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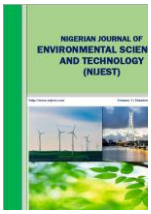

Architectural Composition and Aesthetic Value of Prototype Bank Buildings in Lagos State

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ABSTRACT

Architecture is ultimately about the configurations, connections, shapes and orientations of physical forms. The assemblage and manipulations of these define architectural composition. A well-articulated architectural composition and conceptualization of aesthetics is very critical in prototype buildings. The use of prototype buildings by institutions or corporate entities is solely aimed at creating a unified aesthetic quality. The study examined the architectural composition of selected prototype bank buildings in Lagos in order to evaluate its impact on aesthetics value. Five prototype bank buildings were selected using purposive sampling method. Masters students of the department of Architecture, and master's students of Law from the University of Lagos represented the respondents. The results showed that architecture and non-architecture masters students saw the architectural composition of prototype buildings more in terms of simple form, geometry, verticality, formal, unity and symmetrical rather than complex forms, such as amorphous, horizontality, informal, variety and asymmetrical. The study suggested that architects' and non-architects' assessments of aesthetic value could differ significantly and prototype bank buildings had unique aesthetics value, influenced by their architectural composition.

Keywords: Aesthetics, Aesthetic value, Architectural composition, Prototype buildings, Bank buildings

1.0. Introduction

Buildings and built environments in general have a significant social, economic, and environmental impact and are an essential component of human habitat. (Grazuleviciute-Vileniske et, al 2021). They represent one of the many media that humans relate with and also use to portray some traits and qualities. Numerous models, such as those for energy, mobility, disaster management, health care, and other applications that help humanity in many ways, are built around building type information or classification (Bandam, et, al 2021). Buildings are classified based on criteria influenced by their functional requirements such as style, purpose, height and size. Specific building types such as hotels, apartments, petrol stations, restaurants, banks and religious centres may be classified further using additional criteria. Among the various interrelated building classifications are institutional, corporate, private, public, novel and prototype buildings.

Architecture through the architectural composition of buildings provide the context to influence and impact human existence in relation to aesthetics value. Marcus Vitruvius Pollio in his first century AD treatise expressed the famous Vitruvian trilogy of firmitas (stability), utilitas (utility), and venustas (beauty). It is certainly worth it to discuss the organization and the core ideas of Vitruvian manuscript which contains his famous architectural theory (Stepanova, 2021), because for a building to be judged successful architecture, these three are essential components. Aesthetics (beauty) as one of the trilogy in building or any object is essential because it boosts the formation and projection of the building. Aesthetics is also fundamental to the dynamics of society's landscape and invariably it is the architect's design solution executed in building form using the architectural composition that defines the landscape (Castells, 2004). The aesthetic value of any work of art is not restricted to its formal features, but increasingly inclined in thought and interaction with a variety of other aspects such as contextual, cognitive, and moral factors. Hence in this study aesthetic value of any work of art is the rating of pleasure or displeasure by virtue of experience of its beauty, elegance, harmony, proportion, unity, or ugliness, deformity or disgustingness.

Architects ensure that there are unique features through the architectural composition of the design which are prominent to enhance the aesthetics of the building. It is the different types of architectural composition and their manipulations that shapes and distinguishes one building from another. A well-articulated architectural composition and conceptualization of aesthetics is therefore very critical in bank buildings.

The use of prototype or repetitive designs by institutions or corporate entities with many branch networks or outlets is solely aimed at creating a unified aesthetic quality. Many architectural structures and buildings have been used conscientiously to depict unique aesthetics. One such design solution cum building is the bank building, particularly their prototype branches that dot the landscape of many Nigerian cities. Prototypical buildings are a means to communicate aesthetics and it is essential in bank buildings among others as a means of recognition by all (Schrage and Peters, 1999).

