A Tool for Exhibit Planning and Design Methodology

Frank Madsen and Abrams Teller Madsen

In the past thirty-five years, designers have developed analytical tools for planning products, environments, communications and for all other designed elements of our material and electronic culture. Only recently have museum planners applied design planning strategies to exhibits.

This paper presents a tool we have used to aid in the critical pre-design planning stage. It attempts to bring the designers in touch with the museum professionals' knowledge and requirements to develop a profile on which design decisions can be based. We can avoid the wasted time and confusion that often occurs when the designers make their first presentation. It is at that time that all of the agendas for what the exhibit should be like finally come out: the Oh my God! phase.

Pre-design planning simply means knowing what an exhibit is going to be like before you can see it.

The individuals who have substantive input for a particular exhibit—whether curator, educator, researcher, registrar, preparator, designer, or director—have a variety of perspectives. They may have both objective knowledge and strong feelings about what an exhibit should and should not be, and if the knowledge and opinions cannot be communicated until a design is presented, hundreds of hours of work may be wasted. Worse yet, an unclear idea of what is expected may lead to parts of the exhibit being independently reshaped so that differences of opinion remain unresolved. The result is a confused muddle that the visitor must try to decipher.

We have developed a method for presenting several variables on both content and appearance to the exhibit planning group for their consideration before design drawings and models are prepared. The techniques employed partially follow methods used by others in visitor surveys. For example, the staff at the Milwaukee Public Museum used one of the first such studies for self-evaluation of exhibits for visual, label, and color factors:

Visual complexity vs. Visual simplicity
Questioning labels vs. Declarative labels
Color variation vs. Minimal color

In the late 1970s, investigators at the Royal Ontario Museum surveyed overall visitor satisfaction with the museum visit by using a system of adjective pairs and an opinion rating scale of one to five. They have tested for such value judgments as exhausting to relaxing and exciting to dull.

Overall satisfaction with museum visit

	1	2	3	4	5	
Exhausting	__	__	__	__	__	Relaxing
Dull	__	__	__	__	__	Exciting

For our purposes we have employed a rating scale, and rather than using words that call for good-to-bad value judgments, we have substituted descriptive words similar to those used to investigate the image that a particular exhibit should present. It is this image—the vision of an exhibition—that the planning group at any given museum may be assembled to describe.

A series of twelve variables—six on content and six on appearance—are put on rating sheets and given to the group for their responses. Each person fills out the sheets independently over a period of ten to fifteen minutes without discussing them, although they may ask for clarification if they don't understand a variable.

Considered are such issues as: should the exhibit be object-oriented or concept-oriented?

Content								
	1	2	3	4	5	6	7	
Object-oriented	__	__	__	__	__	__	__	Concept-oriented

Provides best possible setting for viewing objects. Use other display devices sparingly	Use objects and other exhibit devices to tell a story or to present an idea

These two possibilities are considered as opposites on a numerical scale of one to seven. A respondent favoring an object exhibit would mark at or near number one. A respondent favoring a conceptual or interpretive exhibit would mark at or near number seven.

Appearance								
	1	2	3	4	5	6	7	
Artifact gallery	__	__	__	__	__	__	__	Place to learn

Concentrate on object placement, lighting and room interior	Downplay building interior, provide impression of a place to learn or discover

Another set of variables deals with whether the exhibit should be like an artifact gallery or like a place to learn. We assume that the groups' response to this issue will correlate with the previous response. In other words, if someone sees the space as a place to learn, they should see the relationship to a conceptual exhibit. In one session, this was the average, or mean response from eight people to these two variable sets:

Content								
	1	2	3	4	5	6	7	
Object-oriented	__	__	__	__	_5.6_	__	Concept-oriented

Provide best possible setting for viewing objects. Use other display devices sparingly	Use objects and other exhibit devices to tell a story or to present an idea

Appearance								
	1	2	3	4	5	6	7	
Artifact gallery	__	__	__	__	_5.5_	__	Place to learn

Concentrate on object placement, lighting and room interior	Downplay building interior, provide impression of a place to learn or discover

There is a deviation of only one-tenth of a point. These are all the content-related variables and responses:

