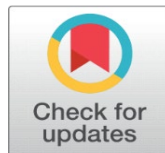
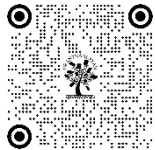


EXPLORING EPHEMERALITY AS A DESIGN STRATEGY IN TACTICAL URBANISM AND PAVILION DESIGN: A SURVEY-BASED STUDY

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ABSTRACT

This study investigates the role of ephemerality as a strategic design approach in tactical urbanism, with a specific focus on pavilion design. As urban environments continuously evolve, designers are increasingly utilizing temporary structures to reshape public interactions, encourage creativity, and test innovative spatial solutions. Through a survey-based research methodology, complemented by interviews and case studies, this paper examines how pavilions function as adaptable and dynamic spaces that challenge conventional urban design paradigms. By activating underutilized urban spaces, these temporary structures act as experimental platforms that foster engagement, stimulate innovation, and contribute to the vitality of the urban landscape. The findings provide insights into the effectiveness of ephemeral architecture in enhancing public space and inform future design interventions in tactical urbanism.

Keywords: Ephemerality, Urban Environment, Pavilions, Design, Stimulate Innovation

1. INTRODUCTION

Recent shifts in urban design emphasize ephemerality and temporary urbanism as dynamic responses to rapid urbanization and evolving societal needs. These interventions challenge conventional planning by fostering creativity, cultural expression, and adaptability in city spaces. As cities struggle to keep pace with change, temporary structures emerge as innovative tools for urban transformation, blending architecture, art, and design to explore the relationship between transient spaces and long-term impact.

Pavilions have gained significance as experimental, interactive, and adaptable structures that respond to contemporary urban trends. Their design integrates abstract, technical, and material concepts, engaging with the natural and built environment in ways permanent architecture often cannot. By activating underutilized spaces, pavilions create immersive experiences that reshape urban interactions and foster community engagement.

Traditionally, urban planning prioritizes permanence, limiting cities' ability to adapt to social, economic, environmental, and political shifts. However, ephemeral structures offer a flexible, responsive alternative, challenging the notion that lasting construction is the sole benchmark of quality architecture. Temporary design encourages experimentation, bold innovation, and risk-taking, sometimes leading to iconic structures that outlive their intended lifespan.

The concept of temporary pavilions dates back to ancient civilizations, where they were used for festivals, exhibitions, and commemorative events. Notable examples include Athenaeus' Greek structures from the third century, the Crystal Palace from the 1851 Great Exhibition, and the Serpentine Pavilion series in London. These structures highlight the interplay between temporality, cultural representation, and architectural innovation, proving that ephemeral designs can shape urban identities and contribute to long-term urban discourse.

Ephemeral structures are typically constructed from cost-effective, easily removable materials, designed to be visually striking and conceptually bold. Their transient nature allows for creative freedom and risk-taking, enabling designers to experiment in ways that permanent structures do not permit. While intended to be temporary, some of these structures gain cultural significance and transition into permanent landmarks.

As cities evolve, embracing ephemerality in design presents an opportunity to create dynamic, inclusive, and adaptive urban spaces. Whether through community-led projects or large-scale municipal initiatives, temporary structures redefine how people engage with their environment, transforming urban landscapes through impermanence.



Figure 1 Interiors of The Crystal Palace



Figure 2 The Crystal Palace at Sydenham (1854)

The Crystal Palace, built for the 1851 Great Exhibition in London, marked a turning point in pavilion design and urban impact. Its innovative iron-and-glass construction showcased industrial advancements, revolutionizing building techniques. Though temporary, its grandeur attracted millions, reshaping public perceptions of architecture and demonstrating the power of ephemeral structures to transform urban spaces. Challenging traditional notions of permanence, the pavilion highlighted adaptability in design, proving that temporary structures can serve as cultural landmarks and catalysts for architectural innovation. (Lesso, 2018)

During the Renaissance, temporary architecture flourished, transforming cities with grand wooden and plaster facades for royal arrivals. By the Baroque era, these structures shifted to religious and state celebrations, using inexpensive materials to create vibrant urban spectacles. Architects like Bernini even designed lavish banquet halls for single-night events.

