Museum Visitor Studies, Evaluation & Audience Research

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Web User Research: 2009 Survey of Arts Network Users

Prepared for
The Dallas Museum of Art
Dallas, TX

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This report examines the Dallas Museum of Art's (DMA) Web users in the context of the Framework for Engaging with Art¹ (FEA). FEA was conceived in 2002 as an overarching institutional strategy for integrating and strengthening staff collaborations for programming, marketing, and exhibition development to create new programs and increase visitation. The DMA identified three distinct types of engagement with art—Awareness, Curious, and Commitment—based on visitors' prior art knowledge and degree of participation in art experiences.

Data collected between 2003 and 2005 validated the Museum's hypothesis that there are three types of engagement with art and four audience clusters associated with the three types of engagement.² The four visitor clusters—Tentative Observers, Curious Participants, Discerning Independents, and Committed Enthusiasts—exist within the three types of engagement with art as shown in Table i.

The study presented here is a part of an IMLS-funded project, Arts Network. Arts Network is a museum-wide network that includes a program development process and an adaptable program delivery system. The program delivery system is an in-house and Web-based network that will enable DMA visitors to access programs and information online.

The results from this study did not produce clusters that correlate exactly with the four DMA visitor clusters. As in the study of teachers, Curious Participants are absent among Web users. Interestingly, however, a new group—Interested Pragmatists—appears among Web users, as it did in the prior study of Web users.

TABLE i
FEA AND DMA VISITOR, TEACHER, AND WEB USER CLUSTERS

LOEASM	CLUSTERS	VISITORS %	TEACHERS %	WEB USERS %
Awareness	Tentative Observers	23	23	5
	Curious Participants	32		
Curious	{ Interested Pragmatists			31
	Discerning Independents	19	30	26
Commitment	Committed Enthusiasts	26	47	38

¹Web user data do not include data from the 2008 study.

¹ Framework for Engaging with Art was formerly referred to as Levels of Engagement with ArtSM.

² Randi Korn & Associates, Inc. (2005). "Levels of Engagement with Art: A Two-year Study 2003-2005." Unpublished manuscript. Dallas, TX: Dallas Museum of Art.

TABLE II

COMPARISON OF PREFERENCE RATINGS FOR DMA VISITOR AND WEB USER CLUSTERS

					CLUSTERS					
	WEB USERS	MUSEUM VISITORS	WEB USERS	MUSEUM VISITORS	WEB USERS	MUSEUM VISITORS	WEB USERS	MUSEUM VISITORS	WEB USERS	MUSEUM VISITORS
	TENTATIVE OBSERVER 5%	TENTATIVE OBSERVER 23%	INTERESTED PRAGMATIST 31%	CURIOUS PARTICIPANT 32%	DISCERNING INDEPENDENT 26%	DISCERNING HINDEPENDENT 19%	COMMITTED ENTHUSIAST 38%	COMMITTED ENTHUSIAST 26%	TOTAL	TOTAL
7-POINT RATING SCALE: DOES NOT DESCRIBE ME (I) / DESCRIBES ME VERY WELL (7)	MEAN	MEAN	MEAN	MEAN	MEAN	MEAN	MEAN	MEAN	MEAN	MEAN
I feel comfortable looking at most types of art.	3.3	5.3	5.7	6.2	6.6	6.6	6.8	6.5	6.2	6.1
I like to know about the story portrayed in a work of art.	2.8	5.5	5.8	6.2	4.6	4.7	6.6	6.4	5.6	5.8
I am emotionally affected by art.	2.6	3.7	5.0	5.4	6.3	5.9	6.5	6.1	5.8	5.3
I like to know about the materials and techniques used by the artist.	2.4	4.3	4.9	5.6	5.6	5.6	6.3	6.1	5.5	5.4
I enjoy talking with others about the art we are looking at.	2.4	4.0	4.6	5.8	6.0	5.7	6.4	6.4	5.6	5.5
I like to be told a straightforward insight to help me know what the work of art is about.	2.7	5.4	5.1	5.8	3.0	2.6	5.8	6.0	4.7	5.1
I am comfortable explaining the meaning of a work of art to a friend.	2.1	2.5	4.0	4.6	5.5	5.2	6.1	5.8	5.1	4.5
I like to view a work of art on my own, without explanations or interpretations.	4.0	3.9	3.8	5.2	5.1	5.9	4.4	4.3	4.4	4.8
I like to connect with works of art through music, dance, dramatic performances, and readings.	3.6	3.0	3.8	5.5	4.0	4.3	5.5	5.1	4.5	4.6
I find some terms used in art museums are difficult for me to understand.	4.1	3.4	4.0	5.2	2.0	2.3	3.5	1.8	3.3	3.4

EXECUTIVE SUMMARY

INTRODUCTION

The Dallas Museum of Art (DMA) contracted with Randi Korn & Associates (RK&A) to conduct a follow-up study of DMA Web users. This study is the second of two conducted as part of an IMLS-funded project called Arts Network. As part of this second study, which was conducted after the DMA redesigned its Web site, 536 visitors to the DMA Web site³ completed an online questionnaire about their art museum visits, art-viewing preferences, demographic characteristics, and DMA Web site experiences and opinions. Data were collected between August and early December 2009.

The findings presented here are among the most salient. Please read the body of the report for a more comprehensive presentation of findings.

DEMOGRAPHIC CHARACTERISTICS

- Females outnumber males (67 percent vs. 33 percent).
- The median age of respondents is 35 years.
- Respondents are mostly Caucasian/White (76 percent).
- Most respondents speak English at home (95 percent).

ART MUSEUM BACKGROUND

- 55 percent of respondents visit art museums four or more times in a typical year.
- 64 percent of respondents visit art museum Web sites four or more times in a typical year.

DMA WEB SITE EXPERIENCES

- 64 percent of respondents were repeat visitors to the DMA Web site.
- Of repeat visitors to the DMA Web site, 91 percent visited the Web site two or more times within the last year.
- The top two reasons for visiting the DMA Web site are to check the schedule of events (57 percent) and plan a visit to the DMA (55 percent).

