



NATIONAL ROUND TABLE ON THE ENVIRONMENT AND THE ECONOMY
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Greening Business Curricula: Integrating Sustainability into the Core

**The Personal Perspective of
One Business Faculty Champion**

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Preface

Throughout 1996 and 1997, members of the National Round Table on the Environment and the Economy (NRTEE) Education Committee met with deans and faculty of selected Canadian business schools to discuss the notion of bridging sustainable development and business education. One resulting conclusion was that most Canadian business schools are not systematically mainstreaming sustainability principles into their core curricula.

As a follow-up to these activities, the NRTEE is hosting a workshop to convene a group of frontline business educators, students and professionals together to address this subject. The workshop, titled *Greening Business Curricula: Integrating Sustainability into the Core*, will explore the barriers which need to be overcome to ensure that future Canadian managers and business leaders are made aware of the need to integrate environmental and economic decision-making. The workshop will build on the experience and ideas of its participants. After taking stock of what is currently happening and defining what we mean by "integrating sustainability into the core", an effort will be made to focus on the important next steps.

The following paper was prepared for this workshop to form part of the basis for discussion, and to stimulate a lively and productive debate. This paper should be viewed as a point of departure, from which the meeting can begin.

Summary

This background paper reviews some of the events contributing to the rise over the past decade of environmental and sustainable development issues as something of relevance to business schools. It then discusses, from a limited personal perspective, the general response to environmental and sustainable development issues in Canadian business schools and reviews in more detail the experiences of a few Canadian business schools who have attempted to take a leadership position in this area. The paper goes on to look at the roles of business students and their demand for environmental content, non-governmental organizations and quasi-governmental organizations, businesses, and business school 'champions'. The piece avoids making recommendations but attempts to raise questions about some of the barriers to better integration of sustainable development into business education and how they might be overcome.

What Might Integrating Sustainability into the Core Mean?

Integrating sustainability into the core might mean one of several things. What it might mean depends on what we understand 'sustainability' to be and it also depends on our interpretation of the words 'integrating' and 'core'.

Most definitions of sustainability and sustainable development derive from the one given by the World Commission on Environment and Development, the Brundtland Commission, which defined sustainable development as "a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are made consistent with future as well as present needs" (World Commission on Environment and Development, 1987, p.9). More commonly cited as development that "meets the needs of the present without compromising the ability of future generations to meet their own needs".

'Integrating sustainability into the core' might, thus, mean teaching about sustainability in business schools with the objective of graduating business graduates who have internalized the concepts and values of sustainability and who will go into the business world with personal agendas to act as change agents within organizations in every job that they might hold. This somewhat idealistic view sees today's business students as tomorrow's business leaders and ascribes a high importance to training a 'new breed' of leaders. A breed of leaders who will lead from a different paradigm than the majority of business leaders today. If this is what we mean by 'integrating sustainability into the core' than we have a long way to go. In order to attempt to achieve this we probably need, at a minimum, one required dedicated specialized course and probably more in every business degree. Realistically, this would probably require a complete change in how business is taught across management disciplines.

Alternatively, 'integrating sustainability into the core' might mean that we try to adapt what we can from the sustainability literature and fit it into the core business concepts already taught in business schools. See 'Proactive Corporate Environmental Strategy and the Development of Competitively Valuable Organizational Capabilities' published in the current issue of the *Strategic Management Journal* for an attempt to position sustainability into the mainstream paradigm of competitive strategy (Sharma and Vredenburg, 1998). This type of material can be taught as part of the core business curriculum dealing with competitive strategy.

This second approach to integrating sustainability into the core may not move us all the way towards educating a 'new breed' of managers and business leaders who operate from a new paradigm of sustainability. Here, environment and sustainability concerns are seen as new ways of developing competitive advantage in the traditional business paradigm. This option is, however, a palatable way of integrating sustainability into the core. Particularly with mid-career MBA students, tying sustainability principles into the competitive advantage concept is the best way to integrate into the core MBA curriculum. There is a belief among business school professors currently teaching sustainability in this way that introducing this concept within the competitive strategy paradigm does lead students to ask the bigger questions of sustainability. It might actually open minds for broader exploration of sustainability at a future time when they are dealing with such issues in their jobs.

Thirdly, 'integrating sustainability into the core' might mean that the topic of sustainability is 'touched on' in all core business school courses so that students are at least exposed to the idea and sensitized to it. Under this interpretation, we would be concerned with having at least one class in a semester in core courses dealing with environment or sustainability issues. This class, or module of several classes, would probably be placed towards the latter part of courses in such disciplines as strategic management, marketing, accounting, and operations management. There is a tradition in business schools to teach material considered somewhat peripheral to the core course material in this way. When there was a call for ethics to be taught in business schools, it was largely taught in this way. Many schools, following the greater globalization of business, now teach international aspects of management in a more integrated fashion. However, for years many management courses merely had an international module towards the end of the course.

'Integrating sustainability into the core', then, refers to utilizing the concepts of sustainable development originated by the Brundtland Commission to teach business from a new perspective. The degree to which this is done in any business program depends. Integrating into the core might mean transforming the entire business curriculum to train graduates to be the agents of change in business organizations. We might also suggest it means incorporating pieces of the broad idea of sustainability into the dominant paradigms in the business school curriculum such as in competitive strategy. Finally, we might simply mean that all business students should get at least some exposure to the concept of sustainability in their core courses. Depending on our conception of what we mean by 'integrating sustainability into the core', Canadian business schools can currently be judged as more or less successful.

The Growing Relevance of Sustainability Principles

Evolution of the Concept of the Global Environmental Problem

Although there have been periodic waves of interest in conservation and wilderness over the past one hundred years, modern day environmentalism appears to have been born in the 1960's and early 1970's. In this era we saw a great interest in pollution of various sorts, protests against industrial polluters, and the foundation in Canada of such activist groups as Pollution Probe and Greenpeace. By the late 1970's much of this activity had left the front pages of the newspapers as market capitalism reached its modern day ascendancy in the 1980's.

In 1987 environmental issues reappeared on the international scene under a new guise. In that year the World Commission on Environment and Development, commonly known as the Brundtland Commission, published its report *Our Common Future* (World Commission on Environment and Development, 1987). This report made many assertions and many recommendations, but the single most important contribution of this report arguably was the coining of and popularization of the term **sustainable development**.

Sustainable development, as alluded to above, is a term which is hard to define in concrete practical terms. It can be (and has been) interpreted in various ways depending on one's interests. But the term clearly redefines the dynamic and the discourse around the environment. The Brundtland Commission defined a role for business (as well as a role for government) in the solution of environmental problems. Business and economic success were defined as equally important and compatible with environmental protection. Business, so the argument went, ought to be responsible for its own environmental effects, with the help of government and environmental activists.

In the late 1980's and early 1990's this new form of environmentalism resulted in the various round tables on the environment and the economy, the World Business Council for Sustainable Development and the foundation of various non-governmental and quasi-governmental organizations dealing with business and the environment. It also contributed to the development, in numerous companies, of environmental strategies and in their appointing senior executives responsible for environmental affairs.

The Brundtland Commission of 1987 helped redefine the relationship between business and the environment from one in which business was simply the problem to one in which business was seen as a necessary part of the solution. This idea has helped energize individuals in businesses, governments and business schools to refocus on the environment in a way which recognized the key role of business in helping societies move towards greater sustainability.

