



# Designing an Experiential Multimedia Gallery Framework

Elyna Amir Sharji<sup>(✉)</sup>, Lim Yan Peng, Peter Charles Woods,  
and Rose Linda Zainal Abidin

Multimedia University, Cyberjaya, Malaysia  
elyna.amir@mmu.edu.my

**Abstract.** Experiential design concept in the built environment puts forward a strong prominence on emotional connection and engagement between users of space and the surrounding environment. In designing multimedia galleries for media arts and interactive content, this concept is applied to understand and improve visitors' perception and experience in navigating multimedia galleries. The engagement component creates a memorable and meaningful experience. If visitors are unable to connect with the space and its content, it is deemed that the space is not experiential. Thus, the objective of this study is to investigate how experiential design elements influence visitors' emotions and engagement in multimedia galleries. This addresses the issue of visitors' unsatisfying visits to multimedia galleries. A survey was conducted at a local gallery where eighty visitors took part in answering the questionnaire during the three-day exhibition. This research focuses on the Visitors' Experience and the Open Ended section of the survey. Findings contribute to the framework design and design suggestions. The framework suggests an insight that acknowledges the inclusion of visitors' behaviour, engagement and emotions as components of experiential design. The limitation of this study lies in the choice and condition of the gallery space, content, tools and devices. The Experiential Multimedia Gallery Framework benefits curators, designers, artists and others in creating multi-layered spaces that feel connected to visitors. Due to the limitation, future works shall concentrate on investigating more diverse gallery spaces and exploration of interactive gallery content.

**Keywords:** Experiential design · Multimedia Gallery · Emotional connection · Engagement

## 1 Introduction

Associating emotions with the creation of meaning is an essential and basic necessity. Our mind understands and translates emotion by assigning interpretations to objects and surrounding associations. Environmental and encircling precincts trigger the mind to establish a connection with past emotional induction. Emotional connection is crucial to the distinguishing of information; the more powerful environmental architectural design

is, the more significant it will be. Thus, architecture and the built environment is an extremely emotional occurrence [1].

The progression of multimedia gallery entails a development of space, content and activities, tools and technology as well as the representational direction and intention with the current advancement of technological development. This manifest to be more demanding in this 'age of experience', as highlighted by [2] where artworks displayed in secured area and containers create a barrier with visitors. This limits engagement and visitors' interaction especially with the nature of media art works and interactive content. This issue is reflected in the present times of exhibition environments where visitors are inclined to build worthwhile emotional encounters rather than to traditionally follow the common inception of galleries [3].

Media art works and interactive contents that are heavily reliable on technology such as virtual reality and others require a more acute level of expressing emotions. This is due to the multi-layered sensorial demand of the content and activities requirement. This is further supported by [4] in stressing that each interactive environment presents with it different specified mood and emotions according to the intended meaning and message of the experience engulfing the exhibition spaces. To cater to the arising issue and emotional connection indispensable between visitors and multimedia galleries, experiential design concept is administered. Emotional connection and engagement establishes the foundation of experiential design. [5] stated that if the exhibition spaces do not furnish its users to identify and feel associated with, then the space is not experiential. Experiential design focuses on the interaction between visitors and the multimedia gallery space as built environment.

## 2 Literature Review

### 2.1 Experiential Design and Visitors' Experience

[6] stated that satisfactory and acceptable designs are pivotal driver elements. By demonstrating an embracing attitude to changes happening in multimedia galleries nowadays supplicate the need of this study. Visitors' direct understanding towards the space, content and activities result in a variety of behaviour and movement. By focusing on these emotional gestures [7], experiential design elements contribute to the multimedia gallery framework.

Experiential design components as stressed by [6] indicate greater design intentions to promote better experience, flexibility and versatility. This is necessary in cruising exhibition spaces; multiple visitors' motivation and mode indicate a variety of navigation, sole use of spaces are turning to become redundant, in between time provides visitors new pockets of discovery and technology that is embedded in the environment result to be more favourable.

### 2.2 Emotional Connection

According to [8], visitors usually present themselves in their feeling self and thinking self whenever they visit galleries. Expressed as a distinctive feeling, emotion is a perceptual state of responsive and physiological reaction. It associates with motion where

it influences reasoning and conduct. It is also as a reaction to encountering incidents happening in various levels of intensity. Scientists reference five basic emotions: anger, fear, disgust, sadness and happiness with an additional sixth emotion which is surprise [8].

