

Program Animals and Effective Conservation Messaging: A Tale of Two Presentations

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Abstract

Modern zoos have begun focusing on displaying animals in naturalistic enclosures, contributing to improved animal welfare and public education. However, many animals are presented outside of their enclosures, and little research has been done on the impact this has on conservation messaging. It is important to evaluate the effectiveness of messaging based on the visual presentation of animals used in zoo education programs. This project was developed to test whether naturalistic or personal presentation of a macaw would impact student understanding of conservation messages. Children ages 9 - 11 were presented with a macaw in a variety of situations, and completed pre- and post-program surveys to assess attitudes about wild parrots. It was predicted that naturalistic presentation of the macaw would result in a greater connection with the image of parrots as wild animals. Results supported this prediction, showing that children seeing a parrot presented naturally had a greater shift in conservation attitudes. However, overall it appears that the majority of students are connecting with the macaw in the presentations, and are inspired to learn how to help wild parrots.

Introduction

Over the past decades, the idea of the animal menagerie, roadside attraction has gone to the wayside, and zoos are focusing their efforts on displaying animals in more naturalistic enclosures. Once confined to concrete squares with metal bars, zoos now strive to create exhibits that reflect the natural environment in which the animals are found in the wild. Not only has this improved the welfare of the animals, visitor's perceptions of animals and their understanding of the natural environment is impacted by the zoo exhibits where they see animals living (Finely, James & Maple, 1988). In fact, the exhibition of animals in a zoo setting is an integral part of the subconscious message that visitors are taking away from these institutions (Coe, 1987).

Modern zoos and aquariums strive to connect with visitors, and educate them about wildlife and conservation issues (Patrick, Matthews, Ayers & Tunnicliffe, 2007). Education opportunities are as varied as the institutions themselves, and may include signs and interpreters at exhibits, special events, presentations for school-aged children, summer camps and overnight programs. Many of these programs incorporate live animals into the themes or presentations. Often, this means handling animals outside of their enclosures, and might even include traveling away from zoo grounds with an animal. It has been suggested that how animals are displayed in these programs should be consistent with the educational message verbally presented to the audiences (Swanagan, 2000).

While studies have shown that displaying education animals increases stay time and retention of education messages for zoo visitors (Povey & Rios, 2002), does removing an animal from a more naturalistic environment (the exhibit) impact the message that is delivered in the program? This is of particular importance when considering animals such as parrots, which are commonly found as pets. Many zoos regularly receive calls from owners unable to continue caring for their exotic pets, and some are released into the wild where they do serious damage to native populations ("Burmese Days," 2006). The Northwest Zoo & Aquarium Alliance, of which the Oregon Zoo is a member, provides information regarding good pet choices, and urges people to consider the benefits of domestic animals as pets (Northwest Zoo & Aquarium Alliance, 2008).

In support of this effort, this project was developed to test whether student understanding of Oregon Zoo's conservation messages was impacted by the visual presentation of program animals. Would the naturalistic or personal presentation of a macaw impact how students related to parrots as wild animals? Elementary students were given a presentation about macaws, either interacting with just biofacts (no live animal), with a parrot presented naturally (on a perch) or a parrot presented more personally (held by the presenter). The students filled out pre and post surveys to determine their

attitudes around wild and pet macaws. It was predicted that students participating in the naturalistic presentation would be more likely to have positive attitudes about wild macaws, and less likely to view them as good pets.

Methods

This project tested whether naturalistic or personal presentation of a macaw would impact student understanding of conservation messages, and specifically how students related to parrots as wild animals.

Materials

In order to test student comprehension of conservation messaging in relation to how they viewed a macaw, several pieces needed to be developed. In September 2012, the presentation itself was written. While we already incorporate a macaw into several of our classroom programs, it was important for this project that we focus the message on just the parrots, their natural habitat in the wild, and how their populations have been threatened by the pet trade. Also, it was critical that all of the classes receive the same verbal presentation, because we were hoping to test the visual impact of how the macaw was displayed. The script was written and presented by Amanda Stanford (Appendix A).

