

# Breaking New Ground? Reflections on Greening School Grounds as Sites of Ecological, Pedagogical, and Social Transformation

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## **Abstract**

*In this paper, we explore greening initiatives in school grounds as sites where ecological, pedagogical, and social transformation might be promoted and take place. Reflecting on our evaluations of school ground greening initiatives in Canada and England, we note that these initiatives are often at the margins of young peoples' experiences in schools and that their potential to be truly transformative can go unrealized. A series of tensions are highlighted in addressing a shift towards realizing their potential; these include situating greening school grounds more explicitly within the curriculum and securing broader institutional support. We also identify a more radical option, the repositioning of the kinds of outdoor learning that occurs in green school grounds as the basis of teaching and learning in Sterling's (2004) vision for "sustainable education."*

## **Résumé**

*Dans cet article, nous explorons des initiatives d'écologisation de cours d'école. Sur ces sites on pourrait promouvoir et voir se produire des transformations écologiques, pédagogiques et sociales. Témoignant de nos évaluations des initiatives d'écologisation de cours d'école au Canada et en Angleterre, nous remarquons que ces initiatives sont souvent à la limite des expériences des jeunes gens dans les écoles et que leur potentiel qui peut être vraiment transformateur peut ne pas se réaliser. Une suite de tensions sont mises en évidence en abordant le virage qui réaliserait leur potentiel; ces dernières supposent qu'il faille placer plus explicitement l'écologisation de cours d'école à l'intérieur du programme d'études et s'assurer d'un plus grand appui de la collectivité. Nous identifions aussi une option plus radicale, le repositionnement des sortes d'apprentissage de plein air qui surviennent sur des cours d'écoles vertes comme la base de l'enseignement et de l'apprentissage selon la vision de Sterling (2004) pour une « éducation durable ».*

While a considerable and growing body of research points to the positive range of impacts of green school grounds initiatives, there remain gaps in our understanding of the wider impacts and potential of greening these spaces. For example, there has been little research exploring how green school grounds relates to the values and goals of the wider educational system, or, if

and how these processes contribute to a “sustainable education” that includes the adoption of a systemic, rather than sector-specific, perspective to learning in and beyond schools (see Sterling, 2001, 2004). While such research has been unfolding for some time in the context of socially critical environmental education (e.g. Malone & Tranter, 2003), the issue of if and how green school grounds might specifically contribute to “sustainable education” remains relatively unexplored. As such, important questions remain unanswered.

In this paper, we focus on whether two high profile examples of green school grounds initiatives explicitly promote not just ecological and pedagogical transformation but also social transformation, that is, encouraging change in personal behaviour and social and organizational practices that also support the kinds of changes in broad social, economic, and physical infrastructure that holistic environmental educators like Sterling, amongst others, envisage. Sterling (2004) raises a critical issue in this regard. Rather than green school grounds initiatives being essentially sites of social reproduction and business-as-usual in terms of teaching and learning, they might alternatively (preferably, even) be an integral part of a *sustainable education*. By this Sterling raises the question as to whether these initiatives assist in the changing of educational culture towards a greater realization of human potential and the interdependence of social, economic, and ecological well-being, and hence lead to more transformative learning? Of critical importance then is whether educational institutions are designed solely for the “delivery” of a curriculum, or, in Sterling’s (2001) terms, enable the “emergence” of transformative learning? In a similar vein, Capra (1997) argues that limiting initiatives by considering only their ecologically transformative role is inadequate:

Learning in the school garden is learning in the real world at its very best. It is beneficial for the development of the individual student and the school community, and it is one of the best ways for children to become ecologically literate and thus able to contribute to building a sustainable future. (p. 9)

These concerns lead us to the following questions in this paper: Are green school grounds initiatives as instances of ecological transformation integrated with other efforts in transforming pedagogy, and wider society, i.e. pedagogical and social transformation? Or are they, perhaps, (still) something “extra” and “outside” of the mainstream and therefore, while important for ecological transformation at restricted scales, contributing little to changing the social and pedagogical status quo in schools?

