

Banjos on the Snowy: *Implementing e-activism in education*

Leissa Kelly and Paul Nicholson
Deakin University, Australia

Abstract: e-Activism (the use of ICT in support of environmental action) aims to develop students' knowledge, skills and attitudes to make them proficient in using ICT to achieve environmental and political goals. This requires teachers to be able to create appropriate ICT-based learning environments. This paper discusses a particular pedagogical design and demonstrates its relationship to real-world political and environmental action.

Key words: e-Activism, environmental education, pedagogy, internet

1. INTRODUCTION

In the ballads and poetry of Banjo Paterson are captured the spirit of the harsh and beautiful places of Outback Australia. His poem, 'The Man from Snowy River', tells the story of a young mountain lad whose horsemanship made him a legend. The poem raised the Snowy River to iconic status, as all Australian children learned its words in school. The river's ongoing environmental degradation and subsequent public outcry have resulted in wide-scale political action that led to a change of government.

2. THE ENVIRONMENTAL CONTEXT

The Snowy River has such acclaim because it was Australia's only truly 'wild' river. In 1967, 99% of its water was diverted to generate hydro-electricity. The Snowy River has now been reduced to a trickle of its former glory to become 'a weed-infested canal with greatly reduced biodiversity' (Woodford, 2000). Much of the re-directed water is lost through

The original version of this chapter was revised: The copyright line was incorrect. This has been corrected. The Erratum to this chapter is available at DOI: [10.1007/978-0-387-35615-0_52](https://doi.org/10.1007/978-0-387-35615-0_52)

evaporation, and inappropriate irrigation techniques have enhanced salinity issues in some regions. Studies indicate that 28% of the original water flow is needed to restore the river to sustainable health (Dalgety and District Community Association, 2000). There is a strong contemporary debate surrounding the river's future. The key issues include:

- the impact that lack of water and the resultant environmental degradation have on tourism, fishing and other recreational pursuits (and therefore on the local community's development);
- the impact on the local ecosystems and specifically the damage to indigenous species, whether they be flora or fauna;
- the need to irrigate agricultural lands across the south east of Australia (and its impact on the farmers in this area);
- the need to supplement domestic and industrial water requirements (therefore the wider Australian community);
- the supply of 5–10% of south-eastern Australia's electricity requirements through hydro turbines.

The complexity and political nature of these issues make it an ideal context for the focus of e-Activism. In this paper we show how it might be implemented as a web quest (Pacific Bell, 2000) illustrating the interplay between the political, social, cultural, economic and environmental issues.

3. E-ACTIVISM

We developed the concept of e-Activism (Kelly and Nicholson, 2001) as a means of providing children with an understanding of how they might use ICT to participate in environmental decision-making. Its defining feature is the use of an authentic, action-oriented, approach focusing on:

- Values clarification;
- Moral reasoning and responsible environmental behaviour (Iozzi, Laveault and Marcinkowski, 1990; Hungerford et al., 1994);
- Developing skills in conflict resolution (Hungerford, Peyton and Wilke, 1980);
- Focusing on personal involvement (Hungerford et al., 1994).
- The use of ICT to facilitate both local and global interactions to support the above (Kelly and Nicholson, 2001).

These features mandate an authentic, active-learning model that requires students to identify the issues, values, and attitudes of the various stakeholders, as well as to interpret conflicting claims and data. In order to seek a solution, students are required to debate and argue their positions, seeking to reach a concensus on the issue. We regard role playing, in which particular students adopt a particular stance, and advocate for it, as central to

the development of understanding the various values and attitudes. Use of this model will hopefully provide students with the confidence (and perhaps skills) that will assist them to adopt environmentally responsible behaviours that they will use as adults.

4. IMPLEMENTING THE MODEL

Table 1 shows how a web quest seeks to mimic aspects of the real environmental controversy. This is acted out by having the students research the issue and to identify and adopt a particular stance on this issue. Students are required to arrive at a consensus to the problem. The web quest scaffolds their actions so that they reflect and role-play in ways that are similar to the real-world interactions of the stakeholders.

Real-world context	Web Quest Component
Stake holders	Role play
Issues	Researching issues
Conflicting interests and viewpoints	Understanding of the conflicting interests and viewpoints
The social, political, environmental and economic values that inform the stakeholders views	Awareness of the social, political, environmental and economic values that inform the various views held
Political and social action (lobbying the Government for a positive solution)	Conferencing and debate
Imposed solution	Consensus obtained

Table 1. Mapping of web quest components to the real-world context

Students are assigned a particular persona such as an environmentalist, developer, or farmer, etc., and are expected to develop a general understanding of the character's values and attitudes, and to act accordingly throughout the web quest. The web quest then structures their interactions in such a way that they have to advocate their positions and attempt to convince the other characters of the validity of their adopted stance. The need for consensus arises from the potentially heated debate and the inherently conflicting positions that make up this web quest.

5. CONSIDERATIONS

In adapting this model to different contexts, it is important to revisit the aims, and to attempt to develop an authentic understanding of how they apply to that particular situation. It is particularly important to accommodate

the diverse social, cultural, political, economic, and environmental aspects of the controversy, and to develop the appropriate scaffolding accordingly. The second consideration that needs to be taken into account is that in this example we are dealing with primary students who may not have the skills to act out their adopted character's roles and may need considerable assistance from their teacher in so doing. In particular, the teacher may need to be heavily involved in helping them to construct a written position and in the formulation of the consensus position. With older children the teacher may not need to be such an active participant in the process.

REFERENCES

- Brown, P. (1995) *The Man from Snowy River* by Banjo Paterson. Mountain Man Graphics, Australia. Retrieved 31/01, 2002. Available at: <http://www.magna.com.au/~prfbrown/mansnowy.html>
- Dalgaty and District Community Association (2000) Retrieved 5/02, 2002. Available at: <http://www.ddca.asn.au/ddcapage1.htm>
- Hungerford, H.R., Peyton, R., and Wilke, R.J. (1980) Goals for curriculum development in environmental education. *Journal of Environmental Education*, 11, (3), 42-47
- Hungerford, H.R., Volk, T., Wilke, R., et al. (1994) *Environmental literacy framework*. Carbondale, IL: Southern Illinois University
- Iozzi, L., Laveault, D. and Marcinkowski, T. (1990) *Assessment of learning outcomes in Environmental Education*. Paris: UNESCO
- Kelly, L.C. and Nicholson, P.S. (2001) *Eco-technology meets e-Activism: scaffolding affective change*. Paper presented at the Technology Education New Zealand (TENZ) annual conference, Wellington, NZ.
- Nicholson, P.S. and Cuttance, P. (2000) *The successful implementation of learning technologies (SILT) Research Project: Defining models of expert practice in Science*. Paper presented at the Australian Computer Education Conference, Melbourne, AU.
- Pacific Bell (2000) *WebQuests*. Pacific Bell. Retrieved 02/07, 2001. Available at: http://www.kn.pacbell.com/ssi_includes/webquests.html
- Woodford, J. (2000) *Snowy river rescue will add a few Sydney harbours to the flow*. Sydney Morning Herald. Retrieved 05/02, 2002. Available at: <http://smh.com.au/news/0010/06/pageone5.html>

BIOGRAPHY

Leissa Kelly and Paul Nicholson have teaching and research interests in technology education and environmental education. Leissa is an environmental educator with a history of committed involvement in environmental issues in public life. Paul is interested in investigating how ICT can be used to address environmental issues globally, especially in shaping attitudes and values.