

## Delving Deeper into Informal Science Education

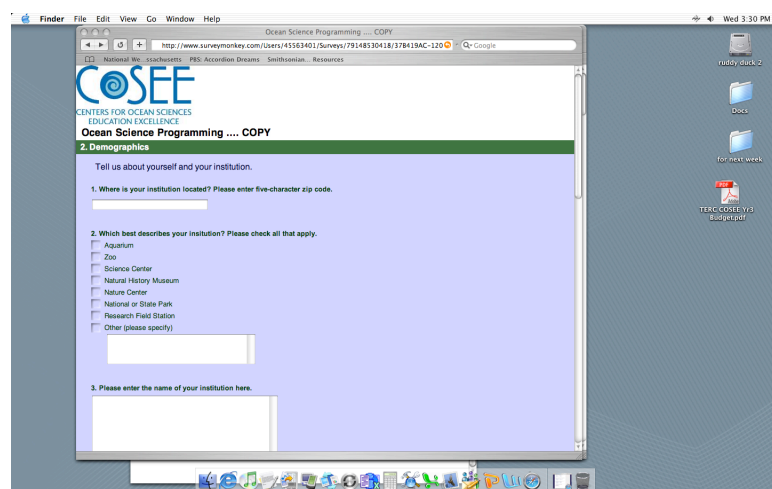
At COSEE New England, we have been developing strategies to help aquariums and other informal science education institutions (ISEIs) incorporate current science, as informed by ocean science researchers, into exhibits and programs. This article reports on early results from a needs assessment of ISEIs that we are using to inform our planning.

A fundamental assumption of all COSEE programs is that participation by ocean science researchers is essential for improving knowledge about the oceans. For this reason, much of our effort is focused on engaging researchers — creating pathways, tools, models and other means for their participation. The results of our earlier survey of WHOI researchers suggest to us that ISEIs should be in a good position to compete for ocean science researchers' time, and that the models our COSEE is developing could help us engage researchers better and more deliberately. However, the pathways through which researchers can initiate or become involved in education activities in aquariums and other ISEIs are not straightforward.

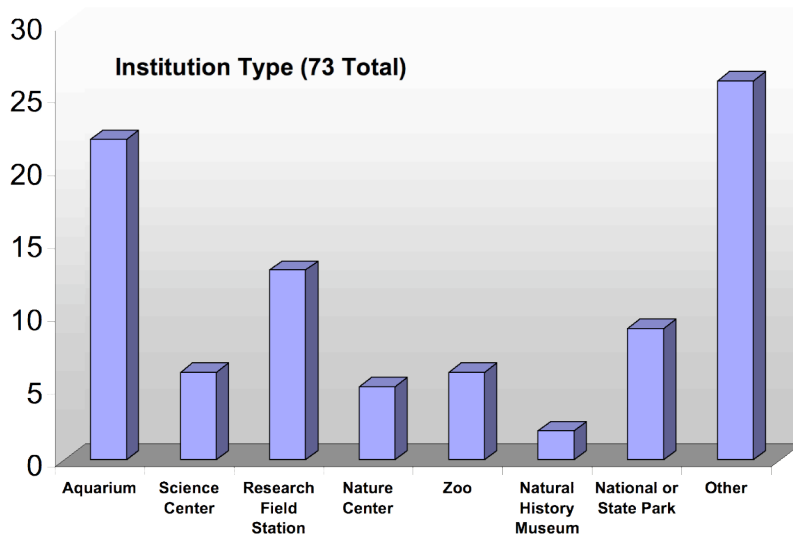
If a scientist wants to visit classrooms, our "Telling your Story" workshop is great. If she wants to create a web site based on her field work, we can offer a ton of advice. If she wants to get marine science into schools, there are our Ocean Science Education Institutes! But what if a she wants to advise an exhibit or introduce families to salt marshes? Where can we send her then? If we want to engage researchers in OSE in ISEIs, we need to make sure ISEIs have the capacity to incorporate OS and OS researchers and that the pathways to engagement are clear. If one or the other doesn't exist, then we need to devise programs to remedy the situation.