Respondents evaluated three aspects of the Web site using 7-point rating scales as follows:

- Not useful (1) / Useful (7): mean = 5.9
- Looks uninviting (1) / Looks inviting (7): mean = 5.8
- Difficult to find what I was looking for (1) / Easy to find what I was looking for (7): mean = 5.6

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³ www.dallasmuseumofart.org

ART VIEWING PREFERENCES

On the scale from 1 ("Does not describe me") to 7 ("Describes me very well"), respondents rated 10 statements regarding their preferences for viewing works of art:

- I feel comfortable looking at most types of art: mean = 6.2
- I am emotionally affected by art: mean = 5.8
- I like to know about the story portrayed in a work of art: mean = 5.6
- I enjoy talking with others about the art we are looking at: mean = 5.6
- I like to know about the materials and techniques used by the artist: mean = 5.5
- I am comfortable explaining the meaning of a work of art to a friend: mean = 5.1
- I like to be told a straightforward insight to help me know what the work of art is about: mean = 4.7
- I like to connect with works of art through music, dance, dramatic performances, and readings: mean = 4.5
- I like to view a work of art on my own, without explanations or interpretations: mean = 4.4
- I find some terms used to describe art difficult to understand: mean = 3.5

WEB USER CLUSTERS

A statistical cluster analysis grouped respondents into four Web user clusters based on their ratings of the 10 statements regarding their preferences for viewing works of art.

- Enthusiasts (38 percent) are highly confident viewing art and highly interested in learning about art.
- Pragmatists (31 percent) are less confident about art than Enthusiasts or Independents. They
 are interested in receiving information about art, particularly straightforward, basic types of
 information.
- Independents (26 percent) are confident viewing art and are emotionally engaged by art, but they are only moderately interested in receiving information about art.
- Observers (5 percent) are not confident viewing art and are not particularly interested in learning about art.

INTRODUCTION

This report is the second of two that explores DMA Web users. Findings from this study are most interesting because (1) they reflect changes in DMA Web users since the 2008 survey; (2) they reflect favorable changes in DMA Web users' experiences with the new and improved DMA Web site; and (3) the clusters provide insight into how the Web site may be further enhanced to address the needs of each cluster.

CHANGES IN DMA WEB USERS' CHARACTERISTICS

Since the 2008 study of DMA Web users, there have been three major changes in the demographics and characteristics of DMA Web users:

1) More male Web users

Between 2008 and 2009, the percentage of males has increased from 26 percent to 33 percent.

TABLE iii

GENDER COMPARISON

	DMA WEB USER STUDY			
	2008 2009			
GENDER	%	%		
Female	74	67		
Male	26	33		

2) Younger Web users

Since 2008, Web users have gotten younger (median age of DMA Web users decreased from 43 to 35). Changes are most pronounced in the segment of 18-24 year olds using the DMA Web site (10 percent in 2008 vs. 20 percent in 2009).

TABLE iv

AGE COMPARISON

	DMA WEB	USER STUDY
	2008	2009
AGE	%	%
18 – 24	10	20
25 – 34	22	29
35 – 44	22	20
45 – 54	26	18
55 – 64	15	10
65 and older	5	3

3) DMA Web users are visiting art museum Web sites and the DMA Web site more

In this study, 30 percent of DMA Web users reported visiting art museum Web sites 11 or more times annually, which is a 10 percent increase since 2008. Likewise, there were increases in DMA Web site use, although less drastic; in this study, 35 percent of Web users reported visiting the DMA Web site 7 times or more in the last 12 months, which is an 8 percent increase since 2008.

TABLE v
VISITATION TO ART MUSEUM WEB SITES

	DMA WEB	USER STUDY
	2008	2009
ANNUAL ART MUSEUM WEB SITE VISITS	%	%
Never	10	7
Once	9	6
2 – 3 times	28	23
4 – 6 times	19	19
7 – 10 times	14	15
11 times or more	20	30
VISITS TO DMA WEB SITE IN PAST 12 MONTHS	%	%
None	4	2
Once	7	8
2 – 3 times	37	30
4 – 6 times	25	26
7 – 10 times	11	16
11 times or more	16	19

These three changes in DMA Web users most likely represent overall changes in Web use, and specifically Web use as it relates to art museums. While this information may seem prosaic, it is quite useful since it begins to identify who art museum Web users are as well as trends in Web use. As most know and have experienced first-hand, the Web is changing rapidly—continually offering new and exciting experiences that have changed how people connect to one another, do business, seek information, learn, and entertain themselves, among many other things. With all these changes, it has been difficult to track art museum Web users are and how are they using the Web. Therefore, the DMA's Web user survey has been an important endeavor as it begins to document such information.

FAVORABLE CHANGES IN DMA WEB SITE EXPERIENCES

Modifications to the DMA Web site have proven to be appropriate and well-received. Web users' ratings of the DMA Web site improved across the board. Of the three aspects rated—usefulness of the Web site, navigation, and the Web site's look and feel—Web users' ratings of their navigation experience increased most from 5.1 to 5.6 on the scale from, 1 ("Difficult to find what I was looking for") to 7 ("Easy to find what I was looking for").

Of further interest are changes in the reasons Web users are visiting the DMA Web site. That is, the percent of Web users who are visiting the DMA Web site to plan a visit to the Museum and check the schedule of events has decreased, while the percent of Web users who are visiting the Web site to

explore the collections or who are visiting for other reasons or no particular reason (e.g., happens across the Web site, seeing what is new on the Web site) has increased. This shift is most interesting as it indicates that the Web site is becoming more of a destination to engage with art, as opposed to just a planning or logistical tool.

Also encouraging is that the DMA Web site has created successful ways in which to engage Web users with the DMA Collections—a goal of the Museum. Findings from this study show that Web users who were visiting the DMA Web site to explore the collections rated the usefulness of the Web site higher than other Web users. While this survey did not delve into the various reasons that Web users found the DMA Web site useful, it does indeed indicate that the DMA is offering successful ways to explore the collections online.

