



Helping Scientists Bring their Research to Broader Audiences

The "Base" Model Online Workshop

- Typical length is 3 weeks with a different pre-recorded science lecture each week.
- Participants view a new lecture each week, with the featured scientist available to answer questions and interact with participants online.



Figure 1. The "Base" Model



Figure 2. The "Professor" Model

The "Professor" Model

- A professor teaches an undergraduate course and films three lectures that are suitable for posting online.
- AFTER the course is over, top undergraduates from the course act as science content guides when the lectures go online for the workshop.
- Undergraduate guides are supervised by the professor and graduate students.



Figure 3. The "Field Experience" Model

The "Field Experience" Model

- During an undergraduate field research course, three science content lectures given by course professors are posted online.
- Undergraduates conduct field research projects while educator participants follow their progress via the online workshop.
- Educators learn the scientific concepts and protocols the undergraduates are using while educators provide them with feedback that helps the undergraduates build their skills as communicators.

BENEFITS

For Scientists

- Obtain better understanding of how to communicate their research: Scientists see where their message "missed the mark."
- Reach more people than is possible with in-person lectures.
- Learn more about how K-12 teachers and informal educators present content to K-12 students.

For Participants

- Learn additional content they can use in their teaching.
- Gain confidence in teaching scientific topics to their students.
- Knowledge of online workshop topics changes a great deal from taking online workshops.
- Increase their own knowledge-base on ocean science topics.
- Direct interaction with scientists on content questions

For Both

- Online workshop available 24 hours a day/7 days a week: Participation can be worked into very busy schedules.
- Mix of presentation formats addresses different learning preferences and needs
- Scientists and participants can learn from each others' questions and comments.
- Scientist and participant location does not matter, as long as there is access to the internet.



Figure 4. Online workshops provide the flexibility to participate from anywhere, at any time.

THE EXTENT OF OUR OUTREACH

Participants from all over the world:

- Many online workshop participants are in areas of the world where the ocean is not easily accessible.
- Other participants take the opportunity to compare their coastal area with the oceanic regions discussed in the various online workshops.

Participant Job Demographics: Most participants are formal and informal educators but participants also include students, scientists and government agency and non-government organization personnel.



Figure 5. Map of where in the world online workshop participants are located. Compiled from COSEE-West workshops over the last 3 years (2009-2011).

EXTENDING THE REACH THROUGH NEW MEDIA

- Video Presentations
- Virtual Field Trips
- Webinars and Webcasts

PARTICIPANT FEEDBACK

- I think these distance learning events are a tremendous experience for a classroom teacher. The range of experts cannot be duplicated in a regular graduate level classroom.
- Some of my students have actually taken some of the material that I have presented and gone to the library to find books on the topics. Pretty amazing for second graders!
- I use the contents to improve my lectures, which are already in the same subject. I would love to have access to this technology to build a similar program, but using Brazilian research (my home country) and to increase ocean science awareness in my own country.
- I do think that distance learning workshops are important as effective teaching methods. These workshops provide a wide range of subjects and interaction with professionals in their field of expertise that might not otherwise be available in a local community.

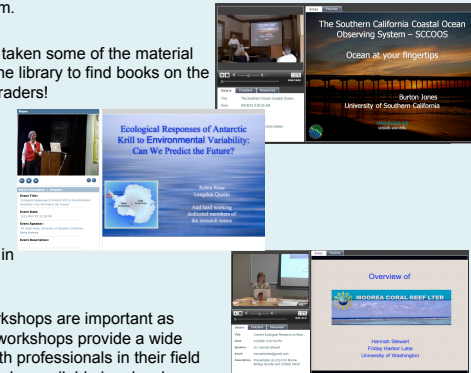


Figure 6. Examples of some of the topics and speakers in our online workshops