Journal of The Nigerian Institute of Architects (NIAJ)
ISSN: 2315-8913

Visual Quality Assessment of Selected Public Buildings in Lagos State

Adedoyin Waheedat Elegbede[1], Oluwadamilola Ajoke Alabi[2], Adewale Segun Alabi[3]
[123]Department of Architecture, Bells University of Technology, Ota, Nigeria
Corresponding email: asalabi@bellsuniversity.edu.ng.com

Abstract:

Visual quality plays a critical role in deciding whether a building is considered a work of architecture as well as how much admiration it receives from users and design professionals. Scholars are challenged with the task of tying the idea of visual quality to a single plain discourse because it is relative and subjective, similar to the idea of aesthetics. The study assessed selected public buildings in Lagos, Nigeria to have a better understanding of their visual quality. The research used a mixed-method approach to gather the data by first identifying the components of visual quality in architecture. The visual quality of the selected public buildings was then assessed using a closed-ended questionnaire. Data were assessed using descriptive analysis. The study revealed that visually appealing public buildings in Lagos had celebrated entrances, large curtain walls, and external walls without balconies. A variety of roof styles were generally accepted as visually appealing.

Keywords: Aesthetics, Building Components, Lagos, Public Building, Visual Quality

1. Introduction

Visual quality is a concept that pertains to every sphere of human endeavour, it depicts the extent of people's aesthetic admiration for living things, objects, and the environment in which they live (Ak, 2013). As corroborated by Fuente Suárez, (2016), the human-environment relationship is shaped by various senses in which sight and the visual appearance of an environment take the majority. The visual quality of a building is crucial in determining its qualification as a work of architecture, and the amount of admiration received from users and design experts. Onlookers noticed a building's façade first and this is a significant aspect of architectural structures that express the technological, socioeconomic, environmental, and historical qualities of the time in which they were built (Alabi & Alabi, 2020; Bello & Jolaoso, 2017; Pickett et al., 2004; Rohracher, 2001).

The visual quality and integrity of public buildings are one of the major concerns of the built environment in Nigeria. Following Kayode et al., (2008), scholars are unable to pin the idea of visual quality to a single plain discourse, as it is relative and subjective, similar to the concept of aesthetics. Conforming to this, they stated it is because judging visual quality involves a variety of perspectives that are influenced by a variety of elements such as the individual's experiences, mental state, mood, socio-cultural prejudice, and other external factors. As supported by Eze et al., (2021) and Okoye et al., (2020), these issues, particularly those linked to "delight" should be addressed by architects and designers because there are several opportunities to make aesthetic judgments, ranging from roof type, window type, door type, wall type, trim colour, etc. which have a direct impact on the visual quality of buildings.

Visual quality assessment entails a variety of methodologies, methods, models, and, the fundamental aspects of the physical environment for its perception (Oludare et al., 2021). There has been a surge in the study of visual perception of the built environment and this has aided designers in gaining better knowledge of what people expect from buildings. These studies are based on users' (public) perceptions, expert evaluations, or a combination of both user and expert perspectives (Mundher, Abu Bakar, Al-Helli, et al., 2022; Mundher, Abu Bakar, Maulan, et al., 2022).

2. Methodology

The research employed a mixed-method approach in gathering the data. The first phase of the study was determining the elements of visual quality in architecture from the literature. The second step was to identify the architectural components that reflect a building's visual quality. Next, an assessment of the visual quality of the selected public buildings in Lagos was carried out using a close-ended pictorial questionnaire with Likert scale questions. The questionnaire was created based on the elements of a building's visual quality. A sample size of 384 respondents from an infinite population was calculated using Cochran's formula for the infinite population. Questionnaires were distributed using a simple

random sampling method. Descriptive analysis was utilized to assess the visual quality of the selected buildings. Table 1 presents the response rate. Out of the three hundred and eighty-four (384) questionnaires administered to the residents in the study area, one hundred and ninety-four (194) questionnaires were returned valid. Thus, represents a 51% response rate (194/384* 100 = 50.5%). The research made use of this because, in a survey study of this nature, a 50% response rate is still permissible as suggested by Mugenda & Mugenda, (2003).

Table 1: Response Rate Questionnaire

Questionnaire	Frequency	Percentage
Retrieved	194	51
Un-retrieved	190	49
Total	**384**	**100**

Source: Field Survey (2022)

There were Five (5) public buildings in Lagos selected for the study which were used to solicit responses through Likert scale questions. These are B&B Plaza, The Phillipi Centre, Harry Barker Institute, Lagos Business School, and Lagos Energy Academy. Figures 1 to 5 present their visual appearance.

