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What Are We Learning?: Outcomes of the Museum Experience Ted Ansbacher

"There is no doubt that learning occurs in museums." This reassuring statement has been made by several authors¹, and probably no one reading this article would doubt it. But many might have difficulty saying just what it means. Do all people learn in all museums, or do only some people learn in some museums? What kinds of learning are included, and does it occur differently in museums than other settings? Is learning, after all, the main mission of museums? The point here is not to doubt the unique educational value of museums or to deny the considerable contributions of research in this area, but to underscore that "learning in museums" is still not well understood. This article suggests that progress here is being limited by our language; that *learning*—the word itself—has become an obstacle.

Natives of the far North (and skiers, too) have many words for snow because their purposes require finer distinctions than one general term provides. Similarly, we in the museum/education world need finer distinctions than the blanket term *learning* provides. Most authors have addressed this problem by carefully defining the word,² but an important insight that comes from wrestling with the various definitions is that there is no such *thing* as learning. "Learning" is only a label for other things, actions, or concepts; and defining the word means choosing which of those items to include under the label.³ No matter how comprehensive the definition, a two-fold problem remains: the single label contains a range of more specific items; and different people will include different items under the same label. As a further complication, *learning* carries emotional baggage. For some it is, like motherhood, an unassailable virtue; for others a bitter reminder of what they disliked about school.

Is there a way out of this dilemma? Paradoxically, it seems our understanding of *museum learning* would advance if we avoided the term *learning*.

Learning vs. Outcomes

Rather than continue to debate which items "belong" under the *learning* label, the solution proposed here is to forget, for the moment, using a collective label at all and instead to identify the individual items that are of specific interest to us. These can then be used to say unambiguously what we mean.

For museums, the items of interest would be the possible results of a visit to the museum—the *outcomes* of a visitor's experiences⁴ at an exhibit, an exhibition, or the museum as a whole. Following are seven possible outcome categories.⁵ This list is not definitive, and

others may come up with more or different entries. As long as the outcomes are well specified, however, the lists will be useful and there is no need for universal agreement.

Produce no outcome. Theoretically it is not possible to have no outcome, since "every experience ... modifies in some way the quality of those which come after."⁶ However, in practice, if a visitor does not engage significantly with the exhibit (for example, a visitor approaches an exhibit and thinks "what is that?"; looks over exhibit; thinks "I don't get it"; and walks away) the outcome will be minimal. This may be the case more often than we care to admit⁷; but worse than no outcome from an exhibit is the possibility of negative outcomes. (see Attitudes below)

Add to the experience bank. An exhibit that is engaging or impressive may yield an experience that will be retained in memory—added to the "experience bank"—yet not be processed mentally by the visitor at the time it occurs. Such experiences may lie dormant forever, or they may be recalled and processed at a later time when triggered by new experiences. Experiences such as watching steel balls roll around the inside of a big funnel, becoming absorbed in a painting, spinning on a platform that changes speed as you move your arms out or in, or feeling the weight of a civil war musket, for example, could be this type of outcome.

Identifying "simply having an experience" as an exhibit outcome is critically important. It recognizes the experience as an end in itself, as well as the means to all other ends. It changes the way exhibits need to be developed, designed, and evaluated by putting the focus on what visitors will be able to actually see and do, rather than on what they may "learn." It is ironic that in paying increased attention to museum "learning" and accountability, designers and evaluators have often given lower priority to the exhibit experience itself.

Develop physical knowledge. This is similar to "adding to the experience bank" in that it does not involve conscious mental processing, but the idea of *physical knowledge*⁸ goes further to include acquiring an intuitive understanding—a "gut feeling"—about some aspect of the world and the way it works. It is

an outcome of exhibits offering “strong interaction,” where engagement with the exhibit has value in its own right, independent of labels or additional explanations. Physical knowledge will usually not be verbalized by the individual, but it serves as an essential foundation for the later development of formal knowledge *with* understanding. For example, playing on swings develops physical knowledge of simple harmonic motion; using tools develops physical knowledge of simple machines; and pitching a baseball develops physical knowledge of trajectories. Exhibits, compared to other media, are particularly well suited to developing physical knowledge, yet museums generally have not recognized that as an outcome in its own right.

The term *physical knowledge* implies dealing with the physical world and the eventual understanding that comes from science. But similar “gut feelings” may be found in other fields. For history it might come from immersion in a historical setting and interacting with historical characters; for art it might come simply from an uncritical viewing of artwork and the accompanying emotional reaction.

