SCHOLARLY SUMMIT
THE ACADEMIC PUBLISHERS

Successful Museums enhancing museum visitors experience

[1]Dalia Hafiz, [2]Saad Tehreem

[1]King Saudi University,
[2]Department of Marketing, College of Management Sciences, PAF-KIET University, Pakistan

Abstract

The study focuses on demographic characteristics of museum going public with a special focus on quality of displayed items and environment as a determining factor to user satisfaction. It is found out that most visitors belong to group 26-40 years through the age perception and have an equal number of male and female visitors and 70% of the visitor's level education is Bachelor's degree. Occasionally and frequent attendees reveal a good combination of the two, quality of the exhibitions is high, and guided tours are effective. Nevertheless, a significant share of dissatisfaction signals the prospects for enhancement. The ANOVA test outcome also show that the visitor groups are significantly different implying that it is important for museums to understand the needs of the visitors to satisfy customers' demand. The implications are that by embracing Inclusiveness, community appeal and diversifying activities, museums can attract many visitors to ensure they are up to date in the cultural market.

Keywords: Museum Visitors, Visitor Satisfaction, Engagement Strategies, Exhibition Quality

Introduction

Cultural museums in current times serve as participatory facilities which unite user engagement with dynamic developmental practices above conventional display techniques (Mucha, 2022). Knowledge about memorable visit experiences now functions as a source of power (Labadi et al., 2021) for this new development phase that enhances our comprehension of cultural heritage (Buhalis & Karatay, 2022). Multiple strategies produce successful museum-viewer interactions because technology-based immersive displays (Wang, 2022) make it possible for different audience types to connect with one another. Digital methods produce success by replicating the natural electronic practices of young people (Kopp, 2023). Active museums develop friendly settings through which all visitors from students to families (Jászberényi, 2021) to tourists feel fully welcomed. The institution delivers specialized programs for each type of visitor through educational lectures and family educational programs (Cromartie et al., 2021) that run alongside structured sessions for school groups (de La Ville et al., 2021). Museum visitors gain better satisfaction from their visit when members of local communities become active participants in museum events. The development

of exhibitions at museums relies on cultural organization artists from local communities who both present cultural heritage and generate museum engagement with the public (Ayala et al., 2024).

The museum achieves stronger visitor investment alongside greater audience loyalty through its strategy of enriching visitor experience (Passebois Ducros & Euzéby, 2021). The study lacks sufficient knowledge about visitor engagement strategy effectiveness among different cultural groups along with demographic populations. Most study initiatives examine particular programs but fail to demonstrate how these programs benefit different visitor populations. Many museums remain unable to effectively provide custom services for audience diversity because they lack complete evaluation of their practice. Visitor experiences is crucial for museums to improve visitor experiences by monitoring engagement statistics and feedback evaluations across different demographic groups. Effective museum strategies for enhancing visitor engagement (Derda, 2024) while presenting adjustments which optimize these strategies for all audience categories (Huang & Li, 2024). The statement highlights the fundamental necessity of permanent assessment that helps museums modify strategies within the continuously developing museum engagement field.

The research results from museums will help existing practices while developing plans to optimize visitor engagement thus keeping museums essential cultural hubs. Museums work to build stronger bonds between visitors and displayed cultural stories so visitors develop a better appreciation for arts and heritage in modern interlinked societies.

Literature Review
The Role of Technology in Enhancing Visitor Engagement

Technological integration into museums has helped transform what a visitor observes into a more interactive and engrossing behaviour (Bunea et al., 2024) that boosts the ability to learn and interact with the exhibits (Ifeanyi). This technological shift is unfurling around Augmented Reality (AR) and Virtual Reality (VR) and those are the same mediums used by museums to deliver immersive experiences that cannot be had through a traditional display (MOHAMMED et al., 2022). VR enhances learning experiences and makes them accessible to younger generations, allowing museums to offer virtual tours of historic sites and endangered locations (Cesário & Campos, 2024), reducing complications for visitors. Further, interactive displays have become popular among visitors (Wen & Ma, 2024) as they entice them to actively be involved in their learning and exploration process. Gamified elements, and touch screens (Lu et al., 2023), motion sensors encourage visitors to engage with content in a hands on way so that they get to a deeper understanding on the subject matter (de Morais Sarmento, 2024). For instance, some museums are using interactive kiosks so that people can almost explore certain themes, play educational games, or even add their own experiences and stories associated to the exhibits (Derda, 2024). In addition to assisting in visitor engagement, this participatory use of the technology encourages social interaction as groups tend to synchronize their use of the technology together.

