

THE RELATIONSHIP BETWEEN FUNCTIONS OF A BUILDING AND ITS FORMS: A CASE STUDY OF HOSPITALITY BUILDING IN LAGOS STATE

ELUJIDE Peter Temitope, AKANDE Ifeoluwa, and OKE Teminjesu I

Department of Architecture, College of Environmental Sciences,

The Bells University of Technology, Ota, Ogun state.

ABSTRACT

The contradiction between form and function should be seen as an important element in architecture due to Louis Sullivan's Credo ideology that "form follows function". The study examined the relationship between the functions of a building and its forms in a public building: A case study of Hospitality building in Lagos State, Nigeria. Specifically, the study identified the elements of building forms applicable in building construction; investigated ways of designing a proper architectural function that is comfortable for the users of the building and examined the relationship between forms and architectural function. A descriptive survey research design and case study research design were adopted with a structured questionnaire as research instrument. Content analysis (documentary analysis) and descriptive statistics (Mean Item Score) were adopted as data analysis techniques. The findings of objective one indicated that lines, shapes, spaces, shape, mass/size, scale, proportion, rhythm, articulation, texture, color, and light are elements of forms. The finding of objective two indicated that buildings regardless of their function are very important in society; and they should be designed in a structural way to meet the user's needs. Lastly, the findings of the study established that a relationship exists between the form and function of a building. From the findings, the study concluded that there is a relationship between the functions of a building and its forms. Thereby, the study recommended that in this contemporary age, forms and function of building should not be neglected by the builders, engineers and architects. Further, more attention should be given to the duo in the construction industry and other relevant industry.

Keywords: Form, Function, Building, Hospitality

1.0 INTRODUCTION

Buildings are fundamental structural elements of the urban physical space and serve many functions with respect to human living, working, and recreation. From a public domain, a building is a structure with a roof and walls that exist more or less permanently in one location

for the habitation of people. As a means of refuge, a building is one of life's most fundamental needs. Ugwu, Okafor, and Nwoji (2018) highlighted the components of a building to including; the foundation, roof, floor, wall, paint, windows, toilets facilities and sewage system. To the scholars, the components form a structure called a building. On that note, a tunnel or a bridge would not be considered a structure. It's also a structure with a roof, walls, floors, and openings like doors and windows that are usually (though not always) fixed in one place.

Despite the perspectives of building, it is common knowledge that building provides shelter for human beings and it is the act of putting certain materials together to bring structure into existence. Thus, it is an enclosed structure within which people can perform innumerable activities. A building can be classified based on the construction type, cost, use, size, style, period, design, performance, and nature of occupancy (Osuizogbo, 2022).

Building's function on the other hand refers to its usage or utility (Hendrix, 2021). In a more detailed fashion, the idea dates back to Vitruvius, who stated that a structure must possess utility (usefulness), firmitas (firmness), and venustas (beauty), all of which have had an impact on architecture throughout history with various cultural and historical subtleties. "Functionalism is often associated with the practical material necessities of the occupants of the building and the expression of structure," writes Edward Robert de Zurko in *Origins of Functionalist Theory*. Meanwhile, the shape or configuration of a building is referred to as its form in architecture (Crisman, 2016). Architecture's fundamental components are form and space, their antithesis. Given that the purpose of architecture is to offer enclosed interior space for human habitation, the reciprocal relationship is crucial.

Form and space are both given shape and scale during the design process, as was previously stated. Another essential component of this form/space interaction is where a building form is situated in respect to the surrounding landscape and other structures. In the same way that voids in a building's shape produce interior space, a building's form can also define or poorly define

outside space. In addition, a variety of factors such as shape, mass/size, scale, proportion, rhythm, articulation, texture, color, and light must be taken into account while analyzing or designing an architectural form.

According to Stankovic, Kostic, Nikolic, and Cvetanovic (2018), architectural form is the point of contact between mass and space. Architectural forms, textures, materials, variations in light and shade, and color all work together to give space an inherent essence or spirit. The designer's ability to use and relate these aspects both inside structures and in the areas around them will determine the quality of the architecture. Also, the synthesis of form and function play a dominant and valuable role in architectural design. This implies that both form and function play a dominant role in architectural activities because architecture is always necessarily tied to the material, to its physical and structural requirements.

From the above discourse and from the lens of architecture, the function of buildings and their forms seem germane in the building constructions to the extent that (Ilias, 2016) ascertained that “function follows forms”. The phrase pointed to the relevance and importance of the two concepts. To this end, the pertinent question is; Is there a relationship between the function of a building and its form? To provide an empirical answer to the question, the current study seeks to identify the elements of building forms applicable in building construction; and examine the relationship between forms and the architectural function of the study area.

