialogical learning (Meijers, 2009) are employed.

One of the authors evaluated this scale in September 2012 by 20 students of Sustainable Business minor using in-depth interview structure and dialogue with individual students as well as classroom discussions conducted for a period of two academic hours. Briefly, summarizing the results of this “evaluation based on discussion”, it can be concluded that the majority of the students felt that this scale made their comprehension of and understanding of anthropocentricity and ecocentricity (both distinctions and similarities in perspectives) in general and of sustainable development (both its objectives and challenges) in particular sharper than the original scale did. According to this qualitative evaluation, EAATSD scale can be used for testing anthropocentric and Ecocentric Attitudes Towards Sustainable Development in students of higher education. Based on these results, this scale tackles the critical view of students of at least some of the dilemmas, paradoxes and challenges inherent in multiple goals of sustainable development. Reliability of the scale needs further statistical testing, and as is the case in conventional EE/ESD evaluations, and consequent research is necessary to improve institutional, national, and international applicability to particular cases.

Conclusions
This article aimed to express the profound concern with “what are we actually teaching in ESD”, and related to it the question of “what is actually being evaluated?” Following this discussion, evaluation of existing evaluations of ESD could also be instructive in revealing practitioners’ and/or researchers assumptions about ESD, which is crucial to understanding of an even bigger question: “why are we actually using ESD?”

Recently, researchers and practitioners in the field of ESD have called for expanding the research on evaluations of ESD. However, caution must be exercised in a few areas, namely objectives, cross-cultural validity and methodology of ESD before evaluations can be developed. It was argued that since the objectives of ESD are not always clear and in some cases contested and criticized, opening ESD up for multiple interpretations and thus plural evaluative standards might lead to 
\textit{ad hoc}, only nationally or institutionally relevant, and at worst, misguided efforts. Pluralistic approaches to evaluation do not value traditional characteristics of summative excellence such as standardization of inputs, consistency of treatment, and uniformity of outcomes and clarity of causal linkages. In Patton’s (1994, p. 313) words they:
assume a world of multiple causes, diversity of outcomes, inconsistency of interventions, interactive effects at every level—and they find such a world exciting and desirable [. . .]. They expect to be forever developing and changing—and they want an evaluation approach that supports development and change. There is a danger to this approach as plural perspectives can undermine clear objectives and leading students of ESD to abandon clear instrumental goals, such as environmental protection.

Literature reviewed at the beginning of this article demonstrates that tradeoffs and paradoxes of development are rarely discussed, and social, economic and environmental issues are rolled into one. While there is robust literature on ethics and ESD, environmental ethics and especially deep green perspective on environment is marginalized in current ESD debate. ESD may obscure inherent paradoxes of “having your cake and eating it” approach by both maintaining a growing and increasingly wealthy population and protecting the environment. Implications of the shift towards anthropocentrism were examined in the light of environmental ethics theory and implications as to the efficacy of the present ESD in fostering young people’s care for environment. We may reflect that what needs to be evaluated is not necessarily the programs themselves, but programs’ underlying ideological assumptions and implicit objectives. Through this “bird’s point of view”, the very foundation of ESD needs to be critically examined through evaluations that address objectives, cultural specificity and methodology of all ESD programs.

As a suggestion for such an overarching evaluation, the EAATSD scale followed up by dialogical methodology outlined in earlier publication by one of the authors was proposed to evaluate students’ perception of the relationship between environmental and social issues. The follow up research the authors are involved in will reveal whether an application of EAATSD scale may be used for addressing the students’ perceptions of the aims of ESD as well as methodological tool.

If the criticism of the objectives of ESD is to be expanded to include the discussion of ESD’s impact in non-Western countries, a few recommendations can be made. Before evaluation of ESD can be conducted in non-Western, “developing” or other context, cross-cultural as well as ethical investigation of its impact on local communities needs to be made. Additionally, the environmental ethics and especially deep green perspective on environment needs to be rekindled in ESD debate in order to strengthen not just social and economic but also environmental aspects of ESD.

Note

1. The filmmakers argue that many colonial European powers, but also the USA and Australia forced native children (American Indians, Australian aboriginals, etc) into government boarding schools. Today, volunteers build schools in traditional societies around the world, convinced that school is the only way to a “better” life for indigenous children. The filmmakers then ask whether this is true and what really happens when we replace a traditional culture’s canon of knowledge with our own? Does life really get better for its people? Shot on location in the Buddhist culture of Ladakh in the Northern Indian Himalayas, the film weaves the voices of Ladakhi people through a conversation between four original thinkers; anthropologist and ethnobotanist Wade Davis, Helena Norberg-Hodge and Vandana Shiva, both recipients of the Right Livelihood Award for their work with traditional peoples in India; and Manish Jain, a former architect of education programs with UNESCO, USAID, and the World Bank.
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About the authors
Dr Helen Kopnina (PhD Cambridge University, 2002) is currently employed at The Hague University of Applied Science as a Coordinator of Sustainable Business Program and Researcher of environmental education. Kopnina is the author of seven books, East to West Migration (Ashgate 2005); Crossing European Boundaries: Beyond Conventional Geographical Categories (Berghahn 2006); Migration and Tourism: Formation of New Social Classes (Cognizant 2007);
Dr Frans Meijers (PhD Leiden University, 1983) is a Professor of pedagogics of vocational development at The Hague University of Applied Science. Meijers is author of several books and many articles in the area of career development, career learning and identity learning. A recent article is Meijers, F. and Lengelle, R. (2012). Narratives at work: the development of career identity. *British Journal of Guidance and Counselling, 40*(2), 157-177.