

Front End Evaluation Report for the Science Museum of Minnesota's Dead Sea Scrolls Exhibition

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The front end evaluation for the Dead Sea Scrolls Exhibition took place in two phases: interviews with adult visitors on the floor of The Science Museum of Minnesota, and on-line with visitors who purchased tickets on-line for the Pompeii exhibition. Because the Pompeii exhibition occurred before the museum used the current database system, only 54 non-staff emails were obtained and only 11 people responded to the request to fill out the survey. Due to such small numbers these responses are combined with the responses of visitors who reported visiting Pompeii after the data are presented from the interviews conducted on the museum floor. Interviews and the on-line survey were conducted in the spring of 2009. Unless otherwise specified N = 201.

Pompeii Exhibition

In 2007 The Science Museum of Minnesota hosted an exhibition on Pompeii. The connection between the Dead Sea Scrolls and Pompeii is two fold. First, both are archaeological exhibitions that are not typical of the exhibitions presented at The Science Museum of Minnesota. Additionally, the eruption of Mt. Vesuvius (78 C.E.) that buried the city of Pompeii is very close temporally to the sacking of Jerusalem (70 C.E.). Most of the visitors (78%) interviewed had not seen Pompeii.

Dead Sea Scroll Knowledge

Most participants (79%) had heard of the Dead Sea Scrolls, while about half (55%) of visitors had seen the scrolls in some form (Table 1). Visitors who had not heard of the Dead Sea Scrolls were not asked questions pertaining to prior knowledge of the scrolls; visitors who had never seen the Dead Sea Scrolls were not asked where they had seen the scrolls.

Table 1. Where did you see the DSS (n=96)

	Percentage*
Photos or books	66%
Internet/TV	49%
In person	9%
In Israel	6%
In the U.S.	2%
Somewhere else	2%

*Percentages for this question equal more than 100% because visitors may have seen the Dead Sea Scrolls in more than one place.

Over half of the visitors who saw the Dead Sea Scrolls in person saw them in person in Israel. One visitor specifically mentioned seeing them in the Caves in Qumran at the Dead Sea. One visitor said that they had visited them in the U.S. and somewhere else, Berlin and Chicago. The other two visitors who had seen the Dead Sea Scrolls somewhere else saw them in Paris, with one visitor specifically saying the Louvre Museum.

All visitors who had heard of the Dead Sea Scrolls were asked what they thought was written on the Dead Sea Scrolls (Table 2), and why they think the Dead Sea Scrolls are significant (Table 3).

Table 2. What do you think is written on the DSS? (n=163)

	Percentage
<i>Alternate versions of books in the Hebrew Bible*</i>	49%
<i>Currently known books of the Hebrew Bible</i>	40%
<i>Community rules and laws</i>	33%
History of people who wrote the scrolls	29%
Alternate versions of books in the Christian Bible (New Testament)	22%
Direct evidence of who wrote the scrolls	18%
Don't know what is written on the scrolls	12%
<i>Commentary on the Hebrew Bible</i>	10%
Currently known books from the Christian Bible (New Testament)	9%

* Italicized answers are correct answers.

In general, visitors are knowledgeable of what is written on the scrolls. Few visitors think that versions of the Christian Bible are written on the scrolls, but of those who do more people think alternate versions are contained in the scrolls.

Table 3. What makes the DSS significant? (n=163)

	Percentage
<i>Really old manuscripts*</i>	60%
<i>Window to the laws and culture of a group</i>	54%
<i>Oldest copies of the Hebrew Bible</i>	52%
<i>From an interesting time period</i>	46%
<i>Controversy surrounding them</i>	45%
<i>Show more diversity in Judaism than originally believed</i>	34%
<i>Made using interesting materials</i>	17%
Mention Jesus	14%
<i>Written in multiple languages</i>	15%
<i>Significant for other reasons</i>	7%

* Italicized answers could be considered correct.

It is interesting to note that there is no evidence that the Dead Sea Scrolls mention Jesus at all, and few visitors thought that this is what makes them significant. Eleven of the 163 (7%) visitors

who responded to this question said there were other reasons the Dead Sea Scrolls were significant. Only ten of the eleven specified another reason. Those reasons are listed below.

Other responses

- Which are considered the Dead Sea Scrolls over other scrolls?
- Missing for a long time.
- Any archeological find is significant.
- Age. History.
- Show continuous accuracy of scriptive history/presentation.
- Not from Minnesota. [I believe this was a bit tongue-in-cheek.]
- Great to prove the bible is real, see more of it. Incredible discovery.
- Information they don't want us to know.
- Interested in them.
- They actually survived.

