

Built-in Antennae: Exhibit Floor Staff as Evaluation Resources

by Eric Siegel, Ryan Hill, Elizabeth Kunz Kollmann, and Carey E. Tisdal

Introduction

Floor staff of museums—Explainers, instructors, volunteers, even security and exhibit maintenance staff—are in touch with the public every day. They can provide sustained, diverse, and detailed input to developers, educators, and other museum decision makers about the affective, pedagogical, and operational qualities of exhibitions and programs. This session explored a variety of strategies for capturing this valuable information.

New York Hall of Science Explainers in Evaluation

by Eric Siegel

The New York Hall of Science's Science Career Ladder (SCL) is a 20-year-old program of sustained youth development, education, and employment. Over these two decades, the program has evolved into a hierarchy of education and employment experiences that has proven remarkably successful in a number of domains. First, the high school and college Explainers—as the participants in the SCL are called—reflect the diversity of our surrounding community of Queens, the most ethnically diverse county in the country. Second, Explainers stay in the SCL for an average of over 2 years and virtually 100% of the high school participants go on to college. Third, visitor surveys repeatedly demonstrate that Explainers are among the most well received aspects of the Hall of Science's offerings.

Explainers work on the exhibition floor interacting with visitors. They are encouraged to participate in all areas of the museum's

public experience, from greeting school buses to interpreting exhibitions to conducting demonstrations and supporting lab spaces. They are smart, opinionated, committed to the Hall of Science's work, and they receive significant amounts of training in communication skills. They are *not* chosen because they have a strong pre-existing interest in science, so they can relate to visitors' level of understanding. For all of these reasons, Explainers are a valuable resource for exploring visitor response to our exhibitions and programs.



Young visitors learn about balance at the New York Hall of Science's Science Playground. Explainers work closely with visitors as facilitators for inquiry learning. Courtesy of the New York Hall of Science.

Until recently, Explainers' opinions were gathered anecdotally, through informal conversations with exhibition developers and educators. Over the past three years, we have begun to make systematic efforts to

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capture explainer input into exhibition and program evaluation.

In 2004, the Hall of Science opened several new exhibitions, including one called **Connections: the Nature of Networks**. This is a complicated exhibition based upon the emerging cross-disciplinary science of networks, and held many challenges for the developers. People, Places and Design Research conducted a remedial evaluation process with the goal of identifying the learning experiences in **Connections** that were most susceptible to improvement from the visitors' point of view.

A series of interviews with Explainers was a central part of the evaluation. The interviews included participants with different levels of experience, from novice Explainers to senior Program Explainers. The responses reflected an extraordinary level of engagement and commitment to responding to public understanding of exhibition elements. While Explainers had favorite (and least favorite!) components, they were able to identify user input with remarkable clarity. The Explainers' responses were validated by user feedback gathered through a series of focus groups.

A second effort to engage Explainers in exhibition evaluation was a museum-wide effort to identify the most and least effective of the 400+ individual exhibit components that populate the Hall of Science. The exhibits range in age from 40 years old (Charles and Ray Eames' marvelous *Mathematica*) to less than one year old. The Hall's management team was looking for a quantitative basis to assess the effectiveness of exhibits across a range of criteria. We created a questionnaire for Explainers in which we asked them to rate each

exhibit element from 1-5 along seven criteria: Popularity, Condition of Exhibit, Reliability, Educational Value, Ease of Explaining, Usability, Text.

We had 22 completed sets of sheets (each set was more than 20 pages long), with literally thousands of data points. We entered each sheet into web monkey and then exported it to excel for data analysis. We used a range of statistical analyses to make comparable ratings for individual components, and to aggregate them for whole exhibition areas. This took more than 80 person hours. In the final analysis, the ratings clustered very closely around a mean, and the differences among most individual pieces were not significant enough for decision-making.

As a result of these two approaches to capturing explainer input for exhibition and program evaluation, we have concluded that qualitative approaches to information gathering, including interviews and focus groups, are more effective than quantitative approaches. We continue to harvest the expert, insightful, and passionate reactions that Explainers have about the public experiences at the Hall.

The Gallery Guide Program— The Solomon R. Guggenheim Museum: A Case Study in the Value of Feedback by Ryan Hill

The Guggenheim Museum's Gallery Guide program was established in March 2005 as a joint venture among the Education, Security, and Visitor Services departments. The initiative has been widely publicized for its innovative



Guggenheim Museum Gallery Guide gives directions in the Zaha Hadid exhibit. Guggenheim Museum, New York.

approach. Rather than offering standard tours, guides approach visitors who appear to have questions and engage in dialogue with them about what is on display. The program's goal was to improve the visitor experience by hiring arts professionals and cross-training them in education and security duties. While this occurs unofficially in many museums, one unique aspect of the Gallery Guide program was that its origins were informed by both visitor and front-line feedback. Admittedly the surveys we self-administered were basic during this pilot phase. We began with postcards for visitors to fill out. In time, this strategy gave way to progressively detailed visitor tallies. These daily tallies gave us quantitative and qualitative information about museum visitors. The information was gathered by the Gallery Guides and tabulated by Education for reports on the program's progress. While our means may seem primitive to those with a background in statistics, I cannot emphasize enough how instrumental the data were in understanding visitor psychology, training Gallery Guides how to use it, and making their role more flexible. The following will outline the impact of these informal surveys on the early stages of this unique program.

