

Art Museums and Technology

Developing New Metrics to Measure Visitor Engagement



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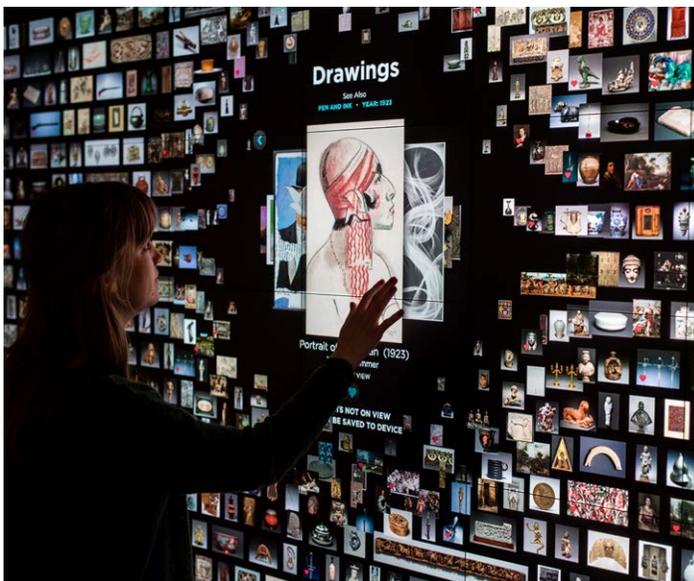
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Introduction

As art museums expand their investment and footprint in interactive visitor-engagement technologies, there is increasing need to find more meaningful ways to tell the story about how these enhance and expand the visitor experience. In late 2016, the Cleveland Museum of Art's Research and Evaluation team with Rockman et al embarked on a two-year project to examine new ways of measuring the impact of these digital interactives in art museums. Project funding was generously provided by the National Endowment for the Arts ArtWorks program.

The Cleveland Museum of Art (CMA) is an ideal site to act as a test bed in this arena. With its award-winning ARTLENS Gallery and comprehensive digital strategy paving the way for digital innovation in art museums, coupled with an established, robust visitor research

program, the institution was well positioned to take on this work. The primary goal of ARTLENS Gallery is to use innovative technology to provide visitors the tools to look closer, dive deeper, and feel comfortable exploring the museum's entire collection. A refresh of ARTLENS Gallery in June 2017 provided a catalyst for engaging in an innovative round of evaluation designed to prototype new metrics focused on outcomes and to determine whether these new interactives encouraged increased museum visitation amongst millennials, families, and first-time visitors, who are the primary target audiences of ARTLENS Gallery.



ARTLENS Gallery is a gift of the Maltz Family Foundation with additional generous support from the Char and Chuck Fowler Family Foundation.

Methodology

After a comprehensive literature review and series of stakeholder interviews, the CMA and Rockman team developed a semistructured, cognitive interview protocol to test out concepts and language surrounding possible visit outcomes. In October 2017, 36 interviews were conducted with a mix of ARTLENS Gallery visitors (n=14) and non-ARTLENS Gallery visitors (n=22). Ten of the respondents were also first-time visitors to the CMA. In addition to answering a variety of open-ended interview questions, respondents were asked to examine some close-ended questions that the team was piloting.

The interview results informed the second phase of this mixed-methods evaluation: a series of pre-visit and post-visit surveys. When visitors arrived at the museum, a random selection of adult visitors were asked if they would be willing to participate in a research study. Participants completed an anonymous pre-visit survey on an iPad, which asked a series of motivational, perception, and demographic questions, before being given a numbered tag. This allowed the researchers to pair pre-visit and post-visit surveys while maintaining participant anonymity. Visitors could then visit the museum however they preferred, with no suggestion or prompting from the researcher. After their visit, which generally

lasted approximately two hours, participants returned with their numbered tag and were given a post-visit survey to complete. Many of the questions asked on the pre-visit survey appeared again on the post-visit survey in order to measure changes across the museum visit. If the participants indicated on the survey that they visited ARTLENS Gallery during their time at the museum that day, then they were given a series of additional questions about that experience.

During November 2017 and January 2018, 438 paired surveys were collected. In order to ensure a substantial sample of target audience populations, particularly millennials and those visiting with children, additional surveys were collected from these groups. In total, approximately 36% of the respondents visited ARTLENS Gallery.