In the early 20th century, ephemeral architecture saw a resurgence, driven by industrial growth, technological advances, and mass media. No longer just for royal or religious events, these structures became tools to elevate a city's status and showcase economic power.

The Eiffel Tower, built for the 1889 Expo Universelle, was initially intended as a temporary attraction but was preserved due to its popularity. Despite public admiration, critics called for its removal, deeming its materials and form unconventional. (Tempone, 2023)

Figure 3

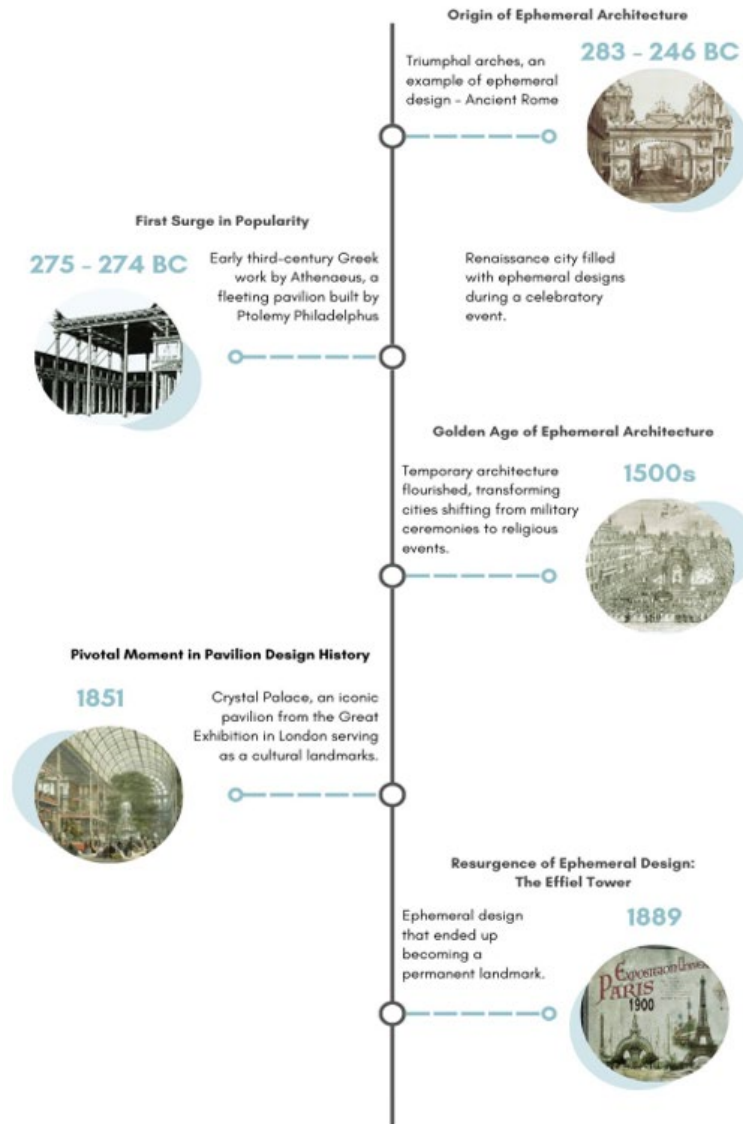


Figure 3 Historical Timeline of Ephemerality

1.1. DATA COLLECTION & ANALYSIS

1) SURVEY DESIGN

This survey aims to gauge visitor preferences for interaction with ephemeral pavilions and their interiors, while also assessing favored design elements and environmental factors. Using a quantitative approach, the survey was structured around emerging parameters in pavilion design. Comprising 19 questions, it gathered 125 responses from participants aged 15 to 40 and above, offering insights into user expectations and engagement with temporary structures.

2) DATA ANALYSIS

The survey results were analyzed both individually and collectively, aligning with emerging parameters in pavilion design to capture public preferences effectively. This comprehensive approach provided a clearer understanding of user expectations and interactions with ephemeral structures.

Additionally, data analysis and discussions on tactical urbanism were informed by an extensive literature review and referenced case studies within the study. These sources offered valuable insights into the role of temporary architecture in shaping urban environments, highlighting key design strategies, material considerations, and user

engagement patterns. By integrating survey findings with established research, the study presents a well-rounded perspective on the evolving significance of pavilion design in contemporary urban settings.

