

AUV Research and Education in the Ross Sea: A Broader Impacts Evaluation Report

Chris Parsons
Word Craft

Josh Kohut, Sage Lichtenwalner & Janice McDonnell
Rutgers University

Kate Florio, Katie Gardner & Harold Clark
Liberty Science Center



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Summer Institute (Aug. 2010)

Prep Strategies

- Teaching mission science with hands-on activities, data, storytelling & photography
- Meeting researchers & AUV
- Preparing teachers for the mission *and* live calls throughout the fall

Mission (Jan./Feb. 2011)

Daily Connection

- Started with scientists' preparing for departure
- Daily Journals: Stories via text, photos & video with Comments exchanged
- Real-time Data (weather, ship location)
- Online Forum (COSEE NOW website)

Live Calls (Webinars)

- Nine audio calls (in classrooms or at LSC) reached 1,000 students, their teachers & others



25 Earth Science Teachers, Grades 6 – 9

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Evaluation

- Success bringing together scientists and educators to improve science education, related to: climate change, Ross Sea ecosystem, life and science aboard a research ship, and ocean-related careers.

Summer 2010 Teacher Institute

Pre Survey

Daily Surveys

Post Survey

Fall 2010 Tech Follow-Up Survey

Winter 2011 Scientist Interviews

Spring 2011 Teacher Interviews/Surveys

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Pre-Survey Teacher Data — Challenges

- 77% in public schools, most teaching science
- Topics typically taught
 - 59% about ocean currents
 - 59% about climate change
 - 50% about physical oceanography
 - 14% about Antarctica
 - 4% about ocean exploration (historical)
 - 4% about ocean-related careers
- 18% had been successful with technology
 - 10% were set up for live conference call
- Students ranging from honors to special needs



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Summer Results

- Teachers loved the Institute
 - 6.7 on a 7-point scale
 - 85% said it met expectations
 - Other ratings:
 - very interesting (83%)
 - very useful (74%)
 - very appropriate for students (65%)
- Main request: Regular updates
- Greatest concern: Technology & live calls



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Project Results

Christchurch Earthquake Story



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Project Results

- Teachers and students bond with scientists as real people
- ... and with the mission as their mission.



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Project Results

- Teachers used authentic materials and data to teach
- ...learned new technologies and integrated those into their teaching
- ...kept connected and supported one another.



A screenshot of the COSEE Networked Ocean World website. The page is titled "Ross Sea Connection" and is a public group with 38 members. It features a navigation menu with options like Home, Documents, Forum, and Members. There are two forum posts visible: one by Claire Barnett and one by Loris Chen, both discussing "Student Impact". The right sidebar includes a "Site Contents" section with links to various resources like Education Materials, Events, and News.

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Project Results

- Most classes followed the Daily Journals (blog) daily.
- Teachers said the stories about the science, people, place and adventures told through a mix of photos, videos and text were accessible to all students.



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Project Results

- For students, classroom science became relevant, real, everyday.
- They developed and asked their own questions.
- They were engaged, interested and excited.



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Keys to Success

- Training teachers for the mission's science
- Assessing and tracking needs, and addressing those with additional materials, training and support
- Having an end event – a goal, a reason for using the training
- Telling stories that are accessible, relevant, multimedia; making them varied and keeping it personal
- Enabling teachers to share and support one another throughout the project
- Keeping them in the loop.

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Continuing Story...



Thanks

To the Team and Teachers

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All of the Teachers

