

Experiments in Noticing The Noticing Tours

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THIS IS NOT A DEFINITIVE FINAL REPORT

FORMATIVE evaluation studies like this one often:

- **are conducted quickly**, which may mean
 - small sample sizes
 - expedited analyses
 - brief reports
- **look at an earlier version** of the exhibit/program, which may mean
 - a focus on problems and solutions, rather than successes
 - a change in form or title of the final exhibit/program

Outdoor Exploratorium Experiments in Noticing The Noticing Tours

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PURPOSE

This evaluation study gauges what visitors found interesting for four of the expert-led tours offered during the Outdoor Exploratorium's all-day event of October 16, 2004. These tours are:

- Topography led by David G. Howell of the US Geological Survey
- Mushrooms around the Exploratorium led by Ken Litchfield of the San Francisco Mycological Society
- Forensics Walk led by Peter Barnett of Forensic Science Associates
- Poetry Walk: Noticing the Wor(l)d led by Sarah Rosenthal

In addition, we looked to see 1) if and how each tour encouraged visitors to notice the outdoors in a new way, and 2) if visitors found anything confusing or disappointing about each tour.

METHOD

- There were 7 different tours, each offered twice throughout the day, as part of the Outdoor Exploratorium: Experiments in Noticing Event. Because of the number of tours, many of which ran concurrently, the Outdoor team decided to focus on only 4 of these tours:
 - Topography
 - Mushroom
 - Forensics
 - Poetry

These tours are described in Appendix A.

The tours we decided *not* to evaluate were:

- Crissy Field – this tour is offered regularly at Crissy Field
 - Blind-folded Walk – this tour was part of a Listening Forum and data were collected about how and what visitors noticed as part of that event
 - PFA – the Outdoor team had explored this content area with the Then and Now Noticing tour in the previous year
- To participate in any tour, visitors were asked to sign up beforehand at an outside table at the entrance to the Exploratorium. Visitors who signed up for one of the tours to be evaluated were asked if they would be willing to give us some feedback after they had

finished the tour. Visitors who agreed received a green dot; visitors who declined received a black dot.

- Evaluators intercepted each tour before it ended and waited for the tour to finish. We then asked visitors wearing a green dot a short set of questions (see Appendix A). These questions applied to all the tours. That is, there were no questions specific to one or a subset of tours. Because some people would join a tour without signing up and because there were only a few participants on certain tours, we also approached people who had neither a green nor a black dot.
- This method allowed us to interview most visitors who went on the tours. However, because of the low turnout, we did not have many respondents. The following gives the tally of interviews for each tour

Tour	Group Type	Count
Forensics	Adult (individual)	2
	Family	4
	Total	6
Mushroom	Adult (individual)	1
	Adult (peer group)	1
	Family	1
	Total	3
Poetry	Adult (individual)	3
	Adult (peer group)	1
	Total	4
Topography	Adult (individual)	2
	Total	2

RESULTS

Because each tour differs in content and approach, we will look at the data for each tour separately.

Forensics Tour

What visitors liked best

- The activity of finding and marking clues
 - Forensics4- F1: Marking the evidence.
 - M1: Marking the evidence and

Forensics5- Girl: When we got to put markers on the places. [What made it the best?]
Because you got to talk about it and find out things about it.

Forensics6- F: It was interactive, you got to look for clues.

- The format of the expert-led tour (the leader and the group)
 - Forensics2- M2: The interactivity - that you get to talk with the guy. And that it was a small group.
 - Forensics4- F: I thought it was very clever and great - good size group and a good age group on the tour. It was well organized, and Peter was very knowledgeable.
 - Forensics3- He did a good job aiming his talk to the kids. It teaches them some critical thinking skills.
- Learning about evidence
 - Forensics1- Connecting evidence to the crime. It made it interesting to connect the two together.
 - Forensics4- learning about the evidence, why it's important.
 - M2: Trying to create the story around the evidence.
- Believability of the crime
 - Forensics2- F1: They were believable scenarios. My brother still thinks it's a real crime.
- Its uniqueness
 - Forensics6- M: It was interesting, it was unique.