Content

	1	2	3	4	5	6	7	
Object-oriented	_	_	_	_	_5.6_		_	Concept-oriented
Complex	_	_	_3.6_		_	_	_	Simple
Factual	_	_	_	_	5.0	_	_	Speculative
Formal	_	_	_	_	_	6.0	_	Participatory
General	_	_	_	4.0	_	_	_	Specialized
Instant information	_	_	_3.6_	_	_	_	_	Depth of information

These are the appearance-related variables and responses:

Appearance

	1	2	3	4	5	6	7	
Artifact gallery	_	_	_	_	_5.5_		_	Place to learn
Dynamic	_	1.9_	_	_	_	_	_	Static
Impressionistic	_	_2.1	_	_	_	_	_	Literal
Controlled	_	_	_3.6_		_	_	_	Random
Simplicity	_	_	_	_	_	_6.3	_	Variety
Some maintenance	_	_	_3.6_	_	_	_	_	Maintenance free

What emerges is a profile that begins to define this specific exhibit as something that is dynamic, offers a good deal of information for the more interested viewer, includes some participatory elements—with the realization that this dynamism and participation will require some maintenance. Of course many more leads as to what the exhibit would be and could be were provided by this work session.

The numbers themselves were of minor importance when compared to the lively discussion that can follow a rating. Participants often comment on their individual responses and ask others about theirs. Hidden agendas are flushed out. This method also helps otherwise noncommittal individuals to present their views, both because the rating becomes a vote that is averaged equally with more vociferous or articulate participants, and because their rating acts as a starting point for discussion.

We know intuitively (empirically?) that there is potential for correlations in value judgments between paired factors on the rating scales. For example, it is highly likely that someone who favors a dynamic exhibit will also favor one that has the characteristics of a place to learn.

In order to guard against "value loading" the rating scales in one direction or the other, the characteristics are reversed on the numerical scale so that the respondent won't just assume correlation and mark all scales at the same number. So if there is such a match in the mind of a respondent, they would mark near the (1) end of the scale for Dynamic and near the (7) end for Place to learn.

This process has been used with approximately fifteen museums in as many years. We have not used the rating scales with all of our museum clients. In some cases a museum has already articulated all of their exhibit goals and produced a detailed narrative keyed to their collections; the rating scale may or may not be appropriate in these situations.

Shown here is an edition that has evolved over that time. Most of the changes have been in the way a pair of rated factors are described. When a participant says, "What do you mean by..." and another participant immediately interjects, "Oh, I took that to mean..." usually the answer is correct. We changed concept-oriented from being described as "...a place to study" to "a place to explore or discover" because to many participants "study" had specific classroom connotations (see the comment below).

The exhibit content factor scale for "Instant information - - - - - - - Depth of information" was previously "Instant information _ _ _ _ _ _ _ Levels of information." The term Levels of information" could be misconstrued to imply that some visitors might be more thoughtful than others. This may be true, but what we were really after was the differences in pacing and learning styles that visitors bring to an exhibition, not differences in intelligence.

The factor scale "Random _ _ _ _ _ _ Ordered" is not always used. We found that this decision in many situations is an inseparable part of the phase in which the exhibit team is creating an overall design and communication concept with a topic structure and cannot be determined in advance.

At times the calculated result of a group's response to one set of variables may be at or near a (4). This means either:

A. Most of the group "wants it both ways", i.e., they see merit in both approaches, or

B. There is a significant split in the group, and both extremes average in the middle. Often the latter situation has more to do with the exhibit process and with the roles of the team participants at the museum than it does with content or appearance issues of the intended finished product. For example, two curators on one team favored an object-oriented exhibit because they felt they would have to do more work to create a solid concept-oriented exhibit. They were right!

Here are some typical responses that not only sparked discussion but also expressed the dynamic of the incipient working situation:

• To the statement that everyone's rating is equal: "Yes, but some are more equal than others." (a director)

• To the idea of providing speculation in an exhibit: "You mean we don't have to tell those old stories as though they were the truth?" (an educator)

• Regarding maintenance: "I'm glad for once we're not leaving maintenance until something breaks." (a preparator)

• Regarding content objectives: "Some of us want just facts and some want mostly ideas. It seems we'll have to have both." (a curator)

• Regarding appearance: "I want it to look like a place to find out things but not to look like a classroom."

