

Virtual Programming in Action: National Children's Museum

August 12, 2022

For this ACM Trends Report, we invited staff from National Children's Museum in Washington, DC, to write about their experiences with virtual programming during COVID-19. Staff from the museum participated in the October 2021 discussion forum focused on virtual programming (See ACM Trends Report 5.1 for details).

After seventeen years without a permanent home in Washington, DC, National Children's Museum (NCM) reopened as a science, technology, engineering, arts, and math (STEAM) focused institution on February 24, 2020. Eighteen days later, the Museum temporarily closed as a precaution against COVID-19, and committed to providing families and educators with free, meaningful experiences at home. When the institution reopened, NCM continued to offer virtual programming for children under twelve and their families, garnering more than three million impressions to date.

While preparing to reopen, NCM conducted a survey to better understand the community's engagement with the museum, including its virtual offerings. Fifty percent of respondents indicated they would be likely or very likely to engage with virtual offerings once NCM opened. Although the virtual offerings were initially developed in response to a need created by the pandemic, they are now part of the museum's ongoing programmatic strategy.

This ACM Trends Report describes the survey items related to virtual programs and the current "evergreen" programming that will be retained based on these data.

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When NCM reopened to in-person visits in September 2021, it began complementing its on-site programming with the on-demand resources developed during the pandemic. As NCM looks to the future, staff are committed to maintaining, and in some cases, expanding the museum's virtual offerings. All of the virtual experiences created during NCM's pandemic closure are fully aligned with its mission and continue to be essential to its ability to promote its mission to audiences locally and abroad.

Social Media Video + Digital Resources

Between March and May 2020, NCM produced free STEAM videos that premiered seven days a week on its social platforms (Facebook, Instagram, Twitter). Funded by Booz Allen Hamilton, the series called "STEAMwork" featured experiments, projects, design + build challenges, story times, and demonstrations.

These videos and accompanying resources were made available free-of-charge on NCM's [website](#) and continue to be featured as "STEAM At Home" opportunities in the museum's newsletter. Staff also send the videos to educators as a post field trip resource for continued learning.

One NCM exhibit that was successfully adapted is its Climate Action Headquarters. In the pre-pandemic era visitors had participated in monthly missions and climate challenges. The [virtual format](#) introduced during the pandemic allowed visitors to determine their own climate action hero persona by answering a playful online quiz.

ACM Trends Reports

The Association of Children's Museums (ACM) is the world's foremost professional member service organization for the children's museum field. We leverage the collective knowledge of children's museums through convening, sharing, and dissemination. ACM has partnered with Knology to create the ACM Trends Reports. Knology is a nonprofit that produces practical social science for a better world.

ACM Trends Reports are commissioned on behalf of our membership to help advance the work of this community. They seek to draw attention to emerging issues and opportunities for elevating the field, and help our members use data to become more accountable to their mission and fiscal responsibilities. A product of collaborative efforts to collect data, the Trends Reports are an effort to support ongoing, accessible dialogue. Our objective is for this approach to be an equitable and inclusive way for museum professionals to contextualize our work and use data to produce effective outcomes.

This virtual version is available as part of NCM's STEAMwork series. At this writing, NCM staff anticipate producing additional STEAMwork videos and related resources with ties to curriculum standards to promote classroom use.

Podcast

With funding from GEICO and The Akamai Foundation, NCM launched the *STEAM Daydream with National Children's Museum* podcast in June 2020 to provide tailored content to young audiences.

Staff engaged 3rd- to 5th-graders as interviewers. The first season had 18 episodes on critical, timely issues. Each episode allowed young learners to hear from STEAM experts, ask questions, and understand the world around them. Topics included:

- What children want to know about the COVID-19 vaccine with Dr. Roberta DeBiasi, the Chief of Infectious Diseases at Children's National Hospital in Washington, DC,
- The wonder of animation with Dave Cunningham, Supervising Director of Nickelodeon's *SpongeBob SquarePants*.

The Museum's podcast, featured in [The New York Times](#), [The Washington Post](#), and [Vox](#), was streamed 5,000+ times, with 15% international listenership for the first season. In 2022, NCM began production for the second season of the podcast for debut in the fall, followed by an assessment to determine the feasibility of a third season.

Virtual Field Trip Videos + Live Virtual Extension Sessions

NCM also developed two 20-minute virtual field trip videos based on in-person offerings. These virtual trips were offered to educators and families free of charge. Both virtual field trips are aligned with Common Core State Standards and Next Generation Science Standards. So far, the videos have been requested by thousands of educators across all 50 states.

The first video, "Head in the Clouds," prompts budding young scientists to observe and identify different types of clouds. When this video was released in May 2020, the

museum received 475 initial requests for it from educators and caregivers. Of those 475 requests, 285 were from educators, who almost universally expressed interest in having their class participate in virtual extension sessions related to the video.

This demand enabled the museum to secure funding from a media company to develop a second video, “Climate Action Heroes.” This video explored the difference between weather and climate and introduces learners to seven real-life climate action heroes from across the country.

To extend learning beyond the videos, NCM has offered classroom teachers the opportunity to sign up for “live virtual extension sessions” with museum educators. These hour-long sessions, held over platforms like Zoom and Microsoft Teams, help youth in formal classroom settings delve deeper into complementary content, participate in virtual activities, and ask museum educators questions.