It is therefore important to study the architectural compositions, and aesthetics of prototype bank buildings. The study aimed to examine the architectural composition of selected prototype bank buildings in Lagos in order to evaluate the impact of architectural composition on aesthetics value. Although prototypical designs are not a regular practice in architecture, the desire by institutions and organizations to have prototype designs that define their aesthetics and identity necessitated the quest for this study. It was realized from the literature that there is some gap in knowledge in this context. The short fall in knowledge resulting from lack of assessment of the effectiveness and efficiency of the prototypical design by architects as solutions for aesthetics and identity for organizations and institutions have consequences. There could be a disconnection between the desired result and the actual result with accompanying implications. Studies in this area in the Nigerian context seem to be quite few. A better understanding of the strength and proper application of architectural composition, its influence on aesthetics in building and specifically in prototypical design will ensure reorientation of the professional, practitioners and client's satisfaction.

1.1 Aesthetics, Aesthetic Value and Architectural Composition

Aesthetics is a general phenomenon and is rooted in a Greek word aesthesis, which mean sensory perception and understanding or sensuous knowledge (Uzunoglu, 2012). Aesthetics in general enhances gratification of the senses or sensuous delight which is germane in human experience. Aesthetics is rooted in all human endeavors and its experience basically in two folds. Aesthetic experience can either be pleasing, (positive value of aesthetics) or displeasing (negative value of aesthetics). Studies have established that human share common basis for aesthetic appeal regardless of nationality, race, age, sex, or occupation (Cons and Jenny, 1994).

Architects use architectural composition to explore, develop, and communicate ideas and solutions. The manipulation of the architectural composition defines and determines aesthetic qualities and values of the building. Hence architecture defines and distinguishes building aesthetics through representations by the use of architectural compositions (Tayyebi and Demir, 2019). Architects manipulate architecture to reveal the story inherent in the design as projected by the aesthetics of the design. The color and schema tell the story of the building and serve as a strong visual aesthetics clue in recognizing such building. The street views or front facades serve as prime medium to showcase the architectural composition. This allows for relationship between people and objects in this case the building. The façade which is made up of the architectural form narrate a clear story and the thought process.

The study examines and defines three kinds of aesthetic variables; formal, symbolic, and schema as revealed by the architectural composition. The study also classifies the aesthetics variables resulting from the architectural compositions of complexity and order; as formal aesthetics variables, as a symbolic aesthetics variable, and of typicality in relation to schema. These architectural compositions are utilized by architects to proffer design solutions that have aesthetic qualities and values which also define and determine aesthetics quality (Yousif, S. et al 2018). The study discusses the relationships of these variables to evaluate responses based on opinion of physical features in relation to the aesthetics.

The aesthetic value of any work of art is not restricted to its formal features, but increasingly inclined in thought and interaction with a variety of other aspects such as contextual, cognitive, and moral factors. (Goldman, 1990, Stecker, 2006).). Aesthetic value of any work of art is the rating of pleasure or displeasure by virtue of experience of its beauty, elegance, harmony, proportion, unity, or ugliness, deformity or disgustingness.

The purposes that assign an aesthetic value to an object are typically called aesthetic measures (Douchová, 2015). The proper application of the known dimension of aesthetics are used to measure aesthetic values in the context of this study. Hence, rooting this study in the context of reviewed literature on aesthetics, this study equally measure aesthetics preference of the selected prototype bank buildings using adjectival scales adopted from literature.

1.2 Bank Buildings as Prototype Buildings

The bank is a vital part of any nation's economy. Banks and bank buildings have been in existence for over a century (Black, 2000)). Building types are locale for the expression of certain connotations, because they function as signs and provide reassertion of identity (Huxtable, 2004). This is visible irrespective of building classifications, whether nouveau or prototypical design. Structures or buildings avail architects the opportunity to project aesthetics and aesthetic value. Architecture defines and distinguishes building through the architectural composition.

Virtually without exception, histories of bank architecture make reference to architectural semiotics, but more in terms of parole than of language. This could be inferred from the interpretations of the appearances of the banks through its architecture than through documentary evidence. There are many factors which influences design of bank buildings in Nigeria. They include customers' centricity, innovation, aesthetics, cost efficiency and operational excellence (Adebusuyi et al 2021). Bank design responds to this need using architectural composition and characteristic such as geometrical form, massing glazing, cladding and color. However, the corporate head offices, are mostly iconic, often multi floors with open floor plans in line with best practices, while in the case of repetitive branches, consistency in building façade with peculiar elements and components.