Once the script was created, we developed the survey questions that we would use to test the student's comprehension of our conservation message (Appendix B). The survey was only six questions, and was designed to be used by elementary-age students. We were interested in surveying three main points: 1) General connection to or feeling about parrots 2) Attitude about wild parrots 3) Attitude about pet parrots. The survey would be administered to the children twice, both before seeing our presentation and after. (See *Implementation* below.)

Finally, it was necessary to ensure that the macaw we were using in the programs was comfortable being presented both on the hand (for the personal/pet presentation) and also on a branch perch (for the naturalistic presentation). We typically present the macaw either holding him on our hand (Figure 1) or on an astroturf perch made of natural wood branches (Figure 2).



Figure 1: Wildlife show staff holding Pele, blue and gold macaw



Figure 2: Pele, blue and gold macaw, perched on a branch during a presentation.

Implementation

Once the materials were developed, in early October 2012 we began looking to contact schools to ask if they would be interested in working with us. We used schools that had already scheduled presentations through a grant-funded program from the Oregon Zoo Foundation and the Bank of America Charitable Foundation. The programs appeared perfect for our study, because there were 3 presentations booked for three classes at the same school, on the same day. Presentations were given to 5th grade classes at Stafford Primary School in West Linn, Oregon and North Gresham Elementary School in Gresham, Oregon. Each had initially booked programs that were themed around insects and adaptations, so the surveys would not be influenced by information they were already studying in their classes (i.e. if they had been researching rainforests). Instead, the parrot presentation would be an add-on to their program, and hopefully the messaging would stand alone.

In order to determine the impact of the presentation, a pre-survey was sent to the participating classes. Teachers were asked to have all students fill out the parrot survey one week before we visited the schools. The same questions were used for the pre and post surveys, to measure the differences in responses before and after the parrot presentation.

Since we had the opportunity to survey three classes for each grade, we were able to create a baseline presentation to go along with the personal and naturalistic presentations. The baseline class was

given the same presentation, without meeting a live parrot. Overall, there were three basic categories where the parrot presentation differed between the classes:

	Parrot	Handling	Behaviors
Class #1 Baseline	Students did not see a live parrot. Instead, presented with biofacts including feathers and replica skull	N/A	N/A
Class #2 Natural	Students were introduced to a blue and gold macaw, presenter did not use his name	Macaw was presented on a natural branch perch, was not touched in front of students	Macaw made a typical parrot squawk, showed his wings, and cracked a nut open with his beak
Class #3 Personal	Students were introduced to Pele, a blue and gold macaw	Macaw was presented on the hand, carried in and out of crate	Macaw mimicked human sounds (i.e. saying “hello”), gave a “kiss” and waved good-bye

Oregon Zoo wildlife show staff member Amanda Stanford conducted all of the classroom programs, to ensure consistency in messaging and presentation techniques. Following the presentations, Amanda stayed with each class to administer the post-survey.

Once we successfully completed the presentations and surveys in the school programs, we also decided to try to the same surveys on Oregon Zoo campers of similar age. We were able to add to our sample size by surveying three different ages of campers, with three programs at each age level (9-, 10- and 11-year olds).

Results

Fifth grade students

The results from the fifth-grade presentations showed an overall increased positive feeling about parrots, and an increased desire to help parrots in the wild (Table 1). When broken down by presentation type, the results from the surveys generally showed a positive impact on all children and their feelings towards wild parrots, regardless of the presentation. All classes, even the students that were not exposed to a live macaw, showed an increased number of students that were interested in wanting to help wild parrots. The greatest increase in positive responses came from the naturalistic presentation, which had 31% of students change from a neutral or negative response to a positive one.

	<i>Percent of student responses</i>			
	<i>Pre-survey: Want to help wild parrots</i>	<i>Post-survey: Want to help wild parrots</i>	<i>Pre-survey: Wild parrots make me happy</i>	<i>Post-survey: Wild parrots make me happy</i>
Baseline	48%	52%	88%	80%
Natural	51%	82%	84%	94%
Personal	49%	66%	83%	87%

Table 1: Comparison of fifth-grader’s responses to questions about wild parrots, before and after macaw presentation.