CONSIDERING DMA WEB USER CLUSTERS ALONG WITH WEB EXPERIENCES

While it is inappropriate to compare the cluster analysis from the 2009 survey with that of the 2008 survey because of the nature of the statistical procedure, we can ascertain that the clusters from both surveys are mostly similar. For this survey, we again found that a 4-cluster solution was most befitting of the data and that the characteristics of each cluster were those of Observers, Pragmatists, Independents, and Enthusiasts.

A couple of interesting findings emerged when looking at differences in DMA Web site ratings by cluster (see Table iv):

1) Some statistical differences in Web site ratings by cluster can be explained by looking at the characteristics of each cluster

While there are statistically significant differences among each clusters' ratings of the DMA Web site, some statistical differences seem to be explained by the characteristics that define each cluster. For instance, there is a statistical difference in the mean rating of Observers and Enthusiasts regarding the usefulness of the DMA Web site. However, we know that Enthusiasts are confident art viewers, interested in learning about art, and tend to be very enthusiastic about the DMA, while Observers are not confident viewing art and not particularly interested in learning about art. Thus, with this information about these Web user groups, it is not as surprising that Observers rate the Web site lower than Enthusiasts.

2) Pragmatists need more help navigating the Web site

Of greater interest, however, is that Pragmatists rated the navigation of the DMA Web site lower than Enthusiasts. Knowing that Pragmatists seek more straightforward explanations of art, the DMA may want to look closely at how such information can be located on the Web site. Note that Pragmatists rated the usefulness of the Web site relatively high, so we can hypothesize that straightforward insights about art are adequately present although they are having trouble finding them.

TABLE vi
RATINGS OF DMA WEB SITE BY CLUSTER

		CL	USTER		
	OBSERVERS (n = 24) 5%	PRAGMATISTS (n = 157) 31%	INDEPENDENTS (n = 129) 26%	ENTHUSIASTS (n = 186) 38%	TOTAL (n = 496)
DMA WEB SITE RATINGS 7-POINT RATING SCALES:	MEAN	MEAN	MEAN	MEAN	MEAN
Not useful (1) / Useful (7) ¹	5.6	5.8	5.9	6.2	5.9
Looks uninviting (1) / Looks inviting (7) ²	5.6	5.6	5.8	6.0	5.8
Difficult to find what I was looking for (1) / Easy to find what I was looking for (7) ³	5.5	5.2	5.6	5.8	5.6

 $^{{}^{1}\}text{F} = 4.450; p = .004$

The DMA continues to demonstrate that the clusters have tremendous practical application in that they continue to inspire the DMA staff to conceptualize their programming to accommodate the distinct qualities of the clusters. RK&A continues to encourage the DMA to think analytically about the clusters as doing so spurs creative thinking and allows staff to serve its various audiences—Museum visitors, teachers, and Web users.

 $^{{}^{2}}F = 3.522; p = .015$

 $^{{}^{3}\}text{F} = 3.485; p = .016$

INTRODUCTION

This report presents findings from a summative evaluation conducted by Randi Korn & Associates, Inc. (RK&A) for the Dallas Museum of Art (DMA) about DMA Web site users. The study was conducted as part of an IMLS-funded project, Arts Network. Arts Network is a museum-wide network that includes a program development process and an adaptable program delivery system. The program delivery system, an in-house and Web-based network, enables DMA visitors to access programs and information online. This study was designed to provide the DMA with concrete information about Web users' experiences with the Web site, post redesign, in the context of the Museum's Framework for Engaging with Art (FEA).⁴

The target audience of the study is adult, DMA Web site users. Specific study objectives are to:

- Describe basic demographic and art background characteristics of visitors to the DMA Web site;
- Determine Web users' experiences with the revised DMA Web site, including frequency of visits, reasons for using the Web site, and ratings of particular aspects of the Web site;
- Explore Web users' preferences when viewing works of art;
- Identify Web user clusters, or Web user types, based on Web users' preferences when viewing works of art; and
- Describe the distinguishing characteristics of the Web user clusters, including preferences for viewing works of art, demographic characteristics, art background characteristics, and DMA Web site experiences.

METHODOLOGY

As in the initial Web site study, a standardized questionnaire was used to collect Web site user characteristics and experiences because it is the most efficient method for gathering information from a large number of people. Moreover, the resulting data from a standardized questionnaire can be analyzed using a variety of statistical procedures. RK&A consulted with DMA staff to determine which questions from the FEA survey would be included in the online questionnaire (see survey, Appendix A)—it is the same survey that was used for the first study.⁵ Respondents completed the questionnaire at the SurveyMonkey.com® Web site

Web users were encouraged to participate in the survey through several means. While visiting the Web site, Web users learned that if they completed a survey they would receive a 20 percent discount in the Museum Store, and possibly win a yearlong membership to the Dallas Museum of Art or a \$300 museum store gift certificate. All survey respondents received a 20 percent museum store discount, 15 respondents received a museum membership, and one respondent won a \$300 museum store gift certificate.

⁴ Framework for Engaging with Art was formerly referred to as Levels of Engagement with ArtSM.

⁵ Randi Korn & Associates, Inc. (2008). Online User Research: Levels of Engagement with ArtSM and Arts Network. Unpublished manuscript. Dallas, TX: Dallas Museum of Art.

DATA ANALYSIS AND REPORTING

Data were analyzed using SPSS 12.0.1 for Windows, a statistical package for personal computers. Analyses included both descriptive and inferential methods. Frequency distributions were calculated for all categorical variables. Summary statistics, including the mean (average) and standard deviation (spread of scores: " \pm " in tables), were calculated for rating scale variables. To examine the relationship between two categorical variables, cross-tabulation tables were computed to show the joint frequency distribution of the variables, and the chi-square statistic (X^2) was used to test the significance of the relationship. For example, "first/repeat Web site visit" was tested against "age" to determine if the two variables are related. To test for differences in the means of two or more groups, an analysis of variance (ANOVA) was performed and the F-statistic was used to test the significance of the difference. For example, "rating scale scores" were compared by "gender" to determine if ratings are related.