2. PARAMETER – INTERACTIVITY

- 1) **Interactivity satisfies the parameter Experience:** Among the 125 survey responses, auditory and visual stimulation emerged as the preferred interactive experience, receiving 60 votes. In contrast, olfactory and touch stimulation was favored by 35 respondents, indicating a stronger inclination toward sight and sound in engaging pavilion interactions.

Figure 4

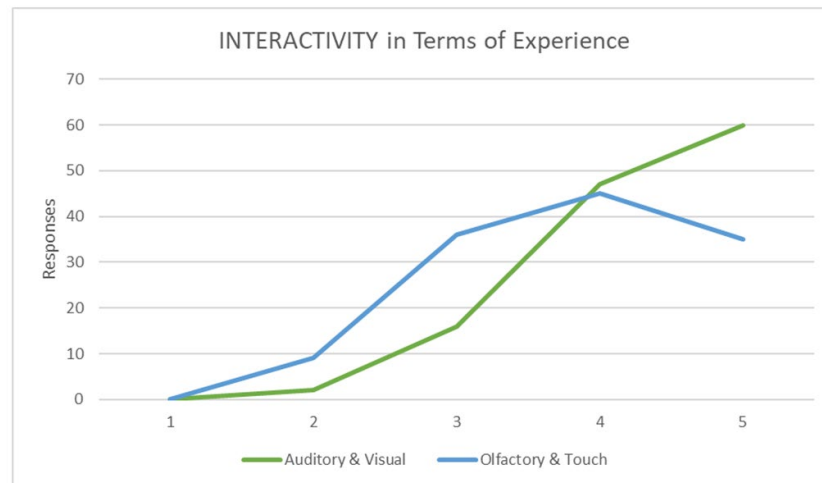


Figure 4 Indicates the type of Interactivity in Terms of Experience Through Auditory, Visual, Olfactory & Touch Stimulation

- 2) **Interactivity: Meeting the Criteria of Responsiveness:** Respondents selected two out of four options, revealing a preference for Virtual Reality experiences and Interactive Touchscreens over Augmented Reality Displays and Interactive Installations, finding them more interactive and dynamic.

Figure 5

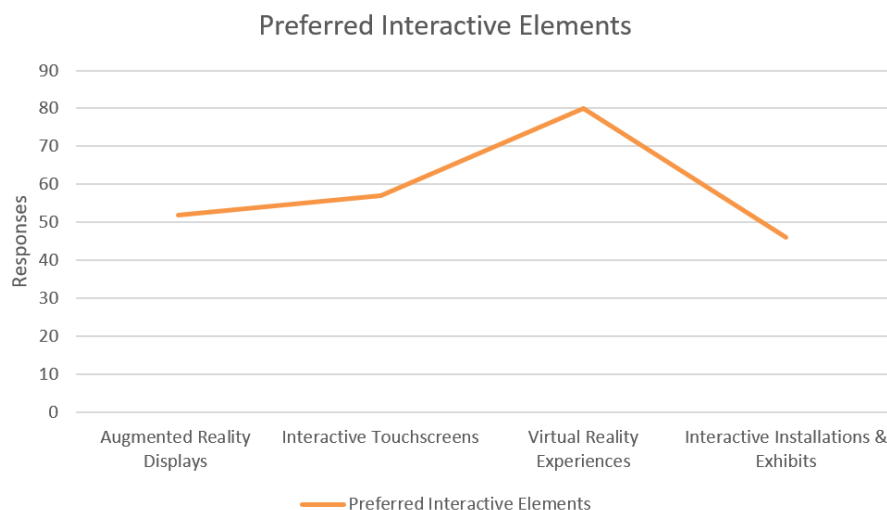
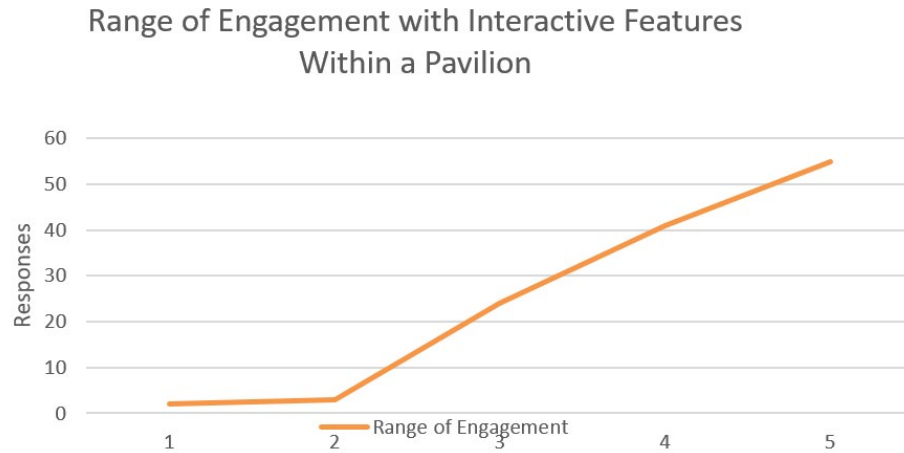