At the same time, technology allows its users to personalise the experience through the collection and analysis of data. Museums can use visitor data in a good way to optimize their content and recommendation experience based on the user interests and preferences (Li et al., 2024). And equally, it can be so personalized to visitor satisfaction that their hangar will be in tiptop and they will feel valued and understood.

Community Engagement and Outreach Strategies

Strategies of involvement in a museum community and outreach activities are essential to the improvement of the visitor experiences at museums (Ver Steeg Jr, 2022) so that the ties formed do not stop within the museum walls. Active involvement of local communities can produce relationships in museums that meaningful and would encourage participation (Mendez, 2021) and then build a sense of belonging (Wallen & Docherty-Hughes, 2022). Museums achieve this one of the most effective ways is by offering educational programs designed for different groups, starting with the schools, families, and underrepresented groups (Weber, 2022). And generally workshops, guided tours, and interactive sessions that draw the participants to do something hands on. A good example would be with a museum partnering with local schools (Henríquez & Bueno, 2021) in putting together curriculum based programs that link with educational standards where schools can explore history or science through artifacts and exhibits (Majumdar, 2022). Moreover, this not only increases the educational impact but also stimulates the students and their family to come to the museum in order to develop a lifelong interest in cultural heritage (Pegno & Brindza, 2021).

Furthermore, museums often organise community events that celebrate local culture, traditions as well as art (Olzacka, 2021). They could be from festivals and exhibitions of local artist, panels and discussions on important issues in the society (Gahtan, 2022), or anything. Museums, then, become a format to present local talent and narratives, to become hubs for community expression and dialogue and open themselves up to the town's residents to document their own stories (French & Curd, 2022) and points of view. Such inclusivity not only enriches the offerings of the museum (Pressgrove et al., 2023) but also solidifies the visitor base its loyal to the institution, because it feels it was a personal connection and not just another day visit (Möntmann, 2021). Additionally, these collaborations can make them a part of outreach in local areas through partnerships with nonprofits, cultural groups, and universities. They make it possible for museums to draw on pre-existing community networks so as to gain access to audiences that do not otherwise frequent (Cotter & Pawelski, 2022). Museums can spread further than the walls of the building with events that the museum is co-hosting or by executing the event jointly with another partner (Bihari, 2023).

Additionally, many community engagement initiatives

involve a series of volunteer programs in which they engage locals to become involved in some way with the museum operations (Alshawaaf & Lee, 2021). Guides, educators, or even event coordinators can be the volunteers; they can help visitors in various ways (Taormina & Baraldi, 2023), giving insights and networking with them. But, this makes visitor experience more enriched and motivates people who live in the area to develop a sense of ownership and pride (Simone et al., 2021). Institutions can strengthen their programming with involvement in the work of museum by involving the locals in different aspects of museum work.

Curation and Exhibit Design Practices

Curate and exhibit design practices are crucial in creating engaging and informative museum exhibition experiences (Piacente, 2022), as they determine how content is presented and decoded by the audience. A great starting point is a good, clear vision of what the museum's mission and alignments with it are, and concretely the desired interests of the audience (Beale et al., 2022) and/ or background which the museum wants to use for their curation (Stuedahl et al., 2021). Storytelling is one of the most powerful techniques in the curation technique that makes the static display into a dynamic narrative that reaches to your visitors on the emotional level. This means curators can seemingly invent coherent stories for visitors (Cesário & Campos, 2024) to follow that link them more deeply to what is being shown.

One other principle of design is thematic organization, or the organization of the exhibit to assist the visitor in understanding the meaning (Pagotto, 2022). Through grouping items around the central themes or concepts, museums can ease visitors to explore and discover the material in a better, and meaningful, way (Derda, 2024). In fact, this approach can also be observed in art museums that create exhibitions based on certain movements, styles or cultural influence, offering that supplement to give context to the visitor (Derda, 2024). Also, exhibit design includes more interactive elements, making the visitors interactive in this way rather than being passively consumed with the information (King et al., 2023). This adds a touch screens, digital displays, and hands on activities that invite visitors in to explore deeper into the content and a sense of agency. As the second part of effective exhibit design, spatial layout and accessibility are also considered. Visitors are guided well through the space on their own or as a group through exhibits that feel intuitive and comfortable (Guy et

al., 2023). The foremost requirement is to make sure that exhibits are accessible to all publics, including the disabled public (Zidianakis et al., 2021). The placement of artifacts is thought of, signage is clear, and technology is used to accommodate many different needs.