Did visitors feel the tour helped them notice the outdoors in a different way

- All 6 groups interviewed thought that the tour either helped them notice or learn something new or helped them notice in a new way.
- Visitors described something new they noticed outdoors
 - The rotunda
 - Forensics4-M2: I noticed how much rubbish is around.
 - Forensics6-M: I noticed more litter.
 - The litter
 - Forensics2-F1: That the dome thing is new.
 - Forensics2- M2: ...that the rotunda is so beautiful.
 - Weddings
 - Forensics3- ...so many weddings are done here. You know, I've never walked around the grounds here.
- Visitors said they learned something new about forensics. These are information they learned and not necessarily something they observed outdoors.
 - Forensics2- F1: ...it took so much to put the evidence together.

Forensics2- F2: ...I didn't realize forensics isn't like CSI. The leader said that.

Forensics2- M1: ...a burglar could be so stupid, to leave all this evidence.

Forensics4- M2: ...so many THINGS make up forensic investigation.

Forensics5- Girl: that sometimes people dress up and mug people.

Forensics6- you could identify someone through bite marks from an apple.

- One person talked about the social interactions on the tour
 - Forensics2- F1: ...my brother could be so annoying.
- Visitors also talked about a changed perspective
 - Looking at evidence and crime
 - Forensics1- No. Maybe from a looking for crimes perspective ... Just noticing things out of the norm.
 - Forensics4-Oh yes. F: there are things around that can link to crime.
 - Being more observant
 - Forensics3-Looking with a critical eye - keeping a tighter focus on your surroundings...You notice things you'd normally not notice.
 - Forensics4-M1: It got me to be more observant.
 - Forensics4- F: ...you can notice so many things you never would have noticed... it just makes you look down as well as up - all the stuff down around your feet.
 - Forensics5- Man: that if you pay attention you can figure things out that you didn't know you could.

What visitors found confusing or disappointing

- What was staged
 - Forensics5- Man: The difference between the fiction and reality. The kids hoped we would be arresting someone in there! [Laughs]
- The tour was too long
 - Forensics6 - M: It's long for little kids which is why we left early, otherwise we would have stayed.

Poetry Workshop

What visitors liked best

- Writing and sharing
 - Poetry3-W2: I liked the writing exercise. It was challenging.
 - Poetry4-Listening to expressions (poetry) of participants.

- A different experience at the Exploratorium
 - Poetry1-Seeing the museum in a different way - I'm here all the time - but decided to take a new, different route on this tour.
 - Poetry2-I liked seeing different examples of poems, it's a different exposure to art in this venue - then bringing it back into the science environment here.

Did visitors feel the tour helped them notice the outdoors in a different way

- Although all the visitors thought the tour helped them notice in a new way, 2 out of the 4 visitors interviewed did not mention anything about the outdoors. In fact they did the activity entirely inside the Exploratorium.
- The visitors who did go outdoors, talked about:
 - Poetry1-I had never really explored the rotunda - but now I'm thinking of using part of it for personal reflection.
 - Poetry4-The quiet. I'm sometimes overwhelmed by the bombardment of urban noise. I was surprised I didn't actually HEAR the noises.
- Visitors also described what they learned about themselves
 - Poetry4-I could be drawn out and in a way that allowed me to let down defenses and express intimate feelings.
 - Poetry3-W2: Not the outdoors, but I saw the way I could express what I was doing in a new way... that I would be able to take small classes and learn more about poetry after school and on a whim.
- Visitors mentioned that the tour helped them take another look at their surroundings, though not necessarily the outdoors
 - Poetry1-Seeing the museum in a different way - I'm here all the time - but decided to take a new, different route on this tour...how much is really going on outside the museum - I'm usually oblivious to the outside, I don't notice it because I don't need to, I'm much more tuned in to the inside part of Exploratorium.
 - Poetry2-I didn't actually go outdoors - I did my noticing on the mezzanine, but it got me to notice my environment, definitely.
- They made specific mention of the technique, putting thoughts to paper, that helped them notice differently
 - Poetry2-The wandering part - but wandering with a specific intent...I was conscious that I'd have to write it down - so was verbalizing as I went...I could create a new poetry style by wandering around the Exploratorium.
 - Poetry3-W2: In terms of putting it from thought to paper.
 - Poetry4-Walking slowly, simply listening, "being."

