

Digital technologies as potentiating tools in the dissemination of information in museum spaces: Impact of the Covid-19 pandemic on museums

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ABSTRACT

This chapter seeks to discuss the digital humanities activity in the museological context, considering the importance of using digital technology tools for information dissemination in museum spaces and highlighting the period faced by the COVID-19 pandemic. The methodology used for the preparation of this chapter is defined as bibliographic and exploratory. Regarding the results obtained, it was possible to determine that using digital technology tools helps in cultural propagation from the informational dissemination of museological institutions in the virtual environment, which was indispensable during social isolation. In this sense, this chapter concludes the importance of using technological tools in the museological environment to reach various audiences without the interference of time/space.

Keywords: digital humanities, technological tools, museum, virtual museums, digital media, social isolation

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1. INTRODUCTION

Seeking to break with the ideals of traditional museology, the New Museology proposes to bring a social bias regarding the development of activities within the museum sphere. Through the Round Table of Santiago, Chile, in 1972, a new way of thinking about museology was emphasized, highlighting the social nature of museums. Given this scenario, it is perceived that museums exist to represent society; in this sense, all their activities must be carried out considering this purpose, i.e., the speeches prepared for the exhibitions, the safeguarding of museological collections, and the museum objectives must be in line with the audiences that museums seek to represent. Following this logic, as spaces at the service of society, museums must always strive to understand the needs of their surroundings to serve them better. Through this perspective, it is perceived that the demands of society change over time, and museums, to continue fulfilling their role, must follow these changes.

An event that highlighted the need for museums to change their dynamics as institutions was the pandemic caused by the coronavirus (COVID-19)¹. During the period of social isolation, establishments that were considered non-essential had to be closed to cooperate with the non-proliferation of the virus, reducing the circulation of people in cities, and museums fell within this sphere. According

1 Highly contagious respiratory infection caused by the SARS-COV-2 virus.

to United Nations Educational, Scientific, and Cultural Organization (UNESCO, 2020), the emergence of the coronavirus caused 90% of the approximately sixty thousand museums in the world to face the complete, partial, or eventual closure of their spaces.

In this new scenario, virtual communication took on a new meaning due to the imposition of isolation and social distancing. With the use of the digital environment as the only way for museums to communicate with their audiences, a series of factors emerged that raised some discussions permeating virtuality (Silva, 2021, p. 1)

From this context, museums underwent and still go through significant challenges in their various sectors, ranging from public service to safeguarding museum collections. Due to these circumstances, museums had to seek new methodologies in developing their activities and delivering services directly linked to their interaction with their audiences. Thus, services that previously took place through physical spaces had to be transferred and rethought to virtual spaces that were in line with the recommendations of sanitary safety standards established by the World Health Organization (WHO). This circumstance brought a new perspective on the delivery of museological services, which should work beyond the physical space of the museums. In addition to the change in the operating format of museological institutions and the delivery of their services, the social isolation period also highlighted other previously discussed issues regarding museums' existence in completely virtual settings.

Through this chapter, we intend to address digital humanities in the museological context, from the discourse

on the importance of using digital technology tools to maintain the services offered by museums. We seek to understand the impact of the use of digital platforms to fulfill the social function of museums, taking into account the adaptation of museological services in this new format and the impact of museums during the period in question. For such, a brief literature review on digital humanities within the sphere of museology will initially be carried out, seeking a general apparatus to substantiate the other subjects addressed throughout the chapter. Subsequently, the pandemic's impact on digital technology tools will be discussed, more precisely, their relationship with the consumption of cultural activities and the search for museum spaces in the virtual sphere during the pandemic. Sequentially, this article seeks to present the museums most searched on the Internet by Brazilian users during the period of social isolation, as well as the performance of the activities established by these museums in the virtual environment, to realize the impact of the use of technological tools in disseminating museum information during the period in question.

2. DIGITAL HUMANITIES WITHIN THE SPHERE OF MUSEOLOGY

Digital Humanities are configured today as a field of knowledge under construction that seeks to relate the Humanities to the digital environment. Palleta's (2018, p. 148) definition suggests that digital humanities may be understood "as new computational forms of transdisciplinary academic studies that involve research, teaching, and collaborative publication."

Digital Humanities arise from reflections on the contemporary reality of technological presence

within the sphere of traditional sources of information previously enjoyed only in their physical format. It is a movement that, by impacting the fields of Human and Social Sciences, leads to the perception that research is now mediated by technology (Palleta, 2018, pp. 148-149).