To get a better sense of what visitors know about the Dead Sea Scrolls, we asked about how many scrolls visitors thought had been found to date and how old visitors thought the scrolls were. About 1,000 scrolls have been found to date and they are approximately 2000 years old. Most visitors greatly underestimated the number of scrolls found in the caves at Qumran, 60% think that there are 50 or fewer scrolls, and over three quarters of visitors think there are 100 or fewer scrolls. Nearly thirty percent of visitors (28%) responded with a number different than was given. More visitors knew how old the scrolls were than how many scrolls there were (Table 4). About half of the visitors correctly identified the age of the Dead Sea Scrolls within a 1000-year window. Since the scrolls were written over an approximately 300-year period, this spread is not unreasonable. Twenty-seven individuals gave a value other than what was listed; these values are combined with the multiple choice responses in Table 5.

Table 4. About how old are the scrolls? (n=163)

	<i>Percentage</i>
Approximately 10,000 years old	10%
Approximately 5,000 years old	30%
Approximately 2,000 years old	42%
Approximately 500 years old	2%
Other	17%

Table 5. About how old are the scrolls (ranges)? (n=163)

	n	Percentage
500-1500 years old	9	5%
1500-2500 years old	86	53%
2500-5000 years old	58	36%
5000-10000 years old	18	11%

Interest in Seeing the Dead Sea Scrolls

At this point in the interview visitors were shown four pictures of the scrolls in a range of conditions similar to the range of conditions expected in the scrolls that will be on display in the exhibition. Visitors who had not heard of the Dead Sea Scrolls were asked all the remaining questions. Visitors who had never heard of the Dead Sea Scrolls were given the following explanation about the scrolls “The Dead Sea Scrolls are texts written about 2000 years ago on papyrus and parchment. They were found stored in sealed jars in a series of caves near the Dead Sea in Israel.”

Fortunately, the majority of visitors were not at all surprised at their condition (Table 6), and about half of them were more excited to see them in their current condition (Table 7). The condition of the scrolls does not seem to be a deterrent to the vast majority of visitors interviewed.

Unlike traditional exhibitions of the Dead Sea Scrolls, The Science Museum of Minnesota is interested in taking a more scientific approach to exhibiting the scrolls. This included examining what the scrolls are made of, how the scrolls are restored, and how the texts are reconstructed from what remains of these texts. Three quarters (76%) of visitors were interested in the processes involved in reconstruction process of these texts.

Table 6. Is their condition surprising to you? (n=201)

	Percentage
Surprising	18%
A little surprising	6%
Not at all surprising	77%

Table 7. Does their condition make them more or less exciting to see? (n=199)

	Percentage
More exciting	51%
The same	35%
Less exciting	14%

Most visitors are interested in seeing the Dead Sea Scrolls (Table 8). Only 10% of visitors responded negatively (1-4). A response of a five or a six is a neutral response, only 20% of visitors responded neutrally. The majority of visitors (70%) responded in the 7-10 range suggesting that they are interested. One quarter of the visitors are highly interested, with almost one fifth reporting a 10 or ‘extremely interested.’

Table 8. Interest in Seeing DSS on a Scale of 1 to 10 (n=201)

	Percentage
1	1%
2	2%
3	4%
4	3%
5	10%
6	10%
7	22%
8	22%
9	8%
10	18%

Overall, visitors are not very familiar with the possible topics The Science Museum of Minnesota is thinking of covering in the Dead Sea Scrolls exhibition. For most topics the majority of visitors interviewed reported being ‘not at all familiar’ with the topic (Table 9). Visitors are least familiar with who owns the scrolls, and what else was found in the caves along with the scrolls. Other topics that visitors have very little familiarity with include: how texts are translated from languages that are no longer spoken, how the scrolls got to the caves, how the scrolls were found, and how scrolls are studied. Although the majority of visitors report knowing nothing about the development of the current version of the Hebrew Bible, about one fifth of visitors interviewed were familiar or extremely familiar with the topic. The most familiar topic for visitors is the geography of the Dead Sea, about one quarter of visitors interviewed were familiar or extremely familiar with this topic, it was also the topic which fewest visitors reported knowing nothing about. Almost half of visitors interviewed reported being a little familiar with the life language, and beliefs of the time the scrolls were written.