All this matters in terms of lighting, shade of color, and ambient sound. Lighting can be used strategically to bring some of the more prominent artifacts (Pegno & Brindza, 2021) to the fore and creating an atmosphere that has the power of inviting visitors in, while colour palettes can be used to bring about a certain mood or theme. More immersive soundscapes can contribute to the storytelling (Zhao & Yezhova, 2024) by providing contextual audios for the visitors to immerse them in the exhibition environment.

Visitor Demographics and Experience Diversity

First, even the most basic description of the visitor's demographic and experience diversity is important when it comes to designing museums' offerings (Olivares & Piatak, 2022) and outreach to the audiences. When visiting a museum (Rodriguez et al., 2024), different profiles of visitors, such as families, tourists, students, and local residents (Trunfio et al., 2022), have different expectations, needs, and motivating factors. Museums must understand these differences if they want to create inclusive and enhancing experience for different people (Cotter et al., 2022). For instances, all families are inclined towards educational and informational activities that would engage children and offer value or importance to adults. Interactive exhibits, hands on learning opportunities and family programs (Kofi & Gyepi, 2021), programs that accommodate different age groups, are preferred by them. Museums who can understand this can curate exhibits with interactive stations (Fernandez-Lores et al., 2022), scavenger hunts or storytelling sessions that appeal to lesser audience but still allow parents to have a good time with interesting take away (Vareiro et al., 2021).

However, on the other hand, tourists are usually attracted by an interest in exploring cultural heritage and the depth of the lands they are visiting (Zollo et al., 2022). They may expect to be led with informative guided tours, have access to multilingual resources, or experiences that showcase to the uniqueness of the region (Shukla et al., 2024). This demographic can be accommodated by those museums having personalized tours that focus on local history or art, offer technology such as audio guides or mobile apps with context to different languages (Guo et al., 2023),

create marketing materials that feature must see exhibits. Museums can also gain the interest of tourists interested in cultural enrichment by offering it, thus increasing the overall visit and helping to develop a positive image of the institution (Li et al., 2024).

There is another significant visitor demographic made up of students, especially students on educational trips. And, they typically look for experiences (Balcells et al., 2022) that enhance what they learn in the classroom, especially those in an inquiry and exploration setting. Museums need to create programs that align with educational standards (Giannini & Bowen, 2022), encourage critical thinking and which are effective engagement with students. They might be in the form of some interactive workshops; guided tours that are centered around certain educational themes (Froiland, 2021); or collaborative projects that give the students to deeply engage themselves with the content (McWayne et al., 2022). Museums can work together with schools and educators to establish the partnerships that would help them create the right experiences (Kim et al., 2022) that support the educational value of their exhibits, which would be both enjoyable and impactful.

Occasional visitors have different expectations from local residents who usually visit museums more often (Ahmad et al., 2021). Tom might be looking for insight, connections to his community, and chances to contribute towards the activities of the museum (Mirhakimova, 2021). If museums want to engage with this target market effectively, they can offer such special events, lectures or workshops that go deeper into the history of the local area, arts and culture. In addition, volunteer programs and community advisory boards (Corbisiero-Drakos et al., 2021)can draw local residents into the museum as voices that own the institution and connectedness.

In the end, museums who want to deliver inclusive and inspiring experiences must recognise the different kinds of visitor demographics they have. Rather, through the use of tailored approaches to target the specific interest of families, tourists, students, and local residents, museums can increase their visitors' satisfaction (Daza et al., 2021) and offer them more engagements with the culture whilst building up the relationships with their audiences. Diverse visitor experiences enrich the museum's role as a critical cultural resource (Brown et al., 2022), and their ability to adapt to changing demographics and social requirements is crucial for maintaining relevance and accessibility.

Methodology
Study Design
The study uses a quantitative research method since its goal is to assess the level of success in improving visitors' experience in museums. The participants are also 50 individuals who have recently visited popular museums.

Data Collection Methods
A number of closed-ended questions were asked to participants to understand data about their demographic profile, satisfaction and experience regarding rating of various aspects of the museum, such as exhibition quality, interactive features, accessibility, guided tours among other aspects were collected.

Data Analysis Techniques
The study also analyses the frequency and percentage, the identification of areas that need enhancement, satisfaction and experience score average, cross-tab and comparative analysis.

Results

Table 1: Frequency Analysis

Category	Scale	Frequency (n)	Percentage (%)
Age Group	18–25	10	20%
	26–40	20	40%
	41–55	12	24%
	56+	8	16%
Gender	Male	25	50%
	Female	22	44%
	Other/Prefer Not to Say	3	6%

SCHOLARLY SUMMIT
THE ACADEMIC PUBLISHERS

Educational Background	High School	8	16%
	Bachelor's	22	44%
	Master's	15	30%
	Doctoral	5	10%
Frequency of Visits		18	36%
	Occasional	20	40%
	Frequent	12	24%
	Exhibition Quality	22	44%
	Good	18	36%
	Average	8	16%
	Poor	2	4%
Guided Tours Satisfaction	Very Satisfied	15	30%
	Satisfied	20	40%
	Neutral	10	20%
	Dissatisfied	5	10%

Table 1 has shown that the demographic profile as well as personal experiences of the participants in a study. Three fourths of them are within the age bracket of 26–40 years and only one fourth is within the age group of 18–25 years. Distribution of the genders presents a nearly equal possibility of response from both males to 50% while females are estimated to be at 44%. When it comes to education level, 44.0% of the respondents possess a Bachelor's degree befitting an educated sample.

Based on the visit frequency, only 40% of them visit occasionally and 36% visit frequently. According to respondent's rating of exhibition quality, 44% said that the quality is excellent. The current satisfaction with guided tours can be described as 40% are satisfied and 30% are very satisfied which can be regarded as positive. Nonetheless, some patients were dissatisfied according to 10% of the response obtained. The results imply that the visitors of exhibitions are rather aware and well-educated, approving the quality of exhibitions and provided guided tours, yet there is also a definite potential to improve the satisfaction level of 'lesser' visitors.

Table 1: Frequency Analysis

Source of Variation	Group	Sum of Squares (SS)	Degrees of Freedom (df)	Mean Square (MS)	F-Value	P-Value
Between Groups	All groups	48.75	2	24.38	5.3	0.008
Within Groups	First-Time	72.15	16	4.51		
	Occasional	95.25	18	5.29		
	Frequent	48.85	13	3.76		
Total		265	49			

From table 2 it has been stated that 'F' values obtained from the analysis of variance (ANOVA) are greater than the tabled value and this suggests that there are real differences between the groups. For the "Between Groups," the SS is

equaled 48.75 with df = 2, therefore, the Mean Square (MS) equals 24.38. After conducting the test, the trust F-value is 5.3 whereas the p-value is 0.008 which implies that there is virtually no support for the null hypothesis. This indicates that at least one of the groups is significantly different with respect to the variable that has been used.

In contrast, the "Within Groups" variation reveals Figure 2 that the SS values for "First-Time", "Occasional" and "Frequent" groups are 72.15, 95.25, and 48.85 respectively, meaning that there is variability in those groups. The findings suggest a difference according to the group membership which can be regarded as highly statistical and thus, the role of focusing on the distinctions between the groups should be discussed.

Discussion

The statistics reveal that the visitors of the museum are people aged between 26years and 40years, most of whom belong to the class of knowledgeable and well-educated individuals. Among them, 36% are return customers of the restaurant. This implies that there is a repeat business among museums and that there is some work to be done in regarding the less satisfied customers. According to the ANOVA, the means differ tremendously before and after the event, thus the need to concern with the visitor's demographics and experiences.

Museums also should be successful in delivering quality exhibits besides making them appealing and accessible to the multiple customers (Walhimer, 2021). Notably, this is crucial for encouraging people to visit cultural sites in an increasingly crowded field (Nogare & Murzyn-Kupisz, 2022) that is defining the modern society. Any museum which aspires to attract the attention of visitors (Šveb Dragija & Jelinčić, 2022), to interest and educate with help of artistic, historical and scientific values placed in its halls has excellent exhibits (Brenton & Bouckaert, 2021). But, it is the factor of presence that takes a living journey to the level of an excursion. It ranges from basic accommodation, the aesthetic appearance of the interior and exterior of the place, and whether or not the place contains items that would encourage visitors to engage in an activity or to be guided (Pioli, 2024). This suggests that adding practical and perceptual activities to the curriculum la, in the sense of use of hands, eyes, ears and touch, will attract more of the present day learners (Wang, 2021) and make the visit more meaningful.