Even though it is a somewhat current subject, there are already several definitions of digital humanities, so there is still no consensus on its conceptualization; however, in general terms, digital humanities use digital technologies to expand the pre-existing knowledge in its areas of activity. Included in the scope of digital humanities is Museology, a knowledge area of Applied Social Sciences that aims to bring understanding about social aspects related to humanistic realities. From the thinking established by the museologist Waldisa Rússio Camargo Guarnieri (1935–1990), as a discipline, Museology was inserted into the scope of social studies (Lupo, 2020). According to her, the object of study of museology is the museum fact, which is defined as follows:

[...] the profound relationship between man, the knowledgeable subject, and the object, part of the reality over which man acts. This relationship involves several levels of consciousness, and man may apprehend the object through the senses: vision, hearing, and touch (Rúcio, 1981, Apud. Bruno, 2014, p. 1).

This relationship between the human being and the object occurs within the museum space. It uses Museology study methodologies and seeks to exercise functions related to a social bias through the performance of its activities. By appropriating the use of digital technology tools, museums

provide their spaces with improvements in the development of their activities, thus leading to higher quality in the delivery of their services to their audiences since the digital environment allows greater access to information, in addition to being a support tool for the performance of more dynamic activities, given that its support enables the creation of various actions within the virtual sphere. Thus, considering museums as institutions that exercise social functions that refer to the cultural propagation and informational dissemination of their collections, museums seek to use digital technologies to have a better resourcefulness of the activities that occur in their spaces. In this sense, we observed the activity of digital humanities in the museological environment. Digital technologies benefit several fields of activity by allowing greater access to information, which is no different within the sphere of museology.

The COVID-19 pandemic pointed out the need for museums to further appropriate the virtual space to strengthen the ties between the museological institutions and their audiences, highlighting the use of such tools that were already somewhat needed but only proved essential at the time faced by social isolation, indicating, in a way, a mandatory condition for the continuity of museum activities.

3. METHODOLOGICAL ASPECTS

This is bibliographic research of a basic nature, given that it aims to “generate new knowledge useful for the advancement of science without practical and foreseen application” (Prodanov & Freitas, 2013, p. 126). As for its objective, it is identified as exploratory research since it aims to “provide greater familiarity with the problem, rendering it explicit or building hypotheses about it” (Prodanov & Freitas, 2013, p. 127). Initially, a brief survey was carried out on

the theme of digital humanities within the museological sphere to generate a basis for the matters discussed later. Then, the cultural habits of Brazilians amid the pandemic and their relationship with the search for museums in the virtual sphere are discussed. Finally, using Google Trends data² provided to the magazine *Estadão*, the services of the five most sought-after museums during social isolation were analyzed to observe whether they remained active during the social isolation period.

4. IMPACTS OF THE PANDEMIC AND THE USE OF DIGITAL TOOLS WITHIN THE MUSEOLOGICAL SPHERE

The arrival of the pandemic in the world significantly impacted society's life, motivating the increase in users in the virtual environment, who started to become partially or entirely dependent on using the Internet to carry out daily activities. "The COVID-19 pandemic has substantially altered the habits of the Brazilian population related to the Internet" (Centro Regional de Estudos para o Desenvolvimento da Sociedade da Informação [CETIC], 2012, p. 64). According to the *Agência Nacional de Telecomunicações* (ANATEL, the Brazilian National Telecommunications Agency, in English), Internet use in Brazil increased from 40% to 50% during quarantine (G1, 2020). With the closure of several establishments considered non-essential, there was a change in the work format, which started to be carried out online, called Home Office. Courses were adapted to the distance learning format, and shopping started to be carried out mainly via the Internet, as did medical consultations and other everyday activities.

2 Platform that allows viewing the trending and most searched terms on the Internet according to a timeframe

The use of digital technologies was the means found to continue activities that previously only took place in person or partially thus; however, the performance of such activities in the virtual environment has already proved necessary and expanding. But the advance of the use of digital technologies was impacted by the beginning of the pandemic, and this contributed to the continuity of everyday activities that somehow affect how people live.

Telecommunications are a significant source to contribute to the development and growth of national economies, businesses, and society, and it is necessary to recognize that the ICT infrastructure, tools, and knowledge allowed a better response to the COVID-19 crisis more effectively and decisively than would have otherwise been possible (Anatel, 2021, p. 11).

