



RESEARCH PROJECT

Current State of Planetariums during the COVID-19 Pandemic

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Introduction

The COVID-19 pandemic has shaken the world and affected every sector of the world's economy, usually for the worse. Informal learning institutions such as museums, zoos, nature centers, and more have had to close their doors resulting in loss of revenue. Reports have stated that up to a third of museums in the U.S. and around 13% globally could be shuttered permanently (Durkee, 2020, UNESCO, 2020) due to loss of revenue, loss or decrease in donations, and reduced tourism in general. This report specifically addresses the impact on the planetarium field from COVID-19. Planetariums are no exception and our field is hurting, though we are showing rapid response in still reaching our mission in these trying times.

About the Survey

We created a short survey asking people to respond to how their planetariums were affected by COVID-19. A total of 57 responses were able to be used in this report. It was distributed through list-servs and professional social media groups. Questions were also asked regarding the virtual distribution of the show *Big Astronomy: People, Places Discovery*. We also recognize that the COVID-19 pandemic is a rapidly changing situation and the results of this report may be different within a few months. This is simply a snapshot of where we stand at the end of the summer of 2020.

A diversity of planetariums is represented in this data in terms of annual attendance and location. Approximately 79% of respondents were from the United States with 21% representing other countries in North America and Europe primarily. Pre-pandemic annual attendance ranges from 1500-200,000 people. Planetariums situated in different venues are also represented with 37.5% being in museums or science centers, 37.5% being at Universities, 12.5% being standalone, 10.7% being portables, and 1.8% being something else.

Effects on Planetariums

Closures and Reopening

An overwhelming majority of respondents, 95%, have had to deal with temporary facility closures with 4% reporting that COVID has already resulted in permanent closure. It should be noted that

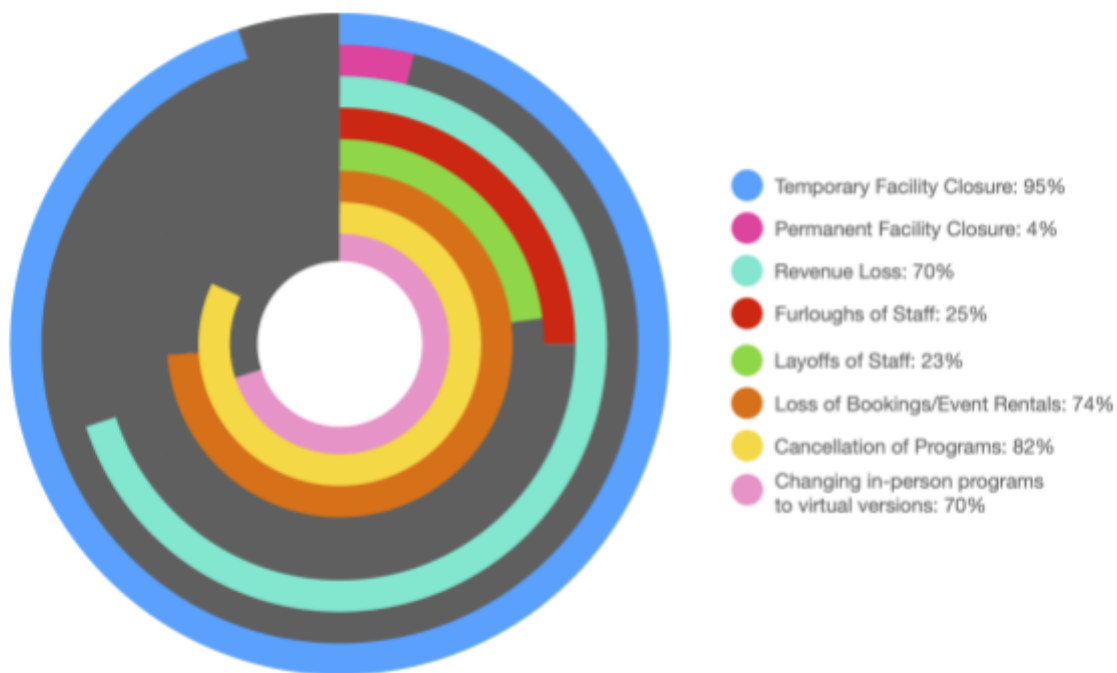


Figure 1: This figure shows the various effects on planetariums due to the pandemic and the the percentage of respondents who reported these effects

some respondents seem to be responding on behalf of a large institution in which a planetarium is a part of with one respondent stating a temporary closure and also saying “The planetarium didn't survive the closure.”