We will continue to use the rating scales where appropriate and to refine them from our experiences and as the medium of exhibition continues to change. At the end of one session, a participant said, "Does this mean there won't be an 'Oh my God!' phase?" The answer is, we still hope to hear that but out of joy rather than horror for what has been created.

Hopping To It: Evaluations of *Frogs!* Exhibit, Special Event, and Products
Linda Wilson
John G. Shedd Aquarium

Introduction

By the end of 1997, more than one million people will have visited *Frogs!*, a special exhibit at Shedd Aquarium that opened in May of 1996 and will close in December of 1997. Shedd Aquarium staff and outside consultants set up a plan to conduct a multifaceted series of audience research and evaluation studies on the exhibit, related special events, and products related to the exhibit. The data from the studies has proven useful in a number of areas: planning, developing, and assessing exhibits; fine-tuning the accompanying interpretive programs; and providing input into the master planning process. This wide use was possible, in part, because four previous exhibits and two previous special events had had similar summative evaluations.

Shedd Aquarium has produced and presented special exhibits for fifteen years on a variety of aquatic-related topics, including undersea treasure, folk art, native cultures, and animal-related subject matter. Two major changes have occurred: In 1991 the MacArthur special exhibit hall was completed, and all subsequent special exhibits were staged there and, in 1995, the aquarium made a commitment to integrate live animals into the featured special exhibits in that space.

In addition to school, family, and regularly scheduled public programs, many institutions also devote considerable resources to multi-day special events or festivals as a marketing tool and as a means to reinforce important messages. Prior to 1994, Shedd Aquarium had put on an occasional festival, but in 1994 the aquarium made this a regular part of the year's planning with a Shark Weekend. At least two large-scale, themed special events are now conducted yearly. The special event for *Frogs* was the first associated with an exhibit to be evaluated.

As with previous events, the *Frogs!* program was a mixture of performance arts, craft activities, displays, and interpretive activities designed to serve a wide range of ages and backgrounds. These took place throughout the aquarium and were free of charge. The publicity for the event was merged with what was planned for the exhibit.

Although the aquarium had produced an occasional retail product, the mugs, shirts and posters designed for *Frogs!* were the first that related not only to the topic, but to the design and messages of the exhibit.

The Evaluations

Shedd Aquarium has conducted a number of evaluation or audience research projects over its sixty-five-year history, but only recently has it approached the topics in an integrated, somewhat comprehensive, manner. This coincided with a change to a team-oriented management style and the development of a specific customer service philosophy. One result was a concentrated effort to revise and expand the planning and assessment process for a number of facets of the aquarium's operation, including events and exhibits.

Formal Summative Evaluation

Beverly Serrell had done the summative evaluation of the four previous exhibits in the MacArthur special exhibit hall. This gave us the ability to compare and contrast results based on the type of exhibit and made the data available for use in a larger database. *Frogs!* became the fifth exhibit to be integrated into her meta-analysis (see *Visitor Behavior* Volume X, no. 3, 1995).

The aquarium was pleased to be a part of the research and gained the additional benefit of using her study as a means to directly compare the five exhibits. The data for the *Frogs!* exhibit put orientation, traffic flow, and loading capacity for the space in a quantifiable form, which will be useful in the process of developing the next generation of special exhibits, as well as in the planning process for specific future exhibits.

Selected Results

Random visitors were timed and tracked through the exhibit. Additional visitors were interviewed about the main messages in the exhibit. Results were reported as mean time in the exhibit, an index of sweep rate, and percentage use of the exhibit components.

While the four previous exhibits were all considered successful, visitors to *Frogs!* "scored" highest among them on Serrell's suggested criteria. Visitors moved rather slowly, with an average time of twenty minutes in the 3490-square-foot exhibit. Expressing this as a unit to describe the rate at which visitors used the space, the "sweep rate" in *Frogs!* was 175. The four previous exhibits ranged from 581 to 225 in the others which means that visitors spent considerably more time in *Frogs!* than in any other special exhibit so far. Visitors interacted with a majority of the exhibit elements.