In this paper then, we foreground the socially transformative potential of green school grounds by reflecting on our own experiences from green school grounds initiatives in Canada and England. We introduce two case examples: the green school grounds programs in the Toronto District School Board (TDSB) in Canada (Dyment, 2004, 2005) and the Growing Schools “Innovation Fund” projects in England (Scott, Reid, & Jones, 2003). These are

by no means fully representative of work in the field, but as relatively large-scale and high profile initiatives, an exploration of their strengths and weaknesses should afford grounds for discussing the relative merits of these initiatives in terms of the interanimation of ecological, pedagogical, and social transformation. Thus, the choice of the cases depends less on their typicality than on our perception of their accessibility to us and potential to provide insights into the issues of evaluating the processes and outcomes of green school grounds initiatives. We also acknowledge that some initiatives seem to us to be more transformative than others, both within this selection of examples, and when other initiatives elsewhere and at other times are considered (e.g. Malone & Tranter, 2003).

We begin by briefly describing the initiatives we were involved with, and then present reflections that explore if and how we think social transformation might be occurring through them. This is followed by a broader discussion of the factors that seem to limit and/or enable the transformative possibilities of green school grounds, before revisiting themes from our opening comments. Before that though, we wish to highlight an organic image of transformation for this particular context, one that seems particularly powerful and redolent as a spark for deliberations about the transformative processes and outcomes enabled or constrained in the examples. That is, as with introducing an activated yeast and working it throughout an unleavened dough, so we see parallels with the catalytic outcomes available to green school grounds on the curriculum, on learning and teaching, and the lives of students and their communities as sites for multiple forms of transformation. At one level, transformation is about reaching potential, moving from “here” to “there,” where the endpoint and outcomes are identifiable and bound up in the purposes of the activity, like in introducing the yeast. While at another, what purposes are intended—what bread is to be produced—depends on wider matters, creativity and novelty might be the order of the day, or perhaps batch production to a prespecified plan.

Finally, we wish to emphasize at this point that we write intentionally in the first person and collectively throughout this paper because much of what follows are *opinions* that have emerged as a result of sharing our reflections, discussions, readings, and experiences. This paper leaves a number of lines of inquiry and argument open and we think of it as representing “work in progress.” As such, we invite both reader reactions and dialogue on this paper.

## The Case Examples

### *Canadian Case-study Notes: Toronto District School Board*

There are many positive things happening within school grounds in the Toronto District School Board. Currently, approximately 20 per cent of

schools have green school grounds (GSG) programs. Detailed investigations of these school ground greening initiatives were carried out in Toronto, Canada by Janet Dymont, one of the authors, as part of a doctoral study which drew on ongoing evaluation work and contract research in the region (Dymont, 2004, 2005). To begin to illustrate the broader themes of this paper, we note the following from Dymont's research journal observations:

*JD:* Using evaluation questionnaires distributed to teachers, parents, and administrators working at 100 schools with greening initiatives to gather quantitative data, and follow up case studies at 5 of the schools across a range of socio-economic statuses to gather qualitative data, I began to develop a good understanding of the potentially transformative role of GSG.

In reflecting on my experiences working with these GSG initiatives, it became clear that socially transformative experiences are happening at the individual level of teacher, student, administrator, parent, and community. I heard heart-warming stories about the socially inclusive and integrative nature of green school grounds. Study participants consistently reported that GSG were more inclusive of people who may feel isolated on the basis of gender, class, race, or ability, suggesting that these spaces promote, in a very broad sense, social inclusion. Evidently, GSG in the TDSB provide places where a range of individuals' needs can be met. They help to draw people in, inviting them to share experiences and goals and to participate, as they are able. A parent captured many of these sentiments with these words:

*Parent:* Everyone can join us in the garden. What a great place for a disenfranchised child to meet new people, dig, and plant. Our garden is colour blind, inclusive, and warm. Anyone can help us, and they do.

