

ABSTRACT

- The aim of this project was to study visitor behavior in the Living Treehouse at Zoo Atlanta. Visitors spent significantly more time watching animals than reading signage. Limited interaction with relatively static displays may not lead to the intended change in knowledge and conservation attitudes among zoo visitors.

INTRODUCTION

- Visitor education & wildlife conservation are important goals for zoos (Hosey, 2005).
- Given these goals, it is important to conduct research on zoo visitor behavior, with an emphasis on assessing visitor interest at various exhibits in a zoo (Davey, 2006).
- It is also important to conduct research on whether visitors utilize conservation and educational displays at zoos (Dierking et al., 2002).
- Goal of present study:** To study visitor behavior in the Living Treehouse at Zoo Atlanta and to determine whether visitors utilize conservation and educational displays.
- Findings can be used in the development of future displays & modifications to existing displays at the zoo, with an aim toward meeting conservation & education goals.

METHOD

- Participants:** 131 visitors to the Living Treehouse at Zoo Atlanta.
 - Women (70.23%) and men (29.77%).
 - Social groups:** Solitary visitors (3.88%), visitors with multiple adults (37.98%), and visitors with minors (58.14%).
 - Age groups:** young adults (18-40 yrs; 74.05%), middle-aged adults (40-65 yrs; 22.14%), and older adults (> 65 yrs; 3.82%).
- Data collection:** Unobtrusive naturalistic observation using Samsung Galaxy® tablets equipped with Noldus Pocket Observer® software for precise timing-and-tracking measurements.
- Data collected over a 16 week period (from July to November, 2014).

DATA ANALYSIS

- Two-way analysis of variance and correlational analyses. All tests were two-tailed. Alpha was set at 0.05.
- Measures of visitor interest:
 - Attracting power (the percentage of visitors engaged with a display).
 - Holding power (the average amount of time visitors spend at a display).

RESULTS

- Average visit duration in the Living Treehouse was 98.13 seconds (ranged from 1.6 to 897.3 seconds, SD = 92.8).
- Approximately 34% of visitors read conservation displays and watched animals on exhibit. This subset of visitors spent significantly more time watching animals than reading displays [$F(1, 44) = 15.62, p < 0.001, \eta^2 = 0.26$].
- There was a significant relationship between attracting & holding power, indicating that displays that drew more visitors, tended to hold visitor interest for a longer period of time [$r(14) = 0.71, p < 0.002, r^2 = 0.50$].
- Attracting and holding power were highest for the monkeys on exhibit.

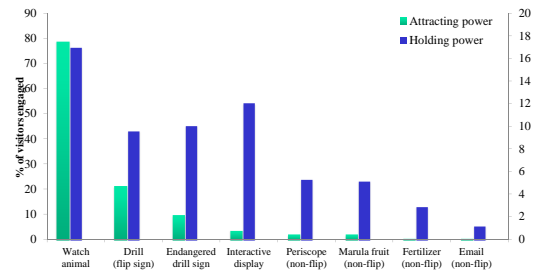


Figure 1. Attracting & holding power for different displays

Table 1. Mean duration of time (seconds) different age groups and social groups spent in building, reading descriptive and conservation signs, and watching animals.

		Multiple adults	Adult(s) with minor(s)
Duration in building	Young adult	$M = 86.02$ $SD = 54.25$	$M = 113.31$ $SD = 122.86$
	Middle adult	$M = 88.07$ $SD = 52.84$	$M = 92.03$ $SD = 52.14$
Descriptive signs	Young adult	$M = 15.71$ $SD = 14.32$	$M = 11.78$ $SD = 14.14$
	Middle adult	$M = 11.60$ $SD = 9.24$	$M = 6.00$ $SD = 2.68$
Conservation signs	Young adult	$M = 19.92$ $SD = 18.32$	$M = 10.91$ $SD = 8.14$
	Middle adult	$M = 9.17$ $SD = 8.20$	$M = 10.84$ $SD = 12.26$
Watch animals	Young adult	$M = 41.18$ $SD = 30.03$	$M = 35.80$ $SD = 25.27$
	Middle adult	$M = 39.33$ $SD = 31.21$	$M = 45.02$ $SD = 30.77$

Table 2. Main effects and age*social group interactions for time spent in building, reading descriptive and conservation signs, and watching animals.

