

Developing effective government education programs for business sustainability – a systems approach

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Introduction

Education has been recognized as integral to achieving the goals of Agenda 21. Governments worldwide are implementing programs at significant expense. Much of this education targets business and industry. Yet, despite the expenditure many businesses are still not in compliance with the laws and few could be said to be seriously moving towards sustainability. Why? Analysing the 'system' surrounding business and our education programs provides insight and suggests the need for new educational approaches.

The problems

Institutional Arrangements - The current education system is fragmented with many different government bodies, from all three levels of government, designing and implementing education programs for business (Environment Australia 1999, NSW Govt 1996, NSW Environmental Education Council 2001). These tend to operate independently with each organization spending time and money on design of brochures and materials. Each program promotes different steps that business can take reflecting the focus of the Department or Section that they belong to. This promotes a reductionist approach or 'cleaning house' approach to sustainability instead of recognising the need to rethink and redesign the whole 'house' to address the triple bottom line (Hawken, Lovins & Lovins 1999). The education programs compete against each other for the attention of business personnel and together with the many different sustainability methods promoted create confusion over what should be done (The SIGMA Project 2001). In essence they limit their own success (Smith 2000).

In Local Government these programs often rely on outside funding which means that significant amounts of time and effort go into grant preparation. If grants are won programs are quickly designed and implemented, during which the educator again starts searching for money to enable the program to continue. Educators rush from business to business providing information to a single contact person who is then expected to implement it within their company. Little time is allowed to work one-on-one assisting business personnel with their implementation processes and if funding is not received the programs cease with business personnel left to address the issue alone. Educators are hired to design and implement the programs based on funding contracts resulting in short term employment opportunities and the failure to attract career educators with specialised skills in behaviour change and business management. The effectiveness of the education programs is often further undermined by a lack of enforcement and Government Staff who continue to pollute. In the case of local government, staff in the remainder of the organization that interact with business also undermine the educational programs when they do not reconfirm the educational message¹ (Smith 2001, 2001b).

¹ These patterns have been found to occur through the author's experience in managing education programs for the Southern Sydney Regional Organisation of Councils (SSROC) in NSW and West Torrens Council in conjunction with the Patawalonga & Torrens Catchment Water Management Board in SA.

Complexity of behaviour change in business – In business behaviour change requires a ‘learning culture’ with participative management practices where staff are encouraged to admit mistakes, given time to reflect on operations, feel safe to raise questions and try new ways of operating (Senge 1990, Ackoff 1994, Handy 1995, Jaworski, Gozdz & Senge 1997, DeGeus 1997, Cairnes 1998, Kim 2001). Unfortunately many organizations do not have such cultures. Instead they tend to rely on ‘command and control’ techniques, are full of politics, with departments that operate in isolation. Change is expected to occur from the issuing of a management directive (Yankelovich 1999, Berdish 2001). In a high majority of cases, such approaches to implementing complex change fail miserably with significant resistance from staff (Atkinson 1998, Isaacs 1999). Trying to implement sustainability in an organization without a learning culture is unlikely to succeed since sustainability requires staff to understand and commit to the issue, to be involved in reviewing current practices, identifying and implementing alternatives that often cross departmental boundaries and affect the way the whole organization operates (Cunningham, Sinclair & Burritt 1997, Schley & Laur 1998, Infotech & Australian Centre for Cleaner Production 1997). It requires lots of time, energy and change! Implementing such a process in a highly management controlled organization will face significant amounts of politics and resistance. Managers are likely to be reluctant to give up their control (DeGeus 1997) and therefore dismiss the issue as too difficult, particularly when they face many other competing issues that they may see as more important to the company’s short-term success.

Educational methods - According to the psychology literature education programs need to create a positive attitude towards sustainability before behaviour change will occur (McKenzie-Mohr & Smith 1999, Geller 1989, 1995, 2002, Dwyer et al 1993). Creating this positive attitude requires three main components 1) helping business personnel to believe that sustainability is important, 2) that it is worthwhile taking action and that 3) they can successfully take that action and receive the benefits from doing so (Robinson 2001, Geller 1995). Traditional education programs have used a range of methods in their attempt to create this positive attitude. These include: awareness raising approaches – the most common as many people assume that information leads to awareness which leads to action (eg: brochures, posters, seminars, demonstrations, case studies and training), negative coercive measures (eg: penalties, taxes, guilt, peer pressure, fear tactics) and positive encouragement measures (eg: incentives, social approval, goal setting, commitment procedures, feedback) (McKenzie-Mohr & Smith 1999, Geller, Dwyer et al 1993).