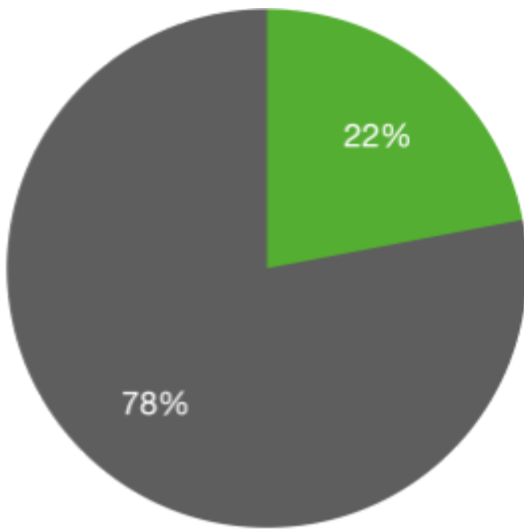


Figure 2: Percentage of planetariums that have reopened after closure in green and those who have remained closed in gray

The temporary closure reports are also with current information. A majority of the respondents had not reopened yet. Only 22% of the respondents indicated that their planetarium has reopened. For those who reopened at least one responded indicated there were considerations of closing again. At least 78% of the respondents are still closed at the time of this report.

Of the 78% that that were still closed, only 4 had firm reopening dates and 1 has a tentative reopening date that is not “set in stone.” The remaining planetariums have no reopening date planned at this time. Of the 22% that are open and the planetariums that have a reopening date, all planetariums will have been closed for at least 3 months and up to 9.5

months. Those without reopening dates have no idea how long they will remain closed with some estimating they will be closed for up to 18 months.

Staffing Effects

Nearly half of the respondents indicated that staff have had their pay affected with 25% of respondents indicated that staff have been furloughed and 23% reported that staff had been laid off. The staffing effects show no trend across annual attendance with large and small planetariums being equally affected by these staffing cuts. These effects have stopped some planetariums from starting virtual programming as well as cause some planetariums to pull back or end virtual programming if they had started any.

Revenue Effects

A majority of planetariums at 70% have reported revenue loss. It is important to note that some planetariums are open due to endowments and are not responsible for revenue generations and would be included in the 30% that have not lost revenue due to having no revenue to lose.

Programming has been greatly affected as well with 74% of respondents reporting they have lost bookings and event rentals, which could be a major source of revenue loss. Additionally 82% of respondents have reported that they have had to cancel programs due to COVID-19

Virtual Programming

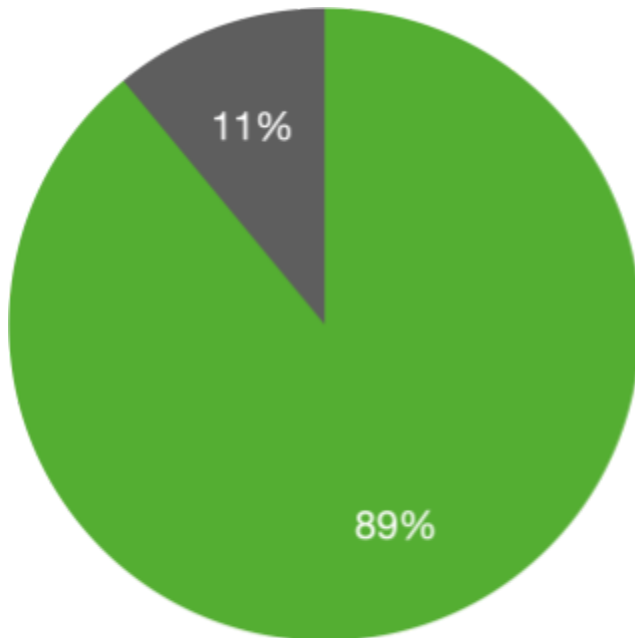


Figure 3: Percentage of planetariums reporting they have changed programming to virtual in green with those who are not in gray

Planetariums have displayed resilience in the face of closures, layoff, and furlough. Despite a great majority reporting cancellation of programming, 70% have also indicated that they have changed at least some programming over to virtual programs. Additionally, 89% have also indicated that they are running virtual programming. This discrepancy indicates that planetariums have also been creating new programming to suit the virtual environment and virtual needs of their audiences. This shows that planetariums still have a strong dedication to their audiences and their missions and are finding ways to reach the public even without their domes.

A majority of the programming planetariums are offering are some virtual version of what we would normally do including 65% of respondents indicating they are doing virtual

public shows and 79% being videos. Fewer indicated virtual field trips as an option with only 35% respondents indicating this option. However, this survey was conducted in the North American summer time. A majority of respondents are from the United States and this is a time that most schools are not in session. Additionally in a question about how planetariums were reaching K-12

students specifically, there were other methods listed including resource pages, directing teachers toward videos made for the public, virtual and socially distanced camps, and so on. So it is possible that this number would change as the school year starts.