To better understand different types of DMA Web site users and the characteristics associated with each visitor type, a statistical K-Means cluster procedure classified Web users into four cluster groups based on their ratings of 10 statements about viewing works of art. These 10 statements are the same statements that were used in previous FEA studies⁶. In a K-Means cluster analysis, the statistical program is instructed to divide the cases or respondents into a particular number of clusters based on how respondents rated the 10 statements. For this study, RK&A explored the data with three and four-group cluster solutions and determined that a four-group cluster solution produced the most distinctive cluster groups.

For all inferential statistical tests, a 0.05 level of significance was used to preclude findings of little practical significance. Only statistically significant findings are presented in the body of the report (see statistical analyses, Appendix B).

The remainder of this report presents findings of the visitor survey. Tables are used to present the information. Percentages within tables do not always equal 100 owing to rounding. Survey findings are organized around the following five areas:

SECTIONS OF THE REPORT:

- 1. Demographic Characteristics
- 2. Art Museum Background
- 3. DMA Web Site Experiences
- 4. Art Viewing Preferences
- 5. Web Site User Clusters

⁶ Randi Korn & Associates, Inc. (2005). "Levels of Engagement with ArtSM: a two-year study 2003 – 2005." Unpublished manuscript. Dallas, TX: Dallas Museum of Art; RK&A (2007). "Levels of Engagement with ArtSM and teachers." Unpublished manuscript. Dallas, TX:

⁷ When the level of significance is set to p = 0.05, any finding that exists at a probability (p-value) ≤ 0.05 is "significant." When a finding (such as a relationship between two variables or a difference in rating scores) has a p-value of 0.05, there is a 95 percent probability that the finding exists; that is, in 95 out of 100 cases, the finding is correct. Conversely, there is a 5 percent probability that the finding would not exist; in other words, in 5 out of 100 cases, the finding appears by chance.

PRINCIPAL FINDINGS

INTRODUCTION

DMA Web users were asked to participate in an online questionnaire, which included questions about Web users' demographics, art museum and art museum Web site visit patterns, DMA Web site experiences, and art viewing preferences. A total of 536⁸ Web users completed the questionnaire.

DATA COLLECTION CONDITIONS

Data collection took place daily between August and December 2009 (see Table 1). Data were collected approximately equally over each month (20 to 25 percent each month) with the exception of December (8 percent).

TABLE I
DATA COLLECTION PERIOD (IN PERCENT)

MONTH (n = 536)	%
August	20
September	24
October	24
November	25
December	8

DEMOGRAPHIC CHARACTERISTICS

This section of the report describes Web site users' demographic characteristics including gender, age, ethnicity, and language spoken at home. Respondents also had the option to provide an address; residence findings are reported in Appendix C.

⁸ Of the 536 Web site visitors who participated in the study, 40 visitors did not complete the questionnaire. We have reported as much data as these 40 visitors provided.

GENDER, AGE, AND ETHNICITY

Table 2 presents basic demographic characteristics. Respondents are primarily female (67 percent) and Caucasian/White (76 percent). More than two-thirds of respondents are younger than 45 years (69 percent), and the median age is 35 years.

TABLE 2
DEMOGRAPHIC CHARACTERISTICS (IN PERCENT)

GENDER (n = 486)	%
Female	67
Male	33
AGE ¹ (IN YEARS, n = 475)	%
$17 - 24^2$	20
25 – 34	29
35 – 44	20
45 – 54	18
55 – 64	10
65 and older	3
ETHNICITY (n = 484)	% ³
Caucasian/White	76
Hispanic	10
African-American/Black	7
Asian	5
Other	5
American Indian	2

¹ Age: range = 17 - 90; median age = 35; mean age = $37.3 \ (\pm 13.27 \ \text{years})$.

LANGUAGES SPOKEN AT HOME

Respondents were asked to identify what language(s) are spoken at home. Almost all respondents speak English at home (95 percent), while a few respondents speak Spanish and/or another language (6 percent and 5 percent, respectively) (see Table 3).

TABLE 3
LANGUAGES SPOKEN AT HOME (IN PERCENT)

LANGUAGES SPOKEN AT HOME (n = 487)	%¹
English	95
Spanish	6
Other language	5

¹Twenty-eight respondents identified more than one language; thus, percentages do not total 100

² One respondent is 17 years old.

³ Sixteen respondents identified more than one ethnicity; thus, percentages do not total 100.

ART MUSEUM BACKGROUND

This section presents two aspects of DMA Web users' art museum background: how often they visit art museums annually and how often the visit art museum Web sites annually.

ART MUSEUM VISITS

The majority of respondents are frequent art museum goers (see Table 4). In a typical year, more than one-half of respondents visit art museums (including the Dallas Museum of Art) four times or more (55 percent).

TABLE 4
ANNUAL ART MUSEUM VISITS (IN PERCENT)

ANNUAL ART MUSEUM VISITS (n = 496)	%
Never	3
Once	10
2–3 times	32
4–6 times	24
7–10 times	14
11 times or more	17

ART MUSEUM WEB SITE VISITS

The majority of respondents also visit art museum Web sites frequently (see Table 5). In a typical year, almost two-thirds of respondents visit art museum Web sites (including the Dallas Museum of Art Web site) four times or more (64 percent). A few respondents said they typically do not visit art museum Web sites (7 percent).

TABLE 5
ANNUAL ART MUSEUM WEB SITE VISITS (IN PERCENT)

ANNUAL ART MUSEUM WEB SITE VISITS (n = 496)	%
Never	7
Once	6
2–3 times	23
4–6 times	19
7–10 times	15
11 times or more	30

DMA WEB SITE EXPERIENCES

This section describes DMA Web users' experiences with the DMA Web site. Respondents reported how often they visited the Web site and their particular reason for visiting the Web site that day. They also rated three specific aspects of the Web site.