While both the natural and personal presentations also showed an increase in positive feelings about wild parrots, the baseline presentation showed a decrease in these responses. Approximately 8% of students

that originally felt “happy” about wild parrots changed to a neutral or negative response after seeing the parrot presentation, without a live parrot (Figure 1).

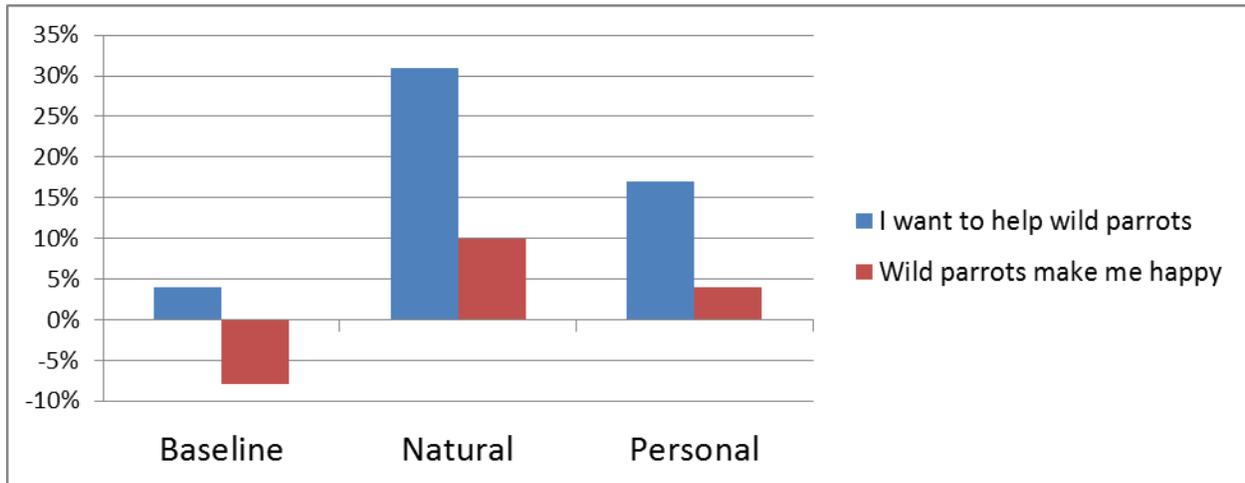


Figure 1: Percent increase in fifth-grader’s positive responses to questions about wild parrots after seeing parrot presentation.

Oregon Zoo campers

The results from the Oregon Zoo camp presentations also showed an overall increased positive feeling about parrots, and an increased desire to help parrots in the wild (Table 2). When broken down by presentation type, the results from the surveys generally showed a positive impact on all children and their feelings towards wild parrots, regardless of the presentation. As with the fifth grade classes, all programs showed an increased number of campers that were interested in wanting to help wild parrots. While the increase was slightly less than that of the fifth grade students, the greatest shift in positive responses again came from the naturalistic presentation.

	<i>Percent of student responses</i>			
	<i>Pre-survey: Want to help wild parrots</i>	<i>Post-survey: Want to help wild parrots</i>	<i>Pre-survey: Wild parrots make me happy</i>	<i>Post-survey: Wild parrots make me happy</i>
Baseline	63%	70%	91%	90%
Natural	60%	74%	82%	92%
Personal	48%	55%	85%	87%

Table 1: Comparison of Oregon Zoo camper’s responses to questions about wild parrots, before and after macaw presentation.

Again, as with the fifth grade responses, both the natural and personal presentations also showed an increase in positive feelings about wild parrots. However, the baseline presentation showed a slight decrease, with approximately 1% of students changing from a happy to a neutral or negative response after seeing the parrot presentation that did not include a live parrot (Figure 2).