Figure 1: B&B Plaza (Building 1)
Source: Field Survey (2022)

Figure 2: The Phillipi Centre (Building 2)
Source: Field Survey (2022)

Figure 3: Harry Baker Institute (Building 3)
Source: Field Survey (2022)

Figure 4: Lagos Business School (Building 4)
Source: Field Survey (2022)

Figure 5: Lagos Energy Academy (Building 5)
Source: Field Survey (2022)

3. Results and Discussion

A study of literature reviewed that there are seven (7) universally accepted elements of visual quality in architecture. These are; points, lines, shape and form, color, texture, pattern, and space (Galvan, 2021; Alabi & Alabi, 2020; Ak, 2013). These elements are portrayed by five (5) building components which are; walls and columns, roof, windows, doors, and vertical transportation structures (such as stairs, escalators, lifts, and ramps) (Tuan, 2022; Oludare et al., 2021; Biancardo et al., 2020; The Constructor, 2020).

Respondents to the questionnaires were presented with pictures of five (5) public buildings in Lagos State and were asked to rate the visual quality of each using their perception of the external

building components as the parameter for assessment. Table 2 presents the decision criteria of the mean values of the responses.

Table 2: Decision Criteria of Likert Scale Mean Values

Mean Values Range	Decision
0.01 – 1.00	Not appealing
1.01 - 2.00	Slightly appealing
2.01 – 3.00	Moderately appealing
3.01 – 4.00	Very Appealing
4.01 – 5.00	Extreme Appealing

Source: Researchers' computation (2022)

Statistical evidence reveals that the walls and columns of Building 4 are the only ones that are extremely appealing. Followed by walls & columns of Buildings 5 and 2 that were very appealing. A critical look at these buildings reveals that the walls of the most appreciated buildings have a visual impression of mainly vertical lines, largely cool plain colours, smooth reflective surfaces (unbroken smooth render, or glass), and uniform patterns that are not interrupted with many recesses. This implies that public buildings that appear to be 'cold' and formal without balconies/verandahs are most appealing. Most likely because balconies/verandahs create the impression of residential or less formal buildings. See Table 3.

The roof style/design of Buildings 2, 3, 4, and 5 is very appealing while that of Building 1 is moderately appealing. This implies that no fixed roof style is considered to be the most visually appealing. However, the lines forming the design of the roof are required to adequately complement the form of the building to create a sense of visual appeal. See Table 3.

Windows Style of Buildings 2, 4, and 5 appear to be very appealing while that of Buildings 1 and 3 are moderately appealing. A study of these windows shows that those that have a large surface area and are not conventional in shape and form (traditional 1.8m height) received more interest from respondents. This implies that curtain walls have more aesthetic appeal compared to traditional windows. See Table 3.

Finally, external Doors, and access Steps & Ramps for Buildings 2, 4, and 5 have mean values that infer they are very appealing while those of Buildings 1 and 3 are moderately appealing. The entrances of these buildings are celebrated making them a focal point for any onlooker. Thus there was no trouble identifying the access to these buildings. Some were central while others were to one side implying that the position of the entrances did not matter. What mattered was their ability to be a focal point. This implies that celebrated/grandiose entrances of public buildings are considered to be more appealing than uncelebrated accesses. Table 3 presents a summary.

Table 3: Mean Rating of Visual Quality of Buildings Components

	External Walls Column (line, colour, texture, pattern)	Roof &style/ Design (line, pattern)	Windows Style (shape and form, pattern)	External Door (point, space)	Access Stairs & Ramp (point, space)
Building 1	2.6392	2.9072	2.7268	2.6134	2.3505
Building 2	3.4948	3.1237	3.3557	3.1804	3.3402
Building 3	2.8763	3.0103	2.8454	2.8711	2.8402
Building 4	4.1598	3.9485	3.9639	3.9742	3.8711
Building 5	3.8454	3.8402	3.7371	3.6959	3.6186

Source: Researcher's computation (2022); SPSS output (Version, 23)

4. Conclusion

The study assessed selected public buildings in Lagos to have a better understanding of their visual quality. The findings will help designers and developers have pointers toward the achievement of visually appealing public buildings. The study concluded that points, lines, shape and form, colour, texture, pattern, and space are universally accepted elements of visual quality. Point signifies a focal attraction. The main entrance to a public building should be designed to be well-celebrated. The predominant lines used in the design of public buildings should be well-defined and clear with tendencies towards verticality giving the impression of awe. Lines also form words and numbers by defining spatial edges, rendering volume, creating texture, and connecting them. Public buildings should not have varying textures in terms of recesses in the form of balconies as these are not considered appealing. Other visual elements are also important. Therefore, architects should pay more attention to the visual elements.

