



Education for Sustainable Development in Teacher Education: Issues in the Case of York University in Canada

Jinyu Liu

English Department, Foreign Language College, Inner Mongolia University

No.235, Daxue West Street, Hohhot 010021, Inner Mongolia, China

E-mail: liujinyu2008@gmail.com

This paper is part of the program "Enlightenment and Reference: A Comparative Study of the Multi-culturalism and Nationalism Between Canada and Inner Mongolia of China" TB8332 40, 27. 12. 2006

Abstract

Educating for a more sustainable future in its broadest sense includes improving quality basic education, reorienting education to address sustainability, improving public awareness, and providing training to many sectors of society. This article mainly considers one aspect of education---teacher education (TE) --- especially the role of institutions of teacher education in reorienting teacher education to address sustainability. The key role of teacher education for the initiative is recognized in the implementation strategy, and a notable education programme to support ESD, but the challenges for teacher education in responding to calls for prioritising and implementing ESD are considerable. The present paper draws upon recent research to examine these issues in the case of York University, with a particular focus on national, provincial and community involvement in a policy context, change within institutions of higher education, funding and resources, research and partnerships and information technology opportunities advocating various approaches to TE.

Keywords: ESD, Teacher education, York University

1. Introduction

The idea of Education for Sustainable Development (ESD) is becoming increasingly important at all levels of the educational system including higher education. The UN International Environmental Education Programme (1975–1995) first introduced the notion of sustainability in higher education, and the UN is now encouraging all countries to address ESD by making 2005 to 2014 the Decade for ESD, with an accompanying declaration that ‘there has been a common consensus that education is a driving force for the change needed’ and named the UNESCO as the lead agency to promote the Decade. Member States are invited to implement the Decade in their national educational plan. Agenda 21 states that efforts on multiple fronts are needed to create a more sustainable world. Education, as described in Chapter 36 “Promoting Education, Public Awareness and Training,” is one of the fronts with high potential for advancing sustainable development efforts; however, education alone will not move citizens and governments to create a more sustainable future. Many people and organizations must share the responsibility for more sustainable societies through good government, enlightened policy, civic participation, and commitment. The key role of teacher training for this initiative is recognised in the implementation strategy, and a notable event in the period leading up to the Decade has been the publication of a teacher education programme to support education for sustainable development (ESD). Agenda 21 describes the role of education in fostering more sustainable societies.

“Special attention should also be paid to the training of teachers, youth leaders and other educators. Education should also be seen as a means of empowering youth and vulnerable and marginalized groups, including those in rural areas, through intergenerational partnerships and peer education. Even in countries with strong education systems, there is a need to reorient education, awareness and training so as to promote widespread public understanding, critical analysis and support for sustainable development.” (p 74)

A strong advocate for ESD in the curriculum, Moore (2005b, p. 326) asserts that: ‘given what academics know about the current ecological condition of the planet, there is an obligation for universities to become leaders in the movement to prevent global ecological collapse’.

To begin the process of reorienting teacher education to address sustainability, faculties of education around the world must draw their own thematic guidelines based on descriptions and ideals of sustainability. Although many idealistic and wholesome descriptions of the conceptual underpinning of sustainability and sustainability education exist, faculties of education must decide which themes to emphasize within their curriculums, programs, practices, and policies to ensure that teacher-education programs fit the environmental, social, and economic conditions and goals of their communities, regions, and nations. As we shall see below, the challenges for schools and teacher education in responding to calls for prioritising and implementing ESD are considerable. For this reason, it is important to undertake research that considers the extent college teachers feel teacher education for sustainable development is a worthwhile and appropriate addition to the higher education curriculum. Some previous studies have identified teachers' beliefs and attitudes as barriers to the implementation of sustainability initiatives in higher education (Lozano, 2006). Specific examples of barriers include: the discipline-focused nature of many academics' work (Moore, 2005a), the perceived irrelevance of ESD to some disciplines, and lack of time in the curriculum (Dawe et al., 2005). However, although these barriers have direct relevance for ESD, the majority are fairly generic to change initiatives within higher education and few studies have investigated in detail college teachers' specific beliefs about and attitudes towards teacher education in sustainability in higher education. A notable exception is Reid and Petocz (2006), who examined academics' understandings of sustainability across a variety of disciplines. They concluded that efforts to engage academics in ESD were hampered by the lack of a shared understanding and language for discussing sustainability issues, and a lack of enthusiasm for incorporating them into the curriculum in some cases: 'sustainability is often seen as a bit of a nuisance, and possibly as a sop towards political correctness that interrupts the real work' (p. 120). Our research sought to investigate this issue in the context of an institution which is attempting to incorporate teacher education into social, economic and environmental sustainable development.