Although visitors did not have much knowledge of the Dead Sea Scrolls, they were overwhelmingly interested in most of the topics suggested (Table 10). Almost two thirds of visitors were extremely interested in what is written on the texts, and another quarter of them were interested in this topic. The majority of visitors reported being extremely interested in four other topics: translation from languages that are no longer spoken, when the scrolls were written, how the scrolls got to the caves, and what else was written in the caves. It is worth noting that some of what visitors knew least about (what else was found in the caves, translating a dead language, and how the scrolls got to the caves) were among the topics they found most interesting. Conversely, the topics they reported being more familiar with (region of the Dead Sea, and the life, language, and beliefs of the period) were the ones people were less interested in seeing presented. Although three quarters of visitors reported being interested in the process of reconstructing the scrolls, when offered other topics, the reconstruction and preservation processes were among the least interesting. It is worth noting, that all topics were rated either interesting or extremely interesting by at least two thirds of visitors.

Table 9. Visitor Familiarity in Possible Topics

Topic	Not at all Familiar	A little Familiar	Familiar	Extremely Familiar
Life, languages, and beliefs at the time the scrolls were written (n=200)	37%	46%	16%	2%
Unique geography of the Dead Sea region (n=200)	35%	38%	22%	6%
Preservation of old texts (n=200)	41%	41%	13%	6%
Reconstruction of old texts (n=199)	51%	35%	10%	4%
How the scrolls were made (n=200)	57%	31%	9%	4%
Who owns the scrolls (n=200)	71%	20%	4%	5%
Translation of the texts form languages that are no longer spoken (n=200)	61%	26%	10%	4%
Who wrote the texts (n=199)	56%	30%	10%	4%
When they were written (n=198)	44%	39%	14%	4%
How they got to the caves where the scrolls were found (n=200)	63%	22%	11%	5%
What else was found in the caves (n=200)	68%	22%	7%	4%
How the scrolls were found (n=200)	60%	26%	9%	7%
How the scrolls are studied (n=201)	62%	27%	8%	4%
What is written on the texts (n=200)	50%	34%	12%	6%
Development of the current version of the Hebrew Bible (n=200)	53%	29%	17%	2%

Table 10. Interest in Possible Topics

Topic	Not at all Interested	A little Interested	Interested	Extremely Interested	Don't Know
Life, languages, and beliefs at the time the scrolls were written (n=198)	1%	13%	45%	40%	1%
Unique geography of the Dead Sea region (n=199)	3%	16%	47%	34%	1%
Preservation of old texts (n=199)	6%	18%	39%	37%	1%
Reconstruction of old texts (n=198)	6%	15%	39%	39%	1%
How the scrolls were made (n=198)	4%	12%	40%	44%	1%
Who owns the scrolls (n=199)	12%	20%	33%	34%	2%
Translation of the texts form languages that are no longer spoken (n=198)	4%	12%	34%	50%	2%
Who wrote the texts (n=199)	2%	11%	38%	49%	1%
When they were written (n=198)	1%	11%	37%	50%	1%
How they got to the caves where the scrolls were found (n=199)	1%	8%	37%	52%	2%
What else was found in the caves (n=199)	1%	10%	33%	55%	2%
How the scrolls were found (n=199)	3%	11%	40%	46%	1%
How the scrolls are studied (n=198)	5%	19%	39%	36%	1%
What is written on the texts (n=198)	1%	8%	28%	63%	1%
Development of the current version of the Hebrew Bible (n=199)	8%	17%	38%	36%	2%

Visitors who Saw Pompeii

The following data come from visitors interviewed at the museum who reported seeing Pompeii and visitors who bought tickets to Pompeii (for whom we had email contacts) and completed an online survey. There are 51 participants in this subset.

Dead Sea Scrolls Knowledge

Pompeii visitors were more likely than the entire sample to have heard of the Dead Sea Scrolls (94% vs 79%), but only slightly more of them have seen the Dead Sea Scrolls. Pompeii visitors listed more things that were written on the Dead Sea Scrolls than the total group (Table 11). For example, half of the Pompeii visitors stated that community rules and laws were written on the scrolls compared to one third of the total group. They were also more likely to list more reasons the Dead Sea Scrolls are significant. As with the total group, 60% of the Pompeii visitors think that 50 or fewer scrolls have been found. Within a 1000-year window, three fifths of Pompeii visitors correctly identified the age of the Dead Sea Scrolls. This is only slightly more than the total group.

