ANNEX

Behaviour change models[1]

Motivating people to adopt a more environmentally friendly lifestyle has traditionally been the focus of EE and ESD. The outdated notion is that by increasing learners' knowledge on a topic, an educator could change their attitude towards this topic, thus create the desired behaviour change. Today's practitioners of ESD recognize that changing behaviour is far more complex even if knowledge and attitude are important factors (variables) in this process.

Currently there are three prevailing models depicting the factors that need to be addressed when seeking to change behaviour through an intervention and these are schematically presented in the diagrammes that follow. Variables repeatedly found in these models include knowledge, attitudes, perceived competence (self-efficacy), locus of control (LoC), and intention.

Variables / precursors to behaviour change

Attitudes: people with more positive attitudes are more likely to report engaging in environmentally responsible behaviours than those displaying less positive attitudes (Hines et al., 1987). The researchers identified two types of attitudes: attitudes toward ecology and the environment as a whole and attitudes toward taking environmental action (e.g. recycling, conserving energy, etc.).

Knowledge: as with attitudes, although knowledge is necessary, simply providing the facts will not lead to great changes in behaviour (Hines et al., 1987). Two types of knowledge have been identified: declarative knowledge (knowledge of issues) and procedural knowledge (knowledge of action strategies).
Logically, for people to act on their concerns, declarative knowledge is often not sufficient; people also need to understand how to proceed or obtain the necessary skills to do so: Therefore providing both types of knowledge is necessary for changes in behaviour to occur.

Self-efficacy: People tend to seek out situations where they can use their knowledge and, by doing so, make a difference. Correspondingly, they avoid situations where they feel they have insufficient information to guide their behaviour and where there is a risk of looking foolish, helpless, or ignorant.

Locus of control: People with a strong internal LoC would be expected to take action more readily than those who feel that the power to affect change is out of their hands (external LoC).

Intent is one more factor suggested to affect, or even predict, behaviour. Before an individual will deliberately take action, that individual must have the intent to take it (Ajzen, 1991).

[1] Adapted from Dotzour et al., "Crossing the Bog of Habits: An evaluation of an exhibit's effectiveness in promoting environmentally responsible behaviours", 2002.

Other variables that can affect behaviour change interventions are the interest of participants to the theme of the intervention and the type of environment in which the intervention takes place (whether it is supporting or not, etc.).

Diagramme A: Hines, Hungerford & Tomera's proposed model of responsible environmental behaviour, published in 1987.

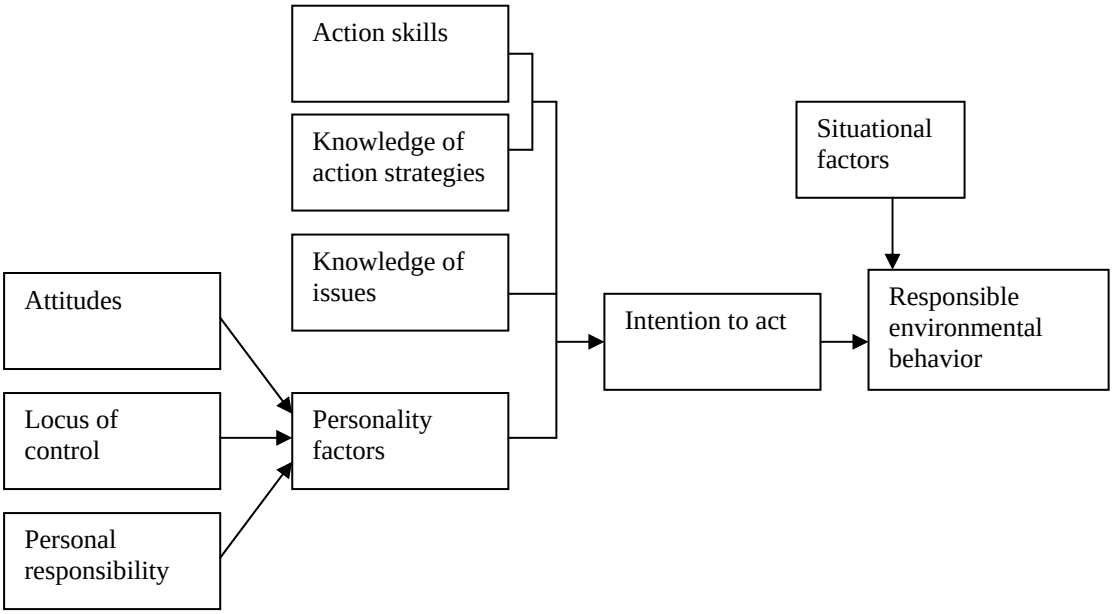


Diagramme B: Hungerford & Volk's behaviour flow chart, published in 1990.

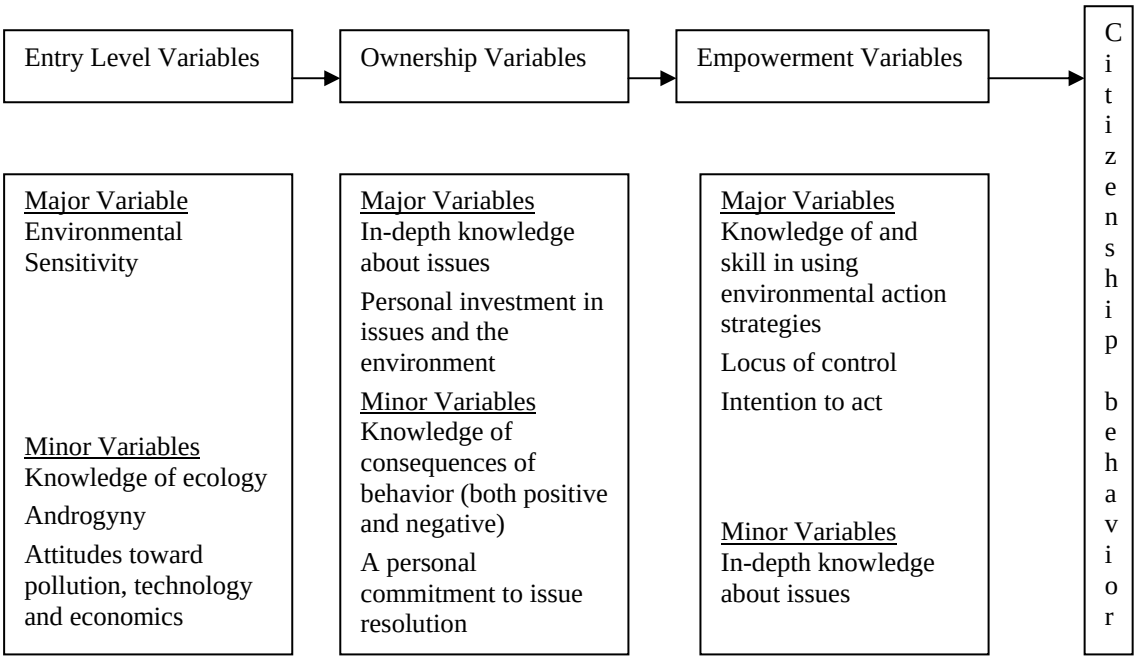
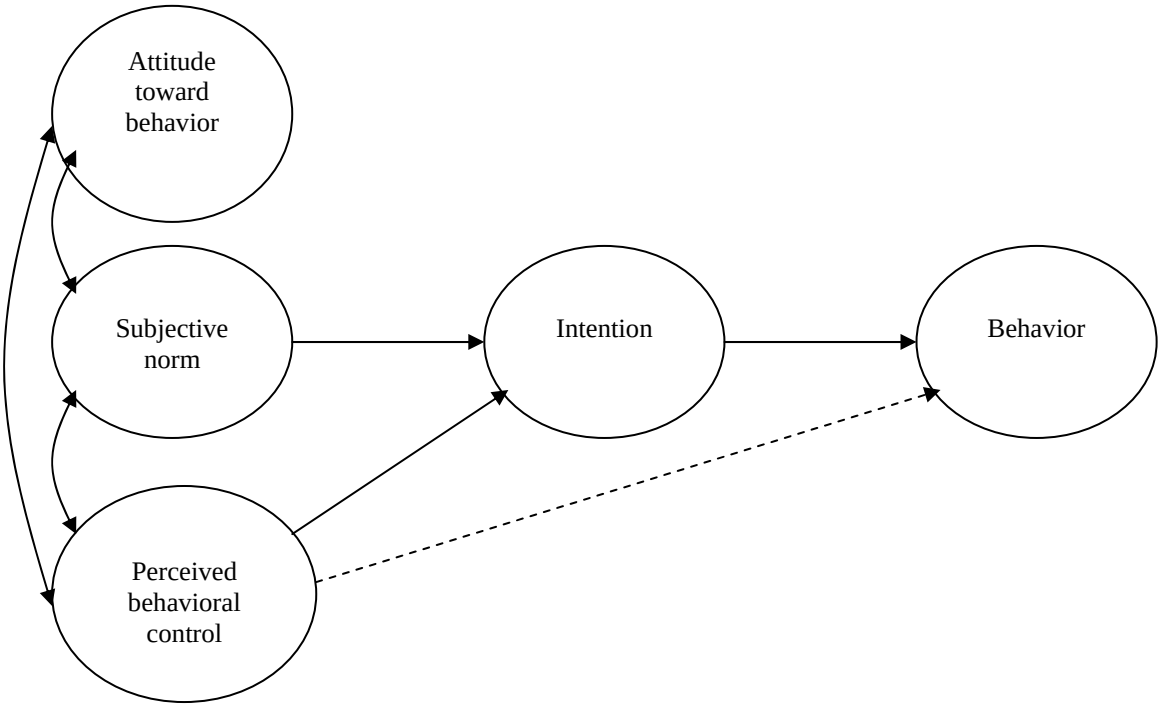


Diagramme C: Ajzen's model of Theory of Planned Behaviour, published in 1991.



Further references on the three models of behaviour change:

Ajzen, I. (1991) "The theory of planned behaviour" Organizational Behavior and Human Decision Processes, 50, 179-211.

Hines, J., H. Hungerford, & Tomera A., (1987) "Analysis and synthesis of research on responsible environmental behavior: A meta-analysis", Journal of Environmental Education, 18(2), 1-8.

Hungerford, H. & Volk T. (1990) "Changing learner behavior through environmental education", Journal of Environmental Education, 21(3), 8-22.