Besides activities related to work and studies, which were significantly impacted during the period of social isolation, cultural habits related to leisure time were also affected to a certain degree, considering that some required displacement to be performed. A study developed by a partnership between Itaú Cultural and Datafolha (2020) revealed that the pandemic interfered with the cultural habits of Brazilians. The study aimed to analyze the following factors:

Cultural habits before the pandemic and expectations for their practice after the reopening of the spaces dedicated to cultural activities and entertainment; possible needs to adapt such spaces; motivators for the return to the practice of cultural activities outside the home; consumption of cultural activities in the digital environment (Itaú Cultural, 2020, p. 3).

The study was conducted from a telephone approach with men and women from 16 to 65 years old, including all economic classes. A total of 1521 interviews were conducted based on the evaluation of ten cultural activities, namely: music performances/musical shows; circus performances or shows; dance performances or shows; children's activities; library; cultural centers; movie theaters; theater performances or shows; museums; and poetry, literary, or musical soirées (Itaú Cultural, 2020). Based on the interviews, "92% of respondents performed at least one of the activities studied, 52% in the 12 months before the survey" (Itaú Cultural, 2020, p. 14). Figure 1 presents the list of the intention of respondents to carry out specific cultural activities, as well as the percentage relative to cultural activities carried out within the previous twelve months and their potential of being carried out after the opening of the spaces.

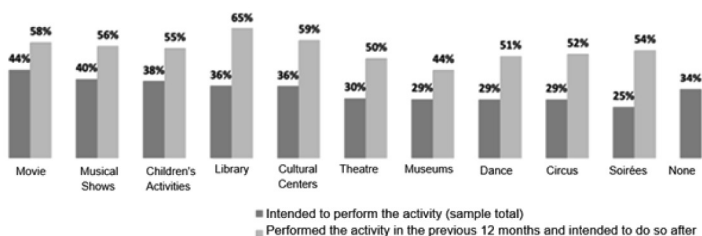


Figure 1. Chart of the potential per activity of interest to the audiences.
Source: Itaú Cultural and Datafolha (2020).

From the sample of 1521 interviews, the survey in question pointed to going to movie theaters as the activity with the most significant potential to be carried out (44%), followed by music shows and children's activities. The visit to museums appeared with 29% of intention and 51% considering having done so within the previous twelve months and the choice to go after the museological institutions

opened. This was based on question 26 of the questionnaire: “What activities would you be interested in doing online?” (Itaú Cultural & Datafolha 2020, p. 49), considering only users who had access to the Internet (1461 of the 1521 respondents) and the indication of five activities preferred by respondents (Figure 2).

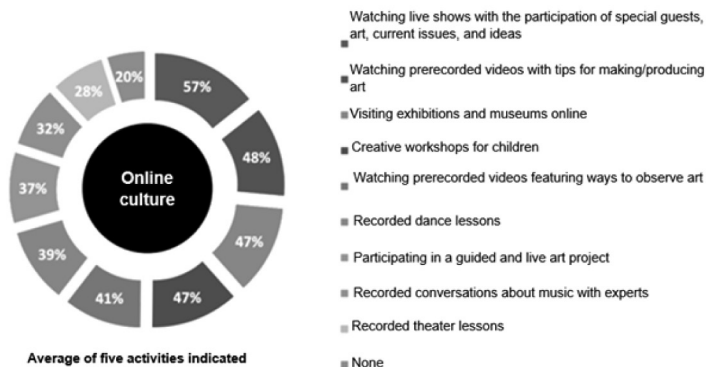


Figure 2. Chart of the interest in online cultural activities. Source: Itaú Cultural and Datafolha (2020).

Based on the chart above, regarding the appreciation of cultural activities in the online format, respondents were very interested. First, in watching live shows with the participation of guests discussing artistic subjects (57%), followed by watching prerecorded videos on the art theme (48%) and visiting exhibitions and museums online (47%). Supported by the survey, one may observe that the respondents’ interest in visiting virtual cultural exhibitions and museums represents a large percentage of the activities listed within the virtual sphere. With the pandemic’s beginning, society was inclined to look for cultural activities within the virtual sphere. Regarding museums, one may say that museum spaces that appropriated technological

means to continue their activities were able to reach different types of audiences, both those who already had the habit of visiting museums in their physical spaces and began to use the Internet to continue consuming such content online, as well as those who did not have such a habit or had never visited a museum. Hence, one may notice that the virtual sphere can significantly benefit people.