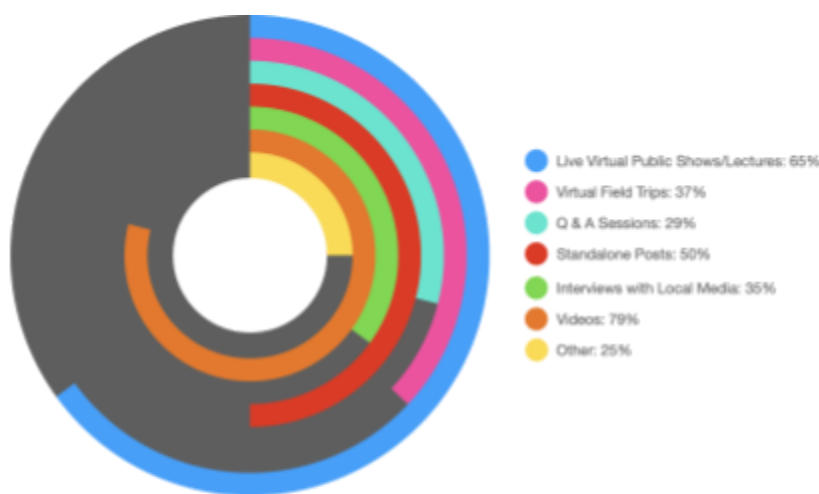


Figure 4: Types of virtual programming commonly offered by planetariums during the pandemic

There are other ways of reaching audiences that could be typical for planetariums pre-pandemic including stand

alone posts and interviews with local media. Standalone posts were indicated by 50% of the respondents and only 35% indicated local media interviews. It is unclear from the data if this number is significantly different from pre-covid numbers since these are both types of audience reach activities that would not look different.

A variety of “other” activities were also indicated in the survey. These fell into two categories primarily, online resources for people to access at home or streaming of pre-recorded planetarium content. Online resources included posting of worksheets, newsletters, and activity kits sometimes in partnerships with other organizations like libraries.

Programming Platforms and Times

Respondents reported using many different video conferencing and social media platforms. By far the most popular were facebook and zoom. Youtube, twitter, instagram were also relatively popular.

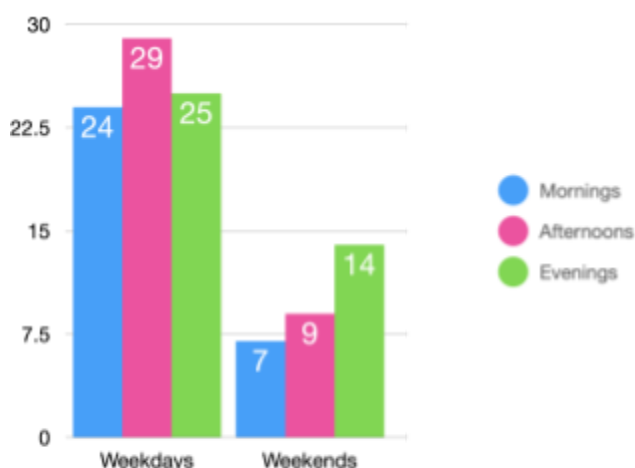


Figure 5: This shows when planetariums are most likely to be offering virtual programming

Respondents tended to do programming on Weekdays with the afternoons and evenings being preferred. Weekday mornings, afternoons, and evenings all were more common than weekend programming with any programming done on weekends trending toward evening time.

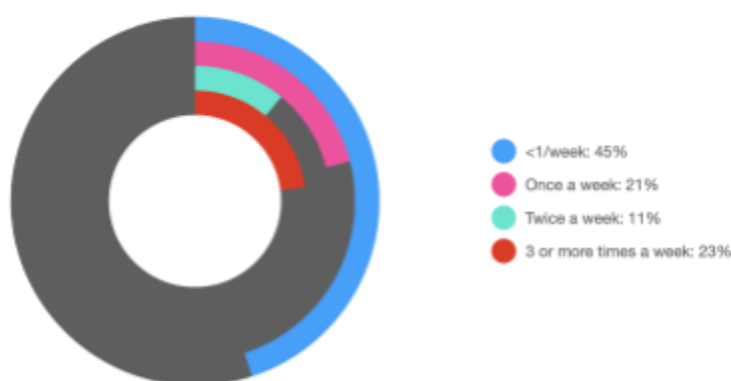


Figure 6: How often planetariums are offering virtual programming during the pandemic

About half of the planetariums surveyed indicated they did programming less than once a week. About a quarter offered programming once a week, another quarter or so 3 or more times a week and a handful offering programming twice a week. Thus it seems with the strings of COVID, though virtual programming is common, the