Architects have a rich tradition of using prototypes solutions to explore and communicate evolving ideas and potential results as it serves diverse functions essentially for its purpose. (Houde and Hill, 1997). Prototypes range from low-fidelity sketches and cardboard cutouts to high-fidelity. In addition prototype enables institutions or organizations with quest for branch network opportunity to meet their needs. Studies have revealed mixed preferences (Moshagen and Thielsch, 2010). While some institutions or organizations have preference for prototypes designs others shows preference to novel designs. Successful classification depends upon the matching of a stimulus input with a prototype representing the appropriate category. Architects use prototype designs with the sole aim of creating a unified aesthetics quality and value which is a good medium of communicating to world. Buildings in general and bank buildings particularly, are veritable tools used by architects to project aesthetics. The study therefore aimed to examine the architectural composition of selected prototype bank buildings in Lagos in order to evaluate the impact of architectural composition on aesthetics value

2.0. Methodology

2.1. Study Area

The study population was the commercial banks because the central bank of Nigeria's consolidation reform policy directly impacts the commercial banks and they largely make use of prototype bank buildings. There are twenty two commercial banks, but within the commercial bank class not all of them have prototypical building resulting from their architectural composition. Therefore, this study possessively selected five banks that have prototype bank buildings resulting from their architectural composition which is approximately 23% of the study population. The selected banks were: First Bank Plc, Zenith Bank Plc, Access Bank Plc, Diamond

Bank Plc and First City Monument Bank arranged in sequential order labeled as conditions effect no 1 to condition effect no 5.

Plate 1: Picture of First Bank Plc

Plate 2: Picture of Zenith Bank Plc

Plate 3: Picture of Access Bank Plc

Plate 4: Picture of Diamond Bank Plc

Plate 5: Picture of First City Monument Bank. Plc (Source: Authors 2018)

The measuring instrument were questionnaires and A3 size photographs of front facade of each of the selected prototype bank building (Plates 1 to 5). The questionnaire was designed in way that each variable was successfully assessed and measured using bi polar rating and the adjectival scale. In addition, A3 sized photograph of front facade of each of the selected prototype bank building was presented and pasted being

part of the measuring instrument. This guided the respondents in their assessment of architectural composition and aesthetics qualities. However, the pictures were edited to remove the banks' logos, signage and other features to ensure clarity of the architectural composition visible from the street façade.

The study used two groups of respondents that represented architects and masters law students using a sizeable and convenient number for each group that was involved. MED2, (Master of Environmental Design Students, Year 2,) student of the department of Architecture represented the respondent referred to as architects, and LLM (Masters of Law) students of the faculty of Law represented the respondent referred to as non-architects. The survey was carried out in University of Lagos because it has both architecture and law departments at master's level.

2.1 Data Collection and Analysis

The study targeted 42 respondents comprising of 21 respondents from each group. A total of 50 questionnaires with adjectival scale shared equally among the two groups of respondents. A total of 45 questionnaires which is 94.23% of the shared measuring instrument was successfully collected from both groups. (Van Belle, 2002, 2011; Taherdoost, 2017; Memon, et al., 2020). However, out of the collected questionnaires only 38 (19 each from both groups) which represented 84.44% of the total questionnaires shared were properly filled and valid. There was no significant difference in the composition of the samples by the number of respondents (Architects: n = 19, comprising of 16 male; 3 female MED 2 students and Law students: n = 19 comprising of (8 male; 11 female students),$p = 0.814$.

The study used measuring instrument in the form of questionnaires and photographs as the research instruments. The questionnaire was designed in way that each variable was successful assessed and measured using the various measuring methods as applicable, such as the bi polar rating, the adjectival scale and the identity index. The use of the selected prototype bank building live photograph taken by professional photographer with the view of having uniformity in photographic angle and style was attained.

