

OBTAINING BEHAVIOUR CHANGE NOT JUST RAISING AWARENESS

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Abstract

The importance of education programs in helping society move towards sustainable practices is well recognised (UNESCO 1997; UNCED 1992). In Australia significant amounts of money have been, and continue to be, spent on sustainability education programs by a range of agencies, in each of the three levels of Australian government. Considering the extent of this expenditure it makes sense to identify the most effective education techniques to obtain behaviour change, thereby maximizing outcomes from the many government education programs implemented.

Research reveals that the sustainability education techniques required for obtaining behaviour change are different to those used to raise awareness (Smith 2003). However, a review of government education programs conducted in the same study revealed that few educators are currently using behaviour change techniques. To improve the effectiveness of sustainability education programs in obtaining behaviour change, educators will need to alter their approaches. How to do this will be discussed within this paper.

Obtaining behaviour change

There are many different techniques that can be used within sustainability education programs. [Table 1](#) shows those most commonly used. They are known as positivist techniques and can be divided up into information based, positive motivation based and coercive manipulation based techniques. Generally the educator will choose a combination of these techniques to use within their program, design their materials and then implement the program. Interpretivist education techniques, such as taking participants into nature or to nature exhibits, can also be used within programs to inspire people to care and take action.

Table 1: Typology of selected behaviour change techniques

	Behaviour Change Techniques		
<i>Source of change</i>	<i>Information based</i>	<i>Positive motivation based</i>	<i>Coercive manipulation based</i>
Environment / Others (Tangible)	<ul style="list-style-type: none"> Written material declarative knowledge: you should change; procedural knowledge: how to change 	<ul style="list-style-type: none"> Material incentives rewards, discounts Social support recognition, social approval, 	<ul style="list-style-type: none"> Material disincentives fines, taxes, penalties Social pressure lobbying, boycotts, peer pressure Legal mandates laws, standards, regulations

	<ul style="list-style-type: none"> • Awareness and education sessions training, seminars, information nights • Feedback progress report or equipment showing resource use levels over time • Modelling case study reports, demonstrations, videotape • Prompts signs, stickers, buttons, TV adverts, verbal reminders 	<p>purchasing preference</p> <ul style="list-style-type: none"> • Goal setting agreed targets • Commitment procedures pledges to take action • Use of respected or influential person movie and sports stars, industry bosses encouraging action 	<ul style="list-style-type: none"> • Engineering and design strategies changes that make environmentally responsible behaviour more salient & convenient • Fear tactics arguing society as we know it will not survive without changing
Internal (Intangible)	<ul style="list-style-type: none"> • Direct experience learning from surroundings and events • Personal insight learning from reflection and analysis of thoughts • Self-monitored feedback consciously observing the consequences of any actions taken and modifying behaviour accordingly 	<ul style="list-style-type: none"> • Commitment belief in and want to act • Intrinsic satisfactions pleasure from taking action • Sense of competence pleasure from feeling capable • Sense of confidence pleasure from having positive self esteem 	<ul style="list-style-type: none"> • Sense of duty feeling that you must take action even if you don't want to change your ways • Feeling of remorse feeling guilty or sorry for damage to environment and human health

(Developed from: De Young 1993 p.492; Dwyer et al 1993 p.279; Geller 1995 p.181)

Rather than treat all targeted stakeholders the same, Geller (2002) suggests that educators should tailor their approach to the needs of the individual they are dealing with. He claims that this will result in greater levels of acceptance and change. Geller (2002) divides people into four different categories, each of which requires a different combination of the educational approaches shown in [Table 1](#). The first three categories are information based, motivational based, and support based. The fourth category is one in which people monitor their own actions and do not need outside assistance. He believes the aim of all programs is to move people to this fourth state.

1. The person does not know about the issue – they are unconscious of their incompetence. The primary need is for an *instructional intervention*, for example education sessions, training exercises and directive feedback. The person will need all three types of instruction over time; information in order to understand, motivation in order to start, and support in order to continue.

2. The person knows about the issue and performs the desired behaviour occasionally – they are conscious of their competence. The primary need is for a *supportive intervention*, for example the creation of positive consequences through feedback and recognition. The person does not need information or motivation, as they already perform the behaviour some of the time; they just need support to do it all of the time.
3. The person knows about the issue, but does not act – they consciously choose to be incompetent. The primary need is for a *motivational intervention*. The information that has been presented has not produced the desired result and the person needs to either be provided with more effective information, such as that tailored to their mental models, or be exposed to initiatives that motivate them to start taking action. Once started they will need support to continue. Motivation may be created through the use of incentives and / or peer pressure.
4. The person knows about the issue and performs the desired behaviour all of the time – they are competent without needing to be reminded of the issue. The behaviour has become a norm for them. Geller (2002) refers to these people as unconsciously competent. They undertake *self management* of their behaviour and initiate changes to it. The person does not need outside assistance, but educators may like to point out further actions that these individuals could take.