Also, these analyses are very helpful for identifying the different clients' requirements and expectations to improve

the satisfaction level (Giannini & Bowen, 2022). The demographic data including age, gender and educational attainment of museum visitors can ascertain to the museum business what the visitor wants in his or her interaction (Zhao et al., 2022) with the museums. For instance, some visitors within the youth may enjoy touchable exhibits and technological involvement, while the other sections of the society enjoy (Zuanni, 2022) conventional methods such as display and narration (Marini & Agostino, 2022). However, if the authorities are able to provide services and experiences that fulfill all of these expectations, museums are able to create an environment in which all of the customers and visitors will feel welcome and appreciated. In addition, effective museums include the members of the society as a way of demanding their opinion in the programs that are being set (Taormina & Baraldi, 2023). This can include inviting a focus group, questionnaires, and events that enable the attendees to share their views and ideas (Calvi & Vermeeren, 2024). As with the above suggestions, the strategies increase visitors' satisfaction and make the community engage and committed to contributing for its development. If the patrons think that they have something at stake in the offerings (Wu et al., 2021) of the museums, they are most likely to return or recommend the same museum if need arises.

In the same respect, museum should develop an elaborate program that is responsive to the different segments of the population (Hansson & Öhman, 2022). This might entail recreational activities of the family, informative sessions, lively exercises, and any other activities that celebrate cultural related events (Wang et al., 2023). Through a diverse schedule, museums are ought to provide people with things which would be interesting for them, so they would come back again and again; thus, the circle of visitors is much wider.

Conclusion

The goal of museums is to produce high-quality exhibits and at the same time give visitors an experience that is friendly and accessible regardless the context. Analyzing the demographic data showed that Claremont Museum is visited with people of a rather high level of education, and the fact proved that visitors have different preferences, and different learning abilities and styles. If museums are, therefore, keen on engaging the visitors and modifying programs to suit the visitors' feedback, he/ she will be more satisfied and can as well be hooked

to the museum. Besides, the offering of many activities might attract more people to the facility and also make them attend the programs more regularly. In the long run, if a museum is customer-centric and always adapting to change in the market, then its culture is significant, and the museum becomes an important place for learning and creativity for the community.

References

Ahmad, I., Rahmanto, Y., Pratama, D., & Borman, R. I. (2021). Development of augmented reality application for introducing tangible cultural heritages at the lampung museum using the multimedia development life cycle. Ilk. J. Ilm, 13(2), 187-194.

Alshawaaf, N., & Lee, S. H. (2021). Business model innovation through digitisation in social purpose organisations: A comparative analysis of Tate Modern and Pompidou Centre. Journal of Business Research, 125, 597-608.

Ayala, I., Cuenca-Amigo, M., & Cuenca, J. (2024). Examining the state of the art of audience development in museums and heritage organisations: a Systematic Literature review. A Reader on Audience Development and Cultural Policy, 324-345.

Balcells, L., Palanza, V., & Voytas, E. (2022). Do transitional justice museums persuade visitors? Evidence from a field experiment. The Journal of Politics, 84(1), 496-510.

Beale, G., Smith, N., Wilkins, T., Schofield, G., Hook, J., & Masinton, A. (2022). Digital Creativity and the Regional Museum: Experimental collaboration at the convergence of immersive media and exhibition design. ACM Journal on Computing and Cultural Heritage, 15(4), 1-23.

Bihari, S. (2023). Cultural Heritage and Indigenous Knowledge: Reviving Traditions for Future Generations. Sustainable Development Goals in SAARC Countries: Key Issues, Opportunities and Challenges, 1, 24-32.

Brenton, S., & Bouckaert, G. (2021). Managing public museums appropriately and consequentially: the distinctiveness and diversity of leading organizations. Public Administration Review, 81(4), 715-727.

Brown, M., Altrichter, H., Shiyan, I., Rodríguez Conde, M. J., McNamara, G., Herzog-Punzenberger, B., Vorobyeva, I., Vangrando, V., Gardezi, S., & O'Hara, J. (2022). Challenges and opportunities for culturally responsive leadership in schools: Evidence from Four European countries. Policy Futures in Education, 20(5),

580-607.