The New Reality for Canadian Business

Certain industries, such as those based on natural resources, those with significant projects or operations in the developing or 'third' world and those having operations in or adjacent to local communities on which they may be perceived as having an impact, might be described as being particularly exposed to potentially volatile environmental developments. Firms which are well-known to the public, and depend to some degree on a favourable corporate reputation with various stakeholders, such as consumers/voters or government agencies, are also vulnerable to environmental developments.

Many of Canada's most important companies fit into these 'environmentally exposed' categories. A number of firms have responded to this decade-long evolution of the role of corporate environmental management by appointing senior board-level managers with exclusive responsibility for corporate environmental management.

The questions facing these corporate decision-makers are arguably more complex and more interdisciplinary in nature than many other business decisions. These questions involve scientific and social complexities, global interactions, and economic and political strategies. Responses to corporate environmental management strategic questions must incorporate a thorough understanding of business strategy, environmental science and public policy.

In a recent conversation, one resource-based company senior vice president described the environmental arena as being the most highly volatile area in his company. Government regulations change rapidly and must be responded to, while financial institutions and boards alike are demanding more information on management of environmental issues. Global climate change is an area in which anything might happen and managers must be prepared to deal with it. This same executive described the new type of senior manager required as one part Chartered Accountant, one part Professional Engineer and one part Environmental Scientist.

A middle manager at another resource-based company told me candidly that "engineers are a dime a dozen ... it's people who can handle environmental assessments and multiparty community-based consensus processes that are at a premium. It's the most critical thing in the business now."

To many in Canadian business, especially in industries which might be considered to be 'environmentally exposed', sustainability and the environment and its relationship to business is more than an idle philosophical issue. Every day these firms are responding daily to the new expectations of various stakeholders with respect to environment and sustainability.

The Call to Business and to Business Schools

Early attempts to help popularize the 'green' trend with books bearing titles such as *Green is Gold* (Carson and Moulden, 1991), were followed by academic business research on environment and sustainable development. This academic flurry reached some of its momentum with the foundation of the Academy of Management's Organization and the Natural Environment (ONE) group, the foundation of the Greening of Industry Network (GIN) and the publication of a special issue of the *Academy of Management Review* (1995), all in the early to mid-1990's.

The environment and its relation to business received an added dose of legitimacy for corporations and for business schools in 1995 when the Harvard Business School's Michael Porter and co-author Claas van der Linde published an article entitled 'Green and Competitive' in the *Harvard Business Review*. Stuart Hart's 1997 follow-up article in the *Harvard Business Review* entitled 'Beyond Greening: Strategies for a Sustainable World' took a broader global view of sustainability and, probably more importantly, ensured that the *Harvard Business Review's* interest in sustainability was not a 'flash in the pan'. Long-time champions of sustainability in firms and business schools alike could cite the

Harvard Business Review articles as incontrovertible evidence that sustainability was a legitimate topic to be focusing attention on.

The Brundtland Commission report paved the way for a new conceptualization of business and the environment. The idea of businesses being key players in moving society towards sustainability was eventually echoed in the academic world through the foundation of management academic associations and the publication of management and environment articles in two key leading academic management journals. These events signified that sustainable development was a legitimate area for business school attention.

The Canadian Business School Response

A 1996 Report commissioned by the NRTEE to scope the state of sustainability education in Canadian business schools (Dougan, 1996), suggests that there is a smattering of sustainable development courses at Canadian business schools. An informal survey of colleagues working in this area suggests that these courses are still relatively limited in number and are generally lightly subscribed.

More common, it seems, and this appears to be borne out by the teaching case materials available through the Management Institute for Environment and Business (MEB) in Washington D.C., is a scenario of sustainability and environmental issues being taught in 'capstone' policy and strategic management courses as part of the 'environment of business' module. It also seems that the topic is taught in disciplinary courses in accounting, marketing, and operations management periodically by professors personally interested in the topic.

In many business schools, it seems, sustainability and the environment are given little serious attention. In a few business schools, notably the Schulich School of Business at York University and the Faculty of Management at the University of Calgary, MBA concentrations in business and the environment (York) and environmental management and sustainable development (Calgary) and joint degrees with the environmental studies faculties are available. In both these schools these programs are lightly subscribed. To my knowledge, the University of Calgary's management school appears to be alone in having a sizeable and vibrant PhD program in Management with a concentration in environmental management and sustainable development.

Canadian business schools generally appear to be responding to the demand for sustainability education in the way academic institutions typically innovate, namely through the efforts of individual professors who have an interest in and have championed course changes and new courses.

The York University Experience

York University had the unusual good fortune of having an individual wealthy businessman named Erivan K. Haub make a substantial donation specifically to establish a program in business and the environment to be led by a professor who would hold the Haub Chair in Business and the Environment. Haub, a German philanthropist who is a permanent resident of Canada, and who's holdings among others include the A & P grocery store chain in North America, personally believed that it was important to educate managers in conducting business with a view to valuing and preserving natural resources.

What was developed at the Schulich School of Business at York University was a Program which included MBA courses on business and the environment, an MBA concentration in business and the environment, executive education, research and public policy formation and public awareness enhancement. The Program was launched in 1991 with Nigel Roome as the first holder of the Haub Chair in Business and the Environment.

The Program's Advisory Board was chaired by Maurice Strong, organizer of the 1992 Rio Conference and an internationally high profile proponent of sustainable development. The Advisory Board also includes the executive director of the Earth Council in Costa Rica, the executive director of the World Bank, the CEO of Noranda, the CEO of Nestle, the Senior Vice President of Northern Telecom, the former CEO of Ontario Hydro, a senior director of Bata Corporation, a senior executive of the United Nations Environment Program, a senior executive of the United Nations Development Program, and the secretary general of the International Chamber of Commerce, among others. The presence of these individuals on the Program's Advisory Board in itself makes a statement about the relevance of sustainability to business today.

The University of Calgary Experience

At the University of Calgary the establishment of the environmental initiative in the Faculty of Management was an 'emergent' strategic phenomenon consistent with the Mintzberg school of strategy theory (Mintzberg, 1978; 1979; Mintzberg and Waters, 1982; Mintzberg and McHugh, 1985; Burgelman, 1991). When I arrived at the University of Calgary from McGill in 1989 into a tenured position, I was intent on doing something more personally meaningful in terms of research than I had been doing since my PhD. Having been somewhat of an environmentalist in the late 60's and early 70's made the rebirth of environmental issues as sustainable development of particular interest to me in this regard.

At Calgary I wrote a proposal to obtain a small 'seed' grant from the Faculty of Management in order to study 'green' marketing strategy and environmental group collaboration. The results of this study, conducted with Frances Westley of McGill University, were presented at the Strategic Management Society annual meeting in Stockholm in 1990. The resulting paper, entitled "Strategic Bridging: The Alliances Between Business and Environmentalists" (Westley and Vredenburg, 1991) appeared in a March 1991 special issue on collaborative alliances in the *Journal of Applied Behavioural Science*. This work set the stage for both the research and the environmental organizational innovation in the University of Calgary Faculty of Management which followed.

In an effort to develop the program, two grant proposals related to management and the environment were written and research funds were applied for and received from the Social Science and Humanities Research Council of Canada (SSHRC). The subsequent research activity undertaken on these projects stimulated the interest of and began to attract both PhD and research master's degree students.