Although we had already begun offering workshops bringing ISEIs together with researchers to initiate new partnerships (Sharing the Challenge), we knew we also needed to address the needs of the ISEI community more systematically. Given the diversity of our institutions, we felt a national-level survey would be most informative and could be shared with other programs. Thus, we began an online survey with national scope. Please see a sample page of the survey, below.

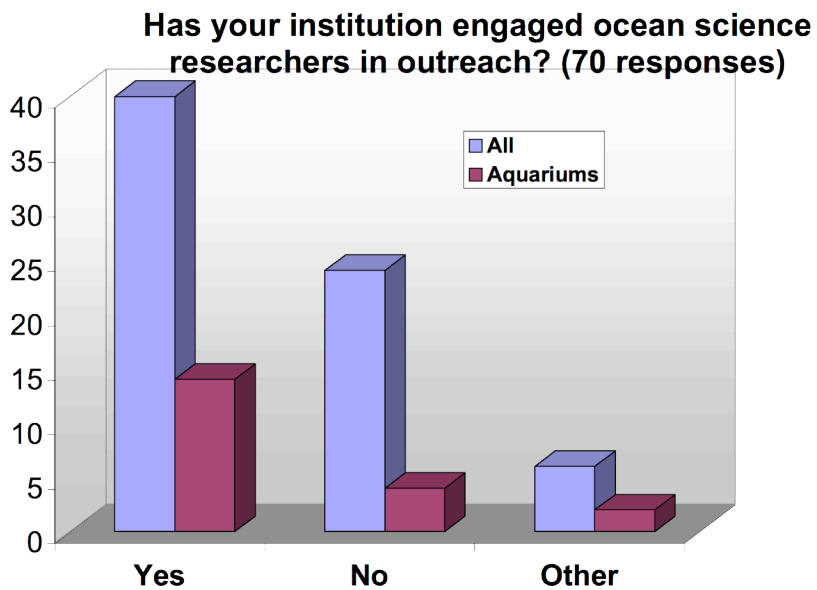
The results below reflect data collected from June – November 2004. The survey is still open, so this is not final data.



The figure below shows that a broad spectrum of institutions responded. (We asked respondents to check as many as apply, so the total here is greater than 73, the total number of responding institutions. Please note in the figures that follow, that some respondents did not answer every question.)



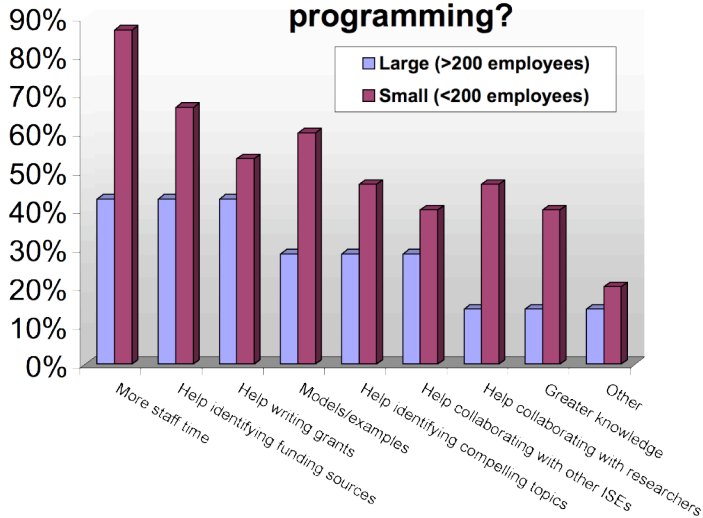
The next figure tells us that a significant proportion of institutions for which ocean science programming is part of their mission do not involve researchers in programming.



We next asked respondents to tell us what would help them include more OS content in programs. (Since we asked respondents to pick as many needs as pertained, the total is much greater than 70.) Respondents identified many needs, but time and money predominate..