Information approaches and positive encouragement measures help to develop the first two components of a positive attitude eg: importance and worth. Negative coercive measures have been shown to lead to resistance even deliberate non-compliance in some people. For this reason environmental psychologists do not recommend the use of these negative approaches (DeYoung 1993, Geller 1995, Dwyer et al 1993). The third component of a positive attitude, convincing business personnel that they can take action successfully, has often been addressed within traditional education programs by training. However this training has tended to focus on the identification of pollution sources and the alternative process or equipment that could be used. It has not focussed on building the capacity of business personnel to create learning cultures and implement change successfully. These barriers to business sustainability and others remain.

What needs to occur?

In order to convince business personnel that they can successfully change their practices and receive the benefits from sustainability *requires the removal of the barriers to change that business personnel face*. It requires making it easy for them to take action. This suggests that education programs need to utilise a 'systems' approach where educators consult with business personnel to understand the system affecting their actions, identify the barriers to change within the system, and develop ways to alter the system that removes the barriers.

The process for designing an education program based on systems theory:

Step 1: Understanding the system & identification of barriers to change – the attitudes, needs and constraints that business personnel face. Since it will be cost and time prohibitive to consult with all business personnel a three-step process is recommended to ensure capture of the main issues. These steps can be conducted for business in general or for each industrial sector: Step 1) literature review / consultation with educators to identify barriers already known, Step 2) focus groups of randomly selected business personnel to delve deeper and learn the 'language business people use' to talk about sustainability and Step 3) random interviews to confirm the findings (McKenzie-Mohr & Smith 1999, Geller 1989, Kassirer 1999). Examples of some of the barriers to sustainability that business personnel face were identified in the first section of this paper. Others include 'brown' taxes, perverse subsidies, consumer purchasing patterns, fiduciary responsibility laws and attitudes such as 'my company doesn't pollute', 'solutions are too expensive / don't exist' or 'our small amount of pollution can't hurt'. There will be many more barriers that would be identified through this 3 step participatory process.

Step 2: Designing ways to remove the barriers – Once the barriers to change have been identified different ways to remove them can be developed. These will vary depending on the type of barrier. Some will require changes to tax, subsidy, company operations and labelling laws. Others will require provision of information in 'business person language' that specifically addresses the concerns and attitudes identified through Step 1. In the case of our education programs it suggests significant changes requiring educators to address sustainability holistically, to include information on change management and organisational learning and to simplify the process for business personnel to take. This could be done through the development of a train-the-trainer package including checklists and guides with mentoring as a backup, as has been called for by large business (Infotech & Australian Centre for Cleaner Production 1997, ANZECC 1998) or it may involve specialised educators actually working within the businesses to implement the sustainability processes. This recognises that many business personnel, particularly in small and medium sized business, do not have the change management nor sustainability skills required to implement sustainability processes themselves. The role of the educator in this case is more as a facilitator and strategic planner that helps the staff develop a shared understanding of sustainability, form a sustainability vision for their company, analyse their current operations, develop, implement and evaluate improvements that move them towards their sustainability vision.

Ideally there should only be one educator working with business people and asking them to take action. This suggests that a whole-of-government approach is needed. Developing

such an approach requires the establishment of a 'learning culture' between the Government Departments that currently implement education programs. This is required so that they can work together to negotiate a program that all can commit to. This will involve discussing their beliefs about educational approaches, identifying their concerns, needs and constraints to being involved; exploring different options for designing, implementing and managing the whole-of-government approach and agreeing on the final approach. Undertaking such a process will take considerable amounts of time due to the sheer complexity of negotiating a satisfactory approach for all parties and the need to overcome people's fears associated with the changes. An appropriately skilled facilitator can help with this process.

