

# Community Capacity Building for Better Water Catchment Management Outcomes Using Popular Education Approaches

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**ABSTRACT**—*In this paper we reflect on two different approaches to community engagement in natural resource management using water management as an example. We first define two approaches - the currently widely used ‘educare’ approach based on the learner being ‘educated’ and contrast this method with the ‘educere’ approach which seeks to build on learners’ experiences as the basis for engagement in resource management. We use our research in water management planning as examples in our reflections.*

**Keywords**— Stakeholder education, Community engagement, Water management, Water conservation

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## 1. INTRODUCTION

Two Latin roots to the English word for ‘education’ reflect different and sometimes opposing ‘teaching’ methods with very different outcomes in terms of the kind of ‘capacity’ built in ‘learners’. *Educare* suggests the learner is ‘educated’ through provision of information. In the more didactic approaches to instruction students are trained and ‘moulded’ to fit into existing social frameworks. In contrast, *educere* suggests that we draw out the learners’ experiences (individually and collectively) to examine what is known at the ‘common-sense’ or ‘sense in common’ level. We then build on this experience with questions that are seen to be relevant by, if not coming from the learners. In the language of popular education [*cf.* 1] the former may be referred to as ‘banking education’ or ‘technical learning’, while the latter is cast in political terms of raising consciousness (‘conscientization’) and developing ‘interpretive’ and ‘transformative’ learning skills. Here the individual begins to understand the world through others’ eyes, and develops the confidence and capacity to challenge dominant ways of thinking – they ‘speak their truth to power’. What characterises the best (in both forms of learning) is the use of participative and experiential learning processes. The role of the educator is as facilitator of the students’ learning, encouraging a spirit of inquiry and focussing on the ability to ‘ask the relevant questions’ rather than simply ‘know the right answers’ [2].

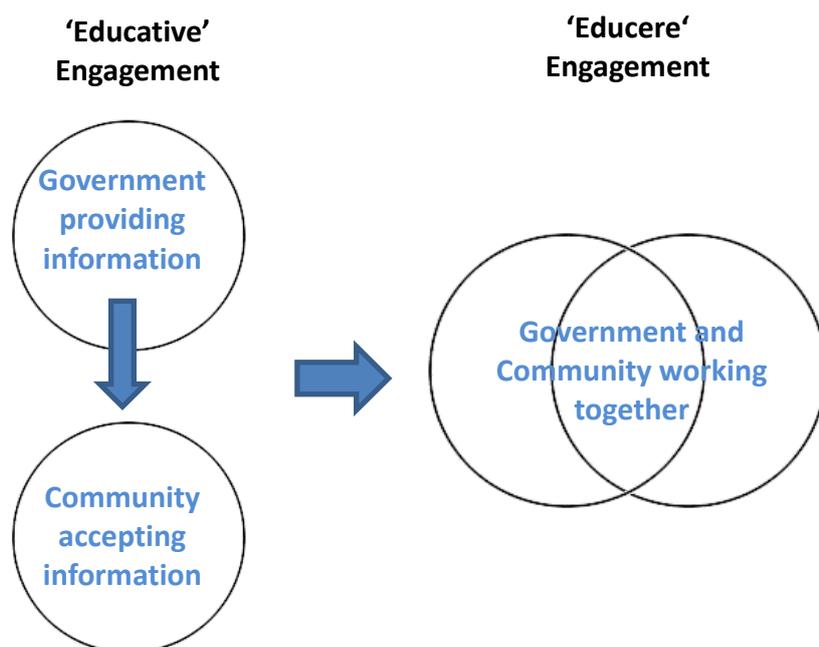
## 2. CHANGES TAKING PLACE IN WATER MANAGEMENT