*JD:* Study participants also shared stories about how their GSG programs helped to facilitate community outreach, by partnering with local "food share" programs that distribute food to people in need. Some GSG initiatives help to facilitate enhanced community connections, by providing opportunities to meet new people, make new friends, and strengthen old friendships. In reflecting upon his involvement at one of the schools, one parent commented:

*Parent:* I think our greatest problem nowadays is alienation because the city is really a world of strangers. There are many kinds of alienation, including social alienation, self-alienation, and environmental alienation. I believe strongly that a landscape, like a green school ground, can work to bridge all kinds of alienation. People are brought together through a greening project and are reconnected with landscape and other people. That really is such an incredible benefit of landscape. And I saw it happen while I was working on the green school ground project.

### *Initial Reflections*

We see these examples as successful pointers to the potential of green school grounds initiatives to facilitate social transformation. However, rather than treat them uncritically, we also wish to locate them in a wider context

through revisiting historical, broader institutional, and structural frameworks in which these individual schools are embedded. This suggests a different interpretation of transformative potential and activity (until recently), one which has echoes with the English case, and which provides a backdrop to comments and observations made later in the paper.

First, during the 1990s, the conservative provincial government, which is responsible for establishing the curriculum for the province of Ontario, radically restructured the educational system by introducing the “Common Curriculum” which focused on “back to basic” learning. Through the introduction of a standardized curriculum and province-wide testing, the government sent a strong message emphasizing the role of school in preparing young people for work in an increasingly competitive and global economy (see Hargreaves, 2003, who also comments on similarities with the English context following the introduction of a National Curriculum in the late 1980s and 1990s by a conservative government). At around the same time and as part of this restructuring, in 2000, the subject “environmental science” was removed as a “teachable” subject from the curriculum with the rationale being that the course material would be integrated across the curriculum. However, a recent study by Puk and Brehm (2003) suggests that this integration approach has not been effective, because fewer students than ever appear to be learning within an environmental education framework.

Second, at a school board level of analysis (each school in Ontario is part of a school board), support for green school grounds has emerged only of late (Toronto District School Board, 2003b). Until recently, historical efforts to facilitate greening (i.e. the late 1990s) were decentralized, with each school taking its own initiative (or not), often with little school board or provincial knowledge, interest, or support. For many years, the relationships between the school board and the “lone rangers” of greening could be described as “hostile confrontations, and warlike” (see Dyment, 2004, p. 153). Furthermore, opportunities to use school grounds as a site for teaching were being limited because of the standardized curriculum that left few opportunities for outdoor activities and/or environmental learning (Dyment, 2004).

The situation has changed dramatically in the last five years. Significant changes within the Toronto District School Board have resulted in a shift towards a more supportive process for greening that is endorsed by the school board in a number of ways. This shift occurred originally because of a change to safety standards for school ground equipment that required the board to remove many play structures on school grounds in the Toronto District School Board in 2000. Forced to deal with even more barren school grounds than existed prior to the removal of the play structures, Toronto District School Board school board officials, with guidance and support from *Evergreen*, a national green school grounds organization, were invited to shift their thinking from “*How do we replace school ground play equipment?*” to “*How do we make exemplary school grounds?*” (Dyment, 2004).