2.0 RESEACH METHODOLOGY

On the methods, a descriptive survey research design and a case study research design were adopted in the study. The descriptive survey research design was used in preliminary and exploratory studies to allow researchers to gather information, summarize, present, and interpret for clarification. On the other hand, a case study research design is a research approach that is used to generate an in-depth, multi-faceted understanding of a complex issue in its real-

life context (Adedokun, 2017). It is an established research design that is used extensively in a wide variety of disciplines, social sciences, and architecture.

Purposive sampling techniques were used to select the required sample size for the study. The basis for choosing the sampling technique premises on the fact that the researchers can extract a great deal of information from the data. This enables researchers to examine the relationship between the function of a building and its forms in a hospitality building. Thus, the sample consists of hotel managers, front officers, desk supervisors, maintenance managers, and other staff. The research instrument adopted in the study was questionnaires. In the study, closed-ended questions were asked to facilitate the data collection and analysis. To rate the items, a five-rating scale was adopted to explore the respondent's opinions about the subject of the study. This scale provides a range of responses to a given question or statement and was set out as; 1 = Strongly Disagree (SD), 2 = Disagree (SR); 3 = Undecided (UN), 4 = Agree (A), and 5 = Strongly agree (SA). Both content analysis (documentary analysis) and descriptive statistics (Mean Item score) were adopted as data analysis techniques in the study.

3.0 RESULTS

Elements of building forms

One of the objectives of the study was to identify the elements of building forms applicable in building construction. To achieve the objective, the content analysis also known as documentation was adopted. The documentation analysis of the available journals and architectural textbooks revealed that elements of building forms are; lines, shapes, and spaces. Shape, mass/size, scale, proportion, rhythm, articulation, texture, color, and light are some of the factors that must be taken into account while analyzing or designing an architectural form, according to Crisma (2016).

Relationship between form and architectural function of the building

The third research objective was to examine the relationship between forms and architecture the function Mean item score was adopted and the findings is shown in Table 1.

Table 1. Relationship between form and architectural function of the building

Sn	Statements	Mean	SD
i.	The elements of building forms used relate to the function of the hotel	4.28	0.65
ii.	Building forms add to the hotel function	3.98	1.21
iii.	The infusion of building forms enhances the hotel's performance	4.06	0.82
iv.	The physical form of the hotel communicates the function of the building	4.19	0.90
v.	The spaces in the hotels are appropriate	3.94	1.06
vi.	Customers always complain about the inappropriate parking spaces.	3.03	0.51
vii	Staircases and toilets in the hotels are accessible	4.12	0.56
viii	The building forms and function of the building are not related in hotel industry	4.25	0.75
	Grand Mean	3.98	0.81

Source: Researcher's Computation (2022)

Decision Rule: If mean < 3.0 the respondent Disagree; If $3.5 \leq \text{Mean} \leq 3.0$ the respondents are Undecided; If mean ≥ 3.5 the respondent Agree

Table 1. presents the analysis on the relationship between forms and function. The respondents were asked to express their opinions on a 5 –point Likert scale with certain statements. For all the statements, the grand mean has a value of 3.98 and a corresponding 0.81 standard deviation. By implication, the grand mean value is greater than 3.5, which implies that all the respondents agreed that a relationship exists between the form and function of a building.

4.0 DISCUSSION

The finding of the study indicated that lines, shapes, spaces, shape, mass/size, scale, proportion, rhythm, articulation, texture, color, and light are elements of forms. From the architecture, the use of various forms, their shape, size, scale, and surface characteristics will provide a perception of weight, being either heavy or light related to the remainder of the composition. This perception is derived by the participant based on their impression of the sense of effort required to install the specific form. This perception is responsible for the physical process of manipulation, a process of construction.

Also, the findings of the study established that a relationship exists between the form and function of a building. The findings uphold the previous scholars' stand on the nexus between forms and function. In the field of architecture, "form follows function" is one of the famous maxims in contemporary design. Standing on the postulation of the nexus between forms and function, Nasar, Stamps, and Hanyu (2005) argue that architectural form and function have a many-to-many relationship, or that certain functions are not distinguishable through architectural form.

5.0 CONCLUSION

The thrust of the current study was to establish the relationship between the forms and functions of the building. Specifically, the study identified the elements of building forms applicable in building construction; investigated ways of designing a proper architectural function that is comfortable for the users of the building in the study area; and examined the relationship

between forms and the architectural function of the study area. Adapting content analysis, literature analysis, and mean item score, the study concluded as follows;

- i. Shapes, lines, spaces, shape, mass/size, scale, proportion, rhythm, articulation, texture, color, and light are elements of forms. The forms are applicable in building construction and other civil construction. Thus, shreds of evidence revealed that architectural forms are inevitable in building and civil construction as well as in architecture.
- ii. It is also concluded that there is a relationship between the forms and the function of buildings. This depicts that forms and functions cannot be separated as the duo are interrelated in the art and science of buildings and construction.

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