

Expanding Science Literacy

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Project Title	Expanding Science Literacy in Tasmania Regional and Rural Schools: Evaluation of professional learning processes
Project Team	Dr Natalie Brown (SiMERR Tasmania), Jeannie Marie Le Roi (Faculty of Science, Engineering and Technology, University of Tasmania – UTAS)
Period	2007 - 2008
Funding Agency	SiMERR
Organisational Base	SiMERR Tasmania

Description

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Two of the identified factors that contribute to students' lower achievement in science, mathematics and ICT are lack of access by teachers to professional learning and lack of resources.

With the intent of increasing awareness of scientific research strengths of UTAS, this project investigated provision of professional learning and resources to teachers in a cascading model. The first tier involved direct collaboration between university researchers, science educators and teachers in six rural schools to produce and test a teacher resource (Working Together to Expand Science Literacy in Schools—Teachers' Handbook—containing teaching units in Forest Science, Marine and Antarctic Science, Environmental Chemistry and Agricultural Science).

The second tier involved introducing the resource to other teachers, and supporting it through professional learning. The third involved assessing the value of the resource for teachers both engaged with the project and those with no prior experience of the project.

Evaluative data were collected using questionnaires administered to the three different groups of informants – teachers involved in developing the resource, teachers attending the professional learning and, teachers who had only received the resource in their schools.

Tiers one and two were funded through an ASISTM project Expanding Science Literacy in Tasmanian Regional and Rural Schools. The evaluative component was funded through SiMERR.

Participants

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40 teachers, Department of Education Tasmania

Findings

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Responses from teachers who participated in writing the resource unanimously agreed that the handbook was a useful teaching resource, with the majority also indicating they had integrated its ideas into their teaching practice and valued the collaboration process with the University.

The responses from teachers who engaged in the professional learning around the resource was positive about the associated professional development activities and the usefulness of the handbook.

There was a disappointing response from the group of teachers who had been sent the resource without having engaged in any professional learning (three responses from 45 mailings). It was therefore difficult to determine the usefulness of the resource for teachers.

Responses for all surveyed teachers indicated they valued contact with the University in a variety of formats, including professional learning, outreach activities and on-campus programs for students.

Outcomes

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- Brown, N., LeRoi, J. & Johnston, M. (2008, July). Expanding science literacy in Tasmanian rural and regional schools: Evaluation of teacher experience. Paper presented at the annual conference of the Australian Science Teachers Association, Gold Coast, Queensland.

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As a result of the findings about the value of different ways of introducing new resources to teachers this is impacting on subsequent Professional Learning programs being considered by UTAS. A follow-up project is looking at ways of accrediting teachers for involvement in science PL, encouraging them to gain postgraduate qualifications. A new Graduate Certificate of Science Education will be offered in 2009 through the Faculty of Science, Engineering and Technology at UTAS in conjunction with Department of Education and the leaders of this SiMERR project.

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