One way of understanding the changes taking place in sustainable water management planning is to observe how agencies are (or regrettably sometimes not) transitioning from the informing/consulting (educating) to the questioning/engaging (educing) approach. This change requires a shift in governance models. Planners become ‘enablers’ and ‘facilitators’ of capacity building processes. They seek to empower ‘grass roots’ community involvement alongside more traditional industry, community and social agency ‘representative’ stakeholder participation in planning. Water catchment strategies become social-context dependent [3]. The New South Wales (Australia) *Total Catchment Management Act, 1989* gave momentum to this shift, embedding the concept of ‘community and government working together’. Attempts have been made to move from ‘top down’ models of government. Administrators perceive their role as ‘facilitators’, rather than ‘arbitrators’ of change. However, mechanisms enshrined in the Act leave agencies as arbitrators of change through a hierarchy of committees with representative representation [4, 5]. Attempts therefore fall short of real transition to, and community ‘ownership’ of a capacity for real democratically engaged water management (see Figure 1).

The thrust of national and international Ecohydrology Programs is to promote an integrated ecosystem approach that embraces the active engagement of the community in decision making [6]. Promoting this, we suggest, requires a shift in the community education paradigms. ‘Education’ where governments inform/administer policy, albeit based on available ‘scientific’ knowledge, will leave communities as passive recipients even if they are invited to participate in consultative processes through interest group representatives. The alternative involves ‘educing’ values, perceptions and ideas from the community about what, where, when and how water can be harnessed and used more sustainably. We explore with people what, how and in what form the scientific knowledge can be useful. And we use these ideas to

inform the development of policy and, importantly ‘ownership’ of the issues for personal and political action by the community.

There is limited value in developing and then seeking to ‘educate’ the community on the first-best technical approach to tackling issues if this does not fit with community values. Frequently, the announcement of this ‘best approach’ reinforces the sense of alienation and increases community resistance to the adoption of the policy proposals. A (technically) ‘second-best’ approach developed with community support and seen as viable and culturally acceptable is frequently a better option as the basis for ongoing community engagement in evaluation, learning and long-term improvement.



**Figure 1:** Transition from Government Provision of Information to the Community (Educative) to Government Engaging with the Community (Educere) for Better Catchment Management Outcomes

### 3. LESSONS FROM OUR RESEARCH

Our research group has been exploring underlying attitudes to water management [e.g., 7-9], with action-research on the limitations of traditional ‘educative’ and scope for more ‘eductive’ approaches to community engagement - particularly in peri-urban contexts where water stress leads to tensions between rural, urban and environmental water uses [e.g., 10, 11]. Burgin *et al.* [7] found university students from rural backgrounds more readily embraced environmental ethics than urban dwellers. Burgin and Webb [12] observed that individuals from a rural background who had lived without reticulated water supplies managed water frugally throughout life - even when reticulated water was available. Similar attitudes were found among householders who has installed or retrofitted water tanks to displace use of reticulated/potable water for bathroom, laundry, and garden uses. The research suggests that current policy priorities (recycling and desalination schemes) and associated education campaigns fail to engage the community and miss the opportunity to both harvest additional water supply and simultaneously change attitudes to water use that the community-based alternative of a water tank installation program would achieve (Figure 2).

We do not suggest that this is an either-or choice between ‘educative’ and ‘eductive’ approaches. Rather, that rather than the latter be given greater priority, and perhaps precede and inform more traditional approaches - if the aim is to build community capacity to engage in planning/implementing changes for a more sustainable future. There will remain a need to distil and deliver information to households (e.g. through radio, television, local papers) but the form of such communication is important. Traditionally governments and news media rely heavily on ‘talking heads’ to deliver messages on issues – couched in the perspective and language of government/scientific/technical experts. Webb, Burgin and Maheshwari [11] observed that individuals found this approach alienating. Messages delivered in this ‘auditory

mode’ were described as ‘too difficult/complicated’, ‘wordy’, and as ‘too much talk, not enough action’. People wanted to see what a recycling or desalination plant looked like. They wanted examples of what people were talking about and, particularly, practical things that they could do to make a difference to water use/sustainability.