Research shows that while the above techniques are effective in raising awareness, they are not necessarily effective in obtaining behaviour change. Some people will not listen to or read the materials given to them, some do not care about the incentives and others may simply ignore the law when it is not being adequately enforced. They may resent being manipulated and coerced by the government and resist changing. There are many reasons why the positivist approach has limited success in obtaining behaviour change. These are explained in detail in Smith (2003).

Resistance to change commonly occurs. Jones (1998) reports that people can feel strong levels of emotion when they are confronted with change. Some may be happy about the possibilities that the new behaviour will bring, but most are not. They often feel a mixture of anger at being told they have to change, sadness at the loss of the old way of operating, and fear about the changes and their ability to do them.

To help people cope with the changes required for sustainability, educators need to deal with these emotions and help people to feel confident in their abilities (De Young 2000; Fagan 1996). People need to feel that changing is *important*, *worthwhile* and *achievable*. If they do not the targeted stakeholders may simply resist changing. Kaplan (2000 p.498) goes so far as to say 'Helplessness would be one of the most important motivational issues to consider in the context of behavior change...any psychological approach to ERB [Environmentally Responsible Behavior] that does not directly address the helplessness issue may have limited practical value'.

To overcome the issue of helplessness educators need to work more closely with their targeted stakeholders. They need to understand their targeted stakeholders' concerns, beliefs, needs and

the constraints that stop them from changing. These will be different for different people. This suggests that expert developed and mass delivered education programs will not be very effective in obtaining behaviour change. Educators need to be more like facilitators, helping their targeted stakeholders to understand the issues, to overcome their constraints to change, build their capacity to change, and coach them with their efforts. In the case of working with business people this may require providing training in various skills such as negotiation, problem solving and change management skills, as well as training in sustainability issues. The need for capacity building activities that help participants to develop various 'action skills' is well recognized in the literature (Agyeman, Morris & Bishop 1996; Fien 1993; Palmer 1998).

The educational approach described above, which works with the participants to problem solve, build their capacity to change and coach them with their efforts, is known as the critical approach to sustainability education. It utilizes aspects of all of the other educational techniques to help the participants understand the *importance* of the issue, why it is *worthwhile* for them to change their behaviour and helps them to *achieve* the changes that they want to make. This may not be the level of change the educator would like to see, but it is what the stakeholders are comfortable doing at the time. Educators need to accept that they will achieve a lot more working with those who are motivated to act, than they will from attempting to coerce those who are not ready to change to do so. Once the stakeholders have made some change and seen that it was beneficial, they may become prepared to undertake larger changes as time goes on. In this way change becomes a cyclic process facilitated by the educator. As confidence builds and word spreads of the benefits and the help the educator can provide, more and more targeted stakeholders in an area will become willing to be involved. From small things, big things grow!

Removing the constraints to change may require the educator to work on altering the system surrounding the participants to make it easier and more worthwhile for them to change their behaviour. Kaplan (2000 p.500-501) explains the need for this.

The observed environmental irresponsibility of many people cannot be interpreted as a simple example of disinterest or inappropriate attitude or sloth. Often there is a lack of appropriate infrastructure, or of multiply desirable choices [those that benefit the environment and other factors such as profitability or quality of life], or of cultural support. People have many reasons to resist making sacrifices for the common good, among them the concern that others will cheat, and that they will look like fools. When one adds to this the sense of inadequacy and helplessness as an individual tries to compensate for the inappropriate behavior of huge corporations and governments, it is hardly surprising that the behavior of ordinary people often falls short of exemplary (Bardwell & Kaplan, 1992)... Environmental campaigns must avoid 'blaming the victim' strategies. Individual behavior change strategies are inappropriate if macro conditions exist which can be blamed for contributing to the problem or constraining the effectiveness of individual efforts (e.g., companies that do not provide ecologically friendly products, government inactivity)".

Removing the constraints that targeted stakeholders face is likely to require changes to legislation and government policy. For instance the introduction of new sustainability rating labeling standards for commercial products, removal of perverse subsidies, and the reduction of the bureaucracy involved in dealing with the many different government agencies involved on sustainability issues. Obviously such tasks may be difficult for a single educator to resolve, but they can point these issues out to the relevant government people and these people should work to resolve them. It shows the need for government educators, policy makers, and enforcement personnel to work together. Action is required at all levels of government if we are to alter the system surrounding individuals to make taking action on sustainability as *important*, *worthwhile* and *achievable* as possible. This is required if we want to obtain behaviour change not just raise awareness.

Fien, Scott and Tilbury (2002 p.159) explain:

Effective programs are not stand-alone activities or ones conducted in isolation from other conservation [or environment protection] strategies. Effective education programs are conceived, planned, and conducted as full and equal partners with other social instruments such as providing information, communication, and capacity building (Fien, Scott, & Tilbury, 2001), as well as policy work, legislation lobbying, conservation biology, environmental monitoring, and environmental planning.

In summary, obtaining behaviour change requires a combination of education approaches that help the participants to see changing as *important*, *worthwhile* and *achievable*. All of the different education techniques can be seen as pieces of a jigsaw puzzle. Each plays an important role, but it is only when they are all used together that the picture is complete and behaviour change is likely to occur.

Current practice

At the moment there are many different government sustainability education programs being implemented. The majority of these utilize awareness raising approaches (Smith 2003). These programs compete against each other for the attention of the targeted stakeholders. Each program tells people different actions to undertake to address the particular individual focus of that program. While convenient for government officials from different agencies, this is not convenient for the stakeholders who wonder whom they should listen to and what they should do first. The multitude of programs and information creates confusion and a feeling of helplessness in the targeted stakeholders, which as reported above can lead to inaction.

The Healthy Rivers Commission of NSW (2000 p.9) has noticed this problem. They found:

... there are concerns that government and community programs and actions are being conducted in a fragmented fashion, without clear goals and objectives and progressive assessment of actual results, frequently leading to a waste of taxpayers money.

Their concerns were echoed by the NSW Council on Environmental Education (2001 p.13), which has also recognised the problems created from the lack of coordination of sustainability education programs. They express concern that

Many programs are dealing with specific environmental issues in isolation from key factors that are causally related or relevant to solutions. Many organizations are dealing with environmental issues in ‘silos’ or ‘boxes’ based on a narrow interpretation of their responsibilities, or as a result of limited consultation with key stakeholders.

They call for a more integrated approach to framing environmental issues, problems, and design of education programs. They state that there is a need

- For Government agency providers to consider the full range of interrelationships that might be relevant to the environmental issue or problem under consideration;
- To provide environmental education that addresses wider systems aspects, e.g. sustainability, rather than just specific problems and issues (e.g. stormwater); [and]
- For better integration of environmental education delivery within specific programs—these could be packaged together better and delivered as interrelated programs. (NSW Council on Environmental Education 2001 p.13; NSW Council on Environmental Education 2002 p.12)

To do so will require changes to our current government policies. The Productivity Commission (1999 p.14) has identified that there is ‘... a lack of rewards, or incentives, in bureaucracies for intersectoral approaches’, and that performance management across Commonwealth departments on ESD is generally poor. The Productivity Commission (1999 p.101) highlighted that the failure of policy makers to understand the needs of stakeholders and the whole system has resulted in policy that appears reasonable, but is difficult to implement. They add that ‘... coordination (with respect to particular problems) is sometimes driven by a response to crisis and therefore can suffer from a lack of overall strategy’.

Linked to the changes required to institutional arrangements is the need to reform the funding system for government sustainability education programs. Several authors are calling for reform to enable local government to implement sustainability education programs for their communities and business personnel (Allen et al 2002; Salier 2000; UTS Centre for Local Govt 2000). Local governments are the preferred provider under international conventions such as UNCED (1992) *Agenda 21*, national policy such as the Commonwealth of Australia (1992) *National Strategy For Ecologically Sustainable Development*, and state legislation. However, no dedicated funding is provided to them to carry out the environmental education role. Instead, local governments are required to either find the money themselves, or to apply for a small number of grants available from the federal and state governments.

This has several unintended negative outcomes. First, it results in different levels of activity within different local government areas, dependent on whether or not they win a grant. Second, it

results in expenditure of significant amounts of time by staff at each local government in the application for grants, rather than on implementation of education programs. Third, if a grant is won the educator positions are usually offered as short-term contracts reflecting the length of the grant, which leads to a difficulty in attracting and retaining qualified educators. Finally, if no grant is won then either no education is undertaken or a range of local government officers are expected to undertake the role in addition to their normal duties. As these officers do not have training in behaviour change or educational approaches, they tend to implement awareness raising measures.