The pictures were edited to remove logos, signage and other features that obscured the clarity of the architectural composition visible from the street façade. Six element for architectural composition were adopted. They included 'geometrical or amorphous', 'simple form or complex form', 'verticality or horizontality', 'symmetrical or asymmetrical', 'formal or informal' and 'unity or variety' constitute measuring instrument for data collection on architectural composition.

The study made use Two-Way ANOVA: that examines effects of two independent variables and their interaction, which is a multi-variable, multi-level factorial design method. This study involved two (2) conditions which are master's student of Architecture and Master's students of Law, two (2) independent variables (which are architectural composition, aesthetics value)and five (5) groups (which are the selected prototype bank buildings). The two (2) conditions were architects and non-architects. The study used measuring instrument which comprised of questionnaires and clear A3 size photographs of each selected building of each selected prototype building. All responses were coded to see if there was any similarity of changes in the responses. Check for within group similarities and differences were observed. Through systematical response gotten through the measuring instruments qualitative data was converted into quantitative data. The study made replicable and valid inferences by interpreting and coding textual material which had earlier been coded.

3.0 Results and Discussion

3.1 Result of Respondents' Response to Architectural Composition of Condition effects

The two groups of respondents, architecture students and law students' assessment and findings on each condition effects presented are discussed descriptively using the mean values of their responses. For architecture students, assessment of the architectural composition in condition 1 effect showed the building was more 'geometrical'; high in 'simple form' with very high verticality. Equally condition 1 effect had very high formal form, was highly symmetrical and high in unity.

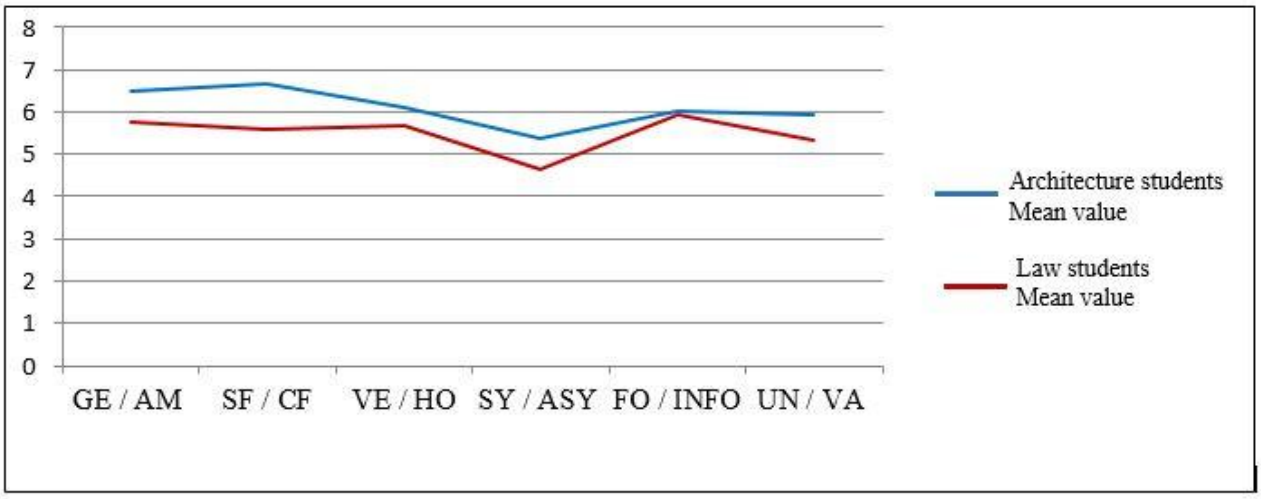

Figure 1: Architectural Composition for Condition effect no 1 by Architecture students and Law students

However, for Law students, the building in condition effect no 1 was assessed as highly formal; more geometrical and highly simple in form. This group also assessed the building in condition effect no 1 to be strong verticality, more symmetrical and was rated highly in unity of composition. In summary as shown in figure 1, there are similarities in the assessment of the two groups but the architecture student's group assessment was more intense than the Law student's group.

In condition effect no 2, the architecture students in their assessment of the architectural composition confirmed the building as being very highly symmetