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How is Writing a Good Set of Questions Like Designing a Good Exhibit?

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Through interviews and questionnaires, during all stages of evaluation, we are constantly 
asking our visitors questions. At first glance, phrasing a set of questions may look like a 
relatively straightforward task, something like this:

“Decide what you want to know, and write it down in question form. If you want to 
know lots of things, just write them all down in a list.”

However, after six years of working at the Exploratorium, I have come to believe that 
writing a successful set of questions is really an extended and subtle process of design, 
that often goes unacknowledged by colleagues who have not worked in visitor studies 
themselves. Thinking about what it takes to write a set of questions for a visitor study, it 
strikes me that the process of writing questions actually has many of the same properties 
as the process of designing an exhibit. And yet, while exhibit development is a topic of 
broad and general interest to the museum community, the process of designing a set of 
questions for any kind of visitor study is rarely mentioned if at all outside the Visitor 
Studies community. I would like to make explicit some of the parallels that I notice 
between these two forms of creative activity.

To begin with, I believe that any question (asked of visitors in a survey or interview) has 
the following things in common with an exhibit:

a) Like an exhibit, a set of questions is a form of open-ended communication between 
museum staff and its visitors. The communication takes the form of an item or set of 
items designed by museum staff and presented to visitors, followed by a personal 
response by the visitors.

b) Like an exhibit, a set of questions is “standardized” in the sense that all visitors who 
participate are presented with the same item. There may have been many previous 
versions of this item, but the final version used is basically the same for all visitors 
who engage with it. In the case of an exhibit, this happens because most of our
exhibits stand alone on the museum floor, and are not personalized for each visitor that comes up to them. In the case of a set of questions, this happens because we use standardization as a method to compare visitor responses, and to draw reliable conclusions about groups of visitors and their likely interactions with our exhibits.

c) Both for an exhibition and a set of questions, museum staff expect and encourage visitors to respond to the standardized item in their own individual ways, making sense of it as best they can. Fortunately, visitors generally expect this too, although there may be a mismatch in the specific interpretations of visitors and staff to the item.

The above commonalities are true of almost any set of questions and any exhibit. However, there are still more similarities if we look more closely, and start to list those properties that might distinguish our most successful exhibits and questions from those that are less successful. For example, I would list the following as properties of both a well-phrased set of questions and a well-designed exhibit:

a) Its meaning to visitors is similar to its meaning to the museum staff. In other words, it is rare for visitors to misinterpret the intended communication or item.

b) It is accessible, so that the broadest possible range of visitors will be able to engage with it.

c) It offers an easy way to get started, so that visitors are not intimidated. More challenging parts may follow, once visitors have achieved some early success.

d) It has a degree of open-endedness to it, so that visitors feel the opportunity to express themselves rather than being put through some kind of “sausage-machine” experience.

e) It has a conversational tone that is both respectful and comfortable to the majority of visitors. It does not leave visitors feeling stupid.

f) Its content level is targeted at what Mark St. John calls the “zone of proximal ignorance” for many visitors, meaning that it explores the area that is “one step out” from what visitors already know (St. John, 1998). If the level is too low, then the visitors will not be stimulated and will not invest much energy in responding. If the level is too high, then the visitors will feel intimidated and uncomfortable, and will also not invest much energy in responding.

g) It is well-matched with visitors’ own expectations, pacing and energy, so that they do not become fatigued or frustrated.
Finally, the process of phrasing a good set of questions has the following things in common with the process of designing a good exhibit:

a) In both cases, the goal is to create an effective communicative device that translates something from stakeholders to a broad range of visitors. In the case of an exhibit, what is translated might be information, an idea, concept, feeling, experience, approach, or skill. In the case of a set of questions, what is translated is a request for personal information and feedback in relation to something the museum is creating (such as an exhibit). The word “translation” emphasizes that there is often a cultural and/or linguistic difference between the stakeholders, who usually have expertise in the areas the exhibit hopes to address, and the visitors, who typically are less familiar with exhibit content and ideas.

b) The item is usually created behind the scenes, especially in the early stages, but eventually used on the museum floor.

c) Small changes in design can make big differences in success of the outcome. For an exhibit, minor changes in the interface, wording, or images used can greatly alter the exhibit’s usability and effectiveness. Similarly, with a set of questions, a single choice of word or phrase can make the difference between getting relevant responses from visitors, and confusing or misleading them. As we often say at the Exploratorium, “the devil is in the details.”

d) It can benefit greatly from iterative evaluation with the target audience (because of the factors just mentioned).

e) The process of iterative evaluation mostly involves searching for likely barriers to communication, and thinking up ways to remove them.

f) Because of the complexity of human cognition and behavior, the design process is partly an art, with some general principles but no formula working in all cases.

g) Throughout the design process, it is helpful to be skillful at “getting inside visitors’ heads,” i.e., simulating a range of probable thinking and responses from visitors.

h) It takes a lot of time and thought, but when done well, the result looks deceptively simple and clear, so that visitors as well as other museum professionals are unlikely to appreciate what went into it!

Overall, I suggest that many commonalities exist between phrasing questions and designing exhibits because they are both attempts to communicate effectively with a diverse group of visitors with a standardized item, in the greater service of designing an effective learning experience for museum visitors.
It is striking to me that museum professionals routinely acknowledge the analytical and creative challenges of exhibit design, yet the parallel challenges of question phrasing usually go unacknowledged. I believe we should regard question-phrasing as an extended and important design process, worthy of detailed attention and broader discussion.

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*Sue Allen is Director of Visitor Research & Evaluation at the Exploratorium in San Francisco. She is currently studying visitors' conversations as part of the Museum Learning Collaborative. She plans to begin work soon on "Finding Significance," a project to study exhibit enhancements that facilitate visitors' personal meaning-making.*