

Collaboration, Opportunity, and Challenge: Technology's Role in the Media Art Exhibition



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ABSTRACT: The current research paper aims to examine the impact of adopting technology in implementing art exhibitions and museums, and explore certain aspects regarding the media art exhibition titled 'Von der Schönheit der Begegnung – Medienkunst als lebendige Gegenwart' (Eng. 'The Beauty of the Encounter- Media Art as a Living Present'). Particularly, the study seeks to identify the technical challenges, determinants, and difficulties faced by the implementation group members; and several findings and lessons learned were reported by the current study.

KEYWORDS: Exhibitions, Media Art Exhibition, Museums, Technology, Digital Artworks, Technical Challenges, Culture.

INTRODUCTION

The new millennium has witnessed a technological and informatics revolution that has touched all fields of science and all aspects of life. Moreover, this new and prosperous era was marked by the achievement of quantum leaps and extraordinary breakthroughs in the areas of computerization, communications and digital innovations, and the Internet. Unsurprisingly, this paid growth continued to increase at an accelerating pace and on a large scale. Eventually, the progress made has led to a new reality that is technologically driven on a global scale and in global dimension (Sinnaeve, 2021; Bulajic, 2007; and Everette & Melvin, 2010).

On contrary, given the fast pace of the global technological turnover and transformation resulted from the quickly disseminating nature of the modern digital technologies, their universal merging capabilities, and the worldwide interest in their highly upgraded hardware devices (e.g., tablets, laptops, smartphones, etc.)/ software's (applications, products, and tools) interfaces and overlaps have occurred between these new evolutionary technologies and the entire aspects and spheres of the human beings' lives, including their everyday lives' situations, activities, affairs, etc., (ibid).

An illustration of the aforementioned intersection can be demonstrated through the noticeable changes that have particularly occurred in the arts' sector, including the overall artistic disciplines, genres, categories, practices, formats, and artworks. Within the framework of artistic genre, installation artworks, whether temporary or permanent, are constructed in exhibition spaces such as public or private museums and galleries. In the realm of various forms of artworks, the highest priority is given to the need of displaying and contextualizing these artworks and make them accessible to a diverse of contemporary audiences concerned. Precisely, one of the most effective platforms used to achieve this ultimate goal is exhibition (Cline, 2021; Marincola, 2006; Greenberg, et al. 1996; Suderburg, 2000).

In a relevant context, the dawn of modernism has paved the way for a number of new forms of exhibitions through which most artworks are displayed in a variety of media. Hence, this contributed to showcase new media art projects and artworks by digital artists and arts institution. Additionally, this new form of exhibition incorporates a broad range of immersive virtual reality which is the most modern form of art. Such medium is executed through an interactive installation that produced by the artists (e.g., digital-based, electronic-based, web-based, mobile-based installations, etc.). Accordingly, this enabled the audience to respond and act on the displayed artworks (Kluszczyński, 2022 & Nechvatal, 2009).

The primary focus of the present research study is the media art exhibition with the theme 'Von der Schönheit der Begegnung – Medienkunst als lebendige Gegenwart' (Eng. 'The Beauty of the Encounter- Media Art as a Living Present'). Particularly, the study was conducted to discuss several types of technical challenges, determinants, and difficulties faced by the technical implementation group members during the execution the aforementioned exhibition. It also sought to explore the methods and techniques adopted by the group members concerned to encounter the technical issues as well as identifying the impact of adopting technology in implementing exhibitions and museums on art and culture.

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SIGNIFICANCE OF THE STUDY

In today's digital age, art, like many other disciplines, has entered the digital domain. Hence, a new art format (also called 'digital art') has started to integrate digital technologies (e.g., 'operating systems' and 'software') in generating, designing, creating, developing, exhibiting, and storing artworks (Morgan, 1992).

In the same context, a new art genre has emerged. This genre is called the 'New Media Art' (also known as 'digital media arts'), which is defined as any work that is created with new technologies such as digital art, computer graphics and animation, virtual and interactive art, this new frontier of the art world encouraged many digital artists started to adopt different display technologies available such as 'laser video projectors' and 'LED video display monitors' that are capable of creating three-dimensional visuals (Sinnaeve, 2021).

Moreover, in light of the emerging digital technologies incorporated into the new media art' genre, including virtual interactive art, 3D printing art, multimedia and animation, computer-generated art, mobile technologies, and computer-generated graphics, digital artists, while performing and practicing such artworks within the framework of digital technologies, are now exposed to the computational process which facilitate digital artworks' productions and the way they are displayed (Morgan, 1992).

Based on what was mentioned earlier, the practical and theoretical significance of the current research paper emerged from its analytical and comprehensive examination of an authentic media art exhibition, i.e., 'Von der Schönheit der Begegnung – Medienkunst als lebendige Gegenwart', as a case study, to highlight many technical aspects related to the implementation of the exhibition, such as the potential difficulties and hurdles, which are supposed to represent influential factors in determining the extent of the exhibition's success in achieving its predetermined goals.