VISITATION TO THE DMA WEB SITE

Table 6 presents respondents' visitation patterns to the DMA Web site. Almost two-thirds of respondents had used the Web site previously (64 percent). Most respondents who had used the DMA Web site had used it two times or more previously (91 percent).

TABLE 6
VISITATION TO THE DMA WEB SITE (IN PERCENT)

FIRST OR REPEAT VISIT (n = 536)	%
Repeat visit	64
First visit	36
IF A REPEAT VISITOR, THE NUMBER OF TIMES RESPONDENTS VISITED THE DMA WEB SITE IN THE LAST 12 MONTHS $(n = 341)$	% ¹
None	2
Once	8
2–3 times	30
4–6 times	26
7–10 times	16
11 times or more	19

¹Percentages do not total 100 owing to rounding..

REASONS FOR VISITING THE DMA WEB SITE®

Most respondents were visiting the DMA Web site for a particular reason (87 percent) (see Table 7). Of these respondents, more than one-half visited the DMA Web site to check the schedule of events and/or to plan a visit (57 and 55 percent, respectively), while one-third visited the Web site to explore the collections (31 percent).

TABLE 7
REASONS FOR VISITING THE DMA WEB SITE (IN PERCENT)

VISIT FOR A PARTICULAR REASON (n = 529)	%
Yes	87
No	13
PARTICULAR REASONS FOR VISITING $(n = 459)$	% ¹
To check the schedule of events	57
To plan my visit	55
To explore the collections	31
Other	23
To use teacher resources	8
To become a member	5

¹Respondents were allowed to select more than one reason for visiting the Web site; thus, percentages do not total 100 owing to rounding.

DMA WEB SITE RATINGS

Respondents evaluated three aspects of the DMA Web site using 7-point rating scales. For all three scales, a score of "1" is least favorable and a score of "7" is most favorable. All three aspects received fairly good ratings (see Table 8).

On the scale 1 ("Not useful") to 7 ("Useful"), respondents rated the Web site a mean of 5.9. On the scale 1 ("Looks uninviting") to 7 ("Looks inviting"), respondents rated the Web site a mean of 5.8. On the scale 1 ("Difficult to find what I was looking for") to 7 ("Easy to find what I was looking for"), respondents rated the Web site a mean of 5.6—the lowest of the three. The rating for Web site navigation has the highest standard deviation of the three scales (standard deviation \pm 1.64), indicating that it elicits the most diversity of opinion from respondents.

TABLE 8
RATINGS OF DMA WEB SITE EXPERIENCES

DMA WEB SITE RATINGS 7-POINT SCALE:	n	MEAN	±
Not useful (1) / Useful (7)	490	5.9	1.33
Looks uninviting (1) / Looks inviting (7)	490	5.8	1.32
Difficult to find what I was looking for (1) / Easy to find what I was looking for (7)	490	5.6	1.64

⁹ The presentation of visit reason in this report differs from that in the 2008 survey. In this report, we present visit reasons for only those Web users who said they were visiting the DMA Web site for a particular reason. See Appendix D for presentation of the 2009 data comparable to that in the 2008 study.

CHARACTERISTICS ASSOCIATED WITH RATINGS OF DMA WEB SITE EXPERIENCES

Respondents' ratings of DMA Web site experiences were tested by gender, age, first visit to DMA Web site, number of visits to DMA Web site visits, reason for visiting the DMA Web site, number of visits to art museums, and number of visits to art museum Web sites. There are two significant findings related to reasons for visiting the DMA Web site:

- Web users who are visiting the Web site to use the teacher resources are more likely to rate the look and feel of the DMA Web site higher than those who are not visiting for this reason (see Table 9).
- Web users who are visiting the Web site to explore the collections are more likely to rate the usefulness of the DMA Web site higher than those who are not visiting for this reason (see Table 10).

TABLE 9

RATINGS OF DMA WEB SITE BY VISIT REASON: TO USE TEACHER RESOURCES

DMA WEB SITE RATINGS	VISIT REAS TEACHER I		
7-POINT SCALE: (n = 430)	YES	NO	TOTAL
Looks uninviting (1) / Looks inviting (7)1	6.4	5.7	5.8

 $^{^{1}\}chi^{2} = 7.861$; df = 1 p = .005

TABLE 10

RATINGS OF DMA WEB SITE BY VISIT REASON: TO EXPLORE THE COLLECTIONS

DMA WEB SITE RATINGS	VISIT REASON: TO EXPLORE THE COLLECTIONS		
7-POINT SCALE: (n = 430)	YES	NO	TOTAL
Not useful (1) / Useful (7) ¹	6.1	5.8	5.9

 $^{^{1}\}chi^{2} = 4.085$; df = 1 p = .044

ART VIEWING PREFERENCES

This section explores Web site users' preferences when viewing art. Respondents rated 10 statements about viewing art on a 7-point scale from 1 ("Does not describe me") to 7 ("Describes me very well"). Table 11 lists the statements in order from highest to lowest rating.

Respondents identify most strongly with the statement "I feel comfortable looking at most types of art" (mean = 6.2). They also have a positive identification with the statements "I am emotionally affected by art" (mean = 5.8), "I like to know the story portrayed in a work of art" (mean = 5.6), "I enjoy talking with others about the art we are looking at" (mean = 5.6), and "I like to know about the materials and techniques used by the artist" (mean = 5.5). Respondents are more equivocal about the statements, "I am comfortable explaining the meaning of a work of art to a friend" (mean = 5.1), "I like to be told a straightforward insight to help me know what the work of art is about" (mean = 4.7), "I like to connect with works of art through music, dance, dramatic performances, and readings" (mean = 4.5), and "I like to view a work of art on my own without explanations or interpretations" (mean = 4.4). Of the 10 statements, respondents identify least of all with the statement "I find some terms used to describe art difficult to understand" (mean = 3.5).

The statements with the highest standard deviation (±; spread of scores), and therefore the most diversity of opinion are "I like to connect with works of art through music, dance, dramatic performances, and readings" (± 1.97) and "I find some terms used to describe art difficult to understand" (± 1.95).