In 1992 I called the first cross-disciplinary meeting of management school colleagues at the University of Calgary to attract colleagues interested in the subject of management and the environment. Initially there was a group of half a dozen professors representing most management disciplines from accounting to business policy to business law, as well as from the Faculty's industry groupings such as tourism management and insurance and risk management. Most of the members of this informal group were younger faculty who held personal pro-environmental values and who were interested in aligning their academic career activities as management professors with their personal values. Over the subsequent years, the group grew to about ten members. The focus of the group was on discussing and supporting fellow members in their efforts to introduce environmental components into disciplinary courses.

Concurrently, I continued to discuss new ideas with colleagues such as McGill University's Frances Westley, Stu Hart at the University of Michigan and Nigel Roome formerly of York University. All of these collegial activities resulted in environmental/sustainable development topics being introduced to most management courses at the University of Calgary.

Three new environmental MBA courses were designed and offered on a trial basis, by professors personally interested in doing the appropriate development and lobbying to offer the courses—Strategies for Sustainable Development, Environmental Accounting, and Environmental Regulation of Business. These courses were taught on

an overload basis in addition to the professors' core teaching. More recently some of them have been taught as regular course load. Enrollment is a constant challenge, although the last few years student numbers have been augmented by environmental science students and resources and the environment students.

In 1994 it was decided by the group to propose a new MBA concentration in environmental management and sustainable development, a 'cause' which I championed, writing the detailed proposal and presenting and discussing it through a series of committees in order to have it approved. The MBA concentration required the three courses already approved and being offered, plus two more courses from outside the Faculty of Management. This concentration structure was selected not only because it seemed to make some sense, but more importantly, because it represented the route of least bureaucratic resistance.

The MBA concentration's approval automatically meant a PhD concentration was approved. This was fortuitous since it further facilitated the growth of the new PhD program in environmental management and sustainable development.

In the fall of 1994 I also started a monthly speaker series known as the Environmental Management and Sustainable Development Seminar Series. The purpose of this activity was to increase the amount and quality of dialogue on environmental management and sustainable development occurring within the management school, between the management school and other relevant academic units on campus and between the management school and the private and public sectors. In addition, the well-publicised seminars were expected to raise the profile of the environmental management and sustainable development programs and research in the Faculty of Management. The monthly seminars have proven to be a great success, consistently drawing between 25 and 60 participants.

On another front, after much ground work and international negotiation, an interdisciplinary MSc in Energy and the Environment for Latin America was also launched in Quito Ecuador, building on course work and research developed in Calgary. The Program is based on a partnership between the University of Calgary and the Organization Latino Americano D'Energia (OLADE) and is funded by the Canadian International Development Agency (CIDA). Mid-career managers are drawn as students for the Program, theoretically from all over Latin America and the Caribbean, although in practice there is a predominance of students from the Andean countries (Venezuela, Colombia, Ecuador, Peru, Bolivia).

The Saint Mary's University Experience

Both Sanjay Sharma and Cathy Driscoll started their academic careers in the 1990's at Saint Mary's University's business school after PhD dissertations focusing on business and the environment (Sharma from the University of Calgary and Driscoll from Queens University).

Sharma has introduced sustainable development and environmental concepts into courses in Marketing Strategy and in International Business. He primarily focuses on the competitive advantage aspects of proactive corporate environmental strategies. Driscoll teaches a course on Business and Society in which she covers sustainable development topics to an elective student group. Peter Secord has also recently introduced an Environmental Accounting course modelled on the one designed by the University of Calgary's Irene Herremans.

Sharma has recently had an elective course on Competitive Strategy and the Environment approved. The catch is that he is only approved to teach the course on an overload basis as the school's core courses must all be covered first and the school is short-staffed. Obtaining enough student enrollment is another possible hurdle. Cathy Driscoll draws at least some of her course enrollment in her Business and Society course from outside the business school. Teaching extra courses on an overload basis is a risky proposition for an untenured faculty member who needs to be concerned about spending time publishing research articles.

Sharma also attempted to form an environmental interest group at Saint Mary's along the lines of the one at the University of Calgary but it failed to take hold. It is possible that initiating such a group as a more junior faculty member is more problematic. It is also possible that at universities which have higher teaching loads than is typical at the more research-oriented universities, there simply is not enough 'slack' to allow faculty to get involved in such initiatives.

The University of Victoria Experience

Monika Winn joined the University of Victoria's business school after completing her PhD at the University of California two years ago with a dissertation focused on business and the environment. Like her colleagues at Saint Mary's University she incorporates a module on business and the environment in her core Strategy course. She has tried pushing her students beyond the environment and competitive advantage perspective to the broader issues of sustainable development. This has been met with some success although students have difficulty going beyond their established business school mind set.

Winn has also designed an elective course on Strategy in an Environmental Age which was recently approved. She sees her main challenge as finding enough students to take the course. Like all Canadian universities, courses at Victoria are offered through a market-driven system. If a new course does not draw enough students, it is cancelled.

Winn believes that business school students may be intrinsically interested in learning about sustainability but business schools have done such a good job over the years of socializing students to only think about immediate job-related skill development, that they simply don't expect to do anything else. Winn tells her students that they are the leaders of tomorrow and it is her job to equip them for that task by pushing their conceptual and value space.

As the new business school at the University of Victoria develops its organizational vision and strategy, Winn has been quietly lobbying and championing the cause of sustainability and the environment. Recently the business school's announced strategy included a focus on environmental leadership. Winn is cautious about how much championing she can do. Like Sanjay Sharma at Saint Mary's, she is focusing her efforts on developing a research reputation, the most critical component of a tenure review case.

Summary

These glimpses into the experience of a few Canadian business schools offer a variety of insights. A considerable amount of space in this paper has been devoted to a description of the University of Calgary initiatives in environmental management and sustainable development because I believe that the Calgary experience might serve as a more practical model for building sustainability initiatives at other Canadian business schools than the York University model. Unless there are a dozen or so philanthropists in Canada willing to underwrite programs in sustainability, these initiatives will have to be built by individual champions working in the various business schools one step at a time. Furthermore, the anecdotal descriptions provide an opportunity to view the effort required to achieve some level of integration of sustainability principles into Canadian business schools. The examples of Saint Mary's University in Halifax and of the University of Victoria further illustrate the efforts and the barriers faced by highly committed professors who are recent PhD graduates.

Stakeholder Roles in the Demand for Environment and Sustainable Development Coverage in Business Schools

The Role of the Student Market

Students who enroll in an MBA or undergraduate business program do not tend to be idealists. They are also not at university predominantly because they are intellectually inquisitive. Thus they are not, as a rule, given to exploring grand ideas or global issues. Their dominant reason for being at university is to increase their ability to land a well-paying middle class corporate job or, if they are given to dreaming at all, they might dream of being a great entrepreneur. They are often highly intelligent and hard working as well as highly motivated. But they do not generally harbour dreams of changing the world.

