EXHIBITIONIST

Formalizing Exhibition Development

photo by Nancy McIlvaney

Visitor-Centered Exhibition Development

by Stephanie Downey

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Integrating audience research and evaluation into the exhibit development process can result in a more meaningful experience for the visitor.

Visitor studies and audience research are not new to the museum field. As someone with years of experience in educational evaluation, yet relatively new to museums, I have found a plethora of existing literature espousing and explaining visitor surveys, audience research, and exhibition evaluation—more than enough to establish museum visitor studies as a credible and integrated practice (Hayward, 1992; Hood, 1986; Korenic, 1988; Korn, 1994; Munley, 1987; Screven, 1990; Shettle, 1992; and Taylor, 1991, to cite a few). Moreover, based on my readings and interaction with other museum professionals, it seems that most in the field would agree that evaluation is an important and valuable tool to ensure that exhibitions are visitor-centered. There is even an entire professional association, the Visitors Studies Association (VSA), as well as a specialized division of the American Association of Museums, the Committee on Audience Research and Evaluation (CARE), devoted to the discipline. To my constant surprise, however, audience research has not been whole-heartedly adopted into the exhibition development process. I have found that too often, audience research is viewed as something mysterious or extra—a beneficial luxury (if money is left over) or a procedure to satisfy funders. Even when audience research is conducted, it is often done quickly or haphazardly, without full integration into the exhibition development process. As a result, the research is not always as useful as it could be.

The scarcity of audience research conducted in museums is all the more disconcerting when one considers the growing discourse among museum professionals on meaning making (Silverman, 1993, 1995). Museum professionals have become increasingly concerned with understanding the nature of the visitor experience because of its implications for the way exhibits are designed. For instance, the fall 1999 issue of *Exhibitionist* was devoted to the topic of making meaning in exhibits. The articles in this issue describe a shift from understanding the visitor as a passive receptacle to be filled with information to the visitor who actively constructs meaning from his/her experience. Lois Silverman, drawing from communication theory (1999), and George Hein from constructivist theory (1999), explain that the act of making meaning is a natural practice for humans, something we do all the time in order to make sense of our experiences. Meaning making naturally takes place when individuals encounter museum exhibitions. Visitors do not necessarily experience what the museum intends for them to experience—instead, they make meaning based on the way the new experiences fit into their pre-existing perspective of the world. Following from this quest to understand the visitor experience, the question becomes, how do we create exhibitions that are visitor-centered—that will serve visitors in the process of meaning making? One solution takes us back to where this article began—using audience research throughout the exhibition development process to identify, explore, and understand visitors. This special issue of *Exhibitionist*, devoted to moving toward formality in the exhibition development process, provides an opportunity to argue for the full integration of audience research and evaluation into the exhibition development process with the end result of providing meaningful visitor experiences. This article provides a model for visitor-centered exhibition development. At the heart of visitor-centered exhibition development is the idea of meaning making. As shown in the diagram, to effectively incorporate meaning making into the process, there is an appropriate time and place for each phase of evaluation—front-end, formative, and remedial/summative. Furthermore, within each phase, there are three critical considerations in regard to planning and implementing evaluation that will be useful to the development process—timing, input by the development team, and methodology. With mindful consideration of these issues, evaluation can become a dynamic part of the development process and yield powerful outcomes for visitors.

Front-end Evaluation

As the diagram on page 43 shows, front-end evaluation tests concepts and ideas during the initial planning stages of exhibition development. Front-end evaluation helps planners understand how visitors comprehend and think about themes, ideas, concepts, and objects that will be displayed in an exhibition. It seeks common ground between visitors and the exhibit. In other words, front-end evaluation examines the extent to which visitors' meaning making processes line up with the conceptual framework of the exhibition. To be sure that results from front-end evaluation are useful, it is important to consider when the evaluation takes place, the degree of involvement by the development team, and the most appropriate methodology.

The specific stage of exhibition development in which front-end evaluation occurs is critical. Typically, front-end evaluation is conducted during the early planning stages, but it is important that it is not conducted *too early*. Some exhibit planners mistakenly believe the purpose of front-end evaluation is to "go fishing"—that is, to ask potential visitors what they find interesting about a topic, what they would like to see in an exhibit, and how much they know about a subject—with the purpose of defining the parameters of the exhibition. Similarly, exhibit developers often use front-end evaluation to find out how much potential visitors know about a topic, such as a particular city's history, microbiology, or 17th century European paintings to guide the development of the exhibition. Yet, many evaluators have found that focusing on these concerns is unproductive (Dierking, 1998). We know from numerous visitor studies in museums, that museum visitors, while highly educated, do not have specialized degrees in history, art, or science, and thus, are potentially limited in their knowledge of most topics. The majority of visitors come to an exhibition for educational and/or recreational purposes, and they have little depth-of-knowledge about any given topic. Since the purpose of front-end evaluation is to bridge the gap between visitors and an exhibition concept, it is vital that the exhibition staff develop an exhibition that reflects their expertise and passion. It is the job of the evaluator to uncover how to best communicate the team's impassioned ideas to the public.

Thus, front-end evaluation should be designed around the central idea of the exhibition—that is, what the team hopes visitors will experience, do, and/or understand—not around the subject matter nor what visitors say they want to know about the subject. Once potential visitors have something concrete to react to, such as themes, storylines, or interpretive strategies rather than an open-ended topic or subject matter, they will be able to discuss their thoughts, beliefs, and understandings in a meaningful way. In this kind of front-end evaluation visitors will reveal the meaning they make in response to a concrete exhibition concept.

Their meaning could include misconceptions, misunderstandings, personal associations and memories, as well as interest level—in other words the information necessary to build meaningful connections between an exhibition topic and visitors.

Once staff has developed a preliminary exhibition concept, including themes, messages, and storylines, a context must be built for the front-end evaluation. This context might include an exhibition walkthrough, diagrams, objects, conceptual drawings, or photographs. The evaluators then frame questions around these ideas:
- What do visitors think when confronted with specific objects and/or ideas?
- What meaning emerges from these encounters?
- Which objects or ideas catch visitors' attention? Why?
- Are memories awakened as visitors look at objects? If so, what are they? (Korn, 1994)

How do we create exhibitions that are visitor-centered— that will serve visitors in the process of meaning making?

Another critical consideration in front-end evaluation is methodology. Most of the time, front-end evaluation will include some type of qualitative methodology that allows visitors to express themselves in a naturalistic manner, versus having them fit their experiences into the predetermined, museum-generated responses that appear on a standardized questionnaire. While standardized questionnaires are useful in some circumstances, qualitative methodology is more appropriate for the exploratory nature of front-end evaluation where the goal is to capture the language and ideas familiar and accessible to the lay public.

Generally, two types of qualitative research methods are used in front-end evaluation: in-depth interviews and focus groups. Both methods can provide detailed information about visitors' knowledge, understanding, familiarity with, and connection to certain concepts integral to the proposed exhibition. They are useful data collection tools because they include probing questions that result in detailed responses that may explain why a visitor thinks or feels a certain way.

If conducted at the right time, using the most appropriate methodology, front-end evaluation can contribute greatly to the exhibition development process. Findings can remind exhibit developers how the lay public approaches, thinks

about, and understands an idea. In some instances, front-end evaluation may lead to modifications in the exhibition goals and objectives so that they are more realistic and from a visitor-friendly perspective. Findings may also help developers select the most appropriate language and terminology. Ultimately, front-end evaluations often lead to the discovery of the "hook," the notion, concept or idea that captures and holds visitors' attention.

Formative Evaluation

As the diagram shows, formative evaluation is conducted during design development. Using inexpensive prototypes, its goal is to collect visitors' behaviors, reactions, and comments with respect to exhibition ideas and components, and then to analyze them in the context of the component's goals and objectives so that problems can be isolated and corrected. Formative evaluation examines aspects of exhibit components such as the instructions for an interactive, placement of exhibit components, or the content of a label. Ideally, formative evaluation is an iterative process—that is, once problems are realized, corrections are made and retested until the component achieves the intended results.

Formative evaluation is only useful after the goals and objectives of the exhibition, individual components, and labels have been developed. To guide the formative evaluation process, exhibition developers need to develop a thorough description of each component or activity to be tested. This description should include the target audience; an explanation of what the user is supposed to do and experience; a description of how the component or activity is intended to function; the component goal and communication message; and how the component's goal is related to the overall exhibition goal. This thorough description of each component guides the design of an effective instrument, the selection of a target audience, and a plan for implementation.

In formative evaluation, the instruments are unique and tailored to individual exhibit components, but in general, the following types of questions are addressed:
- Is the physical design accessible and inviting to all users, regardless of age, background, or culture?
- Do visitors know what to do?
- Are visitors using the interactives as intended by planners?
- Is the activity or component functioning as intended?
- Do visitors understand the message or point of the activity or component?
- Can visitors see the cased objects?
- Is the content of the label clear?
- Do visitors find the theme/component/experience relevant to their own lives?
- What emotions are evoked by the experiences?
- What general meaning are visitors creating from their experiences? (Korn, 1994)

For the most part, the data collection methods used in formative evaluation, prototyping in particular, are more informal than other kinds of evaluation methods. Large sample sizes are not necessary when identifying the quality of an activity or component because problems usually surface quickly and the feedback loop between developers and evaluators is immediate, urging developers to try alternative solutions when tested ones fail.

Formative evaluation usually includes two methodologies: visitor observations and short-answer interviews. Observations are often included in formative evaluation because they provide objective data about reactions to certain exhibition components. Visitors are observed and their behaviors recorded either quantitatively or qualitatively. Visitor observations, however, are limited if they are the only procedure used to assess the quality of an exhibition component. In the case of formative evaluation, it is always best to support observations with short-answer interviews. Short-answer interviews are useful for explaining behaviors and understanding how users interpret and understand exhibition messages and experiences. Interviews usually take place after users have finished using a component. They are asked what they thought the activity or component was about and how it might be changed to make it more inviting, interesting, fun, or understandable. Through such discussions the evaluator will be able to detect problem areas as well as areas that are working successfully.

Often, data collection is conducted with cued visitors. Cued testing, as opposed to uncued testing, is more cost effective and efficient for formative evaluation. In cued testing visitors are intercepted *prior* to seeing an exhibition or using a component, and they are invited to participate in the evaluation. If they agree, they are asked to spend time in the exhibition or at specific components, after which, they will be asked some questions. Cued testing is done to set up a best case scenario of exhibit use (e.g., visitors are paying attention to the instructions of the exhibit and are focused on trying to "do it right"), thus evaluators do not have to wait until visitors select to use an exhibit prototype, and evaluators can approach visitors in target age groups.
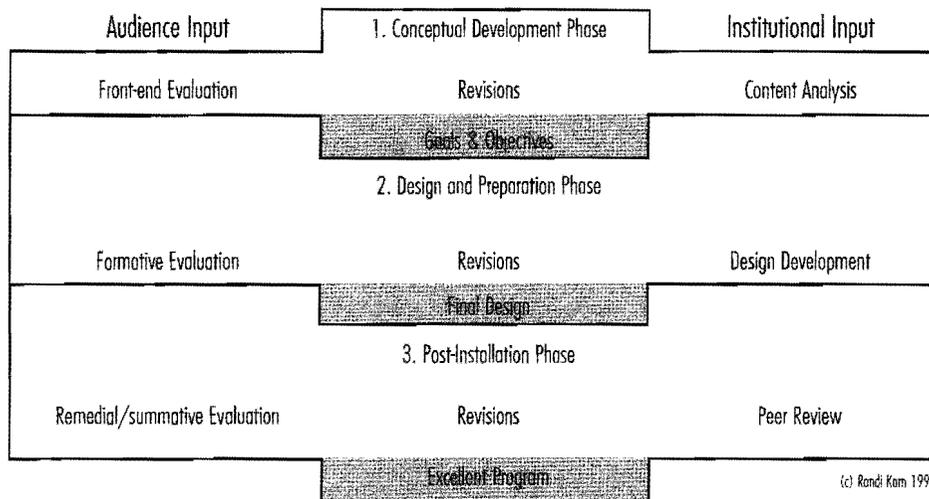
Many exhibit developers have found formative evaluation to be essential in the exhibition development process. If done properly and at the right time, formative evaluation can help create effective and meaningful exhibitions for visitors and prevent the need for expensive alterations after an exhibition is completed and installed.

Remedial/Summative Evaluation

Remedial/summative evaluation takes place at the end of design and development, once the exhibition has been installed, as shown in the diagram. The difference between remedial and summative evaluation is that remedial implies

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Audience Input	1. Conceptual Development Phase	Institutional Input
Front-end Evaluation	Revisions	Content Analysis

Goals & Objectives

2. Design and Preparation Phase

Formative Evaluation	Revisions	Design Development

Final Design

3. Post-Installation Phase

Remedial/summative Evaluation	Revisions	Peer Review

Excellent Program

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improvements will be made to an exhibition based on evaluation findings (and is not widely practiced by museums), while summative does not necessarily result in changes. Front-end and formative evaluations examine exhibitions with little context from which visitors can draw. Ideas or components are tested in isolation, the flow of the exhibition is not actualized, and visitors are not provided with the big picture—they experience the exhibition in bits and pieces. By contrast, when remedial/summative evaluation takes place, there is plenty of context. The exhibits are complete, and they are all vying for visitors' attention (Korn, 1994).