TABLE 11
RATINGS OF ART VIEWING PREFERENCES

7-POINT SCALE: DOES NOT DESCRIBE ME (I) / DESCRIBES ME VERY WELL (7)	п	MEAN	±
I feel comfortable looking at most types of art.	496	6.2	1.27
I am emotionally affected by art.	496	5.8	1.51
I like to know the story portrayed in a work of art.	496	5.6	1.53
I enjoy talking with others about the art we are looking at.	496	5.6	1.59
I like to know about the materials and techniques used by the artist.	496	5.5	1.60
I am comfortable explaining the meaning of a work of art to a friend.	496	5.1	1.73
I like to be told a straightforward insight to help me know what the work of art is about.	496	4.7	1.77
I like to connect with works of art through music, dance, dramatic performances, and readings.	496	4.5	1.97
I like to view a work of art on my own, without explanations or interpretations.	496	4.4	1.75
I find some terms used to describe art difficult to understand.	496	3.5	1.95

WEB USER CLUSTERS

The previous section of the report describes DMA Web users' ratings of 10 statements regarding their preferences for viewing art on the scale 1 ("Does not describe me") to 7 ("Describes me very well"). This section identifies four clusters, or Web user types, derived from a cluster analysis of respondents' responses to the 10 statements. The four clusters are "Enthusiasts" (38 percent), "Pragmatists" (31 percent), "Independents" (26 percent), and "Observers" (5 percent) (see Table 12).

TABLE 12
DMA WEB USER CLUSTERS (IN PERCENT)

DMA WEB SITE USER CLUSTERS (n = 496)	%
Observers	
	5
Pragmatists	31
Independents	26
Enthusiasts	38

DESCRIPTION OF THE CLUSTERS

Table 13 gives the ratings of the 10 statements about viewing art according to cluster group. Below, we describe the clusters based upon their relative mean ratings.

OBSERVERS

Observers are not confident viewing art and are not particularly interested in learning about art. Of the four clusters, this cluster is least comfortable explaining the meaning of a work of art to a friend (mean = 2.1), least interested in talking with others about the art they are looking at (mean = 2.4), least interested in knowing about materials and techniques used by the artist (mean = 2.4), least emotionally affected by art (mean = 2.6), least interested in knowing a straightforward insight about a work of art (mean = 2.7), least interested in knowing the story portrayed in a work of art (mean = 2.8), least comfortable looking at art (mean = 3.3), and least interested in connecting with art through music, dance, dramatic performances, and readings (mean = 3.6). Observers are less inclined to view art without explanations or interpretations (mean = 4.7) than Independents and Enthusiasts (mean = 5.1 and 4.4, respectively). They are also the group that most finds some terms used to describe art difficult to understand (mean = 4.1).

PRAGMATISTS

Pragmatists¹¹ are less confident about art than Enthusiasts or Independents, but more confident than Observers. They feel reasonably comfortable looking at art (mean = 5.7), and they have a fairly strong emotional connection to art (mean = 5.0), although they find some terms used to describe art difficult to understand (mean = 4.0). While they rather enjoy talking with others about art (mean = 4.6), they are not comfortable explaining the meaning of a work of art to friends (mean = 4.0). Of the four clusters, Pragmatists are least likely to want to view art without explanations or interpretations (mean = 3.8). Rather, Pragmatists seem to want nuts-and-bolts explanations and interpretations; they are more interested in knowing the story portrayed in a work of art (mean = 5.8), being told a straightforward insight to help them understands what the work of art is about (mean = 5.1), and learning about the materials and techniques used by the artist (mean = 4.9). Pragmatists are not particularly keen to connect with art through music, dance, dramatic performances, and readings (mean = 3.8).

¹⁰ The cluster analysis procedure is described in the Methodology/Data Analysis section of this report.

¹¹ This cluster was not present in either DMA onsite visitors or teachers who visit the DMA with their students.

INDEPENDENTS

Independents are confident viewing art and are emotionally engaged by art, but they are only moderately interested in receiving information about art. Of the four clusters, Independents have the strongest preference for viewing art without explanations or interpretations (mean = 5.1), and they also have the least difficulty understanding art terminology (mean = 2.0). Independents are similar to Enthusiasts in being comfortable looking at art (Independents' mean = 6.6 vs. Enthusiasts' mean = 6.8) and emotionally affected by art (Independents' mean = 6.3 vs. Enthusiasts' mean = 6.5). Independents also enjoy talking with others about the art they are looking at (mean = 6.0) and are comfortable explaining the meaning of a work of art to a friend (mean = 5.5), but they are not as keen to do so as Enthusiasts (mean = 6.4 and 6.1, respectively). Independents are more interested in knowing about materials and techniques used by the artist (mean = 5.6) than learning other information, such as the story portrayed in a work of art (mean = 4.6) and straightforward insights about a work of art (mean = 3.0). Independents are not particularly keen to connect with art through music, dance, dramatic performances, and readings (mean = 4.0).

ENTHUSIASTS

Enthusiasts are highly confident viewing art and highly interested in learning about art. Of the four clusters, Enthusiasts are most comfortable looking at art (mean = 6.8), most interested in knowing the story portrayed in a work of art (mean = 6.6), most emotionally affected by art (mean = 6.5), most interested in talking with others about art (mean = 6.4), most interested in knowing about materials and techniques used by the artist (mean = 6.3), and most comfortable explaining the meaning of a work of art to a friend (mean = 6.1). Enthusiasts like to know a straightforward insight about a work of art (mean = 5.8), although this kind of information is somewhat less important to them than other kinds of information, such as the story portrayed in a work of art (mean = 6.6) and the materials and techniques used by the artist (mean = 6.3). This cluster is more interested in connecting with art through music, dance, dramatic performances, and readings than the other three clusters (Enthusiasts' mean = 5.5 vs. other means = 4.0, 3.8, and 3.6).