### 2.3 Experiential Design Issues

Technology has impacted the progression of our built environment and the related art scenes flourishing inside these spaces. Two dimensional and three dimensional contents metamorphose into new art forms such as interactive installations, net art and virtual reality landscapes. These current displays are attracting a high number of interests. Failing to comprehend visitors' emotions and needs ensue in unsuccessful interactive exhibition spaces. [9] indicated that the 200 year old exhibition spaces conception is becoming outdated in archiving and displaying interactive content. It is seen that currently exhibition spaces are shifting the prominence of display settings to visitor centred experiences [10]. Therefore, to continue attracting new visitors to multimedia galleries, their habitual behaviour, movement and visiting manner need to be investigated and studied [10].

## 3 Research Methodology

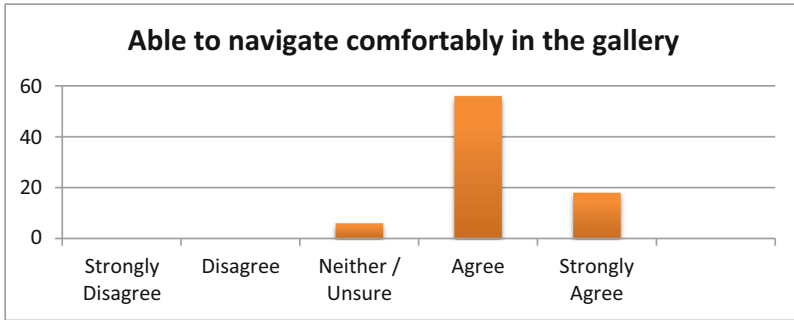
A survey was carried out at a local gallery to investigate how experiential design elements influence visitors' emotions and engagement in multimedia galleries. Experiential design elements create memorable engagement that speaks of the psychological components of visitors' interaction with space and the gallery environment. [6] informed that during visits, the level of interaction that take place carry significant apprehensions on their thoughts and experience.

A set of questionnaire was distributed to visitors attending an event held at a multimedia gallery. Eighty visitors took part in the exercise which consist of young adults and adults age group with majority of them well versed with art and design background knowledge. There are eight segments in the questionnaire consisting of multiple choice questions, 5 point Likert scale and open ended questions.

The survey is divided into sections inclusive of:

- i. Section A: Demography
- ii. Section B: Gallery Space.
- iii. Section C: Spatial Layout and Gallery Furniture
- iv. Section D: Types of Content and Activities
- v. Section E: Tools and Technology in Galleries
- vi. Section F: Visitors' Experience
- vii. Section G: Sense of Place
- viii. Open ended section

With reference to the scope of this research which is experiential design and visitors' experience, data collection in Section F: Visitors' Experience and the Open Ended section will be further analysed and interpreted in this study. In the Visitors' Experience section



**Fig. 1.** Able to navigate comfortably in the gallery

questions were asked to know more of visitors' experience in the multimedia gallery in relation with the gallery environmental space, content and activities, digital devices and interaction with other visitors.

The limitation of this study as mentioned earlier lies in the choice and condition of the gallery space which is at the e-Gallery of Faculty of Creative Multimedia at the Multimedia University. The space is of an average space, double volume, open space that allows multiple configurations of media artwork installations. Content and devices are limited to an array of 2D and 3D artwork, digital projections and installations as well as interactive multimedia content.

## 4 Data Analysis

### 4.1 Section F: Visitors' Experience

Data analysis of the visitors' experience survey reflect visitors' gallery space and their experience, engagement with content and activities and with other visitors, usage of digital tools and devices and their experience, adequate amenities provided such as pathway, seating are, entrance and exit, resting points and level of satisfying experience by enjoying it with other visitors.

In Fig. 1, it is seen that 56 visitors (70%) agree that they are able to navigate comfortably, while 18 visitors (22.5%) strongly agree and another 6 visitors (7.5%) are neutral. This corresponds to the good spatial layout and gallery affordances provided.

In Fig. 2, 54 visitors (67.5%) agree that they are able to interact well with content and activities while 17 visitors (21.3%) strongly agree, 1 visitor (1.3%) disagrees and 8 visitors (10%) are neutral. This shows that if visitors are able to interact well, the content and activities are designed to fulfil visitors' experience and elevate their interaction.