The study further established that walls and columns, roofs, windows, doors, and stairs (steps/ramps) represent the external building components that are defined by architectural

elements of visual quality. These components work together to define the exterior of buildings and are further defined by their visual characteristics. Hence, a building is incomplete without them. Thus, establishing the importance of the components. Also, the components must be in good condition to make a building habitable and visually appealing.

To design visually appealing public buildings in Lagos it is reiterated that an architect should respectfully employ elements of visual quality while complying with the findings on ways in which building components should be employed to encourage visual appeal. This study can be replicated in other parts of Nigeria and the diaspora to have a comparative analysis of how users of public buildings view their visual quality.

References

Ak, M. K. (2013). Visual quality assessment methods in landscape architecture studies. In *Advances in Landscape Architecture*. IntechOpen.

Alabi, O. A., & Alabi, A. S. (2020). *Are All Buildings Architecture?*

Bello, O., & Jolaoso, B. (2017). Character-extinction of Yoruba architecture: An overview of facades of residential buildings in South-Western, Nigeria. *Journal of Emerging Trends in Educational Research and Policy Studies*, *8*(3), 143–150.

Biancardo, S. A., Viscione, N., Cerbone, A., & Dessì Jr, E. (2020). BIM-based design for road infrastructure: A critical focus on modeling guardrails and retaining walls. *Infrastructures*, *5*(7), 59. https://doi.org/10.3390/infrastructures5070059

Eze, E. C., Ugulu, R. A., Onyeagam, O. P., & Adegboyega, A. A. (2021). Determinants of sustainable building materials (SBM) selection on construction projects. *International Journal of Construction Supply Chain Management*, *11*(2), 166–194. https://doi.org/10.14424/ijcscm110221-166-194

Fuente Suárez, L. A. de la. (2016). Towards experiential representation in architecture. *Journal of Architecture and Urbanism*, *40*(1), 47–58. https://doi.org/10.3846/20297955.2016.1163243

Galvan, M. (2021, May 26). *7 visual elements of design*. Medium. https://uxplanet.org/7-visual-elements-of-design-bbd56eb063e9

Kayode, F., Ojo, B., & Sheba, E. A. (2008). Design, aesthetics and the issue of integrity in the built environment: The Nigerian example. *Indoor and Built Environment*, *17*(4), 283–298. https://doi.org/10.1177/1420326X08094897

Mugenda, O. M., & Mugenda, A. G. (2003). Research methods: Quantitative and. *Qualitative. Approaches. Nairobi*.

Mundher, R., Abu Bakar, S., Al-Helli, M., Gao, H., Al-Sharaa, A., Mohd Yusof, M. J., Maulan, S., & Aziz, A. (2022). Visual Aesthetic Quality Assessment of Urban Forests: A Conceptual Framework. *Urban Science*, *6*(4), 79. https://doi.org/10.3390/urbansci6040079

Mundher, R., Abu Bakar, S., Maulan, S., Mohd Yusof, M. J., Al-Sharaa, A., Aziz, A., & Gao, H. (2022). Aesthetic quality assessment of landscapes as a model for urban forest areas: A systematic literature review. *Forests*, *13*(7), 991. https://doi.org/10.3390/f13070991

Okoye, N. B. C. D., Onyegiri, I., & Okafor, M. (2020). *Examining Flexibility in Space Use in Architectural Designs of Public Core Housing Schemes in Anambra State of Nigeria*.

Oludare, O. J., Ezema, I. C., & Adeboye, A. B. (2021). Visual Quality Assessment of Covenant University Senate Building Façade. *IOP Conference Series: Earth and Environmental Science*, *665*(1), 012018. https://doi.org/10.1088/1755-1315/665/1/012018

Pickett, S. T., Cadenasso, M. L., & Grove, J. M. (2004). Resilient cities: Meaning, models, and metaphor for integrating the ecological, socio-economic, and planning realms. *Landscape and Urban Planning*, *69*(4), 369–384. https://doi.org/10.1016/j.landurbplan.2003.10.035

Rohracher, H. (2001). Managing the technological transition to sustainable construction of buildings: A socio-technical perspective. *Technology Analysis & Strategic Management*, *13*(1), 137–150. https://doi.org/10.1080/09537320120040491

The Constructor. (2020). *12 Basic Components of a Building Structure—The Constructor*.

https://theconstructor.org/building/12-basic-components-building-structure/34024/

Tuan, I. M. M. R. M. (2022). *Multicompartment building in Okhtyrka city of Sumy region*.