The fact that an exhibition or a museum exists from virtual support does not prevent people from enjoying these environments just because they are not physically present in an exhibition space because virtuality “allows that people, collectivities, and information become ‘non-present’, which enables a process of deterritorialization. Removed from the physical space, the virtual is not just imaginary, as it produces effects on the subjects” (Silva, 2021, p. 5). In this sense, the use of digital technology tools brings people closer to these spaces, as does the existence of virtual museums, virtual exhibitions, and the tools that support physical museums’ activities. In addition, as a virtual support system, the Internet causes the time and space barriers to not be something that interferes with the experience of its users, leading, in the example of museums, people who are in Brazil to have access to exhibitions of the Louvre Museum, France, through the Internet.

From the search made in Google Trends using the search term “*museus virtuais*” (virtual museums) in Brazil from the beginning of 2019 to December 2021³, it was possible to observe significant peaks of searches referring to the term, precisely in the period of social isolation.

3 The chosen period was justified by the intention to visualize the search for the term in three different periods: before, during, and in the current pandemic scenario, with the reopening of cultural establishments and spaces being carried out.

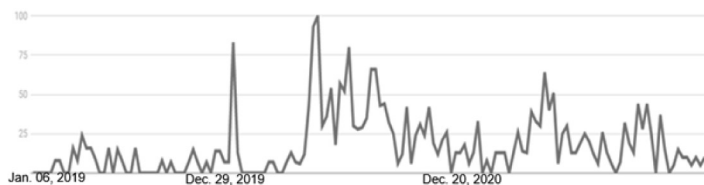


Figure 3. Chart of the search for the term “museu virtual” (virtual museum) on the Internet (2019–2021). Source: Google Trends (2021).

Figure 3 shows that the search for the term “*museus virtuais*” (virtual museums) throughout 2019 was relatively low. There was an increase in interest at the end of the same year, on December 29. In 2020, the search for the term proved quite evident relative to the previous year, with a high search frequency at the beginning of the year and some fluctuations between high and low peaks. However, interest in the search for the term remained throughout the year compared to 2019. In 2021 the search proved noticeable, demonstrating increased interest throughout the year. Still, based on the chart generated by Google Trends, we may suggest that the pre-pandemic year identified a low interest of the Brazilian population in virtual museums since none were closed due to the pandemic, thus, ensuring access for their audiences in their physical spaces. At the beginning and end of 2020, some interest of the population in virtual museums was observed; concomitantly, Covid-19 arrived in Brazil, sequentially resulting in social isolation. The beginning of the pandemic, March 2020, was the month that had the most searches on the Internet for virtual museums. Everything indicates that this was due to tackling something new, in this case, the situation of social isolation, when society sought numerous ways to consume services from what was being made

available in the digital environment. In 2021, the search for virtual museums seemed to have become popular, so much so that it was maintained throughout the year.

With this, one may understand that the pandemic factor substantially increased the use of the Internet, which consequently interfered with the cultural habits of society, causing it to start looking for cultural services and activities in a virtual environment. In relation specifically to museums, there was a greater interest in society in searching for virtual museums, virtual exhibitions, or other activities within the virtual sphere. This highlights the importance of making museological content available in this medium. This makes it easier for information to reach society, providing proximity between museums and society. The creation of virtual museums and museological services within this sphere does not cause society to distance itself from the physical spaces of museums; on the contrary, the use of virtual technology tools allows several people to have access to such content, which encourages these audiences to consume cultural content both in the virtual and physical spheres. However, it is necessary to bear in mind that Internet access and cultural content available in the virtual environment are not yet a reality for everyone considering that Brazil is still a country with much social inequality. This shows that many people still do not have access to the Internet and thus cannot have the experience of visiting museums, even through online exhibitions or other online cultural experiences. In its 16th edition of the *TIC Domicílios*, the Regional Center for Information Society Development Studies (CETIC) pointed out that the data obtained in the survey regarding ICT access in Brazilian households and its forms of use are evidence of social inequality.

The survey data showed that the migration of in-person activities to the digital environment due to social distancing measures led to increased demand for the Internet in households and the proportion of Internet users and activities carried out online during the period. But the data revealed the persistence of digital inequalities that affect the appropriation of ICTs and the opportunities resulting from their adoption by different population segments (CETIC, 2020, p. 27).