Since 2000, the school board has increasingly recognized the importance of school grounds and their support is manifested in several ways. For example, the school board helped to produce the publication, *A Breath of Fresh Air: Celebrating Nature and School Grounds* (Houghton, 2003), which profiles greening initiatives around the Toronto District School Board. The Toronto District School Board has also been developing its new EcoSchools program, sending a clear signal of its intention to fulfill its environment policy commitment to support “environmental literacy for all students” and to develop “environmentally sound” operational practices in its schools. Launched to all of its schools in 2003, the EcoSchools Program currently has four priority areas: waste minimization, energy conservation, ecological literacy (curriculum), and school ground greening (Toronto District School Board, 2003a, 2003b, 2003c, 2004). Green school grounds is now explicitly recognized as being part of a larger school board vision for education into the future. Indeed, study participants highly valued the recent steps taken by the Toronto District School Board to promote successful greening initiatives as this both validated and legitimated previous efforts and spurred further work. These initiatives are particularly noteworthy given that the Toronto District School Board, like all school boards across Ontario, has faced significant budget restraints in recent years.

Such themes resonate with experiences of, and contexts for, examples of green school grounds in England, where, although the Growing Schools Innovation Fund projects have a wider brief, issues of curriculum control, change, and management are also important in framing understandings of the socially transformative potential of green school grounds, particularly in the ways new relationships might form and old patterns of behaviour be discarded amongst teachers and learners, and the wider community as part of this transformation. This time, the particular focus in the example is on growing and farming (Scott, Reid, & Jones, 2003), while a significant difference is that ongoing curricular and educational reform in England under a labour government has not created the same opportunities for social transformation to be able to take place as we find in the Toronto District School Board.

#### *English Case Notes: Growing Schools Initiative*

The Growing Schools Initiative (see Department for Education and Skills, 2005) is sponsored by the UK government’s Department for Education and Skills. It has an explicit focus on improving learners’ and teachers’ experience of the curriculum by setting out to provide: “tried and tested methods that will enable and inspire teachers to use the outdoor classroom as an inherent part of everyday learning.” It has a particular concern with “raising awareness of the rural sector, of food and where it comes from, of farming and agriculture, of countryside issues and healthy lifestyles, and [with] increasing

understanding and responsibility for the environment” (Department for Education and Skills). The aims of the initiative reinforce this broad agenda; they are two-fold:

- encourage and inspire all schools (nursery, primary, secondary, and special) to use the “outdoor classroom” as a context for learning; and
- increase learning activities which enable pupils to gain knowledge and understanding about the outdoor environment through first-hand experience of growing, farming, and the countryside—within and beyond the school grounds.

A notable example is the Growing Schools Garden, currently located at the Environmental Curriculum Centre (Eltham, London, UK). This, along with many other successful Growing Schools projects, is described on the project website (see references). They show “how barren playgrounds can be transformed into exciting and welcoming green spaces ... and ... [show] teachers, pupils, governors, parents, and the general public alike ... what schools can achieve, regardless of location, budget or resources” (Department for Education and Skills, 2005).

In this section, we focus our discussion of the Initiative by considering a series of flagship projects that were run by five non-governmental environmental organisations working with schools. These projects were run by the Countryside Foundation for Education, Learning through Landscapes, the National Association of Field Studies Officers, the Federation of City Farms and Community Gardens (FCFCG), and the National Association of Principal Agricultural Officers. They sought to address the following issues:

- the delivery of the Foundation Stage curriculum (i.e. primary age groups);
- the 14 to 19 curriculum (i.e. examination age groups);
- the potential of the outdoor classroom in providing continuity across the Key Stages (e.g. the transition from primary to secondary schools);
- the development of teacher-training materials;
- the learning opportunities provided by allotments, city farms, and community gardens;
- developing the potential of environmental centres; and
- the development of growing zones within school grounds.

Each project was expected to evaluate its work in relation to its own goals and contexts. An external evaluation of the Innovation Fund projects was commissioned by the Department for Education and Skills as an integral part of its programme of activities (2002-2003), and carried out with the co-operation of the organisations that managed the projects. One of the authors, Alan Reid, took part in this external evaluation, with William Scott (both at the Centre for Research in Education and the Environment, University of Bath), and Nick Jones,

from the UK's Council for Environmental Education. The external evaluation set out to complement the internal evaluations by working with the five organisations, drawing on and identifying issues across their own evaluations, regarding:

- planning and delivery;
- how projects worked in practice;
- learning outcomes and their transferability;
- project outputs and their dissemination/replication, particularly in the absence of future funding; and
- the nature of “support” and “barriers.”