As Allen et al (2002 p.61) explain, the grant process ‘... result[s] in a stop/start approach to community-based initiatives, with much energy being diverted to securing future funding’. If no further funds are received programs often stop, leaving the targeted stakeholders to address the issue alone (Allen et al 2002; Salier 2000).

Similarly enforcement of environmental laws is not consistent. Both state and local government officers have responsibilities, however with limited funding, little is often done (Newland 2000). Unfortunately a lack of enforcement reduces the effectiveness of sustainability education programs in motivating people to change their behaviour – it reduces the *worthwhile* aspect required for behaviour change to occur (Graborsky & Grant 2000; Newland 2000; UNEP 1994).

Educators who do not understand the system and constraints surrounding their targeted stakeholders, can not only be ineffective in obtaining behaviour change, they can actually frustrate and annoy the targeted stakeholders, who know that they should take action, but don't feel able to. DeYoung (1993 p.491) explains that

There has been little appreciation of the fact that an intervention can, with the best of intentions, actually do harm. A common misconception is that, at worst, an intervention will have no effect. The issue here is more complex than one might first imagine. It involves not merely the possibility of *indirect side effects* (e.g., effects on untargeted behaviours, effects on behaviour at a later time). It also includes whether an intervention promotes *unintended direct effects* (e.g., psychological reactance).

The need for changes to the education approaches used by sustainability educators has been recognized. Environment Australia has developed a national environmental education action plan. The key focus of the national plan is the:

... move from an emphasis on awareness raising to an emphasis on providing people with the knowledge, values and skills to actually make a difference to the protection and conservation of Australia's environment. (Environment Australia 2000 p.5)

The NSW Government (1996 p.30) has called for reform to obtain:

... a broad, cohesive and cooperative environmental education system which is characterised by: the integration of education and other strategies for environmental

protection, clarity among providers about the roles and responsibilities of other players, less duplication of resources across programs and clear criteria for quality programs, clear messages from government agencies better able to target audiences on particular issues, closer alignment between environmental priorities and education programs.

The changes that the NSW Council on Environmental Education (2002) recommend to education approaches is shown in [Table 2](#).

Table 2: The shifting emphases in environmental education over time

Aspect	From:	To:
Problem	Pollution / end of pipe	Pollution / source reduction
Solution	Environment protection	Sustainability solutions
Connectedness	Humans separate from ecosystems	Humans as part of ecosystems
Time frame	Present / short term	Future / long term
Goals	Awareness and knowledge	Changed behaviours, practices, and structures
Education methods	Predominantly information-based	Participatory and experiential learning, community development, and capacity building
Learners	Audiences / target groups	Participants / stakeholders
Implementation	Mainly top down	Through partnerships / networks
Legitimacy	Predominantly technical	Based on different ways of knowing

(From: NSW Council on Environmental Education 2002 p.15)

Conclusions

Making the changes required to improve the effectiveness of government sustainability education programs in obtaining behaviour change, will require the support of all three levels of government. It will require coordinated initiatives between policy makers, educators and enforcement officers. It should include professional development activities for educators to help them make the transition. The author has shown in this article that using a mixture of positivist, interpretivist and critical education approaches will improve the likelihood of a sustainability education program resulting in behaviour change. All of these different techniques can be seen as pieces in a jigsaw puzzle. Each can achieve a small amount on their own, but together they complete the picture. Combining the approaches leads to a more effective education program. One that involves not only awareness raising, but also identification and removal of constraints, capacity building and coaching. This will result in better value for money from government sustainability education programs.

Presenter biography

Dr. Jodi Smith has been involved in education for sustainability since 1994. In her PhD she explored why education programs for sustainability have had little impact on behaviour despite the implementation of numerous programs and significant expenditure by various government

departments. Jodi identified many factors that hindered the success of current government sustainability education programs and proposed a more effective approach. Jodi has designed and managed sustainability education programs for business personnel and communities in SA and NSW. She currently operates a consulting business, through which she helps government officers to improve sustainability policy and education practices, she designs and facilitates leadership development programs for business and conducts executive coaching of participants. She also runs her own personal development / life coaching business and she works part time at the University of South Australia as a Lecturer in Professional Development. Jodi's qualifications include a Bachelor of Applied Science Environmental Health, a Post Graduate Diploma in Natural Resource Management, a Certificate IV in Workplace Assessment & Training, a Certificate in System Dynamics, a PhD and she is now undertaking a Diploma in Professional Counselling.

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