Figure 3 indicates that 52 visitors (65%) agree that they are able to use the digital devices well while 17 visitors (21.3%) strongly agree, 1 visitor (1.3%) disagrees and 10 visitors are neutral (12.5%). This illustrates that the digital devices provided are easy to use and visitors find them feasible.

Figure 4 displays that 55 visitors (68.8%) agree that they are able to interact well with other visitors while 12 visitors (15%) strongly agree, 2 visitors (2.5%) disagree

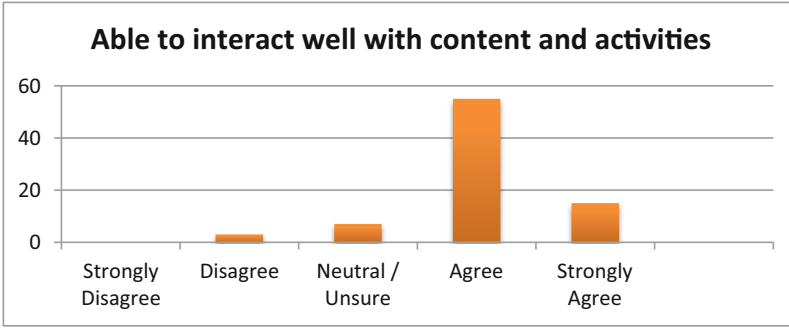


Fig. 2. Able to interact well with content and activities

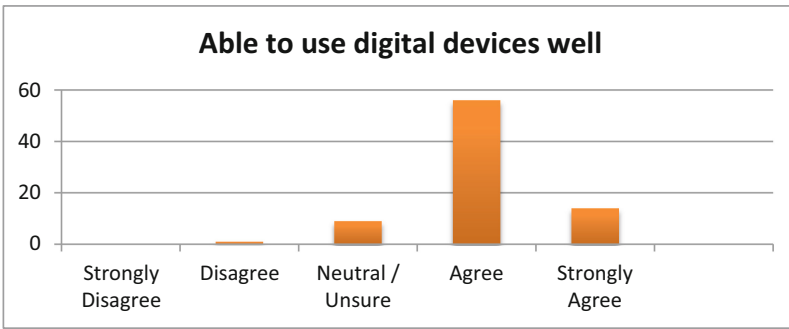


Fig. 3. Able to use digital devices well

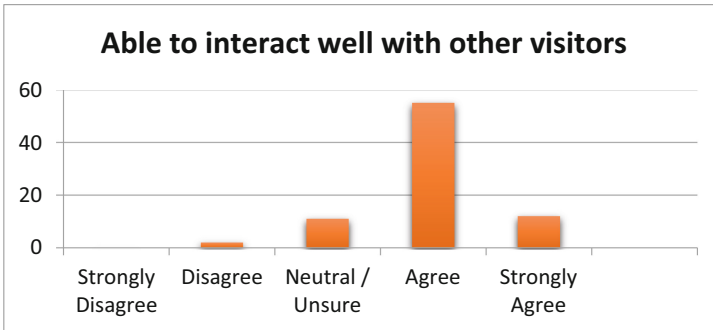
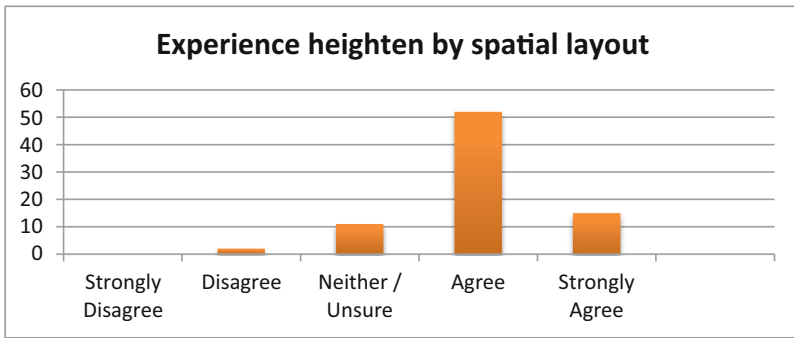