Grant-funding through the end of 2021 offset the fee-based model for local Title I schools to book the sessions at no cost. Between May 2020 and June 2021, NCM fielded requests from 1,401 educators interested in live classroom sessions. Overall, NCM received 2,382 overall requests for access to the “Head in the Clouds” and “Climate Action Heroes” videos.

At this writing, staff plan to focus on content designed specifically for 3rd to 5th grade, which make up the majority of onsite field trips at the museum. Staff believe that this audience will be best served through live virtual field trips led by museum educators.

Based on the scale of these programs, NCM added a dedicated second full time educator to focus on teaching live extension sessions. The internal analysis also confirmed the museum will require dedicated space for a virtual field trip studio to allow educators the privacy and technical setup to teach effectively.

Lastly, the team recognized that programming developed during COVID tended to be longer than newer audiences anticipate. They concluded that offering shorter, fee-based classes, as well as promoting live virtual field trips to a national audience may be an effective use of resources.

Re-opening Survey

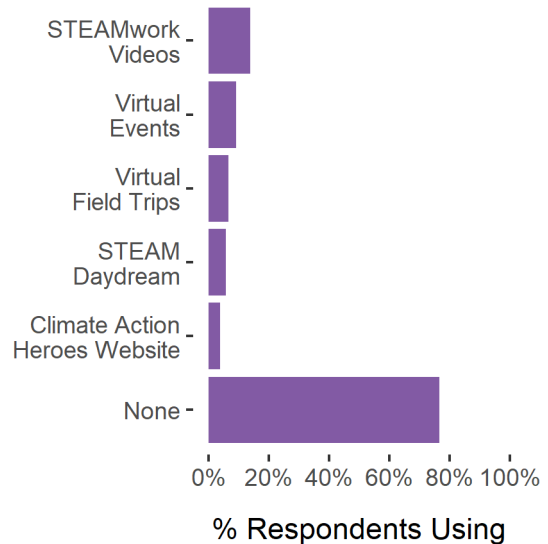


Figure 1. Responses to NCM’s re-opening survey question on digital offerings used (N = 316).

NCM shared a re-opening survey through their newsletter, which had nearly 10,000 subscribers at the time of distribution. The 316 returned surveys translate to a (roughly) 3% response rate.

The survey asked two questions on virtual programming:

- During National Children’s Museum’s temporary in-person closure, did you use any of the museum’s digital offerings? If so, please check all that apply.
- How likely are you to continue to use—or begin to use—the museum’s digital offerings once our institution and others are open for in-person visits?

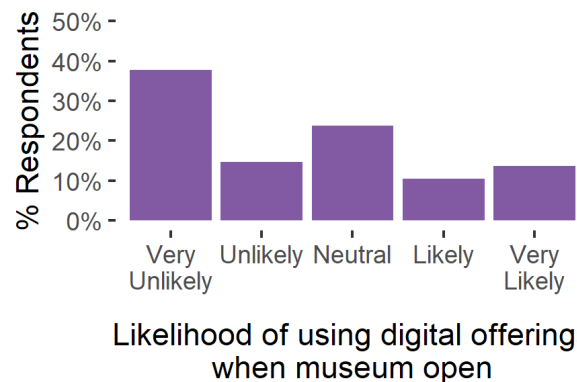


Figure 2. Responses to NCM’s re-opening survey question on digital offerings (N = 316).

While only 15 percent or less of respondents utilized the museum's digital offerings (Figure 1), 24 percent said (Figure 2) they would be likely or very likely to use digital offerings in the future. An additional 24 percent indicated they were neutral to digital programming.

With roughly 50% of respondents neutral or likely to consider virtual offerings once NCM re-opened, the Museum felt there was sufficient interest to continue some types of virtual programs, especially given prevailing health and safety concerns. Coupled with the data on educators' interest in virtual field trips and live educator extension sessions, NCM felt compelled to retain virtual programming as an asset for the museum moving forward.

Key Takeaways

There are a few important takeaways from the NCM's experiences with virtual programming:

Strengths

- NCM's reach across the country has expanded through free virtual content, contributing to its identity as a national institution. For example, as of September 2021, the Museum has served educators in all 50 states, which is a 90% increase from February 2020.
- Creating new categories of experiences and content has strengthened a culture of innovation amongst staff members, providing the opportunity to think creatively and develop new skillsets.

Weaknesses

- Balancing the allocation of resources, especially staff time, between designing and implementing onsite programming and keeping this digital exhibit dynamic with fresh content is highly challenging. Virtual

content creation is extremely labor and time intensive, as well as requiring additional investment in equipment and even reallocation of physical space.

- The content available to the public on demand via social media or podcast platforms is free. This has depended on continued success in corporate fundraising.

Opportunities

- By demonstrating its ability to adapt and fulfill the NCM mission in a new environment, the organization was able to tap new funding sources. This extends beyond grants to support content creation; our experience suggests is an opportunity to generate revenue on an ongoing basis from fee-based live virtual trips for primary school classrooms nationwide.
- NCM's profile has been raised by the significant attention its high-quality virtual programming has received in national media coverage.

Threats

- Public engagement plays a key role in sustaining virtual programming, especially in terms of justifying the allocation of labor. A reduction in online consumption would affect the ability to create new content.

References

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