Re-creating the Museum Space: Distance Learning in Museums during Covid-19 Lockdown

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ABSTRACT

During the Covid-19 pandemic lockdown, from March to July 2020, museums opened their collections and buildings online and digitalized museum objects. People had a chance to visit and experience museums, no matter their geographic location. Museums are lifelong learning spaces and they explore different ways to connect their users. During the lockdown, cyber space was not there as an alternative environment but the only way for the museum visit and learning experience which offers information, socialization and stimulate senses through a screen. Even if it is real or virtual, learning cannot be separated from space. The purpose of this study is to explore the use of virtual museum space and examine the creative practices in online museum learning to find the experiences available a time of crisis. The selection of "Kids in Museums" initiative for museums in times of the lockdown are discussed with previous internationally significant digital museum practices. In the results section, virtual museum space is stated as a medium for museum distance learning and some key findings to enhance virtual space and distance museum learning are discussed.

Keywords

Covid-19, Museum learning, Digital museum, Cyber space, Virtual museum

Introduction

The corona virus pandemic was announced officially in March 11, 2020 by World Health Organization [1]. People were advised to stay home and isolate themselves. The term social isolation describes a situation of keeping physical distance from others. People could not go to cafes, restaurants, schools or offices but by getting online they could visit virtual museums. Museums were open only virtually. Most of the museums were physically closed from March 2020 and slowly started to re-open after June 2020. By staying in the house's environment and getting online, people could experience another museum space anywhere in the world. Museums tried to respond the need of another space when one can't have.

Museum space is a restorative environment [2]. The pandemic and the lockdown unexpectedly changed people's daily routine overnight. To manage anxiety and vagueness and to connect the world out of the house, museums used their therapeutic effect which has been applied in the field since 2018, the year doctors prescribed free museum visits to the patients and their companies with a partnership between the Francophone Association of Doctors in Canada and the Montreal Museum of Fine Arts [3]. Even when they are virtual, museums have tools to contact the real world using digital information and representations of real objects and artworks.

Literature Review

Virtual Museums and Their Respond to Self-Isolation

Common response of the museums to the pandemic lock down was the attempt to connect their visitors virtually through www and social media to offer more than just an online site visit.
Virtual museums are associated with the context of "museum without walls", which is discussed since the 1950's and is often referred to French politician and writer André Malraux's concept of "musée imaginaire" [4]. Today, as a one big worldwide museum, Google Arts & Culture offer more than 2000 virtual museum tours which users can explore and personalize, create their own museum with the pictures of artworks from anywhere in the world [5]. In Google Arts & Culture, virtual museum tours happen in digitalized real museum buildings. Harrison's vision for future museums with social subjects in the center and museums without buildings seems to be virtually realized [6].

The fact that museums are available to much wider audiences than these that can physically go to the galleries, led non-traditional audiences able to engage with artworks and the museum. Some people experienced the museums for the first time. Museum experience is expected to be pleasurable. Pekarik et al. identified four most satisfying user experiences [7]:

• Object experiences by seeing the rare and the beautiful
• Cognitive experiences by knowledge and understanding
• Introspective experiences by imagining and meaning
• Social experiences by interacting and watching others learn

During Covid-19 crisis, museums offered some of these experiences by using digital platforms. NEMO (Network of European Museum Organizations) provides an overview of how museums in Europe respond, when 90% of museums were physically closed [8]:

• Digital Initiatives
• YouTube channels
• Providing objects for creative use
• Documenting the pandemic
• Donating necessary materials to hospitals

Some of the initiatives like Getty Museum Challenge to recreate artworks at home had huge impact on social media [9].

Space as an Interface in Virtual Museums

Dercon states that digital platforms are not only new environments to exhibit collections but can be used as plus-terminals of the museums [10]. Virtual environment is user generated and audiences become users and control their experience. Frisch's definition of shared authority in museums [11], which is different from collaboration and participation is tested virtually.