Back Story: Making Connections

During the Guggenheim's 2004 Matthew Barney exhibition, the artist transformed the entirety of the museum by integrating almost ten years of work into a multi-media installation. Unfortunately when visitors entered this exhibition with traditional expectations, they were perplexed by imagery that was provocative but hermetically sealed

in an internal narrative referencing all kinds of visual culture, literature, medicine, and esoteric history. This is a familiar challenge for many contemporary art museums and was hilariously lampooned in a Ros Chast cartoon in *The New Yorker* magazine. While senior staff was unfazed, one of the museum's deputy directors reported his friends were simply not "getting it." Education's response was to put contracted educators, currently employed to give special tours, on the floor to answer visitor questions. It was important to measure the value of this temporary solution in order to know how effective a full-fledged program could be over time. We used postcards that could be mailed after an interaction that gave us some visitor demographics and pull-quotes. In time the need for an informed gallery presence dovetailed nicely with Security's need to improve customer service. Thus the Gallery Guide Program was born just in time for *Eye of the Storm*, an exhibition for which the artist Daniel Buren literally emptied the museum of its possessions in order to focus on its physical presence.

Gallery Guide Program: The Feedback Loop

Gallery Guides use what might be called a visitor "feedback loop," a combination of inquiry and active listening that informs their conversations in order to gauge a visitor's prior knowledge. This allows them to customize the information they provide while discussing an artwork. There is an interesting correlation between this technique and how over time the results of our postcards and tally organically informed the development of the program. Once visitor feedback was reviewed it could influence the program to be more flexible

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and responsive. Working this way with an education/security hybrid program changed the way security was previously done in the museum. It allowed for rotating positions, varying work schedules, casual uniforms, and the option of a roving rather than stationary security post. While certainly this kind of data gathering has inherent bias, factoring in the visitors' needs redefined the original idea of the position so it could be more educational.

Another evaluative process near the end of the pilot period was the use of small journals many of the Gallery Guides kept in their pockets to record their thoughts. Rather than deeming these journals a distraction, writing in them became part of the job. An ambitious intern created a system by which the Gallery Guides recorded different hatch marks to tally their variety of interactions, successful visitor approaches, and frequent questions and complaints. This information was to be disseminated to Education, Visitor Services and Curatorial as a barometer of the visitor's experience, but proved to be too excessive a task to be supervised on a regular basis. Thus the journals became less important once the program was sanctioned and stabilized.

Conclusion

The development of the Gallery Guide program was in no way easy and systematic. There were changes in personnel, resistance to change, and problems with new hires that needed to be worked out over time. While senior staff recognized the value of this pilot program it wasn't considered a unique feature until it received press. The media attention reflected the program back to the museum, as well as the public, and showed how special it was to invite the public to engage in informal dialogues

with professional staff. As the Gallery Guide program continues, we hope that front-line staff will continue to be used as a resource for understanding visitor psychology and for bolstering visitors' confidence in their own experience of art.

Collecting Visitor Data from Staff: Methods, Benefits, and Drawbacks by Elizabeth Kunz Kollmann

Many museum staff, including program developers, educators, and maintenance workers, come into contact with visitors on a regular basis and could be used as sources of information about visitors. There are many reasons why it makes sense to gather data from these staff: they interact with visitors; they affect the visitor experience; and they create visitor programming. This paper describes three recent research and evaluation studies conducted at the Museum of Science in Boston that used staff as data sources. For each study, the methods used and benefits and drawbacks of the information gathered will be described.

Case Study #1: Exhibit Maintenance Evaluation

The purpose of the Exhibit Maintenance Evaluation was to assess maintenance practices to discover ways to improve the experiences of visitors. Therefore, it was important to understand what maintenance staff report as broken in the Museum and understand how this compares to visitors' experiences. The study used weekly maintenance logs, which were already being collected by maintenance staff for the entire Museum, to learn what exhibits were

broken and the repairs these exhibits required.

There were many positive and negative aspects of the weekly maintenance log data. One of the biggest benefits was that staff was already collecting this data, so new practices did not need to be implemented. On the downside, it was discovered that logs were collected inconsistently. Sometimes logs were collected less than once a week, and sometimes maintenance workers were focusing on different maintenance issues. Another positive aspect of the maintenance logs was that they allowed for comparison between staff and visitors. Without these data there would be no way to know that staff and visitors had different maintenance priorities.

Case Study #2: NISE Forum Formative Evaluation

Nanoscale Informal Science Education (NISE) Forums bring people together to discuss societal and ethical implications surrounding nanotechnology. The purpose of the formative evaluation was to help program developers make informed decisions about future Forum directions. In this case, it was important to collect information from staff about whether they felt Forums were meeting their goals, and what changes they felt would improve the program.