Figure 5 Indicates Varied Kinds of Interactive Elements

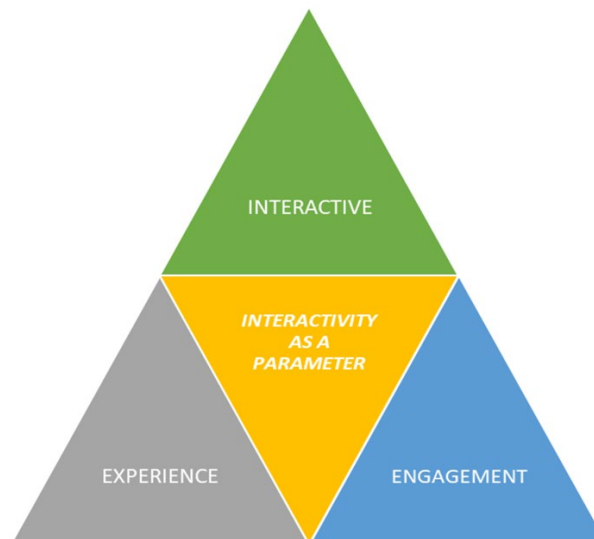
- 3) **Interactivity Meets Sub-Parameter Engagement:** The graph implies that from a scale of 1- 5, a higher number of people are likely to be intrigued and will engage with interactive features in a pavilion.

Figure 6**Figure 6 Implies the Degree of User Interaction with the Interactive Features**

2.1. OVERALL INFERENCE

The survey results highlight a clear preference for interactive experiences within a pavilion that prioritize Auditory and Visual stimulation over Olfactory and Touch stimulation. A significant portion of respondents gravitated toward these sensory inputs, suggesting that immersive soundscapes and dynamic visual elements play a crucial role in shaping engaging pavilion environments. This inclination underscores the need to design spaces that leverage audiovisual storytelling to create a compelling and memorable visitor experience.

Furthermore, the survey responses indicate a strong preference for Virtual Reality Experiences and Interactive Touchscreens over Augmented Reality Displays and Interactive Installations. This suggests that visitors are more drawn to immersive digital interactions that provide a heightened sense of engagement and participation. The data reflects the growing influence of technology-driven experiences in shaping public interactions with temporary architectural spaces.

Figure 7**Figure 7 Segmented Pyramid Indicating Overall Inference of the Parameter - Interactivity**

By integrating cutting-edge audiovisual technologies and interactive digital interfaces, pavilions can be transformed into captivating environments that resonate with contemporary, tech-savvy audiences. These findings reinforce the importance of designing pavilions that not only capture visitors' attention through sensory-rich experiences but also foster deeper connections through interactive, multisensory narratives. The emphasis on digital engagement points to a

shift in how temporary structures can be utilized to create meaningful, dynamic experiences that leave a lasting impact on visitors

3. PARAMETER – FORM

Figure 8

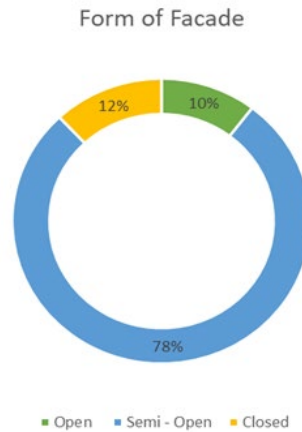


Figure 8 Indicates the Type of Pavilion Facade

Among the 125 survey responses, a significant preference for a **semi-open facade** was observed, with 97 respondents favoring this option. In contrast, the **open facade** received the least support, garnering only 13 responses.

