

**GOAL SETTING FOR SUSTAINABILITY:
A NEW METHOD OF ENVIRONMENTAL EDUCATION**

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DECLARATION

I declare that this thesis is my own account of my research and contains, as its main content, work that has not been previously submitted for a degree at any tertiary education institution.

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ABSTRACT

If current environmental problems are to be addressed and future environmental problems are to be prevented, significant changes are needed in the way people live. Environmental education has been identified as an important tool for encouraging people to make the changes needed for sustainability. However, environmental education has been largely ineffective in doing this. Education *about* the environment is being achieved, but education that creates the skills and motivation for action is not.

The purpose of this research was to investigate the potential of goal setting to be used in environmental education programs to develop the skills and motivation required to change environmental behaviour and create positive environmental outcomes. Goal setting is one of the most replicable and reliable of psychology theories, with extensive evidence of its benefits for increasing performance and changing behaviour. The premise was to take an already proven and well-established behaviour change theory and apply it to environmental education.

A framework was developed, that enables goal setting to be included in an environmental education program. In developing this framework, the environmental behaviour change literature was reviewed and the components of successful environmental education were identified. The goal setting literature was also reviewed to determine the characteristics of an effective goal and how goal setting could be facilitated to create greater goal achievement. As there has been little research on the community's attitudes towards goal setting, a questionnaire was developed to determine the extent of goal use in Perth, the characteristics of those goals and the linkages between goals and behaviour. The survey indicated that most people were already using goals in their daily lives and would respond positively to the use of goal

setting in an environmental education program. Thus, the new environmental education framework included providing action knowledge, teaching goal setting skills, setting goals and giving continued feedback and support. This environmental education framework was then implemented and evaluated through two environmental education programs, Green Houses and Living Smart.

The Green Houses program assessed the effectiveness of the framework for reducing household energy consumption and the effectiveness of different communication methods for delivering the framework. Personal communication through the workshop was the most effective method for changing behaviour, with workshop participants reducing their energy consumption by 17%. The website and booklet approaches also had reductions in energy consumption (7% & 8%, respectively). The schools group was the only group not to achieve a reduction, suggesting that what the students learned about energy saving was not being transferred to the home environment or impacting on their parent's behaviour. Importantly, the groups that set goals reduced their energy consumption by an additional 5% compared to the corresponding control groups and maintained those savings for a significantly longer period of time.

The Living Smart program then assessed the effectiveness of the framework for creating behaviour change across a range of sustainability topics. As a result of the program, participants significantly increased both their environmental knowledge and sustainable behaviour. A control group that received the same environmental information as the Living Smart group, but no goal setting skills, only increased their environmental knowledge. This demonstrated that environmental information alone is not sufficient for changing behaviour. Qualitative evaluation identified that goal setting facilitated behaviour change because it gave participants direction and strategy and increased their motivation and commitment to change. Importantly, the goal setting

process worked equally well across all the sustainability topics, suggesting that it is applicable to a variety of behaviours, not just energy conservation.

In conclusion, the goal setting process and framework created significant behaviour change that was maintained longer than when goal setting was not used. The goal setting process and framework was delivered effectively through a range of communication strategies and was applied effectively to a range of environmental behaviours. Therefore, goal setting is an effective and valuable behaviour change tool that has great potential across a range of environmental education programs to create positive environmental outcomes *in, for* and *about* the environment.

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