At this point, it is vital to bear in mind that the struggle to combat social inequality and the demand for equal rights considering the use and belonging of cultural spaces must be carried out for the appropriation of people in both physical and virtual spaces, given that “it is noticed that social inequalities are also manifested in the digital environment, with the potential to restrict opportunities” (CETIC, 2020, p. 28). In an open letter, the International Council of Museums (Icom-Brazil), given the pandemic situation that the world was facing, stressed that: “museums must rethink their role in the face of the economic impact and the inequality gap exposed among us, recognizing their responsibility for Brazilian social and cultural regeneration” (ICOM-Brasil, 2020 n.d), and showed that, in the post-pandemic future, “solidarity will be essential for the construction of a more egalitarian, diverse, and inclusive world” (ICOM-Brasil, 2020 n. d). In this sense, it is understood that the virtual environment can reach many people. However, there are still some gaps to be bridged so that access to the Internet and the content made available in this medium is perceived as a right of every citizen and achieved by everyone.

4.1 Performance of museums in the pandemic context

An article published by the magazine Galileu in May 2019 pointed out that Brazilians' number of searches for virtual museums grew. Google Trends data provided to the magazine Galileu indicated: "Searches for remote visits to institutions increased by 50% in the last 12 months compared to the previous year" (Galileu, 2019 n.d). According to the survey provided by Google Trends, Brazil was one of the 20 countries that most performed searches for virtual museums worldwide during the period of social isolation, divided between national and international institutions (Galileu, 2019). From this, the article made available the list of the most searched museums during this period of 12 months before the publication of the article, which were divided into two lists, one with searches for museums along with the word "virtual" and the other with the list of museum searches in general. In this sense, the list of the most sought-after museums by Brazilians, along with the word "virtual" was the following:

1. Louvre Museum (France)
2. Pinacoteca de São Paulo
3. Ipiranga Museum
4. National Museum
5. Masp
6. Prado Museum (Spain)
7. Museum of Tomorrow
8. Catavento Museum
9. Imperial Museum
10. British Museum (United Kingdom) (Galileu, 2020, n.d).

The second list, which refers to the museums most sought after by Brazilians in general, was the following:

1. MASP;
2. Louvre Museum;
3. Pinacoteca de São Paulo;
4. Museum of Tomorrow;
5. Inhotim Institute;
6. The Metropolitan Museum of Art (The Met);
7. Catavento Museum;
8. Ipiranga Museum;
9. Prado Museum;
10. Museum of Modern Art (MoMA) (Galileu, 2020, n.d).

Based on the list of the most searched museums in the first list, which referred to the search for museums along with the word “virtual”, the first five museums listed were selected to analyze each of them and investigate how they dealt with the moment faced by social isolation, seeking to visualize the mechanisms used for the continuation of their activities in the virtual environment, such as using social media and digital platforms, among other virtual supports to meet the demands caused by the pandemic.

4.1.1 Louvre Museum (France)

The Louvre Museum is located in the Louvre Palace, in the capital of France. It is the largest art museum in the world, with approximately 38,000 objects from prehistory to the twenty-first century. The museum was inaugurated on August 10, 1793, totalizing 228 years of history.⁴ Regarding the virtual environment, the museum has active Instagram, Twitter, and Facebook profiles; in addition to using social media, the museum also has a website and is

4 Louvre Museum, Paris, France. Available at: <https://www.britannica.com/topic/Louvre-Museum>. Accessed on Dec. 22, 2021

inserted on the *Google Arts and Culture* platform⁵. During social isolation, the museum continued to use social media to communicate with its audiences through publications about its collections. It also made its entire collection available for online visitation by accessing it through a website that organizes the collections by typology⁶. On the museum's official website, possible activities to be carried out at home were inserted, identified by the Louvre at Home tab, such as events in the museum auditorium through online exhibitions; podcasts about the museum collections. Louvre Kids, which has children's stories; and the virtual reality experience "Mona Lisa Beyond The Glass", an application that allows a virtual reality experience on the techniques of Leonardo Da Vinci when painting the Mona Lisa and may be downloaded to smartphones.⁷ In addition to using social media and the activities inserted in the museum's website, it is also available on the Google Arts and Culture platform, allowing the user to access the works in the museum's collections through photographs⁸.

4.1.2 Pinacoteca de São Paulo

The Pinacoteca de São Paulo is a museum of visual arts located in the Luz Station in the city of São Paulo. The museum was founded in 1905, thus being the oldest art

5 It is a free online collaborative platform from Google that allows visiting museums and galleries worldwide through virtual tours using the Street View technology.

6 <https://collections.louvre.fr/en/>. Accessed on Dec. 22, 2021.