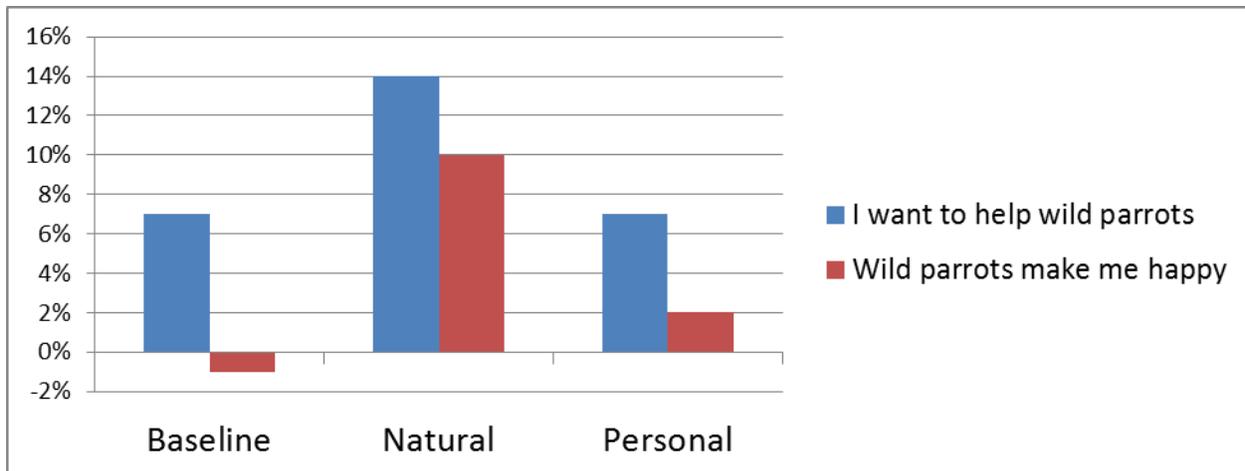


Figure 2: Percent increase in Oregon Zoo camper's positive responses to questions about wild parrots after seeing parrot presentation.

Discussion

The results from the parrot surveys were similar for both the fifth-graders and the Oregon Zoo camp groups. The prediction that students participating in the naturalistic presentation would be more likely to have favorable attitudes about wild macaws was supported. The increase in positive responses was greatest in relation to the question about helping wild parrots. While this survey was not designed to measure action, the results of this quiz demonstrate that an important change in attitude did occur following the parrot presentations. This attitude change is the first step towards creating behavior changes that have a positive environmental impact.

Although there was a less significant change in attitude, the survey did show some increase in the number of children that were “happy” about wild parrots. The naturalistic presentation group again showed the greatest increase in positive responses. However, the groups receiving the baseline presentations demonstrated the reverse, with the number of positive answers actually decreasing following the parrot program. While not the goal of the surveys, these results support the importance of using live animals in classroom settings and the positive impact that zoo education programs can have on classroom learning.

One variable that may have influenced the results from the surveys was the behavior of the parrot. Although the project was designed to test the presentation of the blue and gold macaw in two different ways, we had hoped that Pele would respond the same in all the classrooms. However, while he was quite calm on the branch perch, he was much more vocal while standing on the presenter's hand. This is likely because he was soliciting attention from the presenter. Whatever the reason, it resulted in his acting more like a “normal” untrained parrot, including a lot of loud squawking. Amanda noted that during this time, many of the students covered their ears and were uncomfortable with his loud vocalizations. This behavior may have influenced the students who participated in the personal presentation to not have a favorable attitude towards parrots. Alternatively, his calm behavior on the perch may have influenced students in the naturalistic class to reject the spoken message that parrots can be extremely loud.

Another possible influencing factor is the pre-exposure that children may have to pet parrots specifically (as opposed to another exotic animal). Amanda reported that several students told her they already had pet parrots. This prior experience with parrots may have influenced their understanding and thus their survey responses. According to one study, “Pet-keeping can provide various benefits to children in terms of acquiring knowledge and positive attitudes toward animals (Prokop & Tunnicliffe, p. 32).” A few children were so eager to share this experience, that they wrote “I have a pet parrot” on their

survey forms. In repeating this survey, I would add this as an answer choice for the first question (Appendix B).