This presents a particular challenge for business schools wanting to integrate sustainable development and environmental concerns into the curriculum. The students who aspire to get jobs or start businesses or professional practices in the environmental area tend to enroll in environmental studies or environmental law programs. MBA or undergraduate business students, when weighing a sustainable development course against a marketing or a finance course will often see greater immediate job skills value in the latter. Sustainable development and environment may well be important to business, but it is not something that a business student is likely to be dealing with in their first job after graduation and it is not something that is likely to come up in a job interview. On the other hand, claiming to be able to do a sophisticated financial analysis or develop a marketing plan, is immediately sellable to an employer.

By its very nature, sustainable development and environmental management tend to be either a technical matter best handled by a recent environmental science or environmental studies graduate, a legal matter best handled by lawyers, or a strategic matter best handled by a firm's senior management. Increasingly, however, there is a demand for people who can manage or facilitate consensus-based stakeholder processes, although news of this development has been slow to reach business school students. In general, the motivation for MBA or business undergraduates is not to take course work in environmental management and sustainable development.

What this does is put our attempts to introduce sustainability to the core, instead, to the periphery of the business school programs. We have a few cases studies in the 'capstone' Business Policy/Strategic Management courses, probably towards the end after the fundamental concepts have been well covered and learned. Here the topic sits for end of term discussion along with other such perceived peripheral topics such as business ethics. All good stuff, but as far as students are concerned, something they really won't have to deal with for the next twenty years. Besides, it is not something in which you have to learn rigorous skills and concepts.

Sustainability and environmental issues could be put in a similar place in the core disciplinary courses. Thus we might discuss environmental accounting methods towards the end of a Management/Cost Accounting course. Most businesses today do not practice environmental accounting, although it is talked about in professional publications. Students see that it might be useful to know about environmental accounting but not as important as knowing the various accounting methods in use today. Likewise, a Consumer Behaviour course might spend some time questioning North American consumer culture at the end, after spending twelve weeks examining the minutiae of consumer psychology within the 'dominant paradigm'. A Marketing Strategy or International Marketing course might also raise questions about equity in international trading systems in the last week. At best, all these introductions of sustainability into the core courses sensitize students to the fact that there is 'something else'. The core material is presented and then a few questions related to sustainability are covered at the end of the course when all the important material has been covered.

Perhaps this is all we need to do. Perhaps not. What are we attempting to do by introducing sustainability into the core? Are we attempting to sensitize students to the issues in the hope that someday when their job demands it they'll remember and come back to the materials (or the professor) and know where to begin? Or are we trying to educate change agents? Are we trying to graduate people into the business world equipped with a new alternative paradigm of sustainability? Are we expecting these new graduates to be the 'beacons of light' trying to change organizations from within?

It seems to me that adding a few sessions to the core business program may succeed in the former objective of sensitization while the latter objective of educating organizational change agents requires a more intensive course or major/concentration education. And for this we need environmentally motivated and keen students.

This section has highlighted that although there may be willing suppliers of course work on sustainability in Canadian business schools, the student demand for it is lacking. Business schools will not run courses with low enrollments. Business school students are reluctant to spend more than a minimum amount of time in a core disciplinary course on topics that are perceived as non-essential. Professors also have a responsibility to 'cover' all the material in a subject and cannot drop significant parts of a course to make room for sustainability topics. Business school students may need greater incentives to do course work on sustainability. Primary demand for teaching on sustainability may be systemically weak among business students. Perhaps if derived demand from employers of graduates could be increased, students would be more interested.

The Role of Quasi-Governmental and Non-Governmental Organizations

Integrating sustainability into the core depends both on supply and demand of sustainability teaching. Supply has two components, 1) willing and able instructors to teach in this area and 2) available materials for the instructors to teach. Demand for sustainability in the business curriculum core can come from 1) primary demand, that is students being keenly interested in and wanting to learn about this area for personal reasons, or 2) secondary or derived demand, that is students wanting to learn about sustainable business methods and practices and sustainability issues because they must in order to get jobs or some sort of accreditation to help them get jobs.

Various agencies, such as the NRTEE and the International Institute for Sustainable Development (IISD) in Canada and the Management Institute for Environment and Business (MEB), as well business school accreditation bodies such as the American Association of Collegiate Schools of Business (AACSB) in the United States, can potentially stimulate and support each of these components of supply and demand.

These agencies can play an important role in legitimating sustainable development and environmental management issues as business issues worth teaching about and researching in the business school. Part of this legitimating function is one of heightening the importance of this area. This NRTEE workshop on Integrating Sustainability into the Core is a good example. This workshop, for certain faculty members, may be the catalyst needed to allow them to engage in discussion about this topic with colleagues and deans towards introducing new teaching and research.

The NRTEE also serves a function in disseminating information about institutional norms that individuals in business schools can point to when they are establishing initiatives in their business schools. Institutional theory (see Greenwood and Hinings, 1996, for a review of this literature) has shown the importance of 'mimetic conformity' in organizational structures and practices. In establishing environmental initiatives at the University of Calgary, the task was made easier by the fact that 'leading U.S. schools' such as University of Michigan, University of Tennessee, and University of Washington had also embarked on such initiatives.

This is not to say that mimetic conformity is automatic. I well remember an associate dean at the University of Calgary who countered my argument in favour of Calgary becoming a Canadian leader in this area by suggesting we

wait and see if other Canadian schools would pick up on it. And there is plenty of research on new product development and on organizational innovation diffusion (see Marshall and Vredenburg, 1992, for a review of this literature) which suggests that laggard adopters of innovations reap the benefits of smaller investment with the same final outcome. This is the notion of 'leap frogging' and avoiding making the expensive mistakes of the early adopters.

But regardless of whether a particular Canadian business school is an early adopter reaping the first mover benefits of establishing a leadership position or a laggard reaping the benefits of 'leap frogging', the legitimization, profile creating, and networking opportunities provided by organizations such as the NRTEE are invaluable.

Organizations such as the IISD in Winnipeg and MEB in Washington play similar roles as the NRTEE. These organizations have been putting a great deal of effort into developing and disseminating teaching materials in the form of case studies, videos, teaching notes, the second component of stimulating supply outlined above.

IISD has recently established a Web Site for electronic distribution of teaching materials and student projects while MEB has for some years played the more traditional role of a niched business and the environment teaching case clearing house, analogous to the comprehensive business case ones at the Harvard Business School and the Ivey Business School at the University of Western Ontario. The NRTEE is about to publish the Annotated Bibliography it commissioned on environment and sustainability materials relevant to business schools. These organizations have also played a legitimating role and a diffusion role by activities such as organizing conferences and distributing newsletters.

Indirectly these organizations also help with an academic's critical questions of legitimization and evaluation of academic work in a new area. A junior faculty member contemplating embarking on teaching and research on sustainability can look to the networks developed through NRTEE, IISD, MEB as well as academic organizations such as the Organization and the Natural Environment Group in the Academy of Management (ONE) and the Greening of Industry Network (GIN) to find outside (and inside) peer reviewers of academic work. I have both championed, at tenure time, junior colleagues working on environmental problems in other disciplines in my own faculty as well as served as outside reviewer on tenure and promotion cases at Canadian and American universities. The organizations mentioned above served as a network of individuals knowledgeable about environment and sustainability and as a source of legitimacy for environmental and sustainability academic work.