The objective of remedial/summative evaluation is to determine the overall effectiveness of the exhibition as well as the effectiveness of individual components. Visitors' behaviors and experiences in the exhibition are compared to the exhibit's goals and objectives stated at the outset of the project. The following are questions a remedial/summative evaluation may ask.
• What emotions were evoked in visitors?
• Which hands-on interactions did visitors enjoy/not enjoy?
• What meaning (in the broadest sense) has the visitor created from his/her experience?
• What is the most valued part of the visitor experience?
• Which component was most confusing/understandable?
• Which component was the most/least fun?
• Which component was most compelling?
• Are visitors using the components as intended?
• Which components held visitors' attention?
• How much time did visitors spend in the exhibition?
• What did the visitors learn?
• Did visitors gain appreciation for, or a new perspective of, the subject matter? (Korn, 1994)

Summative evaluation is the most formal type of evaluation. Large sample sizes are sought and a number of methodologies are employed. On the other hand, since remedial evaluation is not widely practiced, guidelines for methodology are not hard and fast. Sometimes, remedial evaluation may mimic formative evaluation, while other times it may be more similar to summative evaluation, just less formal.

The most efficient and result-producing methodologies for summative evaluation are in-depth interviews, observations, and questionnaires. Using at least two of these methodologies for one study is optimal. The use of multiple methods is referred to as triangulation, and is an important way to strengthen a study design since each method reveals different aspects of the visitor experience

Observing visitors through an exhibition and tracking where they stop and for how long indicates the attracting and holding power of individual components and the whole exhibition. This procedure provides an objective account of visitor behaviors and is useful for uncovering the most successful and least successful exhibition components from a behavioral perspective. Each exhibition component can be analyzed individually, by type, and by location—depending on staff needs. Other calculations can also be made from tracking data to dissect visitor behaviors. Observing visitors can be very labor-intensive, but is worthwhile if exhibit developers are interested in understanding visitors' behaviors.

Looking at where visitors stop and for how long reveals only part of a visitor's exhibition experience. Because the visitor experience is personal, unique, and diverse, assessments should include a feedback loop that allows visitors to describe their experience. In-depth interviews elicit descriptive, detailed data. This methodology is useful in

remedial/summative evaluation because visitors' remarks can often explain their behaviors, but more importantly, they show how visitors processed and internalized their experiences. Visitors' descriptions of their experiences can be compared to the exhibit's goals and objectives to assess the quality of the experience from the museum perspective. At the same time, visitors' experiences may include unexpected outcomes and demonstrate the range and diversity of meanings visitors construct from their visit.

Standardized questionnaires, which produce quantitative data, are useful because they collect responses from many visitors, and statistics can be applied to the data allowing the researcher to examine the data in a variety of ways. Statistical procedures can provide a wealth of detailed information about visitors with respect to the questions asked of them. For example, findings can demonstrate differences among a range of demographic characteristics (e.g., age, gender) or visiting patterns (first-time versus repeat visitors). These types of analyses provide interesting and useful details about the public that would otherwise go undetected.

Unlike the formative evaluation described above, visitors participating in a remedial/summative evaluation should be uncued. In the case of interviews or questionnaires, visitors who are uncued are approached *after* viewing an exhibition and invited to participate in the study. In the case of observations, uncued visitors are unobtrusively observed without their knowledge.

When conducted properly and with the buy-in of the exhibition staff, findings from summative and, remedial evaluation in particular, can lead to improvements to the exhibition in terms of presentation, text, or other changeable elements. Remedial evaluation is especially useful when the team is planning to build a smaller version of the exhibition for travel. Even in the case when changes will not be made, findings are useful in that the exhibition team finds out whether they achieved their visitor experience objectives. Understanding the successes and shortcomings of one exhibition can inform development practice of future exhibitions.

Conclusion

As institutions that serve the public, museums have a responsibility to facilitate visitor experiences that are enjoyable, meaningful, relevant, and informative. Doing so requires an understanding of visitors' perspectives, including their needs, interests, and concerns, and to incorporate this understanding into their exhibitions and practices. Hopefully, this article has demonstrated a way to formally integrate audience research into the development process with the end result being visitor-centered exhibitions.

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