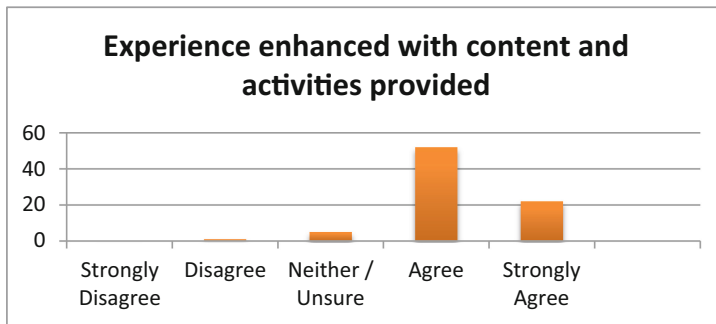
Fig. 4. Able to interact well with other visitors

and 11 visitors (13.8%) are neutral. This shows that the gallery affordances and gallery environment provides good relationship among visitors as they are able to interact well.

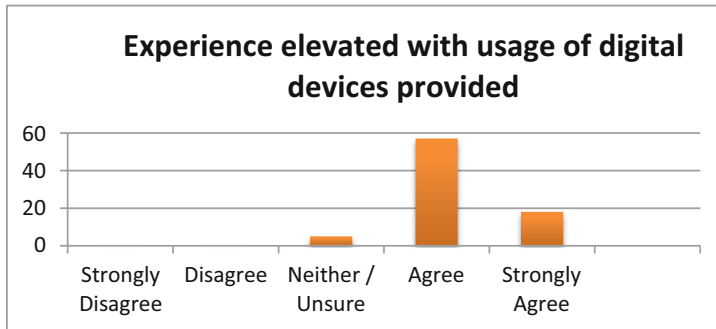
Figure 5 indicates that 52 visitors (65%) agree that their experience is heightened by spatial layout, while 15 visitors (18.8%) strongly agree, 2 visitors (2.5%) disagree and



**Fig. 5.** Experience heightened by spatial layout



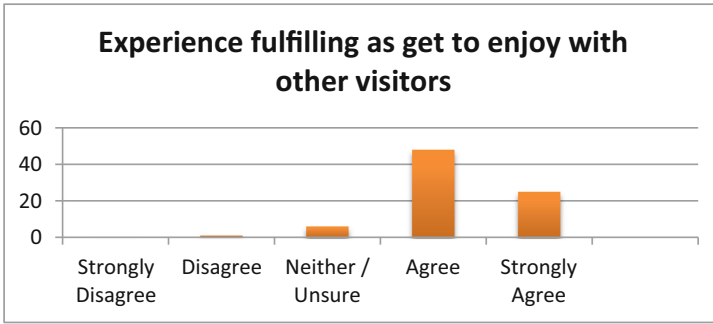
**Fig. 6.** Experience enhanced with content and activities provided



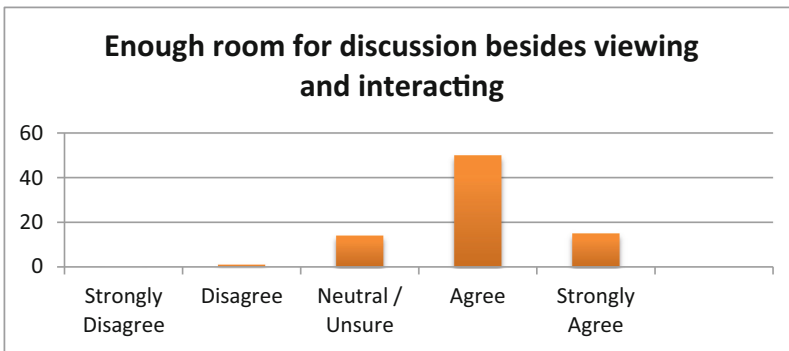
**Fig. 7.** Experience elevated with usage of digital devices provided

11 visitors are neutral (13.8%). This illustrates that good gallery affordances and spatial layout will certainly contribute to good visitors' experience and a heightened one.

In Fig. 6 it is seen that 52 visitors (65%) agree while 22 visitors (27.5%) strongly agree, 1 visitor (1.3%) disagrees and 5 visitors (6.3%) are neutral. Visitors feel that their experience are being enhanced with the content and activities provided in the gallery.



