Center for Research on Lifelong STEM Learning

Collecting Demographic and Behavioral Data through Stationary and Hat-Mounted Cameras

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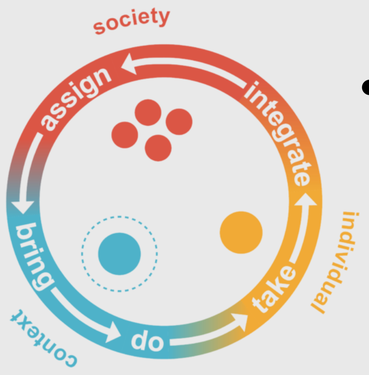
INTRODUCTION

Oregon State University used stationary cameras to characterize visitor demographics, and head-mounted GoPros to capture visitor's conversations and decision making behaviors.

This study is part of a broader collaboration between three research teams to understand how visitor agendas, behavior, and learning relate to the conservation education agenda of most zoos and aquariums (Z/As). You can read more at: **http://wzam.org**



RESEARCH QUESTIONS

What are the entry characteristics of visitors and how do these characteristics play out in terms of behaviors during the Z/A visit?

1. How do visitors make choices about what to experience during the visit?
2. How do these choices link to "learning behaviors"?

THEORETICAL CONTEXT

- Contextual model of learning (Falk & Dierking, 2000; Falk & Storksdieck, 2005)
- Integrated Experience Model (Storksdieck, 2006)
- Visitor-based learning framework (Barriault & Pearson, 2010)

DATA COLLECTED

Post-Interviews (61 interviews)
- Behaviors
- Adherence to plans
- Decision making
- Perceived mission of Z/As
- Learning re: group & self

Head-mounted GoPros (70 recorded visits)

Pre-Visit Interviews (62 interviews)
- Demographics
- Motivation
- Plans
- Typical visit
- Perceived mission of Z/As

Entry videos (118 hours)
- Demographics

GOPROS: A VISITOR'S EYE VIEW

Recordings from 70 visits across 6 sites coded for:

Time spent…	Time engaged in…	Time spent talking about…
• at exhibits • in transit	• meaning making • wayfinding • decision making	• conservation • animal welfare • emotions

Preliminary Coding and Calculating

- **Team of coders** trained w/ est. protocol
- **Calculations automated** w/ Excel (e.g. elapsed time, % of visit spent doing X)
- Coding **non-deliberate (vs. deliberate) decision making is difficult**, because those behaviors are subtle and ingrained in us

PRELIMINARY FINDINGS and LESSONS LEARNED

- For timing and tracking, **interrater reliability: present (1) /not present (0)**
- Visitors **engage in some meaning-making talk when not at exhibits** (e.g. in transit, in giftshop, between exhibits).
- White visitors, female visitors, & some age categories were **over-represented in our sample** (e.g., younger than 5, 5-9, 25-34, 35-44; as compared to US census)
- Most groups (67%) in our sample were **visiting with children**
- Adult Groups: Most **common group size was 2 & age was 25-34**
- Groups with Children: Most **common group size was 3 & age was 25-34**

"On a scale from 1 to 5 (1 = not important and 5 = very important), how important do you think each of the statements are to the mission of zoos and aquariums?"	**Entry Ratings (n=77)**
To provide public with **educational experience**	4.8
To **protect critical habitat,** endangered, and threatened species	4.7
To provide public with **connections to the natural world**	4.7
To provide public with **entertaining and enjoyable experience**	4.7
To provide **direct encounters** with nature and wildlife	4.5
To improve **public understanding of science**	4.4
To be l**eaders in sustaining and protecting** the environment	4.4

What do you think is the mission of zoos and aquariums? (N=77)	**Entry**	**Exit**
Education	42%	39%
Conservation	40%	46%
Direct Encounters & Interactions	7%	9%
Entertainment	5%	3%
Multiple, Complex Goals	0%	1%
No response / I don't know	7%	3%

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