Table 11: Familiarity with Possible Topics for Visitors Who had Seen Pompeii

Topic	Not at all Familiar	A little Familiar	Familiar	Extremely Familiar
Life, languages, and beliefs at the time the scrolls were written (n=200)	24%	52%	22%	2%
Unique geography of the Dead Sea region (n=200)	20%	34%	40%	6%
Preservation of old texts (n=200)	38%	42%	18%	2%
Reconstruction of old texts (n=199)	39%	51%	8%	2%
How the scrolls were made (n=200)	46%	40%	12%	2%
Who owns the scrolls (n=200)	52%	32%	8%	8%
Translation of the texts form languages that are no longer spoken (n=200)	56%	26%	16%	2%
Who wrote the texts (n=199)	43%	45%	5%	7%
When they were written (n=198)	25%	52%	19%	4%
How they got to the caves where the scrolls were found (n=200)	50%	32%	12%	6%
What else was found in the caves (n=200)	62%	26%	8%	4%
How the scrolls were found (n=200)	40%	28%	22%	10%
How the scrolls are studied (n=201)	48%	34%	10%	8%
What is written on the texts (n=200)	32%	42%	22%	4%
Development of the current version of the Hebrew Bible (n=200)	38%	42%	16%	4%

Dead Sea Scrolls Interest and familiarity

The condition of the Dead Sea Scrolls and its influence on their desire to see them is about the same for Pompeii visitors as for the total group. Additionally, about the same percentage report being interested in the reconstruction process. However, more Pompeii visitors rate their interest in seeing the Dead Sea Scrolls a 10 on a 1-10 scale (38% vs 18%). Pompeii visitors are more familiar with the Dead Sea Scrolls than the larger group, with ten percent reporting being extremely familiar with how the scrolls were found. Additionally, Pompeii visitors were more likely to be ‘extremely interested’ in a larger number of potential topics than the total group (Table 12.)

Table 12: Interest in Possible Topics for Visitor Who had Seen Pompeii

Topic	Not at all Interested	A little Interested	Interested	Extremely Interested	Don't Know
Life, languages, and beliefs at the time the scrolls were written (n=198)	0%	6%	37%	57%	0%
Unique geography of the Dead Sea region (n=199)	0%	10%	48%	42%	0%
Preservation of old texts (n=199)	2%	21%	37%	40%	0%
Reconstruction of old texts (n=198)	5%	19%	35%	42%	0%
How the scrolls were made (n=198)	0%	10%	33%	57%	0%
Who owns the scrolls (n=199)	4%	18%	35%	43%	0%
Translation of the texts form languages that are no longer spoken (n=198)	0%	15%	35%	48%	2%
Who wrote the texts (n=199)	2%	12%	33%	53%	0%
When they were written (n=198)	0%	13%	38%	50%	0%
How they got to the caves where the scrolls were found (n=199)	2%	6%	39%	51%	2%
What else was found in the caves (n=199)	0%	8%	27%	63%	2%
How the scrolls were found (n=199)	2%	14%	37%	47%	0%
How the scrolls are studied (n=198)	2%	16%	37%	45%	0%
What is written on the texts (n=198)	2%	2%	29%	67%	0%
Development of the current version of the Hebrew Bible (n=199)	0%	20%	35%	45%	0%

Recommendations

Most visitors interviewed had heard of the Dead Sea Scrolls and were interested in learning more about them and the scientific processes involved in interpreting and preserving them. About half the visitors knew approximately when the scrolls were created, but very few had any notion of the vast number of scrolls that have been found. Fortunately for The Science Museum of Minnesota, most visitors were not surprised by their tattered state and were even more excited to see them based on their condition. Additionally, there is high interest amongst those interviewed to see the scrolls. In developing the exhibition, The Science Museum of Minnesota should go forward with their idea of taking a more scientific approach to exhibiting the scrolls, and should emphasize how many scrolls exist.

Demographics

Demographics are reported only for visitors who were interviewed by staff at The Science Museum of Minnesota. The 11 people who responded to the online survey were not included in the demographic analysis.

Table 13. Interest in Science (n=192)

	Percentage
1	1%
2	0%
3	0%
4	1%
5	7%
6	8%
7	20%
8	31%
9	15%
10	17%

Table 14. Group Composition (n=201)

	Percentage
I am here alone	4%
I am here with a school or tour group	6%
I am here in a social group with kids & adults	35%
I am here in a social group with adults only	54%
I am here in a professional group that contains adults only	2%

Table 15. Visited Museum in Last Two Years (n=200)

	Percentage
None	36%
1-2 times	33%
3-5 times	18%
6+ times	14%

Table 16. Highest Level of Education (n=200)

	Percentage
Less than high school	1%
Completed high school	12%
Some college or technical education	28%
College degree	40%
Post-graduate degree	21%

Table 17. Gender (n=200)

	Percentage
Male	45%
Female	55%

Table 18. Disability (n=200)

	Percentage
Have disability	4%
Do not have disability	96%

Of the eight visitors with a disability six explained their disability. Half had a mobility disability, one had a visual disability, one had a learning disability, and one had an auditory disability and one had a mental disability.