What visitors found confusing or disappointing

- The format (not interactive enough, not enough group interaction)
 - Poetry1- Maybe not disappointing - but I did think, or maybe expect to do it as a group, with everyone contributing. But I'm not disappointed about it.
 - Poetry2- I wish there was some little further activity after reading our poems out loud. It was a little anticlimactic.
 - Poetry3- W1: I thought it would be more interactive. I thought it would be more of a led tour than going on your own.
 - W2: We didn't do a tour. It wasn't what I was expecting. It wasn't bad, though.

MushroomWhat visitors liked best

- Learning about mushrooms
 - Mushroom1-I liked the beginning - the intro to the mushrooms laid the groundwork for the tour, and was really interesting.
 - Mushroom3- And the interesting stories, what is poisonous, what you can eat, and where to look for them.
- Finding the mushrooms
 - Mushroom3-Finding the mushrooms.
- The tour leader
 - Mushroom2- He was clear. [Liked] the explanations the best.

Did visitors feel the tour helped them notice the outdoors in a different way

- All three groups interviewed thought the tour helped them notice something new about the outdoors.
- In particular, they mentioned
 - Things they observed
 - Mushroom1-When we were looking at conditions, and talking about where to look for different types of mushrooms ...there would be such a variety of mushroom right under your nose.
 - Mushroom2-I didn't know about the mushrooms around here. I think it's good for the young [people].
 - Information they learned
 - Mushroom3-F: That if you eat a deathcap you'll die or need a liver transplant.

- One person described how the tour helped them take a more careful look
Mushroom3-F: Next time I'll look around carefully.

What visitors found confusing or disappointing

- Wanted more information
Mushroom1-I would be more interested in finding out about what families the different mushrooms are in, so this just piqued my interest - I may google some information tonight.

Topography

What visitors liked best

- Learning the content
Topography1-Seeing the map of the bay underwater. The overall geological story was very interesting.
Topography2-Learning about the immediate bay area.

Did visitors feel the tour helped them notice the outdoors in a different way

- Both visitors interviewed thought the topography tour helped them notice the outdoors.
- They talked about the information they learned on the tour about the area they saw
Topography1-...they were blowing up mini islands in the bay. I also never realized that there was no water ten thousand years ago and that water from the Sierras used to flow through Monterey Bay.
Topography2-...two different types of rock make up the majority.
- The tour also helped visitors realize that there was more that meets the eyes in their outdoor environment
Topography1-The main thing was it impressed upon me that there are clues all over about how the earth was formed. Seeing all the pictures really helped tell a geological story.
Topography2-Things like looking at the slope of the hills, how that extends underwater. How much things have moved, things weren't where they are now. I realized there was movement, I didn't realize how much.
- The two visitors also talked about noticing techniques, such as
Topography1-The idea that you not just look at shape and composition of the rocks.
Topography2-Taking a closer look. Slowing down to actually look.

What visitors found confusing or disappointing

- Neither visitor interviewed found anything confusing or disappointing about the tour.

DISCUSSION AND SUMMARY

- In general, visitors believed that the tour they went on helped them to notice something new or encouraged them to notice in a new way. However, what and how they noticed varied greatly between tours, which themselves varied in content and approach.
- Not surprisingly, tours that focused on a specific aspect of the outdoors (particularly, the Topography and the Mushroom Tour) encouraged visitors to explore that specific content area. Visitors talked about learning the content, and noticing anew usually referred to noticing something about that particular subject area. Even when they did talk about techniques of noticing, these techniques were very specific to the content area.
- Of the four tours we looked at, the Poetry Tour was the least focused on content and the most focused on a particular technique for noticing the outdoors anew. Visitors talked about how the process of writing and sharing made them look again not only at a particular area but also at themselves. Unfortunately, the tour spent most of its time inside the Exploratorium, and 2 of the 4 visitors we interviewed did not actually go outside and, consequently, what they noticed did not have anything to do with the outdoors. Yet, writing and sharing poetry seems to be a promising technique of helping visitors explore and reflect in general.