Action Steps

The survey results from this project have provided us with valuable information about our programs. The dramatic increase in a positive attitude towards parrots that resulted from the naturalistic presentations has helped us re-examine how we present the animals when in public. We have already made changes to our classroom presentations, and will continue to incorporate similar actions and ideas into our other programs. One concept that we have discussed is the idea that “the wild” might be considered a scary place for many children, particularly those students served through a grant-funded program. This realization has helped guide the different ways we introduce “the wild” as home for these amazing animals.

While this project focused on students’ perceptions of parrots, I would like to implement similar evaluations for many of our other programs. The staff has been extremely excited to see the results of the surveys, and continue developing new ways to ensure we are doing our best to share positive conservation messages. Currently we offer almost 20 different classroom programs, grade-specific and designed around curriculum standards. We are hoping to evaluate the established learning objectives for each of the programs, although it will take time to get through all of them.

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Appendix A

Parrot presentation outline

The Parrot Presentation

Materials: macaw skull, feathers, fuzzy wings, picture of macaw, iPod, nut, parrot perch

- I. Baseline: Talk about macaws with a picture of a parrot and biofacts/props*
- II. Naturalistic: Talk about macaws with bird displayed on perch and display natural behaviors*
- III. Personal: Talk about 'Pele' displayed on hand and mimicking behaviors*

Outline

1. What is a parrot/macaw?
2. Why are they unique/what special adaptations do they have?
3. What is their role in the environment?
4. Survey: who thinks a parrot would make a great pet?

1. What do you all know about parrots or macaws? Macaws are amazing animals: smart, social, and very colorful! *Pass around feathers and:*

- I. Show picture*
- II. Display macaw on perch, cue 'wings' behavior with food reward*
- III. Display 'Pele' on hand, cue 'wings' behavior with 'Good Boy!' and food reward*

Parrots are highly intelligent and very social, living in large groups. They can make a variety of vocalizations, including loud calls:

- I. Play macaw call on iPod*
- II. Cue macaw to talk followed by food reward*
- III. Cue Pele: 'Hello,' 'Is that right?' 'Is that funny?' followed by 'Good Boy!' and food reward*

2. What is unique about parrots compared to other types of birds? They eat fruits, seeds, and nuts, using their powerful beak to crack open hard nuts:

- I. Pass around skull and nut; nut-cracking attempt with fuzzy wings on*
- II. Pass around skull; nut-cracking demonstration*
- III. Pass around skull; nut-cracking contest with fuzzy wings, 'Good Boy!' afterwards*

They use their beak like another hand to help them when climbing in trees. Their feet are also specially shaped to aid in climbing:

- I. Show picture again*
- II. Point out how macaw is sitting on perch*
- III. Point out how Pele is 'holding my hand'*

3. Why are macaws important to have in the wild? They help disperse seeds; their main predators are raptors such as harpy eagles that will attack them in flight. Many parrots are threatened and in danger of becoming extinct in the wild. Pet trade is a major cause - collecting parrots from the wild for the pet trade is incredibly harmful to wild populations. Parrots are truly wild animals, and make difficult pets. They are loud, bond to one person, chew up everything and live a long time!

- I. Show picture while saying thank you and goodbye*
- II. Return macaw from perch to crate*
- III. Have students wave goodbye to Pele with Pele 'wave' behavior and return him to crate with 'Good Boy!'*

Appendix B

Survey questionnaire (used for both pre and post surveys)

All About Parrots!

Someday, do you want to have a parrot as a pet?

YES

MAYBE

NO

Do parrots make a good pet?

YES

MAYBE

NO

I want to learn how to help wild parrots

YES

MAYBE

NO

Seeing a parrot makes me feel...(circle one face)



HAPPY



I DON'T KNOW



SAD

Seeing a parrot as a pet makes me feel...



HAPPY



I DON'T KNOW



SAD

Seeing a parrot in the wild makes me feel...



HAPPY



I DON'T KNOW



SAD