Change feelings or attitudes. Allowing visitors to see something familiar in a new way, have a dimly-remembered experience repeated with new or more vivid detail, share the excitement of exploring new and unfamiliar territory, or relate a new experience to an emotionally charged prior experience are some of the ways an exhibit may affect their feelings and attitudes. These may relate to the subject of the exhibit (like, dislike, find fascinating, sympathize with, etc.), or to the visitors themselves (joy, grief, guilt, satisfaction, self-confidence, etc.), or to a sense of community with others who have shared in the exhibit experience. While other exhibit outcomes may involve the head and hands, this is the one that also involves the heart.

Feelings occur at the moment of the museum experience and may not be consciously recognized or verbalized. Because they depend on a visitor’s prior experiences, they will be different for each individual. Elusive though they may be to assess, feelings and attitudes are of critical importance since the impact of an exhibition and how vividly it is remembered depend on them. Changes in feelings or attitudes are not always positive, however. They may be a “turn-off,” limiting or interfering with future experiences.

Examples of this are boredom: “Well that was pretty dull, I never want to look at those again”; or frustration: “I don’t get it; this science stuff just goes right over my head,” or discouragement: “These people are certainly clever, but I could never do that on my own.”

Lead to active curiosity, interest, or awareness. The key word here is *active*, meaning that the exhibit experience motivates and encourages the visitor to actually *do* something—explore further, notice similar things in the environment, find out more about the subject, etc. In other words, the exhibit experience results in a change of behavior. This outcome will depend, of course, on the feelings aroused and how interesting the exhibit content is to a particular visitor, but more important, it results from interaction with the exhibit and success with the inquiry process. Since a museum experience by itself is always limited, this outcome, which leads to a longer process and involvement beyond the museum visit, is of particular value.

Achieve understanding. *Understanding*, in this context, means the patterns, connections, and relationships a visitor finds among his or her experiences, and the general ideas that bring them together under a common umbrella. In its most refined form these become the theories of science, while for visitors to an exhibition it is a more personal understanding—an *Ah-Ha*. In many cases these personal understandings will not correspond to “accepted explanations,” but they are result of the visitor’s *own* inquiry process and are tremendously exciting and important for the individual. Finding answers to one’s own questions—a rare experience for many people—is so satisfying and intrinsically rewarding that it provides motivation for continued exploration and further action.

This does not mean it is impossible for visitors to reach sophisticated levels of understanding; but this will depend largely on the prior experiences and skills they bring with them to the exhibit.

These last three outcomes—changed feelings, aroused interest, and achieved understanding—are the result of the visitor mentally processing his or her experience at the exhibit. These outcomes constitute *meaning* for the visitor, and the process to reach them has sometimes been called *meaning making*⁹. The term *meaning*, however, like *learning*, is general and only loosely defined, and for clearer communication it also might simply be

avoided in favor of more specific statements.

Develop skills. Developing mental or physical skills—the ability to actually *do* something—is different in kind from either making meaning or “book learning.” Skills are acquired through practice, preferably with the guidance of a coach. Because of the short duration of most visits, limited facilities for practice, and the expense of providing staff “coaches,” museum exhibits are not particularly well suited to the development of most skills. The one skill that is practiced at all exhibits, however, is *observing*, and museums are excellent places for its development. Coaching in the skill of observation is different from telling people what to see, and floor staff need to be well trained and labels carefully written with that intent in order to fulfill the coaching role.

Acquire information or factual knowledge

Communicating established facts and knowledge is commonly taken as the major educational goal for schools and, by extension, for museums. Exhibits can use labels and other media to communicate graphically and verbally, and this can be effective, especially when the information presented satisfies “active curiosity” which has been aroused by the exhibit experience itself. Exhibits are less successful, however, when the intended “learning” is *all* in the label, with the physical exhibit serving alternately as an illustration to the label text or as a “hook” to get visitors to read. In these cases the label, in effect, *is* the exhibit, and it has long been acknowledged this kind of information-based learning is not a particular strength of exhibits¹⁰

The Advantages of Outcomes

Clarify Discussion. What is gained by specifying seven kinds of exhibit outcome and avoiding the term *learning*? The answer is clarity, both of communication and of thinking. Of the outcomes listed, only two—developing skills and acquiring knowledge—fit the dictionary definition and common usage of *learning*. So if a writer uses that word to encompass some or all of the other possible outcomes, it is easy to see how confusion and miscommunication can arise.

Following are some examples from the literature that illustrate how changing from *learning* to the vocabulary of *outcomes* can lend clarity to the discussion of “learning in museums.”

Original: [At an arch bridge exhibit] The children are just playing here; they aren’t learning anything.

Rewrite: The children are playing here; they

aren’t acquiring factual knowledge. They are, however, gaining experience, acquiring physical knowledge, and probably developing an awareness of the arch as a load-bearing structure.