Results

The visitors who were most likely to opt into the ARTLENS Gallery experience were younger adults, families, and nonmembers. Visitors who were motivated to visit the CMA that day by a desire to have fun and be entertained were also more likely to visit ARTLENS Gallery. If they visited ARTLENS Gallery early in their visit, they were also more likely than other visitors to go into the museum’s permanent collection galleries.



When asked to reflect on their experience and what they found meaningful about it, participants were likely to agree that their visit to ARTLENS Gallery enhanced their overall museum experience (76%), encouraged them to look closely at art and notice new things (74%), and increased their interest in the museum’s collection (73%). The majority (78%) also agreed that it increased their perception of the CMA as a place that was welcoming to a wide range of visitors and was forward-thinking and innovative (76%). Participants were asked to use

their own words to describe their experience at the CMA and, when applicable, in ARTLENS Gallery. Compared to the CMA, participants tended to describe ARTLENS Gallery using words that fell into the category of fun or entertainment (e.g., “fun,” “enjoyable,” “play”); new (“modern,” “innovative,” “different”); or interactive (“interactive,” “engaging,” “lively”). Individuals who visited ARTLENS Gallery had more positive views about technology in museums at the outset but also had a statistically significant increase in their perceptions that was substantially higher than visitors who did not visit ARTLENS Gallery.

One of the most intriguing findings across all ARTLENS Gallery visitors was the differences between their pre-visit and post-visit survey responses around art comprehension. Those who visited ARTLENS Gallery felt less confident about their level of art understanding and knowledge at the beginning of their visit compared to those who did not visit ARTLENS Gallery. After a single visit, ARTLENS Gallery visitors substantially increased their ratings, whereas visitors who did not go to ARTLENS Gallery did not experience a significant change. This was especially true for ARTLENS Gallery visitors who felt less confident in their understanding of art upon entering the museum that day.

Results

While there was little difference between frequent and infrequent visitor groups' responses, there were substantial differences among two particular visitor cohorts: millennials and families. Millennials (defined as adults born between 1981 and 1996)¹ were more likely than older adult visitors to visit ARTLENS Gallery (44% compared to 29%). Millennials who visited ARTLENS Gallery were most likely to visit museums as a way to have fun (37%) and relax (38%). Millennials' art understanding and knowledge were more likely to increase significantly over the course of a single visit if they attended ARTLENS Gallery, rising from a base rating of 5.3 to 6.0, compared to those who did not visit ARTLENS Gallery (5.8 to 6.0). ARTLENS Gallery also positively influenced millennials' perceptions of art museums as good places to have new experiences. Their agreement with this item rose from 76% to 88% by the end of their visit.

More than half of visitor groups that included children (henceforth referred to as "families") visited ARTLENS Gallery. With its interactives focused on promoting group engagement, ARTLENS Gallery proved to be a natural match for families, who were primarily motivated by a desire to facilitate a positive experience for the entire group. This led to families who visited

ARTLENS Gallery being more likely to leave fully satisfied with their CMA visit experience, which can lead to an increased likeliness to return and recommend. Over a single visit, family group participants who visited ARTLENS Gallery also had a statistically significant change in their art understanding and interpretation skills compared to families who did not visit ARTLENS Gallery.



¹From the Pew Research Center, <http://www.pewresearch.org/topics/millennials/>.

Looking Ahead

Beyond discovering some of the visitor outcomes related to the ARTLENS Gallery experience, the study focused on developing new ways of capturing insights into how interactive technology affects the visitor experience. Having the ability to capture visitor attitudes, perceptions, and self-reported skill levels prior to and immediately after their visit was critical in determining real changes that developed, rather than solely relying on a post-visit evaluation. Asking layered questions also helped identify and parse out museum-based language barriers, improving researchers' abilities to gather meaningful data more easily.

Moving forward, the complementary toolkit to this whitepaper, *Art Museum Digital Impact Evaluation Toolkit*, aims to bring these findings and methodologies out to expand this investigation into interactive technology outcomes throughout the art museum field. It is important to determine whether these goals and associated metrics for measuring them—such as whether the interactive technology expands visitors' art knowledge and understanding skills or whether it changes visitors' perceptions of what an art museum experience can be—are able to be replicated in other environments. It is our sincere hope that other museums will test and vet these metrics so collective understanding about the effects of these investments can be realized.