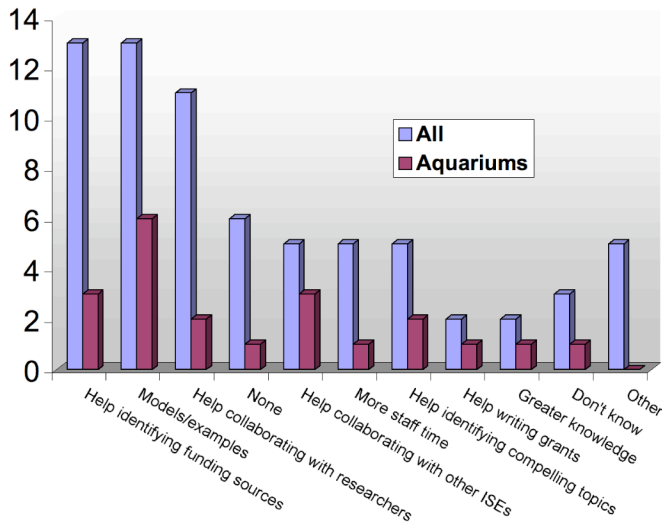
One of our first analyses has been to break out the data on aquariums. We can see here that smaller aquariums have more needs, across the board.

### Which of the following would enable you to include more ocean science content in your programming?



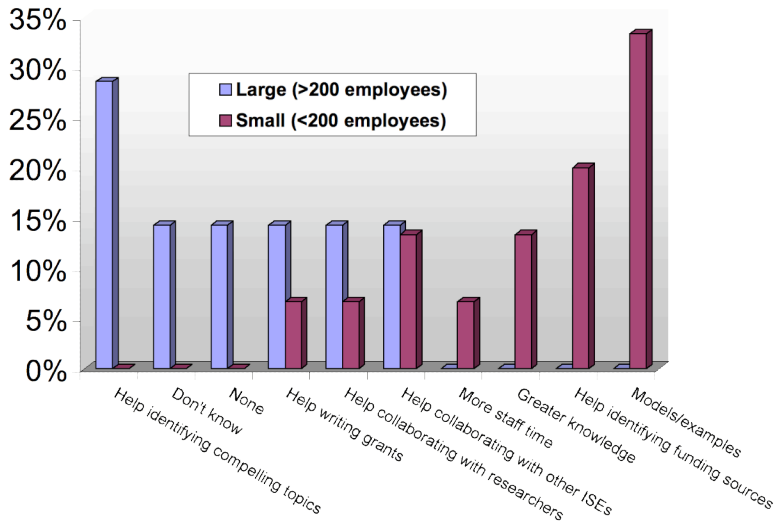
We next asked respondents to identify the one need they thought COSEE could most help with. Some other things now come into focus, including models and collaborations. Here, aquariums differ from the overall group. Aquariums are asking less for help with staff and funding and more for more program-specific help — like models and examples, building collaborations, and finding good stories to tell.

### Which one of these would you \*most\* like help from COSEE with? (69 responses)



The figure below again concentrates on aquariums. We learned that we should be planning different programming for small aquariums than for large ones (below). Larger aquariums are more confident with respect to how to get funds and how to design programs, but want help identifying the stories to tell and in finding researchers to help tell them. Smaller aquariums seem to have more resource-related needs, including needing help with models and with examples of good ocean science programming.

## Which one of these would you \*most\* like help from COSEE with?



We also learned that we need to approach different sized institutions differently. We learned:

- smaller aquariums are most likely to benefit from staff development and exposure to models and examples;
- larger aquariums are most likely to benefit from help finding research stories to tell;
- both are likely to benefit from frameworks we create for nurturing collaborations.

Soon we'll be planning new programs based on what we've learned. We now have more guidance with respect to knowing where opportunities for COSEE's involvement lie, and thus where to focus our efforts to increase/create opportunities for researcher involvement in our community.

To learn our final results, which will include more analysis of non-aquarium institutions, and to stay informed about our coming programming, please keep checking <http://www.necosee.net>.

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