Data for the external evaluation were developed and/or gathered from project visits and observations, analysis of internal documentation and evaluations, report writing, and meetings (including interviews) to discuss the evolution and evaluation of each project.

So in what sense might the Innovation Fund projects be ecologically, pedagogically, and socially transformative? Answers to such questions are not easy to find, but in the external evaluation report a range of contributory factors can be identified that bear on this. They include the personal, relational, and ecological; the symbolic, historic, and pedagogic; and the institutional, structural, and resource-based, amongst many others (see Scott, Reid, & Jones, 2003). Nevertheless, with Growing Schools Innovation Fund, very few projects directly address our wider theme of social transformation. We wondered why this might be so? In beginning to answer this question, we start by noting the following from Reid's research journal observations:

*AR:* To understand the outcomes of this initiative, we must recognize that food, farming and growing, the countryside, and the environment are increasingly important issues for English schools to include in their work with young people. By way of context, Nicholson-Lord (1997) notes:

“The past decade or two have seen the globalisation of the British shopping basket as supermarkets scour the world to satisfy our newly acquired appetite for exotic fruits or out-of-season greens. Such global supply lines would have staggered our grandparents, but they also mean that we know less about the way our food is produced.”

*AR:* Furthermore, the report of the government Policy Commission on the Future of Food and Farming (The Curry Report, 2002) argued that, “the key objective of public policy should be to reconnect consumers with what they eat and how it is produced.” The Growing Schools Initiative, then, arose out of concern that children and young people had become distanced from “nature”—in particular from farming and growing—and it became one of a number of initiatives to find ways to encourage greater understanding of food/farming/countryside issues, including projects focusing on community capacity building, locally-sourced food, allotment use, healthy eating, and active lifestyles, including using the school grounds to do this (Scott et al., 2003).

Yet, if we take into account wider and pressing priorities for the English national curriculum (e.g. about inclusion, ICT, numeracy, and literacy) as primary vehicles for cultural reproduction and restoration via the education sector (Ross, 2000), it is of little surprise that despite the efforts of its many supporters, Growing Schools was often located at the margins of young people's experience in schools, and hence their potential as sites for social transformation was typically blunt. But that is not the whole story. For example, activities and programmes at the Meanwood Valley Urban Farm in Leeds (part of the FCFCG) often sought to combine educational work across a number of fronts. Young people excluded from mainstream schools working at the farm take part in standard reintegration courses, but don't have their farm work isolated by the staff from wider teaching and learning. That is, one-to-one supervision can sit alongside involvement in horticultural projects with local primary schools, science projects with adult visitors from further afield, and local community projects restoring habitats and, for example, discarded bicycles, for charitable rather than commercial ends.

### Moving Towards Social Transformation

While the source references for these projects provide further detail on the cases, at this stage in the paper we want to signal a shift in direction by relating that in our discussions preparing the paper we noted many similarities between the English and Canadian projects that could be explored further. When considered together, we found that the cases pointed to a range of constraints, possibilities, and potentials for green school grounds to be socially transformative. As we have noted above, broader institutional and structural constraints—such as curriculum requirements and provincial/national policies—can clearly limit or enable the possibilities for social transformation to occur via green school grounds initiatives, and in these projects, we did observe that the potential for school grounds to be transformative beyond the individual and school level remained quite limited. But we also noted that the situation can change, as illustrated by the recent emerging commitment and support from the Toronto District School Board.

In the final section of this paper then, we turn to exploring the following question: What would have needed to happen here for social transformation to occur in a more meaningful way, which is supported by larger institutional and structural systems? To begin to answer this question, we discuss factors grounded in these projects that we think might help to facilitate the realization of the transformative potential of green school grounds initiatives, in social, as well as pedagogical, and ecological ways.

