

Science Challenge

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Background

As reported in Tytler et al., (2006) rural teachers have less professional development than urban teachers. Despite a teacher from a small remote rural school reporting strong “collegial support” (Tytler et al., 2006. p. 17) there is evidence that teachers in this situation would appreciate the opportunity for more professional development.

Remote locations prevent students from accessing stimulating activities such as excursions and competitions and also limit easy access to resources. Teachers in remote locations may have difficulty finding replacement teachers and attendance may involve extended travel time. Remote locations are in small communities with limited examples and models of career paths and tertiary study (Tytler et al., 2006, p. 19).

Description

This project is designed to create a community of online learners among geographically isolated students from small sized schools and provide opportunities for professionally isolated teachers to share common science lessons. A common website was created and used as the learning forum for the students and teachers, providing each school with a web-space on which to report their results of various science challenges.

The aim of this project is to promote students’ interest in science, provide learning opportunities for students in remote rural locations, increase the pool of students communicating about science concepts, and provide professional development instruction and continuing online support for teachers.

The project has involved eight remote rural schools in a “Science Challenge” targeting Grade 5-6 primary level students. Under the guidance of the classroom teacher and with the aid of information from the website, students undertake a science activity each week and report their findings online through the website. The project started initially in late 2006 when a professional development day was held at Welshpool Primary School for four teachers and then began again in 2008 in response to the time availability of staff and research assistant.

Project Participants

8 Teachers and their students in rural schools in Victoria.

Project Activities

Day long Professional development in Science topics for Primary Schools- water

Create and write Science challenges – suitable for Grades 5- 6; motivating, and easy to organise that are explained in detail on outlined on the website

Monitor website and maintain contact with teachers

Findings

Despite the large number of primary schools that were classified as small schools (less than 50 children) in remote and regional areas of Victoria who were approached to participate in this project, the uptake of the offer was very small. Feedback indicated that most schools have full curriculum commitments.

The distances in rural areas make it difficult to physically get teachers together in a single day. While one professional development day occurred, some teachers in the same rural area were still not able to attend because the distance – both in time and cost was prohibitive. This highlighted the isolation of some locations.

There has been a lack of continuous and interactive communication on the website. It has not achieved the commitment nor the critical number that was originally expected, however it is currently ongoing with some participation. The lower than expected participation result could be due to a lack of understanding of the time and commitment required and lack of ICT skill level among teachers and children. Another reason could be a lack of participation and monitoring by the researchers which was addressed by appointing an assistant to do this task in 2008. As a result the website has been monitored more regularly and teachers and students responses are more consistent.

All participants - researchers, teachers and students require time and practice to become familiar with the site and skilled in simple operations of publishing and using the site. It was assumed that all participants would easily develop these skills, but that has not been as easy as first anticipated with more time and practice needed to consolidate these skills.

Project Outcomes

The website for the Science Challenge site <http://www.deakin.edu.au/alt/edsmf/simerr/>

Impact

While the project has demonstrated that a website can be used as a learning forum, it has highlighted the necessity for the website to be directed and the need for a critical number of participants for meaningful communication.

In September 2008 the website is to be used in conjunction with another project called *Promoting Effective Small Schools' Science: Maximising student and teacher learning*. This project is funded by the DEECD 2007-2009 between Centre for Educational Leadership and Renewal, Deakin and Country Education Project. The 5 schools in the Shepparton area, participating in the DEECD project, are focusing on learning science in 2008 and will be provided with professional development in Science Education. The teachers involved will be invited to participate in the SiMERR Science Challenge and hopefully will work with the current teachers from Gippsland area.

Contact

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