**Fig. 8.** Experience fulfilling as get to enjoy with other visitors



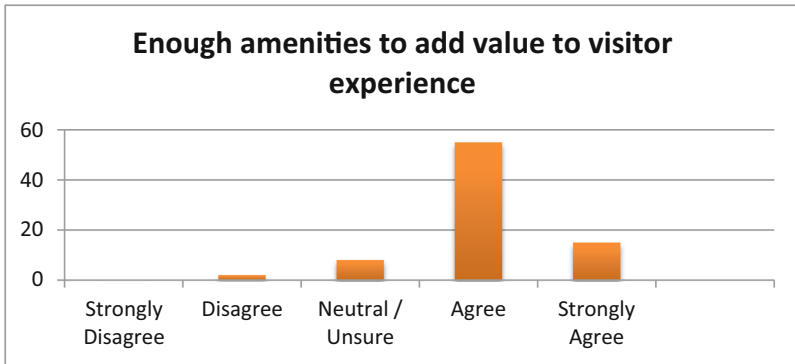
**Fig. 9.** Enough room for discussion besides viewing and interacting

In Fig. 7, 57 visitors (71.3%) agree while 18 visitors (22.5%) strongly agree, 5 visitors (6.3%) remain neutral. With usage of digital devices provided, visitors' experience is elevated.

Figure 8 demonstrates that 48 visitors (60%) agree while 25 visitors (31.3%) agree, 1 visitor (1.3%) disagrees and 6 visitors (7.5%) remain neutral. They agree that their experience is fulfilled as they are able to experience it with other visitors.

Figure 9 indicates that 50 visitors (62.5%) agree while 15 visitors (18.8%) strongly agree, 1 visitor (1.3%) disagrees and 14 visitors (17.5%) remain neutral. Visitors agree that there is ample room for discussion and to mingle around besides only looking and interacting with displays.

In Fig. 10, it is seen that 55 visitors (68.8%) agree while 15 visitors (18.8%) strongly agree, 2 visitors (2.5%) disagree and 8 visitors (10%) remain neutral. Majority agree that there are enough amenities and facilities to add value to visitors' experience at the gallery.



**Fig. 10.** Enough amenities to add value to visitor experience

Insightful	Everything is fine
Good experience for visitors	Decent
Good experience for visitors	Okay
All good and great experience	Amazing
The space is bit small	Fine
Very good	Brilliant
It was fun	Great
Wonderful	Awesome
Nice	Filled with awe
Quite interesting with different concept and the way of art raft construct	
Work and play	
Very emotional and satisfying	
Need something to enhance visitor experience	
Add more seats for lunch sessions	

**Fig. 11.** Section H: Open ended questions

## 4.2 Section H: Open Ended Questions

The open ended questions invited visitors to respond with their suggestions for the enhancement of a good multimedia gallery design. This includes spatial layout, content and activities, tools and technology, visitors’ experience and sense of place. In this study, focus is given to the responds in the visitors’ experience section. There were 79 feedback answers (some with similar answers) from the respondents (Fig. 11). The responds are later translated into word cloud frequency visualization as seen in Fig. 12.





**Fig. 12.** Word cloud frequency of visitors' experience component in the open ended questions

## 5 Findings

### 5.1 Design Suggestions

Findings from the visitors' experience section survey (Fig. 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10) demonstrate that visitors are able to navigate comfortably in the gallery based on the exhibition set up. They are able to interact well with the content and activities as well as utilize the digital tools competently. Their engagement with other visitors is on a good basis. Their overall experiences have been heightened by ample gallery layout, adequate content and activities, suitable digital tools provided and the relationship built with other visitors. Besides these findings, enough room for comfortable discussion and sufficient amenities add value and present visitors with elevated gallery experience. The variety of engagement, activities, knowledge building content, exploration with devices, space navigation choices and diversification of amenities add to visitors' experiential visit.

Findings from the open ended questions (Section H) and word cloud frequency of visitors' experience lead to the design suggestions as seen in Fig. 13.

### 5.2 Experiential Design Framework

Findings indicate that visitors' behaviour, engagement and emotion are crucial consideration in designing the experiential multimedia gallery framework. The experiential design components provide emotional connection and engagement with the built environment. This is conveyed in the framework where prominence to visitors' emotions and engagement is highlighted. Different intended emotions envisioned to be felt from the content and activities contribute to a variety of spatial layout configurations, different usage of tools and technology as well as types of visitors' reactions.