2. The current study

The research presented here was undertaken at York University, Canada, a university of some 40,000 students and 1125 faculty members and 800 affiliated teachers, distributed across two campuses. York is consistently ranked as one of the top three in Canada and has a particularly strong reputation for teaching and learning, having gained funding of more than \$23 million each year for teaching and research, more than \$6 million for scholarship. During the 1990s, UNESCO identifies teacher-education institutions and teacher educators as key change agents in reorienting education to address sustainability. Subsequently, in 1998 the United Nations (UN) Commission on Sustainable Development (CSD) work program on Education for Sustainable Development called for UNESCO to develop guidelines for reorienting teacher education to address sustainability. In order to accomplish this task, UNESCO and York University, agreed to establish a UNITWIN/UNESCO Chair in 1999 to provide advice to UNESCO and institutions of teacher education. The task of developing guidelines for the reorientation of teacher education was passed to the UNITWIN/UNESCO Chair at York. As a result, one of the long-term goals of the UNITWIN/UNESCO Chair is to develop guidelines and recommendations for reorienting teacher education and associated realms of pedagogy, curriculum, and other related issues. To accomplish this, the Chair established an international network of more than 30 teacher-education institutions in as many countries. Educators at these institutions work collaboratively to identify various ways of achieving this goal.

3. Methodology and Research Questions

The methodology used is based on case study. This is the best option for democratizing the project and giving the detailed value to the University. Apart from simple counting, the principle task was to analyze qualitative, written and oral responses on the questions submitted to some teachers.

The concerns for national, provincial and community involvement in a policy context, change within institutions of higher education, funding and resources, the quality of university teachers' performance, research and partnerships and information technology opportunities advocating various approaches to TE have been central in our previous work, although we have not previously interpreted them in terms of TE. The research questions which form the basis for the present paper illustrate these foci and are as follows:

- (1) To what extent does ministerial and national level involvement, community and regional/provincial involvement enhance approaches to ESD and hence provide a fruitful context for TE?
- (2) How to change the current situations in Higher institutions?
- (3) How are the problems of funding and resources designated ?
- (4) How to work on the cooperative research work among institutions?
- (5) What does the role of York University play in forming partnership in this area?

To create this work I have made surveys at York University. The institutions and teacher educators there, who have gained significant experience over a range of reorientation undertakings, summarized their attempts to reorient their own teacher-education programs and made recommendations based on their own experiences for reorienting teacher

education to address sustainability. A limitation of the work reported is its focus on only one Canadian university. However, this university is central to TE development in ESD in Canada, and, as we shall see later, a restricted concern for the most relevant subjects may well represent the most fruitful way forward for TE development.

4. Findings

Some of the more prevalent challenges for reorienting teacher education to address sustainability fell into the following categories. Official national and provincial curriculum rarely mandate sustainability. Teacher certification guidelines do not mention sustainability. There are lack of or inadequately trained professionals who are knowledgeable about ESD, lack of or inadequate funding and material resources, lack of or inadequate national, provincial, and local policy to support ESD. Inadequate institutional climate supports the creativity, innovation, and risk-taking necessary to support transformative efforts to reorient education to address sustainability. Rewards for institutions or faculty members who undertake ESD programs are quite inadequate. Prioritizing Sustainability in the Educational Community. ESD is not part of ongoing educational reform. Prevalence of traditional disciplinary curriculum frameworks makes incorporating sustainability, which is transdisciplinary, arduous. ESD programs are often developed without local community participation or involvement of other stakeholders leaving the program without local context or relevance. Coordination of efforts between ministries of environment, education, health, agriculture, etc. is inadequate.

5. Discussion

In this final section I would like to examine some of the implications of the above findings. The main problems faced when teachers are to implement any work on education and learning of sustainability in the institutions were lack of awareness and understanding of the concept of sustainable development among our faculty members. There are too many disparate initiatives, too little time for thinking about new ideas, and too little encouragement to think “outside the box” or make links between initiatives, particularly where cultural norms or existing mission statements don’t mention sustainability.

5.1 Ministerial, national, community and regional/provincial involvement

Ministries of education have to make ESD a mandatory part of elementary and secondary education at national and provincial levels. Work with ministries of education to revise teacher education and certification requirements to include ESD and to align these revisions to correspond to the ESD components of elementary and secondary education. The ministries of education should create policy to support ESD and professional development programs related to ESD for teacher educators. Engage teacher unions and national certification boards in the conceptual development and implementation of ESD; develop a strong national coordination team for ESD that includes professional organizations and issue-related educational organizations (e.g., consumer education, environmental education, and equity education) to integrate their work with institutional ESD initiatives through cooperation, collaboration, and sharing of ideas.