- 1) Interior Details in the Context of Theme:** Analysis of responses from **Figure 9** indicates that when designing a pavilion with a specific ambience and theme, respondents prefer the **Integration of Technology** as a key design element. This option received the highest number of votes, with 69 out of 125 respondents emphasizing its importance.

Figure 9

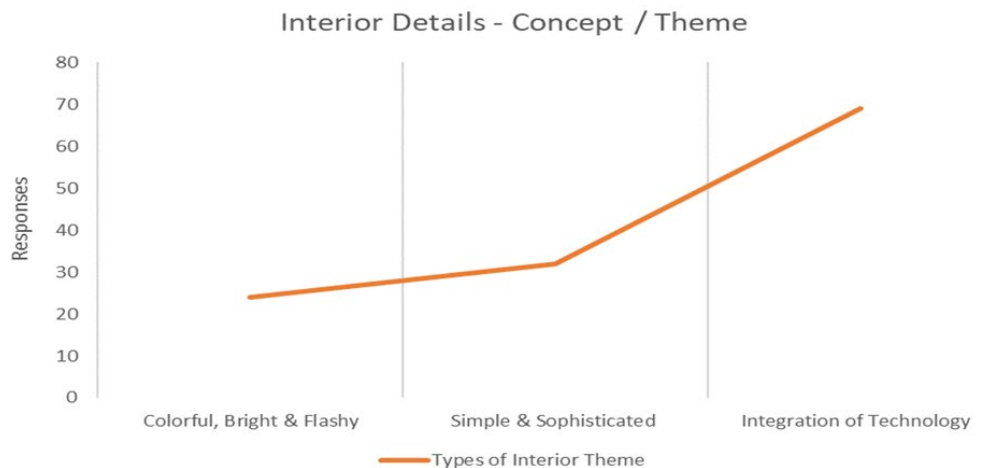
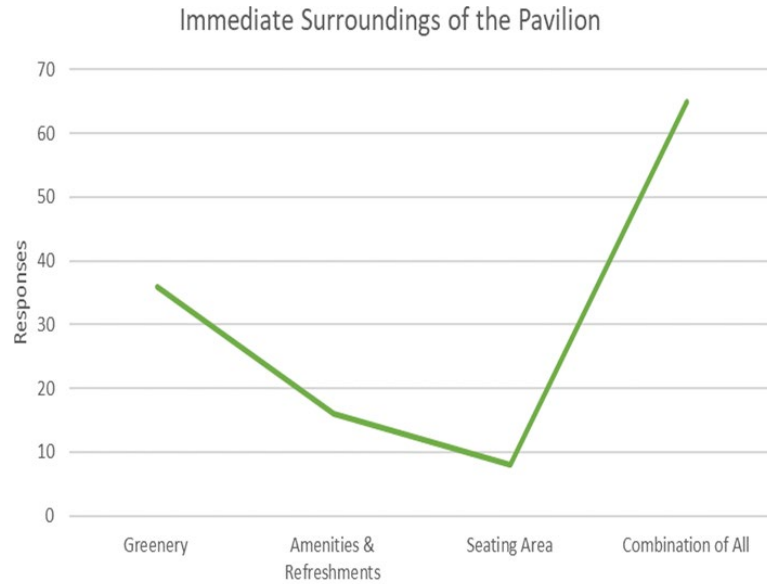
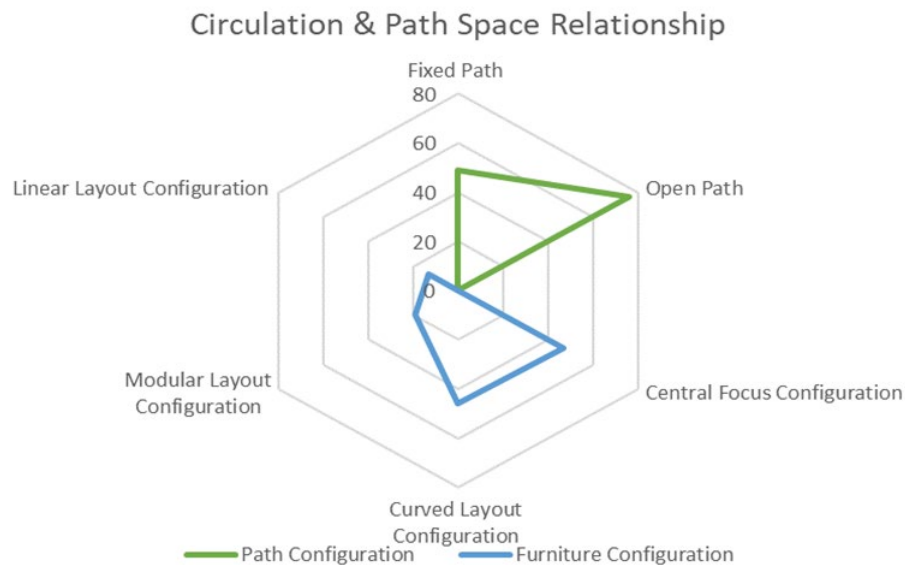