Thus far I have been talking about the role for quasi-governmental and non-governmental agencies in stimulating supply of academic initiatives related to sustainability in Canadian business schools. Less developed, and undoubtedly more difficult, is their potential role in stimulating demand for teaching and academic work related to sustainability in Canadian business schools. As suggested above, business school students are, in general, not personally inclined to seek education on sustainability and environment. They will grudgingly accept a session or two on the topic at the end of a disciplinary or 'capstone' course. But most are unlikely to take an entire course in this area without stronger enticement, as has been learned at the University of Calgary, York University, McGill University, Saint Mary's University and the University of Victoria

There may be a role for quasi-governmental and non-governmental organizations to play in enhancing the enticement to students to take course work on sustainability. This would have to be in the form of other critical organizations demanding course requirements on sustainability and environment. If potential employers required graduates to be 'sustainability literate' for entry level jobs, if the accounting and financial analyst professional accreditation bodies required graduates to have done course work on sustainability and environment, or if the business school accreditation body, the American Association of Collegiate Schools of Business (AACSB) made sustainability and environmental education a prerequisite for accreditation, we would have a greater demand for studying sustainability and environmental management.

Organizations such as NRTEE, IISD, and MEB could play an influencing role in encouraging companies and professional accreditation bodies to require business school graduates to be 'sustainability literate'. Business schools which have in the past responded to outside pressures to increase computerization of the curriculum and internationalization of the curriculum, would undoubtedly respond similarly to pressures to increase sustainability education.

Finally, the NRTEE or IISD might consider getting into the certification or accreditation business themselves. This would be a less attractive option, but might be more feasible in the short term. Business schools might, under such a scheme, receive some sort of seal of approval from the NRTEE or IISD if they met certain standards in their course offerings or coverage with respect to sustainability. Measuring and reporting individual and organizational performance tends to enhance performance in the areas being measured and reported.

This section has reviewed the roles of quasi-governmental and non-governmental organizations with respect to integrating sustainability into the core. While these organizations have already played a helpful role in the area of supply of sustainability teaching materials and of legitimacy of the topic, there may be further potential for them to contribute in developing student demand.

The Role of the Business Sector

As the above discussion suggests, in many ways what drives the business school curriculum are the demands and requirements of the business sector. Once employers in the business sector demand graduates with an understanding of issues like sustainable development and environment, students will certainly ensure that business schools offer this in their courses. Better yet, if employers from the business sector actually favour hiring students who have a demonstrated understanding of environmental and sustainability issues, students will soon demand that they get the required education from business schools. As a first step, however, having corporate recruiters on campus who talk about and advertise for students to have a broad background including sustainability education as a desirable attribute of a potential hire, will help stimulate student demand for this kind of teaching in the classroom.

Corporate sector communication to business school deans about the importance of sustainability education is also critical. I had been championing sustainable development and environmental management teaching for several years with minimal success when the dean of my business school was asked at a meeting with corporate leaders 'downtown' what the business school was doing about environmental education. Although my dean had systematically left off reference to my work in the environmental area when introducing me for years, suddenly he reportedly replied that he 'had someone working on it'. Shortly after this incident, my championing was rewarded with the formal title of Director of Environmental Management and Sustainable Development Programs, a title I proposed but had to accept at the height of Premier Ralph Klein's budget cutbacks in Alberta without honorarium, course remission or budget.

There may also be a role for industry associations such as the Canadian Association of Petroleum Producers (CAPP) or a city's Chamber of Commerce who have an interest in promoting environmental business school education to play in communicating with business school deans and business students regarding the importance of this area.

Certain companies, such as TransAlta Corporation and Canada Trust, as well as individuals such as York University's Mr. Haub, have donated money earmarked specifically for sustainable development education. This is certainly helpful in communicating the importance they attach to sustainability. There is plenty of room for other companies and individuals to do likewise.

The Role of Committed Business School-Based 'Champions'

The collegial democratic nature of universities and the strong organizational value of academic freedom in these academic institutions, make it virtually impossible to accomplish anything in the way of introducing new initiatives such as sustainability education without professors who are prepared to be 'champions' for the cause inside the business school.

A business school dean or an outside agency or corporation might receive a polite audience from the academic ranks for a discussion of sustainability, but unless a particular professor is prepared to line up his or her research and teaching priorities with this area, it is unlikely that anything will come of the discussion. Offering money may get some takers for short-term projects, but in order to achieve transformative changes in the business school curriculum, a champion who is prepared to make this a major career thrust is needed.

These individuals in the various business schools must be identified in order to form a network that can work together to figure out a way to effect change. It is crucial that networks such as those described above serve as support groups for these individuals if they are to achieve the changes desired. Hopefully, this NRTEE workshop can play a catalyst role here as many of the individuals who will be present have never been brought together as a group before.

The Road Ahead

The above discussion suggests that potential champions who can lead the way in introducing sustainability to the core exist in many business schools. It has also led us to believe that there now exist a number of professional networks for these champions to use as support groups. Thirdly, it has indicated that various agencies have played a useful role in providing a supply of teaching materials for teaching about sustainability. Business schools which have not yet introduced any sustainability course work are probably simply laggard adopters. When someone is prepared to champion the cause the groundwork has been laid for them.

From my perspective, the major stumbling block to making further progress across the board in integrating sustainability into the core business school curriculum appears to be student demand. The immediate barrier for professors may be resources. These individuals must teach courses on sustainability as overload to their regular courses or they must find space in already full course syllabuses. But if the student demand for this material were strong, business schools would find the resources to allow these concepts to be taught. Alternatively, they would eliminate other course material to make room for teaching sustainability. This leads to some important unanswered questions regarding why business students still do not see the relevance of integrating sustainability principles into their curricula.

The above discussion has speculated on possible roles to be played by business and by various agencies interested in furthering the integration of sustainability into the core. Stimulating student demand for courses and course modules dealing with sustainability may be the most useful task for interested business leaders and agencies advocating sustainability. It is hoped that the Ottawa workshop will debate the points brought up in this background paper, develop some of these ideas further and canvass additional ideas which have not yet been addressed.

References

- Academy of Management Review* (1995), Special Issue on Organization and the Environment, 20, (4).
- Carson, P. and J. Mouldon (1991), *Green is Gold*, Harper Business, Toronto.
- Dougan, J. (1996), *Bridging Business and Sustainable Development Education at Centres of Higher Learning: Scoping Survey*, National Round Table on the Environment and the Economy, Ottawa.
- Greenwood, R. and C.R. Hinings (1996), "Understanding Radical Organizational Change: Bringing Together the Old and the New Institutionalism," *Academy of Management Review*, 21 (4) pp. 1022-1054.
- Hart, Stuart (1997), "Beyond Greening: Strategies for a Sustainable World," *Harvard Business Review*, January-February, pp 66-76.
- Marshall, J.J. and H. Vredenburg (1992), "An Empirical Study of Factors Influencing Innovation Implementation in Industrial Sales Organizations," *Journal of the Academy of Marketing Science*, 20 (3).
- Porter, M. and C. van der Linde (1995), "Green and Competitive," *Harvard Business Review*, September-October.
- Sharma, S. and H. Vredenburg (1998), "Proactive Corporate Environmental Strategy and the Development of Competitively Valuable Organizational Capabilities," *Strategic Management Journal*, 19.
- Westley, F. and H. Vredenburg (1991), "Strategic Bridging: The Collaboration Between Business and Environmentalists," *Journal of Applied Behavioral Science*, 27, pp.65-91.
- World Commission on Environment and Development (1987) *Our Common Future*, Oxford University Press, New York.

