The Museum Visitor

It seems easy enough to conclude that the museum presents a rich and diverse environment in which informal learning can take place. Dierking and Falk (1992) describe the ideal museum experience as "a socially, cognitively, kinesthetically, and aesthetically rich experience" (p. 175). Whether displaying paintings for visitors to admire, or beckoning them to participate in a hands-on science experiment, museums utilize a number of media designed to attract, stimulate, and enlighten their audience. In recent years, the opportunity for visitors to interact with and selectively explore the vast amount of information that museums contain has steadily increased, allowing for a much closer relationship between the visitor and the information museums contain (Alexander, B., 1992; Edwards, 1992; Palmer, 1992; True Interaction, 1992). This focus on the visitor has been a critical success factor for museums aiming to serve as informational and educational resources.

The most common methods of getting to know the visitor include voluntary surveys and evaluations, and informal observations of visitor behavior at selected exhibits. Museums have believed that, over time these techniques lead to a fairly good body of information about their visitors. However, numerous visitor studies highlight a problem with this approach, which is that these methods only gather information on the individuals who actually visit the museum, not on the local population which does not visit and which they also hope to attract (Hood, 1991). This identifies the two key visitor issues for museums: one is to understand the people who visit the museum so that museums can design exhibits and programs to interest and satisfy them; second is to understand who the target population is so that the museum can design exhibits and programs to attract those who do not ordinarily visit the museum. The target audience, depending on the museum type and location, is generally a very broad cross-section of the local community, nearby communities, and tourists (Hudson, 1977). Yet even though museums wish to attract members of their local communities, data from visitor studies indicate a discrepancy between the often diverse demographics of local community populations and those of most museum visitors (Kelley, 1992).

Understanding the audience is essential to the process of creating the most effective exhibit that attracts the visitor and successfully transfers the information to be gained. The interpretive setting that museums offer should provide the context and information needed for the lay visitor to understand the artifact (Alexander, E., 1979; Booth et al., 1982). The curator's interpretation of an artifact as represented through exhibition is, in effect, a communications effort. The museum is full of visual and aural stimuli that need to be sorted out by the visitor, ideally with the help of effective exhibit design. A metaphor by Karl Popper puts it quite succinctly: "...our minds are not buckets which become filled with sensory data as we passively acquire knowledge from the outside world, rather they are search lights seeking out meaning in the things we observe and experience" (cited in Miles et al., 1982, p. 9). Successful communication depends on the information being conveyed to the audience who must interpret it in a way that is meaningful to them (Williams, 1984), and making this determination is a task that requires a sound understanding of the individual and of how they approach museums and exhibits.

The meaning and knowledge that individuals gain from a situation are heavily dependent upon the individual's prior experiences and knowledge (Gagne, 1983; Miles et al, 1988). Without some form of guidance designed into the exhibit, the visitor can become lost or lose interest, or worse, be misinformed. Dierking and Falk (1992) have integrated these factors into their "Interactive Experience Model" which identifies three contexts that affect the total museum experience and that might aid or prevent interaction or learning from happening: the personal, physical, and social context.

- **The Personal Context:** what the visitor brings to the museum in terms of a psychological make-up of past knowledge, experience, attitudes, motivation, and interests;

- **The Physical Context:** what the visitor encounters in the museum, including the exhibits, architecture and "mood" of the museum;

- **The Social Context:** the interactions between the visitor and friends, other visitors, or museum staff.

Each context is combined with the others to make a total experience unique to the individual. The visitor's constructed reality includes the effects of each of these contexts (in varying degrees over time). Ultimately it is the presence of these factors that influence what is learned or enjoyed, seen or skipped (Dierking and Falk, 1992).

While it is important to try to understand the overall knowledge and experience frameworks that visitors bring to the museum, understanding their motives for coming is particularly important (Dierking & Falk, 1992; Worts, 1992; Interview: The Experimental Gallery, 1992). Motives, one element of the personal context described by Dierking & Falk, have had a significant impact on the way museums attract visitors and on how they decide to engage them. Although all of the contexts described by the Interactive Experience Model affect the way an object or exhibit is approached by the visitor, it is the motive that gets them to the museum in the first place. As T. R. Adam (1937) stated, "effective educational guidance will never be achieved by any museum until the reception given to visitors corresponds to some extent with the purposes that led them to its halls" (p. 14). Several participants in this study also indicated that the visitor's motive should be specifically addressed by the exhibit designer in order to increase the probability of an enjoyable and informative experience. The director of the Museum of Ethnology at Leiden in the Netherlands (cited in Hudson, 1975, p. 74) has identified three basic motives for visiting museums:

- **Aesthetic,** "the wish to experience beauty."

- **Romantic or Escapist,** " the urge to leave the everyday world for a short time."

- **Intellectual,** " the wish to satisfy a certain thirst for knowledge."

Other researchers refer to these same categories as, respectively, "sacred, social and cognitive" reasons for visiting museums (Kelly, 1992). The fact that these motives can be inter-

twined, coupled with the heterogeneity of the museum audience, makes satisfying each visitor a formidable task. Instead of attempting to meet the needs and wants of every visitor in every exhibit, many designers agree that museums should try to identify the possible motives of the visitor and then do their best to design either separate or integrated exhibits that satisfy each of those motives (Hudson, 1977; Miles et al., 1988; Interviews: The Austin Children's Museum, 1992; The Exploratorium, 1992).

Two other important, fairly generic audience characteristics include the fact that most visitors come to museums in groups or at least couples, and that the average time spent at an exhibit ranges from 5 seconds to two minutes (Lee, 1968; Lewis, 1991; Melton, cited in Special Issue, 1987a; Interviews: Aborescence, 1992; The Exploratorium, 1992; Minneapolis Institute of Art, 1992). Since visiting museums tends to be a social experience, several study participants felt that exhibits should attempt to accommodate more than one person. And with an average attention span of 45 seconds to one minute per exhibit, the design must be attractive and immediately intuitive to capture a passerby (Lee, 1968). Each of these factors carry implications regarding the design of educational exhibits and the need for an engaging presentation of the content.

The Museum as a Learning Environment

Understanding the educational approach used in museums requires an examination of not only the visitor, but of the learning setting. Traditional learning environments, i.e., schools, are often contrasted to museums by describing the former as formal education, and the latter as informal education (Bitgood, 1988; Gardner, 1991a; Shettel, 1991; Vance & Schroeder, 1991). Lee (1968) describes the difference as "learning-from-the-environment" versus the formal "teaching-learning" process used in schools (p. 373). Although both settings are alike in that they aim to inform their audiences, the bottom line is that the museum presents a completely different learning environment from the school. In museums, visitors learn through direct interaction with objects and artifacts, and in the schools, students are generally directed by teachers to absorb predetermined curricula from textbooks. Understanding the similarities and differences between these two approaches to learning helps to highlight the most effective ways to present information given the museum environment.

A common goal of informal and formal educators is to communicate new information to learners. It makes sense then, that exhibit designers often follow many of the information presentation strategies and processes that have been proven by instructional design professionals in formal education contexts. For example, exhibit designers normally define objectives, identify the target audience, identify program resources, design by the objectives, implement, and revise exhibits as necessary - processes advocated by many instructional designers (Dick & Carey, 1990; Mager, 1988; Miles et al., 1988). The success of systematic instructional design processes in schools and corporate training departments has validated their use as an instructional framework, and many museum professionals also recognize the value of these techniques. Exhibit designers, however, tend to vary their "instructional