Figure 9 Represents the Types of Interior Ambience of theme

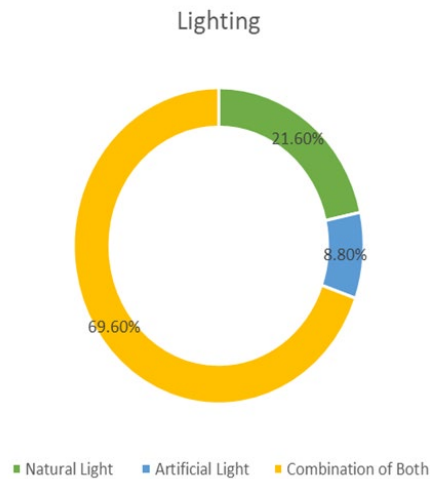
- 2) Interior Details in the Context of Comfort & Surrounding Environment:** Insights from **Figure 10** suggest that respondents favor a **combination of all activities** within the pavilion's surroundings to enhance the overall experience. However, the second most preferred element is the presence of **greenery**, indicating an inclination toward natural surroundings for comfort and aesthetic appeal.

Figure 10**Figure 10 Represents the Activities Taking Place Around the Pavilion**

Circulation & Path-Space Relationship: According to **Figure 11**, respondents showed a strong preference for the **Central Focus Configuration** for furniture layout, receiving 47 responses. This was closely followed by the **Curved Layout Configuration**, which garnered 46 responses. The **Linear Layout Configuration** was the least favored, with only 13 responses, indicating a lower preference for rigid spatial arrangements.

Figure 11**Figure 11 Showcases the Different Kind of Furniture Layout Configuration in Addition to Path Space Relationshi**

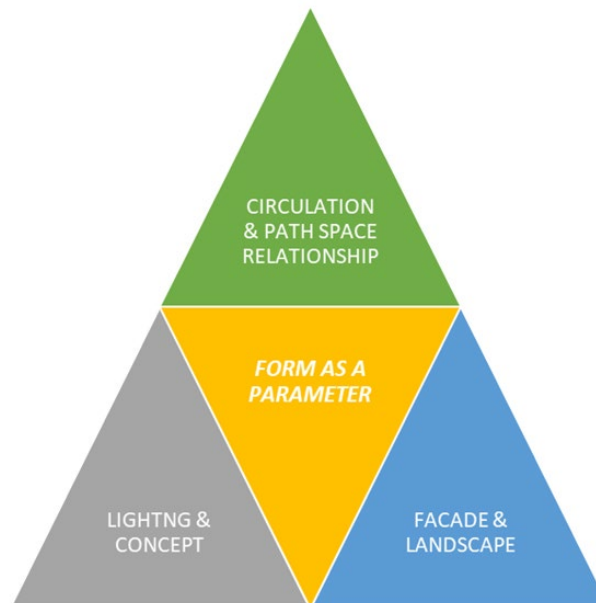
Lighting Preferences: Findings from **Figure 12** highlight that the majority of respondents (87 out of 125) prefer a **combination of both natural and artificial lighting** within the pavilion. This suggests that an adaptable lighting strategy, balancing natural daylight with artificial illumination, is crucial in creating a comfortable and engaging pavilion environment.