Table 19. Primarily Language Spoken at Home (n=196)

	Percentage
English	96%
Spanish	1%
Hmong	1%
Other	3%

Of the other languages provided, three participants spoke Hindi, two spoke Russian, one spoke Japanese and, and one spoke Tagalog.

Table 20. Ethnicity (n=200)

	Percentage
African American	3%
Hispanic	2%
South Asian	2%
White	91%
Native American	0%
Asian	4%
Other	2%

Other answers were given as mixed and multiracial.

Table 21. Household Income (n=182)

	Percentage
Under \$10,000	7%
\$10,000 to \$19,999	8%
\$20,000 to \$29,999	4%
\$30,000 to \$39,999	10%
\$40,000 to \$49,999	7%
\$50,000 to \$59,999	10%
\$60,000 to \$69,999	12%
\$70,000 to \$79,999	11%
\$80,000 to \$89,999	7%
\$90,000 to \$99,999	5%
\$100,000 to \$149,999	13%
\$150,000 or more	6%

Additional Comments

During some interviews the data collectors made a few comments regarding a visitor's response to the survey or individual questions. Comments are below.

Comments

- Although the participant said that he had not seen the DSS before when asked if the condition was surprising he also said, "I've seen this before."
- Data collector note: she felt rushed by the man with her while she was filling out the familiarity/interest portion of the survey. She quickly filled it out and said she thinks the DSS are very interesting.
- This participant said "the same" for how exciting the DSS are based on their condition but they also mentioned that it depends on the audience.
- Question 6 [what makes the scrolls significant] for value H [They're written in multiple languages] participant said Hebrew origin. Collector's note: Visitor is very concerned about science overshadowing religious (Christian) meaning. Not at all interested in scientific processes associated with manuscripts.
- Participant indicated with the "Who did you come to the museum with today?" question that she was here with Scouts.
- Data collector wrote that participant saw the Omni.
- Participant said she thought the tattered condition of the scrolls was more exciting especially if they are translated.
- Participant suggested that you overlay a completed image of the scroll with the actual tattered scroll.
- Data collector noted with question 9a [Is their condition surprising to you?] that the visitor thought the DSS would be more deteriorated.
- Data collector wrote "verified old testament information from time period" under question 5.
- Data collector wrote "different parts of old testament" next to question 5.
- Data collector wrote "biblical info" next to question 5.
- Data collector wrote "don't know" by question 5 and "old" by question 6.
- For 9a. [Is their condition surprising to you?] visitor said that it was in surprisingly good shape. Visitor came in group of 26 people (only 2 adults in the roaming group that Scott approached). The larger group was families from Northern, MN.
- Question 11 [How would you rate your interest in seeing the Dead Sea Scrolls] the visitor commented that he would be more interested in the DSS if he could touch them or read the content. This visitor was legally blind. Data collector read whole survey to him and did best to explain the condition of the scrolls.
- Question 9b [Does their tattered condition make them more or less exciting to see?] that the visitor commented that it is "frustrating".
- Question 9b [Does their tattered condition make them more or less exciting to see?] – the visitor didn't respond whether the DSS' tattered condition make them more or less exciting to see. Data collector took note that the visitor commented that it would be less exciting because there would not be a lot of it there and parts would be missing, and that it would be more exciting because it's a relic of nature.
- Question 9b [Does their tattered condition make them more or less exciting to see?]. Visitor did not respond if the DSS condition was more or less exciting but said some of both- less exciting if you can't understand, more exciting to see.
- Tour Group.
- Visitor came in a group with age range of 8-60. The group Scott approached was 3 adults. The larger group was families from Northern MN. No Chaperones.
- Visitor commented it was surprising the DSS are still in tact. Also, there were 2 additional individuals with this visitor beside the 21 year old. They appeared to be in their 30s or 40s.
- Visitor maybe saw DSS in person in Berlin or in Chicago.
- When answering question 9b [Does their tattered condition make them more or less exciting to see?], the visitor said that he can't read them.
- When asked if the tattered condition make the DSS more or less exciting the visitor said the same and continued to state that it was a fact of life.