	<i>F</i>	<i>df</i>	<i>p</i>	
Duration in building	Age group	0.21	1, 115	0.65
	Social group	0.56	1, 115	0.46
	Age group * Social group	0.31	1, 115	0.58
Descriptive signs	Age group	1.20	1, 44	0.28
	Social group	1.12	1, 44	0.30
	Age group * Social group	0.03	1, 44	0.85
Conservation signs	Age group	1.31	1, 40	0.26
	Social group	0.60	1, 40	0.44
	Age group * Social group	1.28	1, 40	0.27
Watching animals	Age group	0.30	1, 93	0.59
	Social group	0.00	1, 93	0.98
	Age group * Social group	0.68	1, 93	0.41

DISCUSSION

Time spent in the Living Treehouse

- No differences among different age and social groups in the duration of time spent reading displays and watching animals, unlike previous studies in which visitors with children were less engaged with exhibits/signage when compared to visitors without children (e.g., Mallavarapu et al., 2014). It may be difficult to find significant differences between the different groups because visitors spent very little time in the Living Treehouse.
- Visitors spent more time watching the animals on exhibit than reading the displays.
- Conservation displays may not attract and hold visitor attention if live animals are exhibited in the same building, as suggested by Ross & Lukas (2005).
- Static signage (non-flip signs) had the lowest attracting and holding power.
- Although the interactive (push-button) display did not attract many visitors, the visitors who did interact with it were engaged for a longer duration (relative to other signage).
- Previous researchers have also found that zoo visitors are more engaged with interactive displays, when compared to static signage (e.g., Derwin & Piper, 1988).
- Recommendation:** Interactive displays (instead of static signage) separated from animal exhibits may be more effective in attracting and holding attention and delivering conservation and educational messages to a wide audience.

Future directions

- Analyzing visitor survey data to complement the behavioral data.
- Expanding to other exhibits throughout Zoo Atlanta.

REFERENCES ON HANDOUT

Acknowledgements: Siggie Bohannatrawn, Melanie Clinton, Allison Dawson, Hannah Dollinger, Sarah Dutton, Vanessa Pedroni, Vanessa Ragland, Tori Sowell, Samantha Sturdevant, and Nissa White. Poster presented at the 20th Annual Symposium of Student Scholars at KSU and the 14th Georgia Undergraduate Research in Psychology Conference, April 2015.

References

- Davey, G. (2006). Visitor behavior in zoos: A review. *Anthrozoos*, 19(2), 143–157.
- Derwin, C. W., & Piper, J. B. (1988). The African Rock Kopje Exhibit: Evaluation and interpretive elements. *Environment and Behavior*, 20, 435–451.
- Dierking, L. D., Burtnyk, K., Buchner, K. S., & Falk, J. H. (2002). Visitor learning in zoos and aquariums: A literature review (AZA Report). Retrieved from http://www.izea.net/education/AZAVisitor_Learning_in_Zoos_Aquariums_Literature_Review.pdf
- Mallavarapu, S., Davis, A., Holt, H., Mitchell, L., O'Neal, A., Sturdevant, S., & Von Stein, H. (2014). Visitor behavior in the World of Reptiles at Zoo Atlanta. *Poster presented at the 2014 annual conference of the Association of Zoos and Aquariums, Orlando, FL.*
- Ross, S. R. & Lukas, K. E. (2005). Zoo visitor behavior at an African ape exhibit. *Visitor Studies Today*, 8, 4–12.

Questions? Contact Dr. Suma Mallavarapu at smallava@kenensaw.edu