7 <https://www.louvre.fr/en/online-tours>. Accessed on Dec. 22, 2021.

8 Louvre Museum. Available at: <https://artsandculture.google.com/entity/museu-do-louvre/m04gdr> Accessed on Dec. 22, 2021.

museum in the city, having, at the time of writing, about 11 thousand items.⁹ Regarding the use of social media, the museum has active accounts on Instagram, Facebook, Twitter, LinkedIn, Spotify, and TikTok. In addition to the mentioned social media, the museum has a website and is available on the *Google Arts and Culture* platform. Since the beginning of the pandemic in March 2020, the museum has proved very active, using virtual means to maintain contact and activities with its audiences. With the creation of the #pinadecasa project¹⁰, the museum began to carry out daily publications on its social media, such as *Instagram*, *Facebook*, and *Twitter*, about the various works in its collections, along with images and comments from curators. During this period, the museum also began holding weekly live chats with curators, artists, and philosophers on its channels.

Another activity to be highlighted, developed within the #pinaemcasa project, was the #pinaemcasa-acustico, the proposal of which aimed to invite people from different areas to select a favorite work from the collection and create a playlist that would be made available on *Spotify*, relating the work to the songs so that the audiences could appreciate the chosen work through a “soundtrack”. The director of institutional relations of the Pinacoteca, Paulo Vicelli, said that during the period of social isolation the museum reinforced its online presence, so much so that the data show that, due to the #pinaemcasa project, the period from March to April 2020 registered a growth in the numbers of followers on the museum’s social media accounts, pointing to twelve thousand new followers on

9 About the pinacoteca. Available at: <https://pinacoteca.org.br/a-pina/7200-2/>. Accessed on Dec. 22, 2021.

10 Hashtag used in the social media of the Pinacoteca de São Paulo

Instagram alone (O Estado de S. Paulo [Estadão], 2020). In addition to the activities made available through social media, which yielded much engagement, the museum also makes available on its website some exhibitions that may be visited through a virtual tour¹¹ accessed by smartphone and computer. At the beginning of the pandemic, it recorded a fivefold increase in the number of accesses to its website – jumping from 1,000 to 5,000 in March (Cable News Network [CNN], 2020, n.d) due to users' interest in accessing virtual exhibitions. Also on the museum's website, there is the *Museu para Todos* (Museum for All) project, where actions developed by the museum's Educational Action Center are made available; the project proposes to create content that relates art and education, so one may find educational texts, animated videos, games, and didactic materials for teachers, among other materials.¹²

Another means of dissemination and availability of the museum's actions are on the *Google Arts and Culture* platform, on which several works are available and categorized by typology of painting techniques. Also available on the platform are several online exhibitions, which allow the user to view the techniques applied in the works, followed by the description of these techniques. In some of these exhibitions, it is possible to be audio guided to interpret the content. Finally, it is possible to visit the museum rooms through the virtual tour available on the platform.

11 Virtual Tour: <https://pinacoteca.org.br/visite/tour-virtual/>. Accessed on Dec. 23, 2021.

12 Museu para todos: <https://museu.pinacoteca.org.br/>. Accessed on Dec. 23, 2021.

4.1.3 Ipiranga Museum/USP Paulista Museum

The Ipiranga Museum, also known as the University of São Paulo (USP) Paulista Museum, located in the city of São Paulo, is one of the university's museums. In 1963, the State Museum was integrated into the university; since then, the Edifice – Ipiranga Museum – and the Republican Museum of Itu started to be managed by the university. At the time of writing, the museum safeguarded about 450 thousand items.¹³ At the moment, the museum is closed for restoration. Still, it remains active on its virtual channels to inform its audiences of the progress of the repair and expansion and the expected dates for the museum's reopening. The museum has active accounts on Instagram and Facebook, a website, and is on the *Google Arts and Culture* platform. Given the pandemic, although it was closed for some time before due to the restoration, the museum used social media to get closer to its audiences. The publications made by the museum included photographs of the collections, along with descriptions that contextualized such collections, old and current pictures of the building showing the restoration process through which the museum was going through, and photographs of the museum staff with an explanatory description of the work done by museum professionals.

