

## **Water Literacy and Citizenship: The Role of Transition Education for Sustainable Water Management**

### **Background to research**

There is a growing global need to address the issue of water scarcity, as the world's population continues to rise and already vulnerable regions risk becoming more so in the face of climate change. This concern is starting to be addressed in the UK, but people are not used to treating water as a resource with limits. It is sold as a service and vast swathes of the country are not yet metered, and so households do not pay according to the amount of water they use. One response to these concerns is environmental education. This has been the traditional strategy of water companies, as well as occasional public campaigns, but it has been shown to be relatively ineffective in terms of reducing domestic demand for water (Von Vugt, 1999). Recent research into the sociology of water use has shown that this lack of success could be because water is not something that is actively used and thought about: it is tied up in a multitude of consumptive activities in the home which may be undertaken for reasons of hygiene, health, relaxation or rejuvenation. These practices are greatly influenced by social norms, such as daily showering, and habits, both of which gradually develop over time. It is for these reasons that research has shown changing patterns of water consumption is too difficult a task for simple traditional methods like information provision or market regulation to solve (Southerton et al., 2004b, Medd and Shove, 2005, Southerton et al., 2004a). Therefore methods of education need to be sensitive to these factors.

Increasing water literacy through transition education has been identified as a possible way to address these challenges. This involves using environmental resources to encourage engagement with and deliberation of issues in order to build capacity for sustainable water management. It also sees incorporation of modes of both cognitive and affective learning to make people not only knowledgeable about water, but actively applying their values to inform their behaviour, rather than not thinking about how much water they use. However, this is an unexplored area of research. Therefore we can identify a need to test the success of transition education methods in making people more water literate, and in turn, whether increased water literacy actually leads to changes in values and actions which mean people use water in a more sustainable manner.

A school provides an environment where a generation of future decision-makers is brought together to learn, and therefore acts as an ideal forum for increasing young people's understanding of the issue of water sustainability, and spreading the message on to households (Barratt-Hacking et al., 2007). Schools also have an important place within their local community, influencing the types of people who settle in the area, developing strategies to solve local issues, and acting as community hubs (Harkavy, 1998, Miller, 1995).

This research is a CASE studentship in conjunction with Severn Trent Water and the Papplewick Pumping Station Trust. Using Nottinghamshire as a case study area will enable the production of an education programme tailored to its locality, and also verify

the feasibility and success of the materials and data collection methods. However, the overall results should be applicable to the rest of the country.

## **Aims**

The aims of the investigation can be summarised as follows:

- To explore the possible role of transition education in increasing water literacy and water citizenship
- To examine the potential of water literacy and water citizenship to reduce water demand in the East Midlands

## **Rationale for research**

There is a clear need for research which brings together work on education to inspire sustainable behaviour change, with the growing field of investigation into the role that knowledge of social practices and norms can play in shaping water usage. There is a strong link between a school and its local community which could be exploited to stimulate this, through building water literacy and citizenship inside and outside the classroom, and encouraging the formation of new sustainable social norms about water. The methods used will be modes of transition education: a new concept which draws in work in environmental education, sociology and behavioural economics.

There is a lack of past work carried out on the effects of increasing environmental literacy in schools on sustainable development. More specifically, this type of work has had very little application in terms of water. Water literacy and water citizenship are new concepts which have received limited attention in the past, particularly in a UK context. Since privatisation, each water supplier has had to submit a five year Asset Management Plan (AMP) to the regulator Ofwat, which exists to ensure that water suppliers do not abuse the monopoly they hold over their regions. We are currently in Year 2 of AMP 5 (April 2011-March 2012). Year 1 was the first time that regulatory targets were put in place for water efficiency: a one litre reduction per customer per day in water consumption. There is also an obligation to educate and inform customers in order to build an evidence base. For these reasons, a need exists for academic work which explores the best ways of educating people about water and encouraging reductions in water demand.

## References

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