This reinforces the principle taught to most educators in training that seeing and doing are more effective than hearing alone and that education messages are best delivered in mixed audio, visual and kinaesthetic modes. Such lessons are frequently not applied, sometimes with embarrassing consequences. In Toowoomba (Queensland) plans for recycling water from treated sewage effluent were rejected despite a local need for increased access to potable water, and scientific and practical evidence that recycled water was the best local option and used without health risks elsewhere. In part, the vocal anti-recycling lobby tapped into latent resentment over lack of real community engagement in the planning process. The alternative eventually adopted will pipe treated water to an existing reservoir and then retreating the mixture of recycled and naturally harvested water for potable use. This is in line with what researchers had found about community attitudes to keeping recycled water ‘at a distance’ from the human body and greater acceptability of secondary or intermediate use [13, 14].

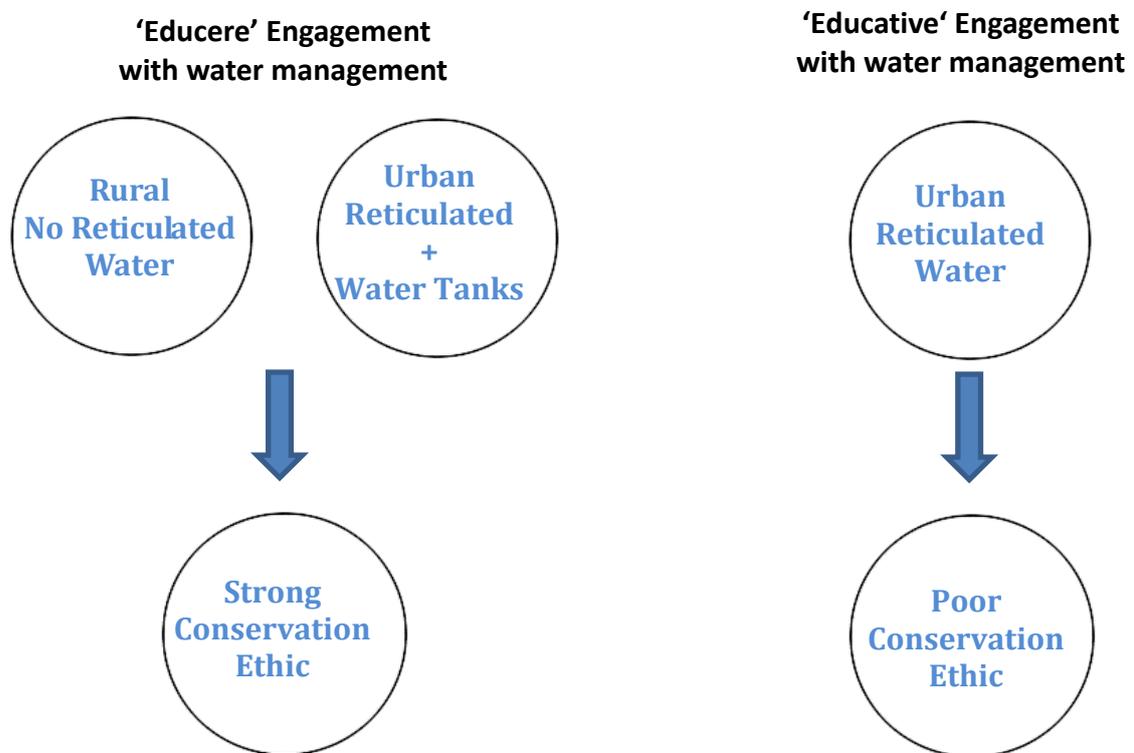


Figure 2 Comparison in environmental ethic between those who self-manage their domestic water supply, at least partly (educere involvement), and those who rely on government (reticulated water) for their supplies (educative involvement).

#### 4. CONCLUSION

We suggest that community education on resource issues needs to be part of social planning approaches - leading to genuine engagement, capacity building, and community ownership of the plan that emerges. Delivering this education appropriately requires greater use of processes that ‘educere’ (Lat. *educere*) alongside approaches that educate by informing (Lat *educare*). Doing so will enhance outcomes that are socially as well as technically economically and environmentally sustainable.

## 5. ACKNOWLEDGEMENT

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