A whole-of-government approach while difficult to establish makes considerable sense since it would reduce the confusion created from the many programs, enables sustainability to be addressed holistically, reduces costs and time currently spent by many people in designing and implementing programs, enables consistent application across the area involved, enables dedicated research into best methods and recognises that the barriers that business personnel face will be similar across geographical areas. The savings made from such an approach could be used to enable educators to work within businesses to facilitate the changes to business practices. It could even be used to provide a monetary incentive to convince business personnel to allow the educators to undertake the process within their organizations. This money could be recouped, if the Government wishes it to be, by taking a percentage of the savings that occur within each business as a result of the program. There are many possibilities. The benefits of taking a whole-of-government approach have been recognised, with Government Agencies calling for its application to environmental education (Environment Australia 1999, Smyth - UNED 2002). The establishment of a whole-of-government approach is likely to take some time, therefore educators wishing to take action immediately should focus on the removal of as many of the other barriers that business personnel face as they can.

Step 3: Trial, Pilot and Refine - Once barriers have been identified and approaches developed to address them it is important that these be trialled with business personnel to see that they are effective. Several steps are recommended. First, focus groups are held to determine if people would change as a result of the approach. If not suggestions are gathered, the approach modified and presented to a new focus group. This process is repeated until the business personnel involved in the focus group say that they would change. Second, the education program should be piloted to check that it is effective on the ground. This requires observation of behaviour before and after the pilot and ideally should also involve a control group to ascertain whether any changes that occur are a result of the education program. Dependant on outcome further changes and a new pilot may be necessary (Kassirer 1999, DeYoung 1993). Effectiveness here requires not only obtaining behaviour change but ensuring that it lasts through follow up observation. Even checking to see if it leads to changes that weren't targeted and changes in other people. Self reports and questionnaires to determine changes made are not recommended as it has been shown that the results given by business personnel are not always accurate (Dwyer et al 1993, McKenzie-Mohr & Smith 1999, Geller 1989).

Step 4: Implement, evaluate & share the learnings - Once satisfied that it is effective, the education program can then be implemented across a larger geographical area, evaluated and the learnings shared amongst the wider education community. This way the methods for environmental education will continue to be refined and improved as each future program builds on the findings of the previous.

While the above approach may appear time consuming with significant investment in research and planning it has been shown to be very effective in obtaining behaviour change, as will be demonstrated in the next section (McKenzie Mohr & Smith 1999, Kassirer 1999). Especially compared to traditional expert developed, information based approaches, which are often repeated when the first program fails to obtain the desired effect or worse Government focus move to enforcement assuming that since business did not respond to the education program they must not care.

Example Program

Kassirer (1999) provides an example of an educational program that was developed using the above ‘systems’ approach. He reports on a CO₂ program run in Toronto, Canada. In 1990 their Government ‘made an official commitment to reduce the city's net CO₂ emissions by 20 per cent relative to 1988 levels by the year 2005’. The overall goal of the program was ‘to retrofit all Toronto buildings’ and ‘to find cost-effective and creative solutions to enhance comfort, increase energy efficiency and reduce operating costs in buildings’. The program was developed in partnership with many stakeholders including Government, Utilities, Private Environmental Consultants and Materials companies. The main barriers and how these were addressed are shown in the below table.

Barrier	Way overcome
Cost of undertaking physical changes to the buildings	The Government provided interest free loans and guaranteed that savings would occur. They reinvested part of the funds from savings back into the program enabling its expansion
Concerns about whether it would be worthwhile	They piloted the project through retrofitting government buildings, proving that it would be effective before approaching the private sector and provided information on the approach
Concerns that it would be too difficult a process to undertake	They simplified the process including altering the way all of the relevant government departments managed the issue – removing the red tape, supported companies through it, made it as easy as possible and demonstrated through the government retrofits that it could be done

The project was very successful not only saving on greenhouse emissions but also making business cheaper to conduct benefiting those already operating in the city and attracting new business to the area. It made the buildings healthier for people to work in leading to increased productivity and morale. It resulted in significant employment to undertake the retrofitting and a win-win attitude towards addressing sustainability issues (Kassirer 1999).

Conclusion

The 'systems' approach to designing education programs presented in this paper focuses on understanding why people behave the way they do and altering the 'system' to make it easier for them to change their behaviour and support sustainability. Educators designing programs will find that adopting this approach will increase the effectiveness of their education programs. For further information on these approaches please contact the author jsmith43@metz.une.edu.au.

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Biography

Jodi is a PhD Researcher, redesigning government education programs for business sustainability. She has managed such programs with Councils in SA & NSW. She has also been an EHO, Team Leader Environment, Strategic Planner & Corporate Development Officer within Local Government as well as a strategic change consultant in the private sector with PriceWaterhouseCoopers.