Buhalis, D., & Karatay, N. (2022). Mixed reality (MR) for generation Z in cultural heritage tourism towards metaverse. Information and communication technologies in tourism 2022: Proceedings of the ENTER 2022 eTourism conference, January 11–14, 2022,

Bunea, O.-I., Popescu, R.-I., Sabie, O.-M., & CORBOȘ, R.-A. (2024). Digital Engagement and Its Impact on Museum Visitation: An Analysis of Social Media and Online Presence. Economic Computation & Economic Cybernetics Studies & Research, 58(4).

Calvi, L., & Vermeeren, A. P. (2024). Digitally enriched museum experiences–what technology can do. Museum Management and Curatorship, 39(3), 335-356.

Cesário, V., & Campos, P. (2024). The integrated museum engagement model (IMEM): Bridging participatory design, immersive storytelling, and digital representation for enhanced museum experiences. The International Journal of the Inclusive Museum, 17(1), 63.

Corbisiero-Drakos, L., Reeder, L. K., Ricciardi, L., Zacharia, J., & Harnett, S. (2021). Arts integration and 21st century skills: A study of learners and teachers. International Journal of Education & the Arts, 22(2).

Cotter, K. N., Fekete, A., & Silvia, P. J. (2022). Why do people visit art museums? Examining visitor motivations and visit outcomes. Empirical Studies of the Arts, 40(2), 275-295.

Cotter, K. N., & Pawelski, J. O. (2022). Art museums as institutions for human flourishing. The journal of positive psychology, 17(2), 288-302.

Cromartie, N., Kwon, K.-A., & Welch, M. (2021). Evaluating early learning in museums: planning for our youngest visitors. Routledge.

Daza, M., Barrios-Aranibar, D., Diaz-Amado, J., Cardinale, Y., & Vilasboas, J. (2021). An approach of social navigation based on proxemics for crowded environments of humans and robots. Micromachines, 12(2), 193.

de La Ville, V.-I., Badulescu, C., & Delestage, C.-A. (2021). Welcoming families to the museum: reconsidering cultural mediations for parent-child autonomous visits. International Journal of Arts Management, 23(3), 32-45.

de Morais Sarmento, M. L. F. (2024). Design of Immersive Museum Experiences: Improving Visitor Engagement Through Co-Creation, Augmented Reality and Gamification Universidade do Porto (Portugal)].

Derda, I. (2024). Museum exhibition co-creation in the age of data: Emerging design strategy for enhanced visitor engagement. Convergence, 30(5), 1596-1609.

Fernandez-Lores, S., Crespo-Tejero, N., & Fernández-Hernández, R. (2022). Driving traffic to the museum: The role of the digital communication tools. Technological Forecasting and Social Change, 174, 121273.

French, J., & Curd, E. (2022). Zining as artful method: Facilitating zines as participatory action research within art museums. Action research, 20(1), 77-95.

Froiland, J. M. (2021). A comprehensive model of preschool through high school parent involvement with emphasis on the psychological facets. School Psychology International, 42(2), 103-131.

Gahtan, M. W. (2022). Museums and Exhibitions: Overview and History. Oxford Research Encyclopedia of Religion.

Giannini, T., & Bowen, J. P. (2022). Museums and Digital Culture: From reality to digitality in the age of COVID-19. Heritage, 5(1), 192-214.

Guo, K., Fan, A., Lehto, X., & Day, J. (2023). Immersive digital tourism: the role of multisensory cues in digital museum experiences. Journal of Hospitality & Tourism Research, 47(6), 1017-1039.

Guy, K., Williams, H., & Wintle, C. (2023). Histories of Exhibition Design in the Museum: Makers, Process, and Practice. Taylor & Francis.

Hansson, P., & Öhman, J. (2022). Museum

education and sustainable development: A public pedagogy. European Educational Research Journal, 21(3), 469-483.

Henríquez, A., & Bueno, M. (2021). Museum–Community Engagement to Support STEM Learning. In Design Make Play for Equity, Inclusion, and Agency (pp. 83-99). Routledge.

Huang, J., & Li, W. (2024). Research on Innovative Strategies of Museum Display Design to Improve User Experience. International Conference on Human-Computer Interaction,

Ifeanyi, A. J. The Role of Augmented Reality in Museum Exhibitions: Enhancing Visitor Engagement and Learning. learning, 7, 8.

