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Creating and Evaluating Manatee Conservation Posters with Middle School Students

The goals of this Community Engagement Lab were to engage middle school age students in completing a conservation action through the use of technology, to examine how different students respond to different conservation messages and images, and to assess the effectiveness of the Wild Research Manatee Poster program in stimulating student interest in manatee conservation.

Methods

The participants in the Community Engagement Lab were 27 students, aged 11-14, in the KidScience Program at the Pittsburgh Zoo & PPG Aquarium. Due to the time constraints of the project, only the 1st year students were able to participate; thus, the participants have taken classes at the Zoo since October 2009, with a strong focus on conservation and animal behavior research. Due to the nature of the class topics and lessons, it is likely that the KidScience students are inherently more conservation minded than the average middle-schooler. The group served to make predictions, evaluate the posters, and make posters using the tool. There were 11 males in the group, and there were 16 females. Four students are 11 years old, nine are 12 years old, nine are 13 years old, and five are 14 years old.

Prior to being introduced to the details and scope of the project, students were asked to make predictions regarding the messages of the poster, especially as it related to demographics of the group. Students were asked to write their age and gender at the top of a piece of paper. They were, then, asked to answer the following questions: 1) Who will prefer positive pictures of manatees and conservation messages: girls, boys, or no difference? 2) Who will prefer negative pictures of manatees and dire conservation messages: girls, boys, or no difference? 3) Which type of picture or conservation message would be most effective in affecting your view of manatee conservation: positive, negative, or both? When the questions were asked of students, the children were instructed to consider 'positive' pictures and messages as generally 'happy' in theme and 'negative' pictures and messages were to be ones that would be considered 'sad' or something that would make the average person 'angry'.

The students were then asked to evaluate and rate seven posters based on whether they liked them and whether they thought they would be effective in conveying a conservation message to the average person. The students were asked to rate the posters on a scale of 1-5 based on whether they 'liked' the poster design (1 being strongly dislike up to 5 being strongly like). They, next, had to rate whether the poster had an effective conservation message (1 being not effective at all, 5 being very effective) based on whether they thought the average person would be moved to work toward manatee conservation after viewing the poster.

Finally, after completing the survey, the students were shown the Wild Research Manatee Poster Public Action Tool (n.d.), and they were encouraged to make their own manatee conservation posters. Unfortunately, due to time constraints, I was unable to have an additional group evaluate the students' posters. I did, however, document the students' preferred conservation message for their posters and the themes that they chose.

The students viewed a total of seven posters (Appendix A). The first four posters were made with 'positive' manatee photos and messages, and the last three posters were made with increasingly dire or 'negative' photos and conservation-minded messages. There were four categories of topics that the posters could have focused upon: "Manatees are amazing animals", which centered on species-specific information, "Manatees are in trouble and we can help", which discussed manatee-related environmental concern, "Manatees are like us", which had a family or human related element to the message, and "About manatees and their watery home", which

examined the entire ecosystem (Wild Research Manatee Poster Public Action Tool, n.d.). At least one poster was made from each category, though three were made from the environmental concern section, and two were made from the ecosystem concern section.

Results

The vast majority of girls (14 out of 16) predicted that girls would be more responsive to ‘positive’ photos and conservation messages, while most girls (11 out of 16) predicted that boys would be more receptive to more dire or ‘negative’ photos and conservation messages. When predicting their own responses, half of the girls thought that they would be most affected by both ‘positive’ and ‘negative’ posters, three thought they would respond more to ‘positive’ images and messages, and five predicted that they would be more affected by ‘negative’ posters.

Boys were more split on their predictions. Five boys thought girls would be more responsive to ‘positive’ posters, while the other six thought boys and girls would equally prefer ‘positive’ photos and messages. For the question about preference of ‘negative’ posters, seven boys thought boys would prefer this type of poster, while five thought that equal numbers of boys and girls would prefer more dire messages. When predicting their own preferences, five boys thought they would be more affected by ‘positive’ posters, three thought they would be more affected by ‘negative’ posters, and three thought both types would affect their conservation views.

When the students actually rated each poster, the results were striking. Responses were remarkably similar between boys and girls in the group, with a few posters emerging as clear favorites among the entire class. In addition, most kids rated the posters they liked the most as the most effective in conveying a conservation message to the public (Figures 1 and 2).

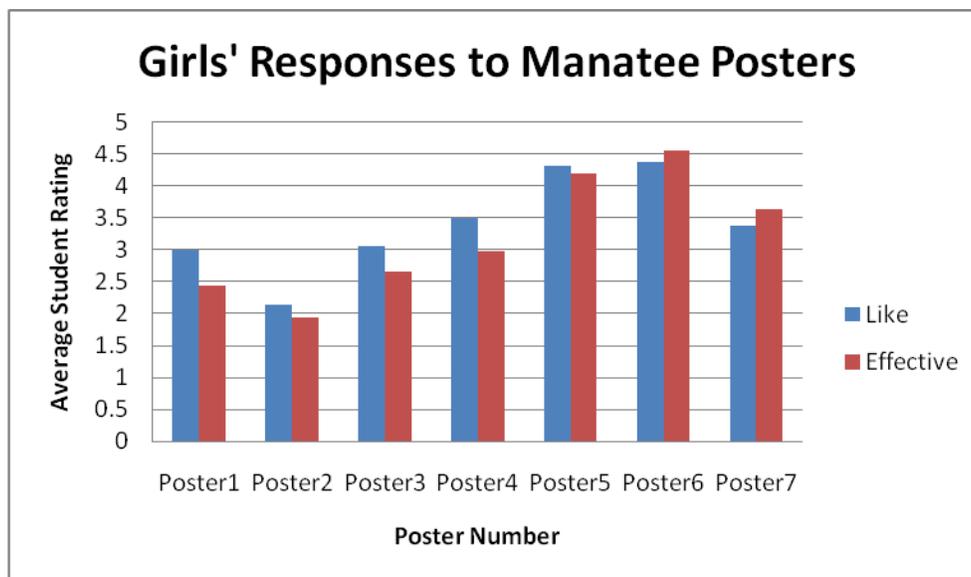


Figure 1: Average Rating and Responses of Girls to the Posters. Girls showed the strongest preference poster 5 and poster 6, and they also rated them as the most effective in conveying a conservation message, as well.