Figure 12**Figure 12 Suggests Different Types of Preferred Lighting Within the Pavilio**

3.1. OVERALL INFERENCE

The survey highlights key preferences for an ideal pavilion design. Versatility is paramount, with a strong preference for a semi-open façade that seamlessly blends indoor and outdoor spaces. Respondents favor technology integration for immersive experiences and a balanced environment that combines greenery with functionality. Communal spaces are valued, with Central Focus and Curved Layouts competing for prominence. Lastly, a mix of natural and artificial lighting is preferred for adaptability and energy efficiency. The ideal pavilion should prioritize:

- **Versatility** for diverse activities.
- **Technology integration** for modern experiences.
- **A harmonious blend** of nature and functionality.
- **Flexible lighting** for ambiance and efficiency.

Figure 13**Figure 13 Segmented Pyramid Indicating Overall Inference of the Parameter- For**

4. PARAMETER – MATERIALS

Figure 14

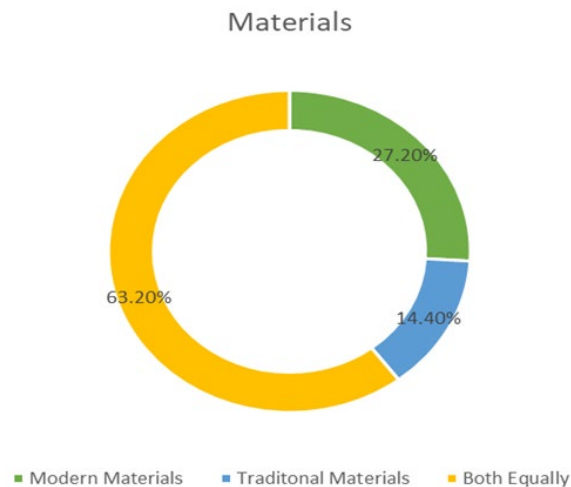


Figure 14 Preferred Material Choice

Both traditional and modern materials hold equal appeal in pavilion design, reflecting a balanced appreciation for heritage and innovation. However, the graph indicates a notable preference for modern materials, suggesting a shift towards contemporary aesthetics and performance-driven choices. This trend may stem from the versatility, durability, and ease of maintenance that modern materials often provide — such as steel, glass, and composites — enabling architects to explore bold, dynamic forms while ensuring structural efficiency. Meanwhile, traditional materials like wood and stone retain their charm, offering warmth and authenticity that ground the design in cultural significance. The growing inclination towards modern materials, however, highlights the evolving priorities in architecture, where sustainability, lightweight structures, and adaptability increasingly influence material selection.

5. DISCUSSION

Ephemeral Pavilion Design: The findings reveal an exciting spectrum of creative possibilities for pavilion design, emphasizing that today's audiences desire more than static structures — they seek immersive, multisensory experiences that transport them to new realms. This growing demand for sensory engagement, particularly through auditory and visual elements, highlights an opportunity to transform pavilions into dynamic canvases where soundscapes and visual displays converge to narrate compelling stories.

The rise of Virtual Reality experiences and Interactive Touchscreens in pavilion interactivity signals a shift toward technology-driven innovation. Imagine walking into a pavilion and instantly finding yourself immersed in distant landscapes through VR, or exploring interactive touchscreens that respond intuitively to your curiosity. These technologies create an engaging, educational atmosphere, positioning pavilions as not only entertainment spaces but also hubs for learning and exploration.

Moreover, the balanced use of traditional and modern materials presents an architectural dialogue between past and present. By blending classic materials like wood and stone with contemporary counterparts such as steel and glass, designers can create visually stunning, thought-provoking structures that celebrate both heritage and innovation.

While adaptable lighting, versatile environments, and green elements enhance ambiance and visitor comfort, they tend to serve as complementary features rather than primary design drivers. Their role, though secondary, remains essential in supporting the overall aesthetic and functionality, shaped by the pavilion's purpose and setting.