Through social media, live chats were carried out with the museum director along with guests to discuss topics about museums in the digital age. Videos were also made available on these platforms about the restoration and expansion processes of the museum, identified as *Diário de Obra* (Construction Journal), which were made available by episodes, nine of which had been published at the

13 USP Paulista Museum: <https://www.mp.usp.br/museu-paulista-da-usp>. Accessed on Dec. 24, 2021.

time of writing. Through publications on the museum's social media, it was suggested to its users the possibility of accessing lectures, publications, and educational materials available on the museum's website, with open access to all materials.¹⁴ On the museum's website, it is possible to take a virtual tour of the museum in its current state – in the process of restoration – as well as view the timelapse of the process. In addition to using social media and the activities available on the museum's website, it is also possible to access other activities available on the Google Arts and Culture platform. Through the platform, it is possible to access some online exhibitions and view collections of works organized by art typology.

4.1.4 National Museum

The National Museum, located in the São Cristóvão Palace in Rio de Janeiro, was inaugurated in 1818, thus being the oldest museum in Brazil. On September 2, 2018, the museum had a catastrophic fire, compromising most of its collections. Before the fire, the museum had more than 20 million museological objects of the most varied typologies, including natural history, anthropology, and archeology. The Federal University of Rio de Janeiro managed the museum. It was closed when writing, seeking solutions regarding possible restoration of the building and restructuring its collections through excavations around the museum and donations. As the museum was already closed in 2018 due to the fire, some of its exhibitions took place in other spaces, such as the National Archives, the Museum and Cultural Center of the Brazilian Mint, and the Museum of

14 Publications and Videos by the Paulista Museum: <https://www.mp.usp.br/publicacoes>. Accessed on Dec. 24, 2021.

Astronomy and Related Sciences. As soon as the pandemic state was decreed, the museum informed through its pages of the temporary closure of its exhibitions.¹⁵ The museum has active accounts on Instagram and Facebook, a website, and is on the *Google Arts and Culture* platform. Since the tragic event that compromised the building, its collections, and its activities, the museum began to use social media and the website to communicate with its audiences, thus continuing to perform its social function. Through these channels, the museum presented the intensive work of several professionals in recovering museum collections, which generated the “*Resgates*” (Recoveries) documentary, available on the UFRJ WebTV channel on YouTube.¹⁶

With the beginning of the pandemic, and consequently the closure of the exhibitions of the museum’s collections, it started using social media to remember old museum exhibitions, presenting some of its collections, performing live chats with museum employees and researchers, and holding webinars¹⁷ and activities for children based on interactive video publications. The National Museum also offers *stricto* and *lato sensu* graduate programs, being master’s and doctoral degrees, with research projects and groups carried out within each program¹⁸. In this sense, the activities related to teaching continued to be carried out through distance learning,

15 Temporary closure of the exhibitions of the National Museum: <https://www.instagram.com/p/B9zpDruJTql/>. Accessed on Dec. 27, 2021.

16 Resgate Documentary: <https://www.youtube.com/watch?v=-JvOPs4De4Sk>. Accessed on Dec. 30, 2021.

17 Videoconferencing widely used in the period of social isolation. Kind of seminar presented through the Internet.

18 National Museum – Graduate Studies: <https://www.museunacional.ufrj.br/dir/posgraduacao.html>. Accessed on Dec. 30, 2021.

as well as research projects. In this sense, the museum used social media to update its audiences on the development and advances of the research projects previously carried out in the museum space. In addition to the actions that the museum developed and is developing through the use of social media, it also uses its website to perform various activities, such as providing news about the progress of the restoration works of the building that housed the museum, making available publications of books of the museum and notices of the graduate program, providing news on seminars and live chats of the museums, and providing access to virtual exhibitions. On the Google Arts and Culture platform, it is possible to access a virtual tour of the museum before the fire, as well as the history of symbolic objects and collections of the museum.

4.1.5 São Paulo Museum of Art Assis Chateaubriand

The São Paulo Museum of Art (MASP) was inaugurated in 1947 and is one of the museums of most significant artistic relevance in Brazil, bringing together “more than 11 thousand works, including paintings, sculptures, objects, photographs, videos, and clothing from various periods, covering European, African, Asian, and American production”¹⁹. Regarding the use of digital platforms, the MASP has an active profile on Instagram, Facebook, and Twitter, has a website, and is on the *Google Arts and Culture* platform. At the beginning of the social isolation, thinking about the continuity of its activities, the museum developed a digital program in which the museological informational services were carried out for a 100% online delivery.