*National Round Table on the Environment and the
Economy*

*Greening Business Curricula:
Integrating Sustainability
into the Core*

March 12-13, 1998

Shaping successful futures...together!



INTERSOL

National Round Table on the Environment and the Economy

Greening Business Curricula: Integrating Sustainability into the Core

Background

Throughout 1996 and 1997, members of the NRTEE Education Committee met with deans and faculty of selected Canadian business schools to discuss the notion of bridging sustainable development and business education. One resulting conclusion was that most Canadian business schools are not systematically main-streaming sustainability principles into their core curricula.

As a follow-up, the NRTEE hosted a workshop of frontline business educators, students and professionals to help advance the NRTEE Education Committee objective of encouraging business schools to incorporate sustainability principles into their core program. The workshop, titled "Greening Business Curricula: Integrating Sustainability into the Core," explored the barriers which need to be overcome to ensure that future Canadian managers and business leaders are made aware of the need to integrate environmental and economic decision-making. The workshop built on ideas already generated by business schools and identified the important next steps, while concurrently forging links between the NRTEE and the workshop participants. The workshop was held in Ottawa, March 13, 1998.

Objectives

The Meeting of Business School Educators and the background paper prepared for this workshop was focussed on the following objectives:

1. **Defining the opportunity.** In defining the opportunity, it was important to: address the theoretical and practical reasons for greening business curricula, including addressing the demand issues; articulate what "integrating sustainability into the core" means in practical terms; and, review the existing level of integration within business schools.
2. **Establishing what barriers prevent the achievement of this opportunity.** This discussion focussed on the impediments to greening business curricula, whether these impediments are philosophical, institutional, practical or otherwise.
3. **Discussing the best way to overcome the barriers.** Achieving this objective involved a focus on both tools and methods. Tools represent the items which will help integrate sustainability into the core, while methods represent the best ways to target, distribute and encourage the use of the proposed tools. This discussion included an evaluation of the current tools proposed and pursued by the NRTEE as a result of its earlier meetings with business deans; and
4. **Focussing on the next steps.** Based on a definition of the problem and the best solutions to address the barriers, the workshop concluded with a determination of where the NRTEE is

likely to add the most value to this process in the future and the appropriate steps to be taken beyond the capacity of the NRTEE.

Workshop Organization and Approach

A briefing paper was prepared to create a context for the discussion and to stimulate reflection and debate. This paper and a consultation workbook which defined the questions for discussion were sent to participants prior to the event.

The workshop began with an evening panel presentation which included Mr. Duncan Noble, Nortel, and Mr. Ron Bergin, Office of the Commissioner on Environment and Sustainable Development. The speakers both presented overviews of how sustainable development is being integrated into the business/government paradigm of planning, problem solving and decision making, risks and rewards, and concepts of bottom-line. Copies of these presentation slides are attached to this report as an appendix.

On day 2, the featured speaker was Mr. Brian Neubert, BELL/MEB, World Resources Institute. Mr. Neubert's presentation was aimed at stimulating the group's discussion of tools and methods to overcome barriers. A copy of his presentation is also attached to this report. The balance of day 2 was spent in a workshop format - small table discussions of specified questions with plenary reports.

The remainder of this report is to re-cap the questions and discussion highlights from these workshop sessions.

Expectations of Participants

- Linkages between this discussion and professional work of curriculum development
- Build a Canadian Network
 - lever ideas/exchange to speed up work at university
- Develop multi-disciplinary approach to courses and students - think beyond business schools to "all students"
- See what problems we share - and exchange on how to overcome - to learn
- Plant seeds to grow/build capacity
- Encourage Round Table to take the lead to develop educational materials
- Look for realistic ways to integrate sustainable development into Society and into decision-making
- Identify new and innovative approaches to integrate into Business Schools
- How can Round Table play a catalyst role
- Develop a shock treatment for colleagues
- How to integrate personal and professional orientation
- How to link to work in curricula, education and design
 - commitment to further steps

- To see what's happening in Business and the environment
- How to build on this group to create and build alliances which will focus on supply and demand side issues
- An Agenda for change
- Know the Barriers - what skills do graduates need to meet the needs of the market place
- What will help facilitate the transition to sustainable development
- Renewed resolve
- Education to Business and Academics
- Define method of getting business and leaders to think sustainably

A. Defining the Objective

Question 1:

The purpose of this part of the discussion was to articulate what integrating sustainability into the core might mean in practical terms. This first question was to create an operative definition of "integrating sustainability into the core. The table report presentations tended to focus on 3 points: definitions of sustainability, means of integration into the core, and other specific ideas to compliment the process as content of integration.

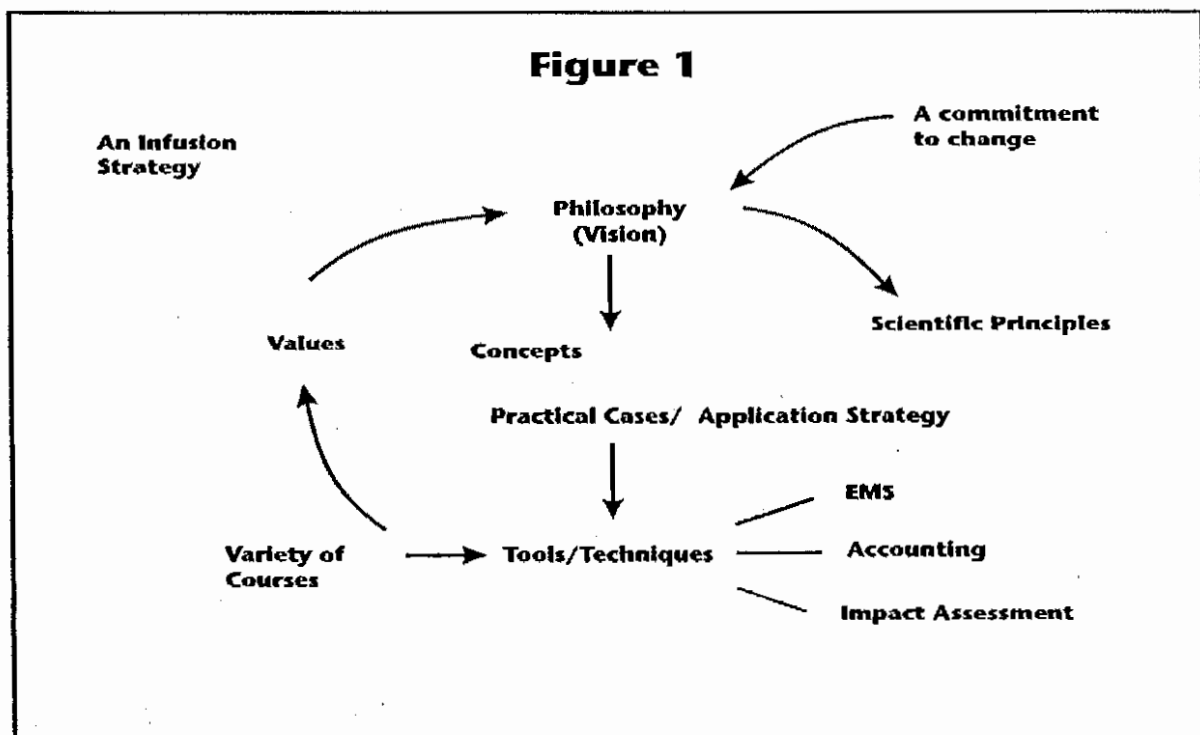
- **Definitions of sustainability**

Participants distinguished between "greening" business curriculum versus integrating "sustainability" into the core. The latter was seen as more robust as a concept, more relevant to the studies, and more in tune with the challenges of change in academic values. Participants defined sustainability as meaning triple bottom-line which includes economic and ecological results as well as social acceptance.