Ultimately, these insights provide a rich canvas for pavilion designers, encouraging the creation of spaces that captivate, educate, and inspire. The fusion of technology with natural elements blurs the lines between physical and digital realities, fostering unforgettable experiences that leave a lasting impression on visitors.

Tactical Urbanism: Tactical urbanism emerges as a powerful, transformative force in reshaping urban landscapes, turning underutilized spaces into vibrant community hubs. Defined by its cost-effective, adaptable nature and community-led approach, this method breathes new life into neglected areas while contributing to the broader mission of placemaking. By prioritizing social interaction, inclusivity, and community involvement, tactical urbanism addresses immediate urban needs and fuels long-term revitalization.

The agility of these interventions empowers communities to experiment, adapt, and reimagine their surroundings, fostering dynamic, responsive urban environments that reflect the evolving preferences of their inhabitants. More than a tool for quick beautification, tactical urbanism champions functional, people-centered spaces that enhance the urban experience for residents and visitors alike.

In the context of placemaking, tactical urbanism aligns seamlessly with the goal of creating meaningful, community-focused environments. It extends beyond aesthetics to elevate functionality, promoting social cohesion, revitalizing neighborhoods, and enhancing the overall well-being of urban dwellers. This approach transcends surface-level improvements, shaping adaptable, inclusive spaces that resonate with the diverse rhythms of city life.

Figure 15

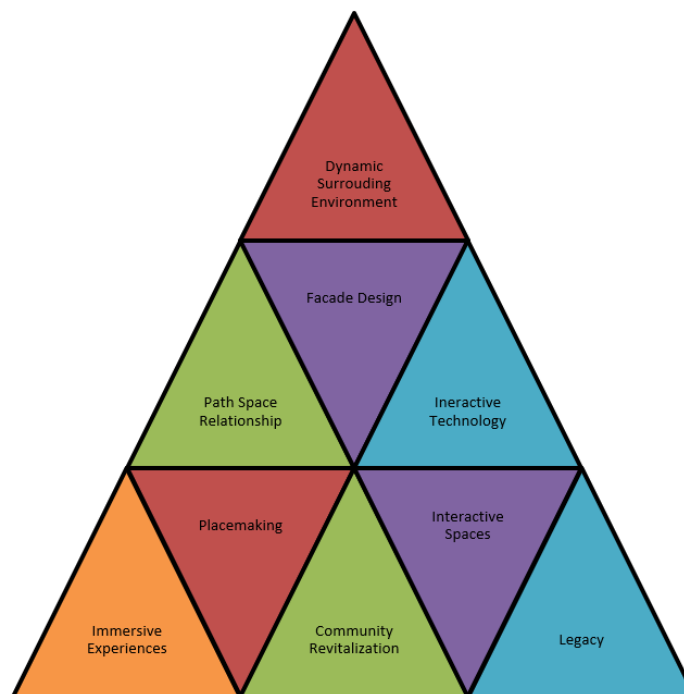


Figure 15 Hierarchy Pyramid of Design Features

6. CONCLUSION

Ephemeral pavilion design has evolved from historical grandeur to contemporary innovation, transitioning from ornate, symbolic structures to dynamic, interactive spaces. Once characterized by intricate architecture and decorative appeal, modern pavilions now serve as experimental platforms for advanced materials, responsive technologies, and immersive experiences.

This transformation aligns with tactical urbanism — a movement focused on community-driven, adaptable interventions that revitalize underutilized urban spaces. Contemporary pavilions, featuring kinetic facades and experiential designs, inject vibrancy into cityscapes, fostering social interaction, cultural exploration, and innovative urban practices.

The fusion of ephemeral pavilion design and tactical urbanism underscores the potential of temporary structures to reshape urban environments. These pavilions act as catalysts for community engagement, blending creativity, adaptability, and functionality. In the context of placemaking, they contribute to meaningful public spaces, promoting a sense of ownership and pride among communities.

Ultimately, the synergy between ephemerality, innovation, and tactical urbanism heralds a new era in architecture — one that prioritizes human experience, inclusivity, and the fluid, evolving nature of urban life.

CONFLICT OF INTERESTS

None.

ACKNOWLEDGMENTS

None.

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