In other words, this study sought to bridge the gap in the relevant literature in terms of the technical challenges, determinants, and difficulties faced by the technical implementation group members who participated in establishing the exhibition and the methods and techniques they utilized to encounter technical issues.

So, conducting research studies, like the current one, which seek carrying out a thorough exploration of the aforementioned topic, would play a critical role in increasing and broadening the horizons of our knowledge regarding the development trend and content change of art exhibitions' form and content of expression, especially within the framework of the new emerging media environment, as well as enhancing our understanding and more comprehensive perspectives towards the variability, diversity, and individuality of this important artistic genre and its relationship with modern technologies and their digital tools and application.

PROBLEM STATEMENT

New Media concerns are often derived from digital electronic modes of delivering/displaying the artworks within practices that range from conceptual to virtual arts' performance to installation. Actually, this overall process varies extremely in terms of its modalities. Hence, its relevant practices should be innovative as regards tools, outlets and channels, components, target groups, the used media, and most importantly the displayed media artworks and new media art projects (Dixon, 2007).

And regardless of the nature of the emerging new digital/media artworks, the primary target of the digital artists and other concerned parties, including architects, designers, designers, and display manufacturers, will remains the same, i.e., to ensure that the new media artworks are displayed in the best way possible (Van Der, 2017).

Based on the above-stated issues and in light of the relevant reviewed literature, digital artists lack the sufficient awareness on how to integrate technological, digital, and electronic innovations in displaying their new media artworks within an interactive environment, mainly through interactive exhibitions. They also lack the needed awareness of the potential technical determinants and challenges they might face while executing these exhibitions as well as the best methods and techniques required to solve any problematic issues they might encounter. Therefore, this research study was carried out to highlight the two previously mentioned dilemmas and to clarify certain aspects regarding the impact of adopting technology in implementing exhibitions and museums on art and culture.

To sum up, although there is much literature on new media-related discussions, the connection between the development of art exhibitions and the adoption of technology in implementing exhibitions is still in a relatively missing state.

TECHNICAL IMPLEMENTATION OF THE EXHIBITION CONCERNED

The primary focus of the present research study is on the media art exhibition with the theme 'Von der Schönheit der Begegnung – Medienkunst als lebendige Gegenwart' (Eng. 'The Beauty of the Encounter- Media Art as a Living Present'), which was curated and organized during the period between 15th, June and 17th, July 2022 by students enrolled in Master's degree program in International Media Cultural Work (IMC) at Hochschule Darmstadt (h_da) (Eng. 'Darmstadt University of Applied Sciences'). In fact, this exhibition was created in cooperation with the Museum Schloss Fechenbach (Dieburg). Admittedly, this exhibition displayed (17) authentic new media art productions from various genres, including 3D audio ear play, virtual reality, video installation, games and animation, 360° film, etc., (International Media Curators 'IMC', 2022).

One last point to be clarified is that this exhibition has involved students from the International Media Cultural Work (IMC) master's program in Hochschule Darmstadt / University of Applied Sciences. The students' involvement aimed at providing them

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with a practical and theoretical experience relating to the designing and implementing art exhibitions from scratch. Forsooth, the teams work assigned to execute the exhibitions were divided into five groups. One of these groups was 'the technical implementation group'. This particular group was responsible for implementing and enhancing the art pieces and keeping them functioning well before and during the exhibition period (ibid).

TECHNICAL CHALLENGES AND DIFFICULTIES

The aforesaid group, i.e., the technical implementation group, faced several technical issues due to the diversity of digital tools that were implemented in the exhibition, including the video hardware, light hardware, audio hardware, etc. likewise, VR and augmented reality, kinetic elements, physical interfaces, and computers sensors have also among the technical challenges.

In other respects, the variation of the technical implementation group members' experiences resulted in a weak performance while executing the exhibition's stages, bearing in mind that the group's members as well as the artists concerned are still students whom, by common sense, have limited practical experience on this regards.

Other difficulties were caused by other reasons such as the group members' inability to communicate with few artists at a steady pace which led to weakening their collective performance level in terms of accomplishing the required tasks. Over and above that, some artists did not prepare advance plans related to the equipment required for the exhibition. They did not also adhere to the workflow in accordance with the rest of the concerned members of the technical implementation group.

Not only that, the group members' incapability to master the implementation of certain artworks such as Schlosskeller (VR- event as virtual), Wesen (installation with sound).