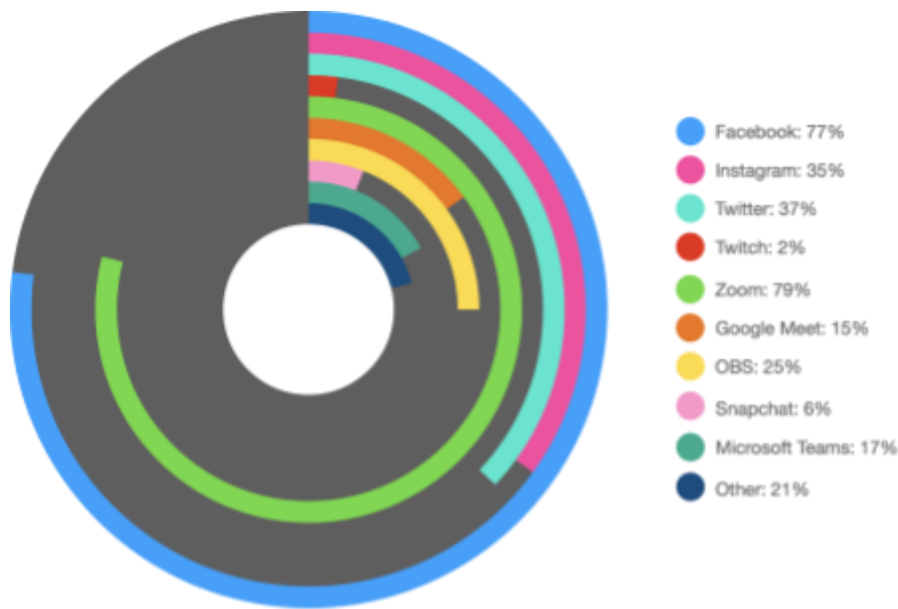


Figure 7: The most common platforms planetariums are using to generate and deliver virtual content

frequency is less than what a typical planetarium might offer.

About half of the planetariums reported they did programs that were 30-60 minutes long with 20-30 minute programs and programs that are less than 10 minutes being a close second and third. Other times of 10-20 minutes and more than 60 minutes were reported, but with less frequency. So programs tend toward very short to something in length similar to a typical planetarium show.

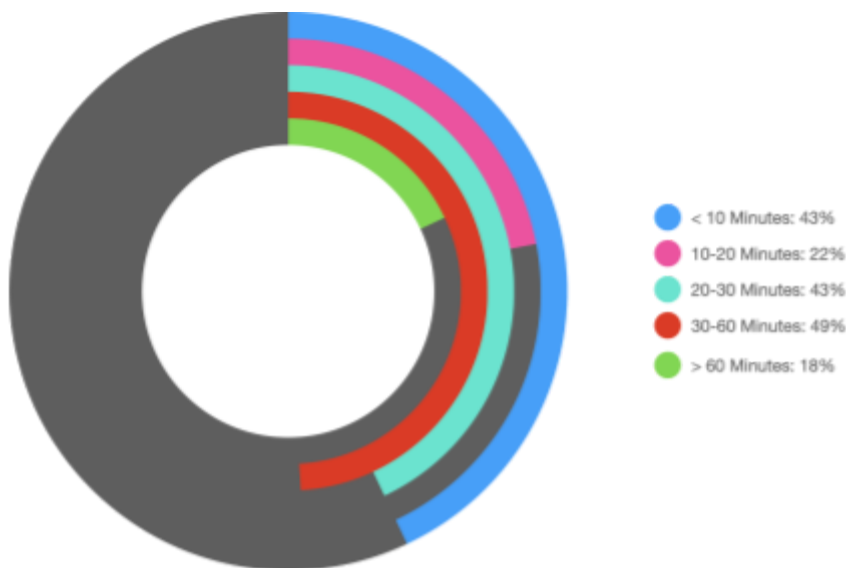


Figure 8: How long the virtual programming lasts from those planetariums that offer virtual programming

What is Success?

We also asked planetariums to indicate what they consider a successful program.

Considering that virtual programming is so out of the norm for planetariums, which are very place based learning environments, we found success measures to be rather loose.

Many were unable to define what their metrics are right now. Those who offered metrics they use to determine if a

program was successful were numbers in attendance with some indicating overall enthusiasm and engagement of the audience. Overall, most respondents indicated that live and interactive programming tended to be the most successful.

What did we wish we knew more about?

We also asked what people wish they knew more about before entering into this pandemic world of virtual programming. Overwhelmingly the answers skewed toward understanding the software and how to use it appropriately or just the technology in general. Specifically many indicated they wished they knew how to use streaming software as well as the practical considerations like green screens, ring lights, etc. Some also indicated they wish they had a more established presence online already with things like youtube channels.

References

<https://www.forbes.com/sites/alisondurkee/2020/07/22/covid-19-pandemic-could-shutter-a-third-of-all-us-museums/#217cbf021d04>

<https://unesdoc.unesco.org/ark:/48223/pf0000373530>