Since the virtual museum experience is new, it is often compared to real world museum experience. Rozwadowski states www's inability to convey scale, texture, a sense of place and other three-dimensional qualities and the ability for freedom of movement [12]. Finn says "Be it small or large, seeing the real thing is unambiguous. There is often an emotional reaction that accompanies the

perception of true size" [13]. Galleries and their digital extensions are often seen as overly editorial, full of texts, images and information and certain navigation paths with little left to the user's choice [14].

These comparisons are for the representations of real museums in digital world. But as Dercon states, plus-terminals can also be taken as virtual spaces that doesn't intent to replicate the real environment but has its own characteristics [10]. McDonald refers to McConnell who states that in virtual world "users remain in control and are not limited or intimidated by traditional expert barriers such as cataloguing systems or curatorial taxonomies" [17]. Interactive interfaces and gamification are often used to avoid information overload and make the visit a multisensory experience. "The Museum of the World" project launched in February 2020 is an interactive experience through time, continents and cultures, featuring objects from British Museum and Google Cultural Institute. Using Web GL (Web Graphics Library) jumping back in time to explore objects and listen to British Museum Curators' insights are possible [15].
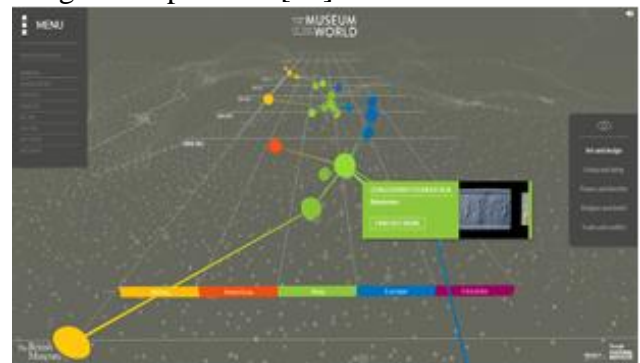
Figure 1. Screenshot of the interactive grid space designed for the Museum of the World. https://britishmuseum.withgoogle.com/

Games designed for a hybrid museum experience, when the body of the visitor was in the real building, were not in use during the lockdown but since they share the same concept with virtual games are explained in this paper using the "Capture the Museum" game [16]. This game was developed by the National Museums of Scotland as an on-site experience. Visitors join the game using mobile devices and select one of the two teams. Then they try to get information on the objects to solve the puzzles on the screens and to claim territories of the galleries.

Figure 2. Capture the Museum game press visual.
http://www.capturethemuseum.com/

When the museum visit is online, movement types define if it is a realistic experience. In real life people walk the museum and the buildings that are replicated in virtual environment are made to be experienced by walking. In virtual environment one need to jump, zoom or rotate not walk. When using www on the screen, it is hard to find the right camera angle to see the artwork without distortion. Gaming technologies solved this problem and give the feeling of a realistic navigation to make it more like an embodied experience. Study of Marin-Morales et al. in 2019 shows there are not very significant differences in navigation between real and virtual environment if a head mounted device is used [18].

Virtual environment has its own characteristics to be able to move from one place to another with a click. Visitors use interactive mini maps to position themselves easily. Moldoveanu et al. stated that "The mini map facilitates both the user's orientation and its fast movement in the virtual space. The current position of the user is indicated on the map by a specific symbol. The map is divided in disjunctive sensitive areas, provided with tool tips and contains teleportation points – with a click on such a point, the user is teleported in the corresponding position" [19].
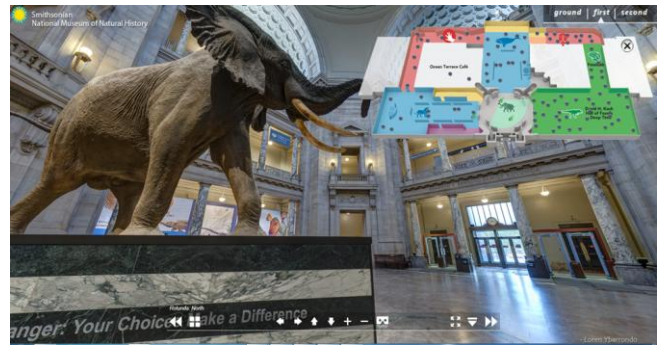
Figure 3. Screenshot of a camera view showing the distortion of space and objects. Navigation is enabled by the interactive map of Smithsonian National Museum of Natural History. https://naturalhistory.si.edu/

Met Museum's interactive map design is a graphic design artwork which doesn't show the real building layout directly but gives references to the real building. Designed for children use, it is a map as a spatial interface [20].