TECHNOLOGY'S POSSIBILITIES AND LIMITATIONS

Alongside the recent technological developments have accelerated the remarkable progress in our day-to-day lives., several technological possibilities were made available in the arts' environment. One of these possibilities can be demonstrated through the innovative digital technologies which are now combined with exhibitions' events. Such technology helped the artists in the art discipline to meet their artistic and professional goals, manage and develop their artistic practices, and meet the requests of their targeted audiences. In similar vein, due to the digitalization and convergence of the contemporary new media art, artists have allowed the artists to create interactive, generative, collaborative, immersive, and computer-simulated artworks (Dixon, 2007, Al-Quran 2022).

On contrary, the existing digital media have several limitations. In fact, the emergence of new digital technologies, their tools, their applications, the Internet, and social media has raised the need of the exhibitions' attendees and exhibitors. Such needs are frequently harder to recognize among the incalculable choices accessible. It also called for providing artists with support systems and services from arts services providers in order to enable those artists to cope with the information age's developments and advances. Likewise, the existing digital technologies are not always prepared or able to tailor or expand their offerings to support the needs that artists working with digital technologies encounter and to allow them to overcome any potential difficulties and challenges. Besides, the insufficient awareness of the new technologies by the artists limits their inability to embrace and integrate these technologies into their artworks (ibid).

TECHNOLOGY COLLABORATION IN EXHIBITIONS

In the age of technology, it has been a natural phenomenon to increase the adoption of technology in various fields, including the art field. Truly, innovations in technology have been progressively affected the world of art and accordingly several technologies have been incorporated into works of art, whether visibly or covertly, and artworks have started to depend on the modern technologies in one way or another. Therefore, it is not surprising anymore that artists have been increasingly using the electronic media (Morrison, 2018).

Using technology has changed our definition of exhibitions' space, moving it from 'physical' to 'digital' to 'hybrid'. Firstly, technologies posed different opportunities for the exhibitions' audiences by putting the exhibitions' experiences in their hands. Secondly, the perfect collaboration of digital technology encourages the exhibitions' visitors to build long-lasting engagement with the exhibits. For example, Visitors are equipped with handheld devices which used audio and tactile feedback to deliver a rich explanatory narrative about the displayed items. Thirdly, technologies enable visitors to capture a rich and diverse range of opportunities, such as the ability to interact with artefacts and various artworks' artists (Choi, B., & Kim, J. 2021; Morrison, 2018).

CONCLUSION

As mentioned earlier, after reviewing the relevant literature, and based on Practical analyzing the qualitative data collected from the team participants, the findings of the study reported that the technological and informatics innovations emerged in the era of modernism and globalization have interfered with the arts' discipline, including various artistic genres, categories, practices, formats, and forms of artworks have been integrated digital technologies. As a result, a new artwork genre across the spectrum of virtual forms was emerged, i.e., the new media art, through which digital technologies are incorporated into this genre, including

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virtual interactive art, 3D printing art, multimedia, etc. The findings of the study have also indicated that the new emerging digital media art includes virtual and interactive artworks that are created through the integrated technologies such as computer graphics and animation. In addition, the installation of this new art forms are constructed in exhibition spaces such as the museums.

Secondly, as for the media art exhibition with the theme 'Von der Schönheit der Begegnung – Medienkunst als lebendige Gegenwart', which is the primary focus of the research study, and according to the technical implementation group which was assigned, alongside other 4 groups, to execute the exhibitions and particularly implement and enhance the art pieces in the above stated exhibition and to maintain the proper functionality of these pieces, several technical challenges and difficulties were faced by the group, including the diversity of digital tools that were implemented in the exhibition, the variation of the technical implementation group members' experiences, the group members' inability to communicate with the artists concerned at a steady pace, the lack of advanced planning by artists, the shortage of some equipment required for the exhibition.

Finally, several lessons could be learned from the current study, including: 1) exhibitions can proactively address the future iterations of digital work; 2) exhibitions' professionals should aware of the most updated technologies (software and hardware components) that are integrated in the new media art; 3) integrating modern technology in the art domain (e.g., mobile applications, digital exhibits, audio/visual galleries, interactive exhibits, augmented reality, etc.) enhance the engagement of the exhibitions' audiences and increase their learning; 4) the rapidly evolving technologies sometimes create technical challenges, determinants, and difficulties in the art field and in the implementation process of the artworks; 5) the emergence of new media and the iterative development of new technology have changed the contemporary art exhibitions' format and led to incorporating more diverse content and comprehensive display methods; 6) the current development of new media and the changes of art exhibition have led to a foundational change in the audiences' viewing experiences and created opportunities for interactive and multimedia experiences; 7) within the frame work of digitization and virtualization, the ways in which exhibitions are carried out must change to be able to adapted to the digital age; and 8) in 'virtual exhibitions', new technologies such as smartphone apps are used in interactive environments, especially those with visual representations such as 3D environments. So, implementing a new media art's exhibition, according to the most modern trend in digital museology, should host innovative new media artworks that are interactive.

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