Data were collected from staff through event and small group discussion debriefs. Event debriefs involved sitting down with current and future program staff and asking them what aspects of the Forum they felt worked well and insufficiently for themselves as implementers and visitors as participants. The small group discussion debrief involved watching a videotape recording of one small group

discussion with the same staff and asking them to discuss positive and negative elements of the discussion and how it could be improved.

There were many positive aspects of the Forum debriefs. Talking to staff gave them a chance to contemplate and solidify goals and pass lessons onto future program staff. Additionally, it gave staff a chance to discuss potential program changes. The only negative aspect of the data was that staff did not always have the same priorities as visitors.

Case Study #3: Engineering Design Facilitation Study

The purpose of the Engineering Design Facilitation Study was to discover how educators scaffold an engineering design activity for visitors. To do this, it was important to learn from education staff when during the activity they felt visitors needed help. These data were collected through a debrief that gathered educators together after they worked with visitors and asked them where visitors wanted and needed help and what parts of the activity were difficult and easy for visitors.

The positive aspects of this source of staff data were that staff were able to reflect on their practices and that evaluators were able to compare educator and visitor perspectives. Additionally, it was discovered that the educators had a good understanding of visitor needs. The negative aspect of this data source was that new information was not generated from this source after a few debriefs.

In conclusion, it is important to be careful about how staff data about visitors are used. The data in this article indicate that staff views about visitor experiences may not be internally

floor staff members have important perspectives to contribute to evaluation studies.

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consistent and may not be the same as visitors' views. However, collecting data from staff can be valuable for many reasons. It allows for the comparison of staff and visitor perspectives. Additionally, floor staff may have novel insights on their programs. Also, collecting data from staff allows them to reflect on visitor experiences. Finally and most importantly, collecting these data can lead to improved interactions with visitors and better programs.

When and How Are Floor Staff Perspectives Useful in Evaluation? by Carey Tisdal

This presentation provides a framework to identify when and how to use floor staff perspectives in evaluation. In general, floor staff members can provide valuable perspectives—but not on all topics and nor without context. Some methods of collecting data from floor staff members work better than others.

Most of us are not systematic in our observations about our daily work. Floor staff members' conclusions, however, need to be systematically collected and considered in the context of other data. We generally talk about four phases of exhibition evaluation that correspond to development phases: front-end, formative, remedial, and summative (Bitgood & Shettel, 1994). In all phases of evaluation, we collect data about four topics: (1) visitors' knowledge, skills, and previous experience; (2) the design and characteristics of the exhibition; (3) visitor experiences; (4) outputs and outcomes. We draw conclusions about one or more topics depending on the type of study.

It's not surprising to anyone who works in a

museum that some staff members focus more on some of these topics than others. Administrators and development staff focus on outcomes because that is of great interest to boards and funders. Exhibition designers focus on the physical characteristics of exhibits and intended visitor experiences. Education floor staff members have particularly valuable perspectives about visitors' knowledge, skills and previous experience and about the experience and behavior of visitors in exhibitions. These are types of information they use to do their own jobs. It is useful in all four types of evaluation. But, staff perspectives need to be considered in the context of other data. This is illustrated in recent studies we did of *Star Wars: Where Science Meets Imagination* for the Museum of Science, Boston (Tisdal, 2006; 2007). These examples are consistent with our experiences in other evaluation studies.

We used two methods to collect data from staff members who worked on the floor. One was productive. Data from the other method did not make it into the report. The productive method was in-depth interviews with education floor staff and exhibition maintenance staff. The exhibition addressed important learning goals through two large interactive elements. In remedial tracking and timing data, we found that groups without children were less likely to use interactive elements. In interviews, staff members told us adults did not use interactives—they seemed uncomfortable using them. In other interviews, adults visiting without children explained that they saw interactives as experiences intended for children. They explained, with a degree of humor, that they were afraid of parents' reactions if they used interactives while children were waiting in line. Oddly enough, some of these very same visitors who claimed not to

have used interactives would tell us later in the same interview about using an interactive. But they would only use the interactive if it was less crowded and without children waiting in line. Tracking and timing data confirmed the crowding pattern. Crowding and social convention, enforced by parents, appeared to be factors in adult use of interactives. Staff interviews played an important role in our exploration of this issue but they provided only part of the picture.

On the other hand, an online line survey asking education floor staff to report broken exhibit elements each day simply did not work. We found little correspondence to the patterns in other data. Their comments focused on the visitors' experience at staffed carts. We concluded that the information we were asking education floor staff to report simply was not important to them. It did not allow them to share their own insights on the topic.

In conclusion, floor staff members have important perspectives to contribute to evaluation studies. These perspectives provide part of the picture. But these data can be misleading if not systematically considered in the context of other data. Information that is directly relevant to their work may be the most useful. Methods that allow floor staff members to communicate in conversation and stories appear more fruitful than structured reports or observations. ☀



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