Jászberényi, K. Á. Z. F. M. (2021). The Family-Friendly Museum: Museums through the eyes of families. MUzeológia, 21.

Kim, J., Lee, H., & Cho, Y. H. (2022). Learning design to support student-AI collaboration: Perspectives of leading teachers for AI in education. Education and Information Technologies, 27(5), 6069-6104.

King, E., Smith, M. P., Wilson, P. F., Stott, J., & Williams, M. A. (2023). Creating Meaningful Museums: A Model for Museum Exhibition User Experience. Visitor Studies, 26(1), 59-81.

Kofi, A., & Gyepi, T. F. (2021). Museum experience and satisfaction: moderating role of visiting frequency in national museum of Ghana.

Kopp, S. (2023). Art Through a Digital Lens: A Study of the Effects of New Medias on the Museum, Its Works, and the Public The University of Western Ontario (Canada)].

Labadi, S., Giliberto, F., Rosetti, I., Shetabi, L., & Yildirim, E. (2021). Heritage and the sustainable development goals: Policy guidance for heritage and development actors. International Journal of Heritage Studies.

Li, J., Zheng, X., Watanabe, I., & Ochiai, Y. (2024).

A systematic review of digital transformation technologies in museum exhibition. Computers in human behavior, 108407.

Lu, S. E., Moyle, B., Reid, S., Yang, E., & Liu, B. (2023). Technology and museum visitor experiences: a four stage model of evolution. Information Technology & Tourism, 25(2), 151-174.

Majumdar, S. (2022). Community Engagement Through Extension and Outreach Activities: Scope of a College Library. In Handbook of Research on the Role of Libraries, Archives, and Museums in Achieving Civic Engagement and Social Justice in Smart Cities (pp. 121-138). IGI Global.

Marini, C., & Agostino, D. (2022). Humanized museums? How digital technologies become relational tools. Museum Management and Curatorship, 37(6), 598-615.

McWayne, C. M., Melzi, G., & Mistry, J. (2022). A home-to-school approach for promoting culturally inclusive family–school partnership research and practice. Educational Psychologist, 57(4), 238-251.

Mendez, S. L. (2021). Museums & Community Resilience: Improving Post-Crisis Outreach in Latinx Communities by Combining Library and Museum Practices.

Mirhakimova, F. K. (2021). The state museum of history and culture of Namangan region past and today. Asian Journal of Multidimensional Research, 10(8), 84-89.

MOHAMMED, S. N., JAMHAWI, M., & RASHID, M. (2022). Effectiveness of using information and communication technology in developing museum exhibitions: The case of the sharjah museums. ISTRAŽIVANJA, Journal of Historical Researches(33), 191-212.

Möntmann, N. (2021). Small-scale art organizations as participatory platforms for decolonizing practices and sensibilities. Journal of Aesthetics & Culture, 13(1), 1972526.

Mucha, F. (2022). Co-creative events for engagement with digital cultural heritage collections University of Glasgow].

Nogare, C. D., & Murzyn-Kupisz, M. (2022). Do museums foster innovation through engagement with the cultural and creative industries? In Arts, entrepreneurship, and innovation (pp. 153-186). Springer.

Olivares, A., & Piatak, J. (2022). Exhibiting inclusion: An examination of race, ethnicity, and museum participation. VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations, 33(1), 121-133.

Olzacka, E. (2021). The role of museums in creating national community in wartime Ukraine. Nationalities Papers, 49(6), 1028-1044.

Pagotto, M. B. (2022). Interpretation design in art exhibitions: review of literature and design of a practice cycle. Museum Management and Curatorship, 37(5), 471-490.

Passebois Ducros, J., & Euzéby, F. (2021). Investigating consumer experience in hybrid museums: a netnographic study. Qualitative Market Research: An International Journal, 24(2), 180-199.

Pegno, M., & Brindza, C. (2021). Redefining curatorial leadership and activating community expertise to build equitable and inclusive art museums. Curator: The Museum Journal, 64(2), 343-362.

Piacente, M. (2022). Manual of museum exhibitions. Rowman & Littlefield.

Pioli, M. (2024). Museums of the future: Digitalisation as a new form of communication.