#### *Situating Greening Initiatives as Part of the Larger Curriculum*

Competing and conflicting demands on the curriculum in England and Canada have clearly created a series of tensions for green school grounds projects. An initial tension which can be identified is that teaching and learning

through green school grounds is not generally considered as legitimate or readily amenable to assessment as that associated with the indoor classroom. Certainly, it now seems to be taken for granted that the bulk of teaching, learning, and assessment in relation to the curriculum in both countries takes place within the classroom, although clearly this has not always been the case, nor is it a settled matter.

In the context of these examples, we also note the ascendance of a culture of inspection and accountability in both English and Canadian schools, which has tended to reinforce this classroom-based orientation towards the curriculum. In turn, this cultural shift in education systems has positioned many schools as docile, compliance-oriented, and technicist in the face of increased centralization and curriculum control. In such circumstances, curriculum priorities in the work of schools have typically become aligned to those elements of a predominantly classroom-based national curriculum that are monitored and judged by government inspectors. For example, in England, there is the Office for Standards in Education, a non-ministerial government department established under the Education (Schools) Act 1992 to take responsibility for the inspection of all schools in England. Currently, in both countries, outdoor learning is not inspected or monitored by such bodies, nor does it fit easily with their frameworks for assessment of learning and teaching. As a consequence, outdoor learning is, in effect, manoeuvred away from being *regarded* as essential to national or common curriculum teaching and learning activities, and thus, is not *validated*, albeit problematically, by the practices associated with accountability/inspection. This means that the projects are, and remain, tangential to many of the targets and drivers of having to “deliver” a curriculum within a school, its building/s, and environs. For green school grounds initiatives to fulfil their potential in terms of pedagogical transformation, a key challenge is whether or not their role in delivering the formal curriculum should become more mainstream than is often the case, which as a consequence, invites the question of whether it should be(come) subject to inspection?

#### *Planning, Support and Coordination: Participating in the Long Haul*

A second tension is that the projects, in general, attempt to redress “gaps” in children’s understandings and experience over the short, rather than the longer, term. For example, in considering the financing and awarding of Innovation Fund projects, funding relied on a competitive bidding process and there were relatively small amounts available nationally (£500k for the 6 projects during 2002-2003), for periods usually no longer than 12-18 months at a time. At the time of writing, the provision of funding for Growing Schools projects, to continue them or fund new ones, is uncertain, as are the amounts available. However recent shifts in responsibilities for delivering the UK government’s Sustainable Development Action Plan at the Department for Education and Skills suggests that Growing Schools might become a flagship programme for

Education for Sustainable Development as well as environmental education. Much is now expected of Growing Schools. In the meantime, schools are encouraged to apply for such schemes, but there are no guarantees of funding being made available, or being sustained. The situation is similar in the Toronto District School Board, with individual schools being required to seek their own funding for initiatives. The large majority of this funding is available for very specific projects, and few funds are available for maintenance over the long term.

This situation is compounded by a number of factors that affect the long term sustainability of these initiatives, a prominent one being the marked decline in the experience of subject- and topic-based outdoor learning in both countries, e.g. through fieldwork in geography, biology, and horticulture (see Nundy, 2001). Other factors include shortcomings in available teacher professional development, the lack of long term partnerships and strategy within the sector, and competing expectations and understandings amongst project staff of how learning takes place in outdoor learning contexts, and how it is supported by teaching, both outdoors and indoors—by teachers and other professionals. These factors all serve to diminish the potentially positive role that greening initiatives can play in generating positive cognitive and affective learning amongst students, which Nundy (1999) argues may be enhanced significantly compared to that achievable within a classroom environment. Thus wider pedagogical transformation is an increasingly fragile prospect in such projects.

