

Finding Out What Works: Using Feedback from Volunteers in a Regional Zoo-Affiliated, Wildlife and Conservation Education Program

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Background

Zoo Corps (ZC) is a volunteer youth program for high school students who are interested in pursuing opportunities to develop numerous skills such as learning and sharing information about various zoo animals, their habitats and conservation; working with young children and adults; public speaking; and customer service. All volunteers admitted to the program must complete a mandatory 9-weekend training regimen at the Woodland Park Zoo. A majority of the ZC activities take place during a 4-month summer session spanning May through August. In the autumn and winter more modest strands of the ZC program take place as well. During the summer session ZC members typically work alongside zoo staff and fellow volunteers at exhibits, behind-the-scenes, and in various indoor and outdoor educational 'stations' engaging visiting youth in activities intended to promote learning about animals and nature, delivering educational floor programs and providing on-grounds interpretative services.

Focus Statement

The focus of this study was to investigate student opinions regarding their ZC training and service experiences. As such the study sought to answer the following central questions:

1. What are the levels of student awareness and interest in relevant topics?
2. What knowledge of relevant information do students already possess?
3. How effective is the Zoo Corps training process?
4. What aspects of the training process are most in need of improvement?

Ultimately, the summarized and interpreted data-sets from this Capstone Project were made available to Zoo Corps and Woodland Park Zoo executives, administrators and managers for the purpose of helping to guide informed decisions concerning such issues as: what changes/improvements to Zoo Corps' program are warranted?, how might limited resources be better allocated in order to achieve prioritized objectives?, etc. In the interest of supporting the zoo's and Zoo Corps' intertwined missions, this report made recommendations and offered suggestions for improvement.

Conceptual Framework

The breadth and depth of knowledge acquired outside traditional school in informal contexts is significant (1). A wide range of Informal Educational Venues (IEVs) such as zoological gardens, aquaria, and nature centers provide unique out-of-school learning opportunities to youth including free choice to explore what is meaningful and interesting to them, collaborative and social learning experiences, and authentic practical experiences involving hands-on interaction with real objects, phenomena, and/or animals (2).

An oft-cited problem in traditional science education is student alienation. Among high school students, science classes tend to have reputations of being hard and —more to the point— students often view science as obscure and irrelevant to their concerns (3). In formal coursework, science is often decontextualized, stripping it of apparent relevance. In contrast, knowledge gained in a richer and more practical context tends to have an immediate salience such that it is more likely to be remembered and valued. A prominent feature of practical work is that it intrinsically provides a myriad of opportunities for students to recognize linkages between two 'domains' of knowledge: the domain of objects and observables and the domain of ideas. Another major factor that influences comprehension and retention is student engagement, because only a student who is interested in a topic or discipline will be prepared to expend the effort required to learn and understand new concepts, and to undertake the associated structured tasks (4). In this regard practical work in IEVs have been shown to foster significantly higher levels of engagement and positive attitudes among students than do traditional schools (5, 6).

Methodology

The Data Collection Instruments (DCIs) for this Capstone project were comprised of in-person & on-line survey, focus group interviews, and a journal of observations & reflection. It should further be noted that the study employed no treatment *per se*.

Data and Analysis

Student opinions gathered from two training cohorts revealed that a majority of ZC volunteers were highly motivated to contribute to both the design and execution of interpretive resources at the zoo. Analysis of the data revealed clear trends in preferences for training methods and attitudes toward ZC activities, coworkers and zoo visitors. Comparative analysis of responses to questions on the End-of-Summer On-Line Survey is summarized in Table 1. In addition, ZC volunteers offered suggestions and constructive criticisms that together provide an important perspective to consider when making future decisions about the zoo's interpretive resources and the ZC program.



Table 1. Hands-On Activities ranked as the most valuable training method, with Icebreakers ranked as the least valuable.

Training Method	Ranking					
	1 (Most Valuable)	2	3	4	5	6 (Least Valuable)
Lectures	2.3% (1)	6.8% (3)	31.8% (14)	27.3% (12)	18.2% (8)	13.6% (6)
Demonstrations	14.6% (6)	36.6% (15)	26.8% (11)	12.2% (5)	4.9% (2)	4.9% (2)
Hands-On Activities	75.6% (34)	13.3% (6)	6.7% (3)	4.4% (2)	0.0% (0)	0.0% (0)
PowerPoint Presentations	2.1% (1)	10.4% (5)	10.4% (5)	22.9% (11)	31.3% (15)	22.9% (11)
Tours Led by Interns	10.6% (5)	27.7% (13)	17.0% (8)	21.3% (10)	17.0% (8)	6.4% (3)
Icebreakers	0.0% (0)	10.6% (5)	12.8% (6)	10.6% (5)	23.4% (11)	42.6% (20)

Interpretation and Conclusion

- ✓ There are significantly more female volunteers in Zoo Corps than males. Which begs the obvious Question: Why is that the case? It would probably be advisable to explore this question further in order to identify the factors that contribute to this gender disparity.
- ✓ The trend of student preferences for training methods was clearly revealed, with Hands-On Activities emerging as the overwhelming favorite, followed by Demonstrations and Tours Led by Interns.
- ✓ A majority of students expressed a self-perception of themselves as interactive-participatory learners.
- ✓ In comparison to communicating information about wildlife, which a majority of students felt they were well equipped to do, a significant majority (~2/3rds) felt that communicating information on wildlife conservation was more difficult.
- ✓ After completion of Zoo Corps training and participation in the summer cycle of activities, all Zoo Corps volunteers perceived a significant increase in their own knowledge about, and understanding of, both conservation and animals.

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