TABLE 13 **RATINGS OF ART VIEWING PREFERENCES BY CLUSTER**

	CLUSTER				
7-POINT SCALE:	OBSERVERS (n = 24) 5%	PRAGMATISTS (n = 157) 31%	INDEPENDENTS (n = 129) 26%	ENTHUSIASTS (n = 186) 38%	TOTAL (n = 496)
DOES NOT DESCRIBE ME (I) / DESCRIBES ME WELL (7)	MEAN	MEAN	MEAN	MEAN	MEAN
I feel comfortable looking at most types of art.1	3.3	5.7	6.6	6.8	6.2
I am emotionally affected by art. ²	2.6	5.0	6.3	6.5	5.8
I like to know the story portrayed in a work of art. ³	2.8	5.8	4.6	6.6	5.6
I enjoy talking with others about the art we are looking at.4	2.4	4.6	6.0	6.4	5.6
I like to know about the materials and techniques used by the artist. ⁵	2.4	4.9	5.6	6.3	5.5
I am comfortable explaining the meaning of a work of art to a friend. ⁶	2.1	4.0	5.5	6.1	5.1
I like to be told a straightforward insight to help me know what the work of art is about. ⁷	2.7	5.1	3.0	5.8	4.7
I like to connect with works of art through music, dance, dramatic performances, and readings.8	3.6	3.8	4.0	5.5	4.5
I like to view a work of art on my own, without explanations or interpretations. ⁹	4.0	3.8	5.1	4.4	4.4
I find some terms used to describe art difficult to understand. ¹⁰	4.1	4.0	2.0	3.5	3.3

 $^{{}^{1}\}text{F} = 103.903; p = .000$

 $^{{}^{2}}F = 124.195; p = .000$ ${}^{3}F = 125.573; p = .000$ ${}^{4}F = 128.607; p = .000$

 $^{^{5}}$ F = 76.844; p = .000

 $^{^{6}}F = 109.395; p = .000$ $^{7}F = 143.279; p = .000$

 $^{^{8}\}text{F} = 33.266; p = .000$

 $^{{}^{9}\}text{F} = 14.978; p = .000$

 $^{^{10}}$ F = 47.566; p = .000

DIFFERENCES AMONG WEB USER CLUSTERS

Web user clusters were tested against gender, age, first/repeat visit to the DMA Web site, reason for visiting the DMA Web site, number of art museum visits annually, number of art museum Web site visits annually, and ratings of DMA Web site. Only statistically significant differences are reported.

DIFFERENCES IN AGE

Table 14 shows the mean and median ages of each cluster. Independents and Enthusiasts (mean age = 35.5 and 36.1, respectively) tend to be younger than Observers and Pragmatists (mean age = 39.5 and 39.9, respectively)

TABLE 14
AGE BY CLUSTER

	CLUSTER				
	OBSERVERS (n = 24) 5%	PRAGMATISTS (n = 157) 31%	INDEPENDENTS (n = 129) 26%	ENTHUSIASTS (n = 186) 38%	TOTAL (n = 496)
AGE (IN YEARS)	MEAN	MEAN	MEAN	MEAN	MEAN
Median age	33.5	39.0	32.0	34.5	35.0
Mean age ¹	39.5	39.9	35.5	36.1	37.3

 $^{{}^{1}\}text{F} = 3.511; p = .015$

DIFFERENCES IN ART MUSEUM BACKGROUND

In a typical year, Enthusiasts and Independents visit art museums more often than Pragmatists or Observers (see Table 15). Seventy-one percent of Independents and 57 percent of Enthusiasts visit art museums four or more times a year, while 41 percent of Pragmatists and 42 percent of Observers visit art museums four or more times a year.

TABLE 15
ANNUAL ART MUSEUM VISITS BY CLUSTER (IN PERCENT)

	·	CLUSTER			
	OBSERVERS (n = 24) 5%	PRAGMATISTS (n = 157) 31%	INDEPENDENTS (n = 129) 26%	ENTHUSIASTS (n = 186) 38%	TOTAL (n = 496)
ANNUAL ART MUSEUM VISITS ¹	%	%	%	%	%
0 – 1	25	19	4	14	13
2 - 3	33	41	25	29	32
4 or more	42	41	71	57	55

 $^{^{1}\}chi^{2} = 33.680; p = .000$

The pattern is similar for annual art museum Web site visits (see Table 16). Seventy-seven percent of Independents and 65 percent of Enthusiasts visit art museum Web sites four or more times a year, while 54 percent of Pragmatists and 56 percent of Observers visit art museum Web sites four or more times a year (see Table 16).

TABLE 16
ANNUAL ART MUSEUM WEB SITE VISITS BY CLUSTER (IN PERCENT)

	CLUSTER				
	OBSERVERS (n = 24) 5%	PRAGMATISTS (n = 157) 31%	INDEPENDENTS (n = 129) 26%	ENTHUSIASTS (n = 186) 38%	TOTAL (n = 496)
ANNUAL ART MUSEUM WEB SITE VISITS ¹	%	%	%	%	%
0 – 1	29	17	9	11	13
2-3	25	30	15	24	23
4 or more	56	54	77	65	64

 $^{^{1}\}chi^{2} = 23.016; p = .001$

DIFFERENCES IN WEB SITE EXPERIENCES

Respondents evaluated three aspects of the DMA Web site using 7-point rating scales in which a score of "1" is least favorable and a score of "7" is most favorable. Overall, the ratings differed relatively little by cluster group, although Enthusiasts always gave the most favorable ratings (see Table 17).

On the scale from 1 ("Not Useful") to 7 ("Useful"), Enthusiasts gave the Web site the highest rating (mean = 6.2), while Observers gave the lowest rating (mean = 5.6). Pragmatists and Independents gave ratings in the middle (means = 5.8 and 5.9, respectively).

On the scale from 1 ("Looks uninviting") to 7 ("Looks inviting"), Enthusiasts gave the Web site the highest rating (mean = 6.0), while Pragmatists and Observers gave the lowest rating (both means = 5.6). Independents gave the middle rating (mean = 5.8).