Finally, sustainability was defined as resulting in "increased resources for future generations due to balanced decision making and values systems".

- **What does "integrating sustainability into the core" really mean.**

Two models of thought emerged from this discussion. The first was a vertical model presented below. In brief, it argues that sustainability must be treated through practical cases, and that the continuum of vision, experiential practice and tools must be in place.



The second model included various ideas on course structure. These include:

- A mandatory foundation course at the beginning of studies which would provide the overall framework concepts, as well as training in tools, data analysis, methods of interpretation and so on.
- Modules to be incorporated or "infiltrated" into the spectrum of courses - accounting, marketing, strategic management and supply chain management were most frequently mentioned. These modules would be mandatory. An oversight committee would ensure compliance.
- Other elective courses and/or competitive strategies; competitions etc.
- "Core" means a required set of courses and modules which could lead to an individual concentration.
- Alternatively, include modules in various courses with an "integrative" course at the back end of the degree program to "pull it all together" and to reinforce the values and concepts.
- Other considerations concerning what "integrating sustainability into the core" means".
 - Sustainability needs to be integrated into the vision/mission statements of Universities, faculties and professional (e.g. C.A.) societies and journals.
 - Look at the experience of integrating ethics and internationalization into business curricula - what are the lessons learned.
 - The approach taken must be flexible in terms of 1st, 2nd and 3rd cycle studies.
 - Requires top down pressures - as in remove "sexism" from curriculum as well as bottom-up in terms of energy, ideas, innovation of individual professors.
 - It needs symbols - e.g. ring ceremonies for sustainable development concentration, vision statements etc.

Question 2:

In your experience, to what extent have we achieved the integration of sustainability into the core in business schools?

- Overall, discussion reports were brief and consistent:
 - The Canadian experience has been largely shaped by individual efforts in different schools; concentrations, advanced degrees, compulsory courses.
 - Experience runs toward inclusion of courses as opposed to integration of core concepts across courses.
 - Looking ahead, the prescription is to build on the individualized successes; build further awareness, and integrate current activities into more complete models of what business schools could do.
 - Also note the European experience - seen as more advanced than Canada.
 - Also noted, Florida Gulf State University which integrated sustainability into its raison d'être.

Question 3:

As relevant as it is to define the concept of integrating sustainability into the core, it is equally important to delineate why this objective should be pursued in the first place. In this connection, participants discussed "why business schools should care about sustainability principles".

- The key reasons cited in discussions were as follows:
 - Values - the only long term hope for business and humanity is an ideological outlook which values sustainability.
 - Demand from business - markets looking for more environmental responsibility: automotive, construction.
 - Demand from students - personal future, forward looking
 - Evidence that successful firms are also sources of best practices: "friendly managers should be teaching students best practices, which includes sustainability issues"
 - Socially responsible to discuss (like business ethics).
 - Not a trade-off: Business and Environment are complimentary.
 - Stakeholder priority - ethical funds.
 - The debate of "should we do this" is over for business - business leaders see this as a requirement for doing business.
 - Business leaders are concerned about the sustainability of their businesses. They need to be better versed re: environmental issues, imports and management re: sustainability
 - Globalization of economics requires a global environmental paradigm.

Question 4:

Conversely, participants were asked why business schools might not care about sustainability principles. The principal reasons they cited were:

1. Denial - stonewall a perceived threat.
2. Business Reward systems - Professoriate promoted in functional silos
3. Hard times - hard decisions - Sustainable development courses may be first to be cut.
4. Lose Agenda to law schools - mediation as an avenue to address reconciliation between environment and business concerns.
5. Systematic - shorter programs of MBA - eg. 1 year puts pressure on curriculum.
6. Curriculum momentum - little incentive for change. Lack of champions across disciplines - Lack of student demand.
7. Need for systems perspective.
8. Need for collaboration - both for human resources, and for systems view.
9. Not supported by business advisory boards - Lack of perceived business demand.
10. Short term focus of Business schools. Professorial is resistance to change.
11. Lack of ecological education - systems knowledge and thinking.
12. Lack of tools for integrating sustainability into course work, e.g. finance.

B. Establishing the Barriers

Question 1:

Following on the first part of the discussion, participants were asked what are the key impediments to integrating sustainability into the core. Their discussion typically addressed factors related to faculty capacity and attitudes, student perceptions and expectations, business attitudes and expectations, and opportunities for research and publication. More specific views include the following:

1. Typically of interest to junior faculty.
2. Lacks rewards as well as career risks for young professors.
3. Don't know how to - capacity issue.
4. Lack of business interest.
5. Lack of leaders.
6. Academic structure - vertical or silo nature.
7. Curricula - short term focus.
8. Competition for "shelf space".
9. Lack of tools and materials as well as an ideology which does not perceive the need for a professional school to integrate sustainability.
10. Lack of champions.
11. Lack of leadership or energy.
12. Limited resources: faculty capability and interest; time in the curriculum; fiscal resources.
13. Need for protection of untenured faculty.
14. Limited opportunity for research - need journals to be interested.
15. Students - low importance or relevance.
16. Business signals
17. Too long a definition of what Business/Management is, and too narrow a definition of who we serve - hence difficult to coordinate.
18. Basic ignorance - lack of understanding.
19. Represents a radical approach.
20. Business is conflicted - as there are forces for and against.
21. No guidelines as to how business operates.
22. Stakeholder values - at macro level, the right wing agenda - agenda applies to schools - and forces universities to acquiesce at the Board or Advisor level.

Question 2 (a): What are the most important barriers to focus on?

1. The model of barriers to be overcome for success includes:
 - Understanding/awareness
 - Structural barriers - capability, resources, reward structure, functional organization versus stove pipes
 - Market barriers - students, stakeholders
 - Leadership
 - Resources - faculty time, curriculum, funding

2. Further ideas:
 - Limited mind set - lack of knowledge of consequences, focus on academic independence.
 - Adequate resources.
 - Industry funding a chair in "sustainable development".
 - Business Values.
 - Primary and Secondary schools have policy of curriculum change but not at universities.
 - Need both incremental and strategic approach.
 - Change the reward system - tenure should be based on education not research (Note: no agreement on this point).
 - Time for research and curriculum development.

Question 2 (b): Who needs to be on-side?

1. Deans and senior faculty.
2. Accreditation bodies.
3. Business Community.
4. Peer pressure - student and faculty.
5. Stakeholder involvement.
6. Convince independent minded faculty to be aware - concerned.
7. CEO's have short term focus - are appointed for short terms - focus is on responsiveness to customer demands - goal is to mobilize interest of concerned.
8. Publishers to include in text books (but don't have time to write a chapter).
9. Focus on few early adopters.

Question 3: What are the determinants of student interest in sustainability?