Next Steps

This study is the last of a set of evaluation studies that looked at how visitors notice on Noticing Tours. The tours in this study represent tours that are expert-led and heavily mediated as compared to other forms of Noticing Tours we have tried in the past, which have included self-guided tours as well as more open-ended forms of exploration. Originally, Noticing Tours were envisioned to be a way by which we can begin to collect initial data about what and how visitors notice the outdoors and to experiment with different ways of helping visitors notice the outside world. They allowed us to do this without a designated site and without committing resources to building exhibits. However, Noticing Tours proved to be a difficult tool to use to collect front-end and research data for several reasons.

- It was difficult recruiting visitors for Noticing Tours, especially since many of the tours required a long (more than 30 minutes) time commitment particularly for visitors who had paid to spend time inside the Exploratorium.
- Noticing Tours, although requiring different levels of mediation, nonetheless, cannot stand alone and requires some staff facilitation. In addition to the staff time for mediation, putting together a Noticing Tour also required a bit of planning, content research, and development. This makes changing a Noticing Tour as difficult as changing any stand-alone exhibit to research different alternative to foster noticing.
- Getting feedback from visitors after a Noticing Tour was often difficult because we had trouble even recruiting people for the tours and afterwards, we had little time to interview visitors who already had spent quite a bit of time on one activity.

- We were always at the whim of the weather. Although this is something the Outdoor Exploratorium must contend with, the Noticing Tours were scheduled in advance and last minute cancellations were particularly costly when it came to staff time.
- Noticing is very specific to content and location. Findings from Noticing Tours are, therefore, specific, and we may be hard pressed to generalize our findings.

Given these limitations and given our new charge to implement a dispersed Outdoor Exploratorium, we will be actively investigating other methods of collecting information about what and how visitors notice the outdoors. These methods will take on a more formative nature and may use design research around tools, exhibits and exhibit clusters instead of Noticing Tours.

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APPENDIX A

Noticing Tour Descriptions

These are the descriptions we gave visitors to the Exploratorium.

Mushrooms around the Exploratorium

Led by Ken Litchfield of the San Francisco Mycological Society

Learn to locate and identify local mushrooms, including *shaggy parasols* and *chicken of the woods*. Learn how to determine which fungi are delectable, poisonous, or just plain fun to investigate.

Forensics Walk

Led by Peter Barnett of Forensic Science Associates

Explore a scene and investigate how forensic scientists recognize objects as “evidence” or ignore them as mere “stuff.” Learn how to recognize objects as evidence, preserve their value, and individualize their unique history contributing to the story of *what happened*.

Topography

Led by David G. Howell of the U.S. Geological Survey

Travel back 100 million years and learn about the forces and events that have shaped the Bay’s striking terrain. Discover how tectonic forces are still active in determining the future of the Bay.

Poetry Walk: Noticing the Wor(l)d

Led by Sarah Rosenthal

We use words all the time without really thinking about them. Yet for poets and other creative writers, words are the basis of an art form. The key to using language creatively is paying attention. On this noticing tour, we’ll use our five senses to notice our world and our words in fresh ways. Together we’ll explore the connections between noticing and creating.

APPENDIX B***Interview Questions***

1. Which tour did you take? Was it the...
 - mushroom tour
 - forensics tour
 - topology tour
 - poet walk
2. What was the best part of the xxx tour for you?
3. Did any part of the tour get you to notice the outdoors in a new way?
4. Which part of the tour?
5. What was new about the way you noticed the outdoors?
6. Was there anything disappointing or confusing about this tour?
7. Could you finish this sentence: "I didn't know, or I never realized that..."