Among the activities that made up the online program, the museum developed the action “Masp [Drawings] at

19 About : <https://masp.org.br/sobre>. Accessed on Dec. 30, 2021.

home,” held on the museum’s Instagram profile. The purpose of which was for its followers to perform reinterpretations of the posted works that were later published on Instagram after a selection. The selected authors received as a prize a voucher entitled to unlimited admission to the museum for one year. Another activity carried out in the museum’s profile was the “dialogues in the collection,” through virtual meetings, the works that make up the museum’s collection were presented, discussing elements of the pieces and characteristics of the artists. On the Instagram profile of the museum, live chats were held with guests who discussed artistic trajectories, the history of the MASP, e-exhibitions, and specific works. The museum also began to carry out publications of its collections, presenting the historical context of a given work.

In addition to using social media, the MASP has an application entitled MASP Audios that composes about 150 comments from curators, artists, professors, researchers, and children about the works in the museum’s collection.²⁰ On the museum’s website, it is possible to access information about the courses offered by the museum, books published by it and available for purchase, information about the museum’s exhibitions, the online consultation of the collection, and news in general on the museum. On top of these online means of communication, through the Google Arts and Culture platform, it is possible to access virtual exhibitions of the museum and carry out a virtual tour of the museum space. One may take a virtual reality tour of the museum through the Google Arts and

20 #maspdigital: <https://masp.org.br/eventos/digital>. Accessed on Dec. 30, 2021.

Culture application. Various museum collections are also organized by collection typology on the platform.²¹

4.2 Activity of the museums in the virtual environment

Second the Ibermuseus survey on the impact of COVID-19 on Ibero-American museums, 73% of participating museums declared they had to readjust their activities due to the restrictive measures.²² Of the museums listed above, only the Louvre is not part of the Ibero-American museum group. Still, it also underwent modifications to the delivery of its services, just as the others listed. According to the description of the activities carried out in the museums during the period of social isolation, it was possible to observe that all five museums described used digital platforms in their favor and continued to deliver services virtually to their audiences, starting from the creation of new services or the adaptation of old ones.

Both the Ipiranga and the National Museums were already closed before the period of social isolation due to restorations, so these museums had already advanced in using virtual means to communicate with their audiences and perform activities in the virtual environment, given that the buildings that house the museums would take time to return to receiving visitation in their spaces. This factor indicates the importance of using digital platforms for museological institutions, as both museums did not cease

21 São Paulo Museum of Art Assis Chateaubriand: <https://artsand-culture.google.com/partner/masp>. Accessed on Dec. 30, 2021

22 What museums need in times of physical distancing: <http://www.ibermuseos.org/pt/recursos/documentos/o-que-os-museus-necessitam-em-tempos-de-distanciamento-fisico/>. Accessed on Jan. 04, 2022.

to exist due to the closure of their buildings but appropriated technological tools to emphasize that museums go beyond the walls that support them. After the closures of their physical spaces due to social isolation, the other museums also used the virtual environment to reach audiences from different regions, both from a national and international point of view. They appropriated digital technology tools to develop various actions through social media, websites, and other digital support platforms. Therefore, it may be considered that using these digital mechanisms led these museums to be the most sought after by Brazilians, considering the diversity of activities performed in entirely virtual environments for their audiences.

5. FINAL CONSIDERATIONS

The COVID-19 pandemic highlighted the need for organizations to rethink the delivery of their services, considering making them available from digital platforms. This matter was already proving necessary, but with the pandemic, it became crucial, as it changed the form of consumption of society on various levels. Regarding the consumption of cultural services, people began to search more about virtual museums and exhibitions, searches that were not so evident in the year before the pandemic. In this sense, as institutions at the service of society, museums had to draw up new methodologies for delivering services to their audiences that would benefit society and the museological institutions themselves, given they would have greater reach over the access to their institutions and collections.

Therefore, for museums with physical spaces, digital technology tools within the museological sphere may be used as support mechanisms for the services performed in the museum or even extension services, considering the

multitude of services that may be developed only in the virtual environment. Moreover, digital platforms are also used to house entirely virtual museums. This format has been intensifying recently, so much so that, in the context of the pandemic, virtual museums emerged on this theme, which is the case of the *Covid Art Museum*, created to provide cultural content during social isolation. Finally, one may state that the digital humanities activity within the museological sphere is indispensable to meeting the demands of society. Digital technology tools allow the approximation of museological institutions to their audiences, thus allowing museums to perform their social function more effectively. In addition, the availability of content, collections, and activities in the virtual environment provides information dissemination, which contributes to the cultural propagation of museums and allows the exchange of information between museological institutions, thus strengthening the cultural realm.

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