Figure 4. Screenshot of Met Museum's Met Kids web interface.
https://www.metmuseum.org/art/online-features/metkids/

Tate London's visitor research shows that 45% of people use the museum to spend time with others and socialize [10]. Virtual museum space is used for socialization too with voice or text chat channels and users can create friends lists and groups of interests with a message board. Moldoveanu et al. describe how users can personalize the museum by creating their own galleries and tours. "Web sites can offer ways to use tools to help their users to configure basic virtual museum environment and user can populate this space with their own imported objects or cloned objects from the museum, then share and create a tour. These ideas can be used for educative purpose or fun" [19]. Social

interaction for educative purpose, sharing ideas on objects or working on them together, web space can be structured as an online cooperative learning environment [21]. During the Covid-19 pandemic lockdown museums used creative ways for learning and socializing. Since the start of the lockdown period "Kids in Museum", supported by Arts Council England, selected and released successful applications from real to virtual environment weekly. At the end of the period, when museums started to re-open, they shortlisted the selection by museum professionals.

Methods

Creativity in Times of Crisis: Unlocking the Virtual Museum

"Kids in Museums" is working with museums in the United Kingdom, to make them more welcoming for children, young people and families. Every year a museum is selected as "Family Friendly Museum of the Year". Since the Covid-19 lockdown in 2020 it was changed as "Family Friendly Museum Award from Home" [22]. 26 museums selected from 400 nominees from all around the world are listed in five categories:

- Best Film
- Best Social Media Activity
- Best Website Activity
- Going the Extra Mile
- Best International Digital Activity

By studying all the nominees, this paper examines the ones that prioritized the digital space use, online learning, personalization and socialization described above. Some examples from Istanbul, Turkey is used to see the similarities and differences of the communication approaches.

National Museums Liverpool's "My Home is My Museum" project is a nominee for "Best Social Media Activity". The project uses this crisis time as a chance to learn more about their visitors. They invited children between 4-11 ages to create their own exhibition; telling about who they are by using objects from their houses and creating artwork to make their own gallery. Children named the exhibition, designed a poster and created a promotional video for social media [23].

With a similar attempt to change the direction of the communication with their users, this time for adults, Arter's learning team in Istanbul had "Tell from Home" project which ten users meet on Zoom to talk about a selected object in their houses [24].

"Best Social Media Activity" nominee Museum of Wales, created a competition, for 6-11 years old children, called "Minecraft Your Museum". Children made their researches of objects in the museums, selected their collection and built their own 3D museum on Minecraft. The prize of the competition is a VIP museum trip for the winner and his whole class [25]. This is a therapeutic approach to motivate kids to think about a positive near future. By constructing the Minecraft gallery visitors experience digital space design and personalization.

The Withworth at the University of Manchester, nominated for "Going the Extra Mile Award", used the therapeutic effect of museums by their "Still Parents" group. In partnership with Sands, Stillbirth & Neonatal Death Charity, the Whitworth launched a series of free art workshops for parents who lost their babies [26]. Therapeutic effect with socialization of this project is far beyond other characteristics.