Original: ... what we “know” about visitors’ learning is determined by our choices among possible definitions of learning¹¹

Rewrite: ... what we “know” about the outcomes of a museum visit depends upon which specific outcomes we are looking at....

Original: ... the amount of time spent and the number of stops made by visitors ... are indicators of learning in museum exhibitions.¹²

Rewrite: ... the amount of time spent and the number of stops made by visitors... are indicators of engagement with museum exhibitions and the degree to which other outcomes *may* be realized.

Original: What does an individual learn as a consequence of visiting this museum ...?¹³

Rewrite: What physical knowledge [or other specific outcome] may an individual develop as a consequence of visiting this museum ...?

Using the vocabulary of outcomes may be cumbersome at times, but the greater precision it allows in thinking and communicating seems worth the effort.

Guide Exhibition Development. Creating an exhibition requires two related sets of goals. One is the desired outcomes, the other is what visitors will be able to actually *see and do* at the exhibits—the *experiences* that may lead to the outcomes. The exhibit developer’s job is to establish these two sets of goals *and* the anticipated relation between them, and recognizing the specific outcome categories greatly facilitates this process.

For any particular exhibit, the seven outcome categories can be used as a guide to selecting the specific outcome *goals*. Not all categories will be applicable to all exhibits, but having the full range of outcomes to work with frees the developer from the constraint of considering only “learning” goals and greatly extends the exhibit possibilities.

Different kinds of exhibit experiences are needed, of course, to produce different outcomes. For example: an exhibit intended to change feelings may need to relate to visitors’ prior emotionally charged experiences; one intended to impart physical knowledge will need to provide direct physical involvement; one that intends to communicate information will need labels or other verbal/graphic media. Recognizing the full range of outcome categories in turn allows developing effective

see and do techniques.

An additional advantage of working with the range of outcome categories is that potentially conflicting goals can be identified. For example, it is not uncommon to find labels intended to convey information placed on exhibits with exploratory activities intended to yield physical knowledge. But the result of the didactic label can be to negate the visitor's *own* experience. Goals which might conflict within a single exhibit unit, however, can often be separated to different units which then complement each other to achieve the multiple goals of the overall exhibition.

Focus Evaluation. Different outcomes require different evaluation methods so, in the same way that it benefits exhibit development, distinguishing among the outcome categories also leads to more effective evaluation. What has been "added to the experience bank" can be assessed by observing what visitors see and do at an exhibit—how thoroughly they engage with it. Since engagement is also the necessary precursor to any of the other outcomes, this always should be evaluated first. If visitors have not engaged, there is no need to evaluate further. Information and factual knowledge which visitors have acquired is another outcome that is relatively easy to evaluate, through questionnaires and interviews, and it has been the one most commonly looked at by those seeking evidence of "learning" from exhibits. Physical knowledge, changes in feelings or attitudes, curiosity and level of awareness, or personal understanding, on the other hand, are difficult to evaluate for a number of reasons, and because of that developers may have been reluctant to explicitly include them as exhibition outcome goals.¹⁴ "Learning" goals, narrowly defined, have tended to be elevated in importance above the others. A major benefit of identifying the seven outcome categories instead of the single "learning" is to recognize them as equally valid for exhibition development and to encourage efforts to develop evaluation tools for them.

Conclusion. It may seem a radical proposal to eliminate *learning* from our professional vocabulary. Learning, after all, is and always has been a central part of the museum's mission. Indeed, many will find it almost impossible to think or talk about museum offerings without invoking that word. The proposal of this article, however, has *not* been to eliminate the concept or substance of learning—whatever it means—from our activities, but only to avoid the *word*. By doing that, and instead more specifically identifying the outcomes of museum experiences, we can achieve clearer thinking and an expanded view of the value of exhibitions and how best to create and evaluate them.

Notes

¹ Some statements expressing a similar view:

- "Without question, museums are places of learning." George Hein and Mary Alexander, *Museums: Places of Learning* (AAM, Washington, 1998), p. 10
- Whether learning is narrowly ... or more broadly defined ..., there can be no doubt that visitors "learn" in museums. George Hein, *Learning in the Museum* (Routledge, New York, 1998), p. 153
- "... undeniably ... *people do learn in museums*." John H. Falk and Lynn D. Dierking, *Learning from Museums: Visitor Experiences and the Making of Meaning* (Alta Mira, Walnut Creek, CA, 2000), p. xiii

² A sampling of definitions of *learning*:

- "Learning is an active process of assimilating information within the three contexts [personal, social, physical], and it requires accommodating new information in mental structures that enable it to be used later." John H. Falk and Lynn D. Dierking, *The Museum Experience* (Whalesback, Washington, 1992), p. 101. These authors are well aware of the confusion attached to the word "learning" and devote an entire chapter to "Museum Learning Defined." A particular difficulty they point out is that *learning* is used both as a verb (the activity) and a noun (the result of that activity).
- "... learning is narrowly defined as absorbing specific pedagogic messages ... or more broadly defined to include responding to the experience" George Hein, *Learning in the Museum* (Routledge, New York, 1998), p. 153. In a sense this whole book is about the meaning of *learning* in the museum, so the author avoids a single definition. Acknowledging the difficulties with terminology, he opts to "use the vocabulary of learning for consistency, recognizing that learning needs to be defined in the broadest terms possible.
- "A change, small or large, that happens in a person's cognitive structure as a result of a new integration—new information, attitudes, feelings, or skills; new connections between prior knowledge and new information, and a new reflection of something already known." In addition, this author defines *Impact*: A change in visitors' beliefs, attitudes, behaviors, skills, or understanding that occurs as a result of experiencing the museum exhibit." Beverly Serrell, *Exhibit Labels: An Interpretive Approach* (Alta Mira, Walnut Creek, CA, 1996), p. 239. This author is to be commended for including a glossary, a positive step towards eliminating the confusion our use of words often causes.

³ "The word is not the thing" is one of the precepts of General Semantics, the system of language and thought put forth by Alfred Korzybski in his 1933 book, *Science and Sanity*.

⁴ *Experience* has been derided by some as the new buzzword for museums, and indeed it may be as overworked and general a term as *learning*, but here *experience* is meant to cover all that a visitor *sees* (used as shorthand for *sees, hears, feels, smells, and tastes*) and *does* while at the exhibit. Within that, it is often found useful to distinguish between *primary experiences*, which depend on interaction with the physical exhibit itself, and *secondary experiences*, which support and extend the primary experiences, such as talking with others and reading interpretive labels. There is also a question of what length of time an *experience* occupies. We have experiences continuously and they can be divided up arbitrarily, so for specific cases we need to specify what we mean: the time between entering and leaving the museum; or between entering and leaving an exhibition hall; or approaching and walking away from an exhibit unit; or still smaller time intervals.

⁵ Michael Spock in *Philadelphia Stories: A Collection of Pivotal Museum Memories* (Am. Assoc. of Museums, Washington, 2000) recounts several anecdotes that illustrate the kinds of outcomes listed here.

⁶ John Dewey's principle of continuity: "Every experience both takes up something from those which have gone before and modifies in some way the quality of those which come after." From John Dewey, *Experience and Education* (Touchstone, New York, 1997; first publ. 1938) p.35

⁷ Beverly Serrell, *Paying Attention: Visitors and Museum Exhibitions* (Am. Assoc. of Museums, Washington, 1998) p. 4. "Before we do any more research on how visitors learn ..., we should create exhibitions that visitors choose to experience thoroughly."

⁸ The term "physical knowledge" is adopted from Constance Kami and Rheta Devries, *Physical Knowledge in Preschool Education: Implications of Piaget's Theory* (Teachers College Press, New York, reissued 1993). These authors credit the term and concept to Jean Piaget.

⁹ See, for example, *Exhibitionist*, vol. 18, no. 2, Fall, 1999, a special issue devoted to "making meaning in exhibits."

¹⁰ Lucy Nedzel, "The Motivation and Education of the General Public Through Museum Experiences," Unpublished Doctoral Dissertation, (University of Chicago, Chicago, 1952). p. 98. "If any major generalization ... can be drawn ..., it would be to dispel any strong hopes that visitors can learn merely from seeing exhibits." George Hein, *Learning in the Museum* (Routledge, New York, 1998) p.153. "Museums are not efficient places for traditional "school" education, learning specific facts and concepts"

¹¹ George Hein, *Learning in the Museum* (Routledge, New York, 1998) p.136

¹² Beverly Serrell, *Paying Attention: Visitors and Museum Exhibitions* (Am. Assoc. of Museums, Washington, 1998) p. ix

¹³ John H. Falk and Lynn D. Dierking, *Learning from Museums: Visitor Experiences and the Making of Meaning* (Alta Mira, Walnut Creek, CA, 2000), p. 11. Interestingly, the authors themselves propose as a better wording: "How does this museum ... contribute to what someone knows, believes, feels, or is capable of doing? Yet they choose to continue using "learning" throughout their book.

¹⁴ Jay Rounds, "Measure for Measure: Purpose and Problems in Evaluating Exhibitions," *Museum News*, July/August 2001 Vol. 80, No. 4, p. 43