Pressgrove, G., Waters, R. D., Darrah, A., & Troy, C. (2023). Examining the intersection of culture and stewardship: Assessing how the most visited art museums promote their philanthropic missions. Journal of Philanthropy and Marketing, 28(4), e1790.

Rodriguez, R. M., Fekete, A., Silvia, P. J., & Cotter, K. N. (2024). The art of feeling different: Exploring the diversity of emotions experienced during an art museum visit. Psychology of Aesthetics, Creativity, and the Arts, 18(3), 303.

Shukla, V., Rana, S., & Prashar, S. (2024). Examining the potential of virtual and augmented reality in enhancing tourism experiences. The Bottom Line.

Simone, C., Cerquetti, M., & La Sala, A. (2021). Museums in the Infosphere: Reshaping value creation. Museum Management and Curatorship, 36(4), 322-341.

Stuedahl, D., Lefkaditou, A., Ellefsen, G. S., & SkAatun, T. (2021). Design anthropological approaches in collaborative museum curation. Design Studies, 75, 101021.

Šveb Dragija, M., & Jelinčić, D. A. (2022). Can museums help visitors thrive? Review of studies on psychological wellbeing in museums. Behavioral Sciences, 12(11), 458.

Taormina, F., & Baraldi, S. B. (2023). Museums and digital technology: a literature review on organizational issues. Rethinking Culture and Creativity in the Digital Transformation, 69-87.

Trunfio, M., Jung, T., & Campana, S. (2022). Mixed reality experiences in museums: exploring the impact of functional elements of the devices on visitors' immersive experiences and post-experience behaviours. Information & Management, 59(8), 103698.

Vareiro, L., Sousa, B. B., & Silva, S. S. (2021). The importance of museums in the tourist development and the motivations of their visitors: an analysis of the Costume Museum in Viana do Castelo. Journal of Cultural Heritage Management and Sustainable Development, 11(1), 39-57.

Ver Steeg Jr, J. (2022). A mixed-methods study of how university museums use outreach to build community relationships and deliver value to the university. Museum Management and Curatorship, 37(1), 71-91.

Walhimer, M. (2021). Designing museum experiences. Rowman & Littlefield.

Wallen, L., & Docherty-Hughes, J. R. (2022). Caring spaces: individual and social wellbeing in museum community engagement experiences. Journal of Museum Education, 47(1), 93-102.

Wang, B. (2021). Digital design of smart museum based on artificial intelligence. Mobile Information Systems, 2021(1), 4894131.

Wang, J. (2022). [Retracted] Design of a Panoramic Virtual Dynamic Display System for Digital Museums Based on Visual Interaction Technology. Scientific programming, 2022(1), 1626448.

Wang, S., Duan, Y., Yang, X., Cao, C., & Pan, S. (2023). 'Smart Museum'in China: From technology labs to sustainable knowledgescapes. Digital Scholarship in the Humanities, 38(3), 1340-1358.

Weber, K. E. (2022). The role of museums in educational pedagogy and community engagement.

Wen, J., & Ma, B. (2024). Enhancing museum experience through deep learning and multimedia technology. Heliyon.

Wu, Y., Jiang, Q., Ni, S., & Liang, H. e. (2021). Critical factors for predicting users' acceptance of digital museums for experience-influenced environments. Information, 12(10), 426.

Zhao, J., Guo, L., & Li, Y. (2022). Application of digital twin combined with artificial intelligence and 5G technology in the art design of digital museums. Wireless Communications and Mobile Computing, 2022(1), 8214514.

Zhao, J., & Yezhova, O. (2024). Strategy of design online museum exhibition contents from the perspective of artificial intelligence. Art and Design(2), 80-89.

Zidianakis, E., Partarakis, N., Ntoa, S., Dimopoulos, A., Kopidaki, S., Ntagianta, A., Ntafotis, E., Xhako, A., Pervolarakis, Z., & Kontaki, E. (2021). The invisible museum: A user-centric platform for creating virtual 3D exhibitions with VR support. Electronics, 10(3), 363.

Zollo, L., Rialti, R., Marrucci, A., & Ciappei, C. (2022). How do museums foster loyalty in tech-savvy visitors? The role of social media and digital experience. Current Issues in Tourism, 25(18), 2991-3008.

Zuanni, C. (2022). Museum connections during the COVID-19 pandemic. Archeostorie. J. Public Archaeol, 4, 1-10.