Rijksmuseum is nominated for "Best International Digital Activity" category. They combined the virtual tour and gaming on the website by the "Key Challenge" for 9 years old and up. One key is hidden inside the artworks in each section of the building; 10 keys are hidden in total. Each key opens a letter in a puzzle. By providing an interactive map, users can jump from one section to another in Great Hall, Gallery of Honor and Nightwatch Gallery [27]. This game motivates the user to navigate inside the museum like the "Capture the Museum" game but this time only in virtual environment. They both combine the search for an object information, one directly and the other not, which can only be found if the artworks are examined. The difference of the two games is that one is played personally, the other is played by teams and gives a social experience too. In the same prize category for "Best International Digital Activity", Museum of Singapore's "Small Big Dreamers at Home" project offers an online interactive exploration with the national art

collection. "Watch and Listen", "Artist's Studio", "Play and Discover" and "Make and Create" sections of their website combines interactive games and Do-It-Yourself activities with information on the art collection in a user friendly way, inclusive for all ages [28].

Figure 5. Screenshot from Museum of Singapore, Small Big Dreamers at Home Website https://www.nationalgallery.sg/smallbigdreamers/

Results and Discussion

Covid-19 lockdown period has been a time of social isolation and keeping physical distance. High-pitched use of virtual environment and virtual museums gave occasion to re-think the need of a space and which spatial potentials virtual museums have.

Virtual museums have pre-defined experiences. This is different from real museum buildings where visitors create their own embodied experience. Differences of web space and digitally replicated 3D buildings studied in this article are mostly on navigation and movement. The use of interactive maps and the way of moving inside the gallery is different form walking the real building. Virtual environment is free to move with technical limitations. Experiencing space virtually, gaming technologies have the potential to make users navigate as in the real world. Navigating and finding the right angle to see the objects need effort and decrease the pleasure of the visit.

Digital environment gives users freedom to construct their own digital museum space as in Minecraft project of Museum of Wales [24]. This is useful to increase perception of object-space relations.

Designing or playing with the museum space and objects changes authority in museums too. Shared authority is a key in museum learning to make it different from formal education and space is a medium for learning itself.

Object experience in virtual museums is not only about seeing new and beautiful things. Users play with the object, personalize it with modifications or adopt to their own galleries.

Personalization and socialization in virtual museums give the opportunity to learn and enjoy the experience together. In times of crisis these functions have therapeutic effect themselves. But therapeutic effects can also be the main characteristic of the environment because of the objects used and their stories and art in the center for art therapy.

Virtual museums are inclusive and easy to use. They don't need high skills to join the experience and they are open for all ages.

Conclusion

The purpose of this study was to explore the use of virtual museum space and examine the creative practices in online museum learning to find the experiences they offer in a time of crisis.

The findings of experiences of online museums studied in this paper are:

• Spatialization: Digitalizing real-life museums and virtual museums together with the use of creative web interfaces
• Navigation: The use of interactive maps and creative maps
• Gaming: Structuring the spatial experience and object information
• Object Experience: Object inspired user artworks
• Shared Authority: User controlled environments for learning
• Personalization: Re-creating the museum space or re-collect and personalize artworks
• Socialization: Sharing self-interest with others, chat channels, friends list, social media use
• Therapeutic Effect: Productive art therapy and online groups on common subjects

• Inclusivity: Easy to use environments for all ages not just children

Understanding the virtual museum experience and the differences form real museums is necessary to improve creative methods for distance museum

learning. Findings of this paper can be used in designing virtual museums or plus-terminal virtual galleries for museums of the future.

References

[1] World Health Organisation (2020). *Timeline of WHO's response to COVID-19*. Retrieved June 30, 2020, from https://www.who.int/news-room/detail/29-06-2020-covidtimeline

[2] Kaplan, S. & Bardwell, L. V. & Slakter, D. (1993). B. The restorative experience as a museum benefit. *Journal of' Museum Education*, 18(3), 15-18.

[3] Canadian doctors to start prescribing museum visits. Retrieved October 26, 2018, from https://medicalxpress.com/news/2018-10-canadian-doctors-museum.html

[4] Allan, D. (2020). *Has André Malraux's imaginary museum come into its own?* Retrieved June 20, 2020, from https://www.apollo-magazine.com/andre-malraux-museum-without-walls/

[5] Google Arts and Culture. Retrieved May 15, 2020 from https://artsandculture.google.com

[6] Harrison J. D. (2005). *Ideas of Museums in 1990s, Heritage, Museums and Galleries: An Introductory Reader*, ed. Gerard Corsane, Routledge London and New York, p. 38-53.