On the scale from 1 ("Difficult to find what I was looking for") to 7 ("Easy to find what I was looking for"), Enthusiasts gave the Web site the highest rating (means = 5.8), while Pragmatists gave the lowest rating (mean = 5.2). Observers and Independents gave ratings in the middle (means = 5.5 and 5.6, respectively).

TABLE 17
RATINGS OF DMA WEB SITE BY CLUSTER

	CLUSTER				
	OBSERVERS (n = 24) 5%	PRAGMATISTS (n = 157) 31%	INDEPENDENTS (n = 129) 26%	ENTHUSIASTS (n = 186) 38%	TOTAL (n = 496)
DMA WEB SITE RATINGS 7-POINT RATING SCALES:	MEAN	MEAN	MEAN	MEAN	MEAN
Not useful (1) / Useful (7)¹	5.6	5.8	5.9	6.2	5.9
Looks uninviting (1) / Looks inviting (7) ²	5.6	5.6	5.8	6.0	5.8
Difficult to find what I was looking for (1) / Easy to find what I was looking for (7) ³	5.5	5.2	5.6	5.8	5.6

 $^{{}^{1}\}text{F} = 4.450; p = .004$

 $^{{}^{2}}F = 3.522; p = .015$

 $^{{}^{3}\}text{F} = 3.485; p = .016$

VISIT REASON BY CLUSTER

In the previous study of Web users, visit reason differed by cluster. While there are no significant differences in visit reason by cluster in this study, we have reported it as such as a point of comparison with the prior study (see Table 18).

TABLE 18
REASONS FOR VISITING THE DMA WEB SITE BY CLUSTER (IN PERCENT)

	CLUSTER				
	OBSERVERS (n = 24) 5%	PRAGMATISTS (n = 157) 31%	INDEPENDENTS (n = 129) 26%	ENTHUSIASTS (n = 186) 38%	TOTAL (n = 496)
REASONS FOR VISITING THE DMA WEB SITE	%	%	%	%	%
To check the schedule of events	46	50	55	48	51
To plan my visit	38	48	53	47	48
To explore the collections	33	20	33	27	27
Other	8	20	20	22	20
To use teacher resources	13	5	8	8	7
To become a member	13	5	6	3	5

APPENDICES

APPENDIX A: SURVEY

Removed for proprietary purposes

APPENDIX B: STATISTICS ANALYSES

DESCRIPTIVE STATISTICS

CATEGORICAL VARIABLES: FREQUENCIES

Q1 First-repeat visit to DMA Website

Q2 Number of DMA Web site visits in last 12 months

Q3-Q4 Particular reasons for visiting Web site

Q6 Number of art museum visits annually

Q7 Number of art museum Web site visits annually

Q9 Gender

Age group: <24, 25-34, 35-44, 45-54, 55-64, 65+

Q11 Ethnicity

Q12 Language spoken at home

Zip code (optional)

State or Country (optional)

DMA Web user clusters: Enthusiasts, Independents, Pragmatists, or Observers

DESCRIPTIVE STATISTICS

INTERVAL VARIABLES: MEAN, MEDIAN, STANDARD DEVIATION

Q5a to Q5j Ratings of preferences for viewing art

Q8a to Q8c Ratings of DMA Web site

Q10 Age-in-years

DESCRIPTIVE STATISTICS

CLUSTER ANALYSIS

Q5a to Q5j Ratings of preferences for viewing art

INFERENTIAL STATISTICS

CROSSTABS OR ANOVAS

CROSS I ABS OR ANOVAS		
Q1 First-repeat visit to DMA Website Q3-Q4 Particular reason for visiting DMA Web site Q6 Number of art museum visits annually Q7 Number of art museum Web site visits annually Q9 Gender Q10 Age-in-years	by	Q8a to Q8c Ratings of DMA Web site
Q1 First-repeat visit to DMA Website Q3-Q4 Particular reason for visiting DMA Web site Q6 Number of art museum visits annually Q7 Number of art museum Web site visits annually Q9 Gender Q10 Age-in-years Q5a to Q5j Ratings of preferences for viewing art Q8a to Q8c Ratings of DMA Web site	by	DMA Web user clusters: Enthusiasts, Independents, Pragmatists, or Observers

APPENDIX C: RESIDENCE

If respondents wanted to participate in the prize drawing or receive a coupon for the Museum shop, they were asked to provide the country and state in which they reside. Two-thirds of respondents chose to present this information (68 percent); see the table below for details.

TABLE 19
HOME STATE OR COUNTRY

RESIDENCE		
(n = 536)	n	%
USA:	358	67
TX	332	62
OK	4	1
CA	3	1
MD	2	< 1
ОН	2	< 1
AL	1	< 1
AR	1	< 1
CO	1	< 1
CT	1	< 1
HI	1	< 1
IL	1	< 1
IN	1	< 1
KS	1	< 1
KY	1	< 1
MI	1	< 1
NC	1	< 1
NJ	1	< 1
NM	1	< 1
NY	1	< 1
VA	1	< 1
Other Country:	5	1
France	2	< 1
Germany	1	< 1
Mexico	1	< 1
United Kingdom	1	< 1
Not reported	173	32
Total	536	100

APPENDIX D: SUPPLEMENTARY TABLES

VISIT REASON

From among a list, Web users were asked to identify their reasons for visiting the DMA Web site; Web users could select more than one reason. The top two reasons for visiting the DMA Web site were to check the schedule of events (50 percent) and to plan a visit (48 percent) (see Table). Other reasons were to explore the collections (26 percent), other reason (20 percent), no particular reason (13 percent), to use the teacher resources (7 percent), and to become a member (5 percent).

TABLE 20
REASONS FOR VISITING THE DMA WEB SITE (IN PERCENT)

REASONS FOR VISITING THE DMA WEB SITE (n = 530)	%
To check the schedule of events	50
To plan my visit	48
To explore the collections	26
Other	20
No particular reason	13
To use teacher resources	7
To become a member	5

¹Respondents were allowed to select more than one reason for visiting the Web site; thus, percentages do not total 100 owing to rounding.