### *Positioning School Ground Greening within a Broader Institutional Context*

In the case examples, when green school grounds initiatives are explicitly embedded within national, provincial, and/or school board policies, a strong message is sent that the potential of these initiatives is understood and supported, and that they are a part of a much larger vision of educational reform. As illustrated in the Canadian case, until recently, greening initiatives were carried out at an individual school level, with little or no school board or province endorsement or support:

[M]ost greening projects are developed in a policy vacuum. That means that decisions are often made on an ad hoc basis without a set of transparent standards. Therefore, changes to the school landscape do not necessarily reflect the principles of the school board and may fail to match expectations on all sides. (Evergreen, 2002, p. 10)

Without external support, unfortunately, some greening initiatives in the Canadian context that initially had high degrees of support from students, parents, teachers, and administrators ended up becoming overgrown and unmaintained spaces once the initial enthusiasm wore thin (Dyment, 2004). Many teachers indicated that the curriculum opportunities in green school

grounds are very limited because of the mandated curriculum that emphasized an indoors 3-Rs view of learning. When larger institutions support green school grounds initiatives, a coordinated and comprehensive provision of education that includes greening initiatives can be developed. Green school grounds initiatives no longer stand alone, but rather can become part of a larger integrated approach to education in general.

With a view to formalizing the role of greening projects in light of other initiatives, some school boards in Canada, like the Toronto District School Board, have recently developed policy related to green school grounds. These policies help to clarify key issues related to green school grounds including: the key educational objectives, the environmental criteria for project evaluation, the amount of funding that will be provided, the process for approving greening projects, etc. (Evergreen, 2002). Policies can assist in framing greening within the context of existing (and often higher level) school board policies related to facilities management, environmental education, and grounds maintenance. Policies can also help to contextualize the project within other provincial, federal, or international initiatives (e.g., Canadian Biodiversity Strategy, Agenda 21). However, this is not wholly unproblematical. In arguing for upper level support for greening initiatives, we are also wary of inscriptive and deterministic support that can lead to the “institutionalization” or “technification” of greening, which turns school ground greening into a “tool” / “technique” that is “done” at all schools (see O’Donoghue & Lotz-Sisitka, in press).

### *Repositioning Outdoor Learning within Citizenship and Sustainability Education*

We conclude this section by raising a more radical option which again creates tensions within curriculum provision. This option is for green school grounds projects to forge closer links to the socio-political and environmental learning agendas of citizenship and sustainability education. Doing so reinvigorates the debate about what outdoors-based learning can contribute, in a broad sense, to children’s education (see Sterling, 2004, for a wider discussion of this rationale), while in this case, the potential of green school grounds projects to provide sites for this kind of sustainable education is also discussed in Capra’s (1997) ongoing work, advocating the development of ecological literacy through children’s work and studies in school grounds:

As we move towards the twenty-first century, the great challenge of our time is to create ecologically sustainable communities, communities in which we can satisfy our needs and aspirations without diminishing the chances of future generations. [sic] For this task, we can learn valuable lessons from the study of ecosystems .... To understand these lessons, we need to learn the basic principles of ecology. We need to become ecologically literate, and the best place to acquire ecological literacy is the school garden. (p. 55)

In contrast, many aspects of the historical and contemporary projects featured in this article do fit within the status quo of both the national/provincial curriculum. As established earlier, Growing Schools as a whole is orientated towards restoring what some argue or feel has been lost within schooling's purposes and provision regarding nature, farming, and growing. Yet, we would argue that these projects in England and Canada are *not* unequivocally "breaking new ground" in terms of their contributions to social transformation, for reasons we illustrate in our concluding comments.