1. Knowledge, received early on.
2. Relative importance placed on the issue in course work - also that courses are elective.
3. Align personal values and course work.
4. See relevance but not too much - lack of media profile; lack of reference in hiring ads.
5. Lack of knowledge re jobs, eg. consulting industry - firms should come to business schools.
6. Job pay prospects.
7. Student recruitment criteria: conservative students are being recruited - Do admissions criteria select out students with environmental interests?
8. Only a minority sees the relevance.
9. Low media profile.
10. Not on the political agenda.
11. Old thinking of environment as a "cost"; creates paradigm of "jobs versus environment" and hence, students shy away.

C. Tackling the barriers

Question 1:

Having discussed barriers, participants next considered the question of tools, methods, strategies to overcome them. The first question under this rubric asked what tools and methods have been tried, what has worked, what has not?

Discussion highlights:

What worked:

1. Optional courses - worked with foreign students - linked to good business practice. Case studies, scenario building, simulations, case competitions.
2. Contrast between what is driving business versus business schools.
3. A core group that is committed.
4. Periodic studies on where management education should be heading - cycle is 10-12 years - then link this to accreditation.
5. Create informal groups - untenured staff.
6. Research opportunities.
7. Business Speakers who reinforce actual cases and experience.
8. Buy in from other faculty.
9. Team teaching and experimental projects.
10. Short modules integrated into other courses.

11. Informal groups.

What did not:

1. Tried case competition - no interest.
2. No french texts.
3. Too many teachers, speakers can be problematic - guest speakers need to be carefully selected.
4. Single integrating lectures at the end of term are not effective.
5. Soft philosophical approaches which sound like preaching.

Question 2: What other tools and methods should be used?

1. Communication across and between institutions - using web sites and list servers.
2. "Strategis" of Industry Canada.
3. Disseminate course outlines, reading lists, key papers, sources of information.
4. Champions - disseminate information to colleagues.
5. Capacity Building - use Internet to build on strengths and as part of an informal educational process.
6. Environment Canada - state of Environment Report.
7. WBCSD - Canadian companies.
8. Keep integrating business leaders, NGO's - to address faculty and students.
9. Role of NRTEE - continued involvement.
10. WBCSD - Sustainability challenge - on line course.
11. Create an Environmental Awareness sub-committee on Advisory Boards.
12. Create student achievement awards with a business sponsor.
 - More support for competitions - cases, use of simulations, study missions, experiential group projects etc.
14. CA and other professional streams to incorporate into accreditation.
15. Encourage Professional bodies to create sub-committees.
16. Create/Identify Centres of Excellence - e.g. York University.
17. Develop a speakers Bureau.
18. Develop and stress importance and value of simulations.
19. Develop a stakeholder negotiation exercise book.
20. Web sites with links to other sites (universities).

Question 3: What type of strategy should be developed to address these barriers?

1. Educate the educators - especially deans - organize one/two-day workshops.
2. Get 3rd party speakers - eg. Maurice Strong.
3. Employers to build into recruitment profile.
4. Universities integrate the need for literacy on sustainability into hiring policy.
5. Need a well-funded, multi-prong strategy.
 - Integrate into accreditation criteria.
 - Importance of maintaining a national network.
 - Develop support for business - environmental literacy - along the lines of the Arthur Anderson model.
 - Continue to exploit opportunities for short courses and introduce continuing education.
 - Awards and scholarships.
 - Resource centre for professors to find out who is doing what, who is available, what is available.
 - Finally, create a planning mechanism to devise a strategy.
6. Recognize stewardship of retiring CEO's by Business Schools. Honorary degrees.
7. Develop the support and accessibility of business.

Question 4: What is the appropriate role of organizations to play integrating sustainability into the core?

1. NRTEE - act as convenor; prepare and distribute videos to augment the speakers Bureau.
2. Get well known person to cross sell videos in supermarkets.
3. Create a video conferencing capability
4. NRTEE - play catalyst role; organize a 1 day multi-stakeholder workshops.
5. Funding - accountability for resources and impacts; NOG's can participate.
6. Companies - internships to show students there are jobs - provide free consulting to companies.
7. Create links to the MEB Bell Program and expand these links across institutions.
8. Create and build on electronic networks - ISD.
9. Private Sector:
 - support guest speakers
 - support to literacy institutions
 - co-op assignments
 - internships
 - executives in residence in Business Schools
 - honorary degrees in Sustainable Development
 - clarify demands in skills in sustainability

10. Academic Associations - get issues on the agenda.
11. Need for neutral university research - example of post Kyoto - both sides said that this will kill the Canadian economy. The Best way to reach students is to present this controversy to them.

D. Next Steps

The final part of the day considered various aspects of next steps, from "what" to "how" to "who". The aim was to create a shared sense of specific expectation for follow-up. This was a plenary discussion. The notes below reflect the contributions of the group as a whole.

Question 1: What are the first three things that must be done to address this issue?

1. Information on what is currently happening needs to be broadly distributed.
2. NRTEE needs to be proactive - gathering and disseminating information and lobbying.
3. Send a letter to Deans
 - inform them of the process
 - get Deans together to shape and share a vision of how to integrate sustainability. Include industry, government and NGO's. Focus on Business Education for the 21st century. Explore video conference - 1 central hub and several regional centres. Use this meeting to identify champions amongst the Deans and to set targets and objectives.
4. Create / identify a national centre of excellence on sustainable management - need a university-based secretariat to take the lead on this.
5. NRTEE - put report together; clarify plan and activities; clarify overall game plan; consider follow-up meeting - 6 months.
6. Certification of Business Graduates - code of ethics - gold ring.
7. Senior Business leaders to talk to senior academics.
8. Develop good ways of illustrating relationships of sustainability to both business and academics.
9. Create a sustainable development seed fund.
10. Teaching development - material, cases.

Question 2: Who must be involved?

1. The power of "1" supported by critical mass.
2. Business leaders.
3. Deans/Presidents.
4. NRTEE
5. Faculty
6. 3rd parties, eg. Maurice Strong.

7. Government Agencies
8. Students - for their input and expectations.
9. Alumni
10. NGO's - Pembina Institute; Pollution Probe.
11. Professional Associations: CA's; CSA's

Question 3: Who should be responsible for initiating this work?

1. We all leave with some responsibility for Bottom-up activity.
2. NRTEE provides report from Top-down perspective.
3. This group is a network - consider the group as an advisory Task Force for the NRTEE.
4. This group can have a virtual continuous meeting on E-mail to circulate successes.
5. Need to interest a mainstream journal.
6. Leadership will shift overtime as progress is made - eg. from NRTEE to Deans.

Question 4: How might you be willing to contribute to integrating sustainability into the core?

1. Each participant communicate to Deans and Presidents re this meeting - advise them of forthcoming letter re a meeting of Deans - encourage this.
2. Send letter to Deans now to let them know about this meeting.
3. Re: FPCMP (182 companies) - Tim to bring back message about the value and potential for industry of this kind of association - better candidate for industry involvement.
4. Conference of Deans will require money - industry could help with cost of this. (Note: industry will be encouraged to pay if they receive service)
5. Get more industry participation at future meetings.

Question 5: Is there a logical sequence of events which should take place?

1. Letter to Deans re Next Steps.
 - need copy of report
 - simultaneous support of business community for a joint venture
2. Develop a marketing plan around these initiatives.
3. If CEO's could agree to the potential for money - then this is a key message for Deans.