[7] Pekarik, A., Doering, Z., Karns, D. (2010). Exploring Satisfying Experiences in Museums, *Curator: The Museum Journal*, 42(2),152 - 173

[8] Network of European Museum Organisations, (2020). *Engaging Museum Initiatives*. Retrieved May 30, 2020, from https://www.ne-mo.org/fileadmin/Dateien/public/NEMO_documents/Initiatives_of_museums_in_times_of_corona_4_20.pdf

[9] Barnes, S. (2020). *People Recreate Works of Art with Objects Found at Home During Self-Quarantine*. Retrieved May 24, 2020, from https://mymodernmet.com/recreate-art-history-challenge

[10] Istanbul Modern Art Museum (2020). *Museums Talk: From the UK "The Future of the Museums*. Retrieved March 12, 2020, from https://www.youtube.com/watch?v=UPjPEDdmfgs

[11] Frisch M. (1990). *A Shared Authority: Essays on the Craft and Meaning of Oral and Public History*, State University of New York Press, Albany, New York.

[12] Rozwadowski, H. M. (1996). "Ocean Planet" at the National Museum of Natural History, Smithsonian Institution. *Technology and Culture*, 37(2), 330-339.

[13] Finn B. S. (1989). Exhibit Reviews-Twenty Years Later. *Technology and Culture*, 30(4), 993-1003.

[14] Kahn, R. (2020). Corona as Curator: How museums are responding to the pandemic. Retrieved April 15, 2020, from https://elephantinthelab.org/corona-as-curator-how-museums-are-responding-to-the-pandemic/

[15] The Museum of the World. Retrieved April 30, 2020, from https://britishmuseum.withgoogle.com/

[16] Capture the Museum. Retrieved May 16, 2020, from http://www.capturethemuseum.com

[17] McDonald, M. (2005). *The Museum and The Web: Three Case Studies*, Master's Thesis, American Studies, University of Virginia.

[18] Marin-Morales, J. & Higuera Trujillo, J. L. & de Juan Ripoll, C. & Llinares, C. & Guixeres, J. & Iñarra Abad,

S. & Alcañiz M. (2019). Navigation Comparison between a Real and a Virtual Museum: Time-dependent Differences using a Head Mounted Display. *Interacting with Computers*, 31(iwz018), 208-220.

[19]   Moldoveanu A. & Moldoveanu F. & Soceanu A. & Asavei V. (2008). A 3D Virtual Museum. *U.P.B. Scientific Bulletin, Series C: Electrical Engineering*, 70(3), 47-58.

[20]   Met Museum "Met Kids". Retrieved July 22, 2020, from https://www.metmuseum.org/art/online-features/metkids/

[21]   Vladescu I. (2008). Introduction in Cooperative Learning. *Educatia21*, 6, 195-207.

[22]   Family Friendly Museum Award from Home. Retrieved July 22, 2020, from https://kidsinmuseums.org.uk/2020/07/shortlist-announced-for-the-family-friendly-museum-award-from-home/

[23]   My Home is My Museum Retrieved July 23, 2020, from https://www.liverpoolmuseums.org.uk/my-home-my-museum

[24]   Tell from Home. Retrieved May 30, 2020, from https://www.arter.org.tr/evden_anlat

[25]   Minecraft Your Museum. Retrieved July 23, 2020, from https://museum.wales/media/49187/Minecraft-your-Museum-4.pdf

[26]   Still Parents, Retrieved July 23, 2020, from https://www.whitworth.manchester.ac.uk/whats-on/events/stillparents/

[27]   Online Key Challenge. Retrieved July 24, 2020, from https://www.rijksmuseum.nl/en/from-home/online-key-challenge

[28]   Small Big Dreamers at Home. Retrieved July 22, 2020, from https://www.nationalgallery.sg/smallbigdreamers/play-and-discover.php