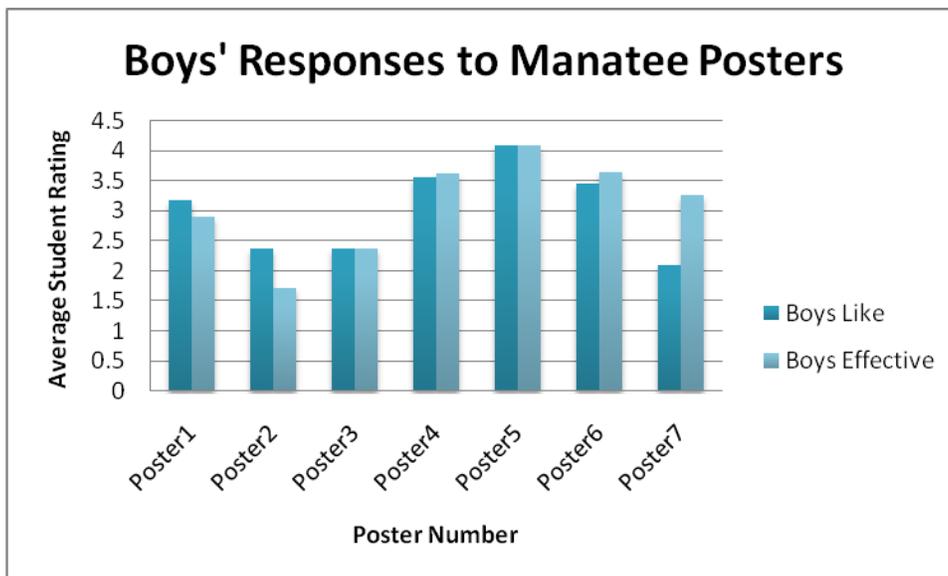


Figure 2: Average Rating and Response of Boys to the Posters. Boys showed the strongest preference for poster 5, and they also rated it as the most effective in conveying a conservation message.

Discussion

Though the students predicted that most students would respond more to ‘positive’ posters, both groups of students showed a strong preference for posters with a more direct conservation message and/or more dire photographs. The favorite for all students was poster number 5 (Appendix A), which had a combination of a ‘negative’ photo and message, but with a beautiful photograph, which could be seen as ‘positive’.

The overwhelmingly ‘positive’ posters received fairly low ratings from both groups of students, and overall, mildly ‘negative’ posters were preferred by the students. Opposite from all student predictions, the most ‘negative’ poster, Poster 7, was rated lower by boys than by girls.

Once the students had a chance to view the posters, the students were introduced to the Wild Research Mantee Poster Public Action Tool (n.d.), and they were encouraged to create their own posters. Unfortunately, I was unable to capture their creations, but I did record from which category the students created their posters. The vast majority of students (23 out of 27) chose the category of “manatees are in trouble and we can help”, three chose “about manatees and their watery home”, and only one chose “manatees are amazing animals”; none of the students chose “manatees are like us” (Wild Research Manatee Poster Public Action Tool, n.d.).

Similar to their poster preferences above, most students chose to create posters with more direct and dire conservation messages than obviously positive manatee posters. Perhaps the outcomes of this activity with 1st year KidScience students reflects their highly conservation-minded views rather than the views of all middle school age students in general. It would be interesting to test that idea, and to assess how these students compare to other children their age not currently enrolled in an optional conservation and science enrichment program.

Overall the activity was successful with the KidScience students, as they expressed great interest in manatee conservation at the completion of the project. The kids were very engaged in the topic, and we had class discussions to address how we at the Pittsburgh Zoo can do more to learn and teach about manatee conservation, even though we do not have manatees in our facility. The biggest challenge to overcome in the activity is the schedule of the KidScience program which prevented us from sharing the posters with another audience or getting the perspective of another group of students.

The kids were excited to learn that the poster tool is being developed for use at the Cincinnati Zoo, and they declared that they wanted to travel to Cincinnati to view the manatees and to use the tool once it becomes available to the public. Most kids stated that they would love to be able to create and send posters to their friends using the tool despite not having seen a manatee up close. They thought the poster application could be used, not only in a Zoo setting, but also on the internet and on social media sites, such as Facebook. They suggested that the more people who could create and see the posters, the more the general public would be moved to directly act for manatee conservation.

The kids are used to using technology in class, as they have access to laptops, and engaging them in conservation through technology was a wonderful way to play to their interests and strengths. We learned that the kids very much enjoyed being able to use technology more directly to impact conservation, and the kids strongly suggested that more technology be used in Zoos and in classrooms to engage students their age. In addition, because the kids have shared so much interest in manatees and their conservation, we will likely be doing more lessons and activities focusing on the amazing creatures in the next few weeks.

References

Wild Research Manatee Poster Public Action Tool. (N.D.) Retrieved April 10, 2010 from http://www.wildresearch.org/pims/13/run_un

Appendix A

Posters that the Students Evaluated.

Poster 1



Poster 2



Poster 3



Poster 4



Poster 5



Poster 6



Poster 7