## Conclusion

In drawing our reflections and discussion to a close, we recall that Malone and Tranter (2003) highlight the importance of the field of vision of an educational agency as a key to their valuing of school grounds as formal and informal sites for learning. If it is a narrow vision, then amongst other things, staffing, curriculum content, timetabling, and historical- and policy-oriented cultural norms within the school can each contribute to reinforcing the marginalization of school grounds as potential sites for social transformation. In these examples from Canada and England, the breadth by which the pedagogic, structural, and professional are defined have proved to be important components in framing what can and cannot be envisioned and hence, enabled, in terms of social transformation through green school grounds.

We do not intend to paint a negative picture of the initiatives profiled in this paper. With respect to the Canadian projects profiled, we have tried to highlight the emerging socially transformative potential vis-à-vis the emerging support from the Toronto District School Board. And, in relation to the Growing Schools projects, we remind readers of the following comments from the evaluation report (Scott, Reid, & Jones, 2003) of the wider value of this work:

The evaluation team welcomes the achievements of the Projects in what is emerging once again as a significant area of the curriculum. It is clear that food, farming and growing, the countryside, and the environment are important issues for schools to include in their work with young people. . . ., when the government's commitment to sustainable development, and schools' roles in setting out to address this, are taken into account, these issues take on a far greater significance. (p. 4)

We also record that in the examples profiled here, at the individual and school level, we found many instances of social transformation occurring within and among the students, teachers, parents, administrators, and community members. Yet our reflections suggest to us that the potential for broader scale transformation to occur remains largely unrealized when there is a lack of institutional and structural frameworks and vision to support and nest these initiatives. Of course, one could argue that these projects might well represent

small steps down a longer road. However, it is not just questions about the “journey” but also questions about “destination” that we are raising in this paper. Our experiences evaluating the projects in Canada and England lead us to reflect that in order to achieve social transformation via green school grounds and other environmental education initiatives, those involved in projects must attend to how they are situated explicitly within multiple levels of the educational system, including the micro-level of daily practice, the meso-level of institutional and systematic assumptions and structures, as well as the macro-level of social and political forces that shape our education systems (see Chapman, 2004). Clearly they must not stand alone, unconnected at the individual project level if broader social transformation is expected. (For an example of green school grounds initiatives being embedded within larger institutional structures, see New South Wales Government, 2002.)

Thus we would argue that for green school grounds projects to become truly transformative, like yeast working through dough, systemic and wholesale change is a necessity, rather than piecemeal or fragmentary approaches, with an ecological view of education and its purposes rather than a utilitarian, transmissive vision (see Sterling, 2001, 2004). Yet clearly, the relationship between what is possible and what actually happens in terms of social transformation is complex in any initiative, and has only been briefly explored in our identification, selection, and discussion of examples. However, the broader lessons we would seek to draw from them go beyond merely accommodating such initiatives within existing structures and policy, but indicate the need to explore the following broader issues in this context:

- learning and the nature of evidence of achievements, participation, and barriers to participation in green school grounds projects;
- how concepts and curriculum mapping in green school grounds projects relate to each other; and how green school grounds curricula might also include themes associated with social transformation, like affirmation, commitment, participation, empowerment, conscientization, and democratisation through (sustainable) educational activities;
- conceptualization of the outdoor classroom and school ground as sites of ecological, pedagogical, and social transformation, in terms of pedagogical and learning theory;
- the nature, differentiation, and contextualization of barriers, and how they are overcome;
- what research, expertise, wisdom, and experience, and in particular, that of participants, have to tell us about designing learning and professional development initiatives related to school ground projects; and
- the socially transformative role green school grounds and other environmental education initiatives might assume in countries with differing social, political, and cultural compositions.

Addressing some of these issues helps concentrate attention and action on the role green school grounds might play in ecological, pedagogical, and social transformation. In this paper, we have raised some alternative possibilities as “destinations” for school grounds projects, arguing that they can bring forth a holistic and integrative, democratic and creative vision of education, making connections and grasping the wholeness of our living and learning environments. And it is such a shift towards an ecological view of educational theory, practice, and policy that is required, according to Sterling (2001), to bring about sustainability and sustainable education.

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