5.2 Recommendations on change within institutions of higher education

This section on change within an institution of higher education (IHE) has four subsections of recommendations. All four deal with change within an IHE at a particular level: entire institution, faculty (i.e., departmental), engaging students, and individual faculty member.

Reorienting teacher education to address sustainability will affect faculties and administrative units beyond the faculty of education. As we know from studies in ecology and sociology, a change in one part of a system will result in changes in other parts of the system. This general principle is also apparent on higher education campuses. Support from the highest institutional levels enhances the success of reorienting teacher education to address sustainability. For example, upper administration can facilitate success by structuring faculty reward systems for promotion and tenure to include teaching, research, and service related to ESD. Upper administration can also strive to manage the campus using sustainable practices, thereby reflecting the value the institution places on sustainable development. Modeling and promoting sustainability in practices and policies related to social equity and environmental stewardship will reinforce sustainability themes taught in academic and professional education programs.

5.3 Recommendations on funding and other resources

Unfortunately, in the majority of countries, few resources have been devoted to ESD. As a result, progress has come out of volunteer efforts of dedicated individuals and the in-kind resources of institutions. On this pilot project level, it was important to show that reorienting teacher education to address sustainability was not expensive and could be accomplished by cost effective means. Now that the pilot project is completed, however, it is time for governments and institutions to dedicate funds to reorient education to address sustainability. Dedicated funds, personnel, and resources ensure that these pilot programs will be institutionalized and replicated and other projects begun on much broader scales. It is folly to think that funding and staffing allocation are not essential to creating and maintaining any education program.

5.4 Recommendations on research

For ESD to be a long-term success, advocates of ESD must develop a research agenda to support the effort. This agenda would include an accountability and assessment system to measure the impact on student learning. Proponents of ESD must have data to prove their claims of effectiveness of ESD. Asserting that ESD is important or effective will not be sufficient to sway audiences in ministries and academic institutions. Interdisciplinary research and collaboration is necessary both to build those arguments and to inform new ESD policy and programs. As with any emerging field of research it is important that academic institutions accept ESD research as a legitimate avenue of inquiry and reward members of faculty who work in this field. Researchers need to be assured that their innovative and interdisciplinary work in ESD is valued in the faculty reward system (e.g., for purposes of tenure review and promotion).

5.5 Recommendations on partnerships and information technology opportunities

The work of reorienting teacher education to address ESD is so immense that fostering broad cooperation and engaging outside assistance is essential to long-term and widespread success. One Network member wrote, "This [era of cooperation] is different from years of competition between institutions and the constant replication of resources, courses, and programs all trying to prove [which institution is] the best. Now we are working as a national team to make sure we are all the best we can be." Partnering, however, can prove difficult in faculties; therefore, guidelines for acceptable partnerships, if not already in place, must be developed. Partnerships between teacher-education institutions and elementary and secondary schools, and such educational organizations as museums, outdoor education sites, and nature centers should be strengthened, as well as local, regional, and international networks by sharing ideas, experiences, and materials and maintaining the vision of a sustainable world. Both the government and institutions should develop guidelines for using information technology related to ESD and for incorporating ESD into online and distance learning courses. Professional development opportunities should be provided for teacher educators to use information and communication technologies (ICT) to provide professional development about ESD to in-service teachers who work in locations distant from campus.

6. Final point

While many nations around the world have embraced the need for education to build capacity to achieve sustainability, only limited progress has been made on any level. This lack of progress stems from many sources. In some cases, a lack of vision or awareness of the role education could play in achieving sustainability has impeded progress. In others, it is a lack of policy or resources such as funding. The UNITWIN/UNESCO Chair and members of the International Network have identified a number of issues that limit progress in ESD.

References

- Dawe, G., Jucker, R. & Martin, S. (2005). *Sustainable development in higher education: current practice and future developments. A report for the Higher Education Academy*. [Online] Available: www.heacademy.ac.uk/misc/sustdevinHEfinalreport.pdf (15 February, 2007).
- Lozano, R. (2006). Incorporation and institutionalization of SD into universities: breaking through barriers to change. *Journal of Cleaner Production*, 14, 787–796.
- Moore, J. (2005a). Barriers and pathways to creating sustainability education programs: policy, rhetoric and reality. *Environmental Education Research*, 11(5), 537–555.
- Moore, J. (2005b). Seven recommendations for creating sustainability education at the university level: A guide for change agent. *International Journal of Sustainability in Higher Education*, 6(4), 326–339.
- Reid, A. & Petocz, P. (2006). University lecturers' understanding of sustainability. *Higher Education*, 51, 105–123.