In building the framework, architectural space (physical) consisting of basic layout and space zoning and gallery affordance model (sense of place, affordance theory and gallery component) which denote exhibition spaces has direct influence towards the human emotional state (affective) consisting of age group and group type. The direct perception of visitors towards architectural space especially the gallery affordance model results in perception of gallery affordance and 'action' of visitors translated into visitors' experience.

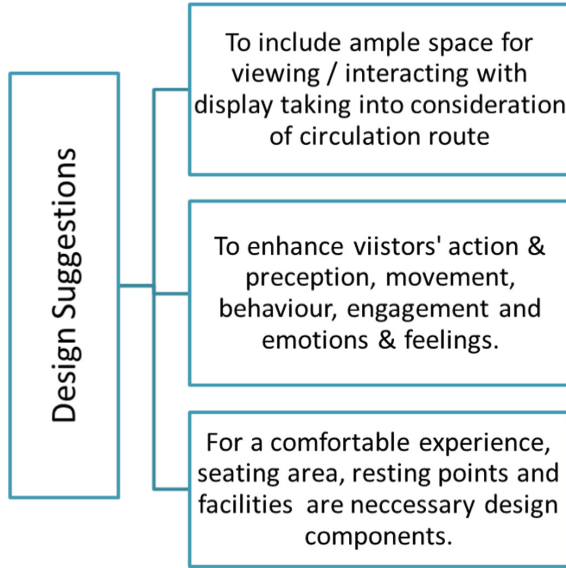


Fig. 13. Design suggestions from word cloud frequency of visitors’ experience

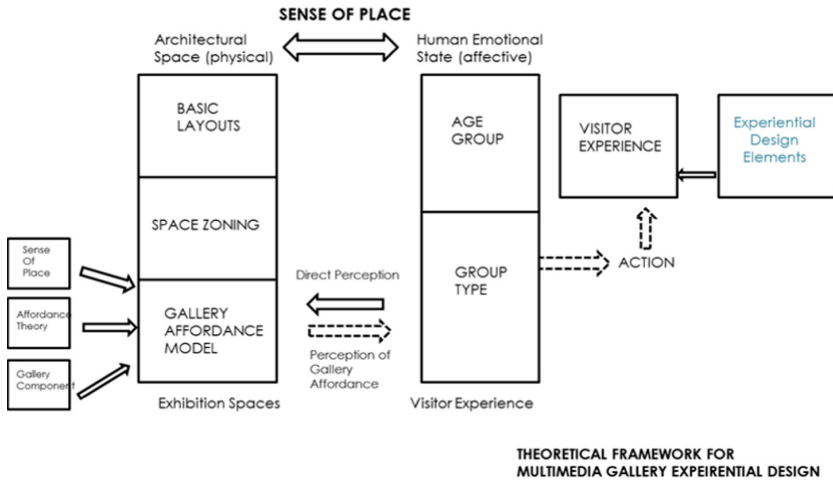


Fig. 14. Key components of experiential design framework for multimedia galleries adapted from [12] Sense of Place Theory (Canter, 1977), [13] Concept of Affordance (Gibson, 1979), and [14] Museum Experience Model (Falk & Dierking, 2013).

Figure 14 illustrates that with additional contribution from the experiential design elements, visitors’ experience will be enhanced. This symbiosis between environmental space and emotional visitor experience creates a direct perception and action going to and forth between these two components. Further explorations in designing experiential spaces result in dynamic design alternatives that stress on visitors’ journey in the gallery.

## 6 Conclusion

From the investigation done in this study, it is concluded that experiential design builds memorable experiences where visitors are allowed to choose their navigation path and determine their own memories. Dealing with emotions and feelings enhances engagement and immersion, and elevates the level of interaction as all five senses are given prominence in experiential design concept. [11] further supported that by incorporating technology in new media and immersive content; visitors are able to create their own story. Thus, spaces designed need to be organic and flexible to allow for alternatives rather than determined as the multi-layered and multi-sensorial space promote highly engaged content and activities. This benefits gallery curators, designers and artists in building meaningful and dynamic engagements. While conventional galleries focus on determining pre-selected visitor paths, multimedia gallery stresses more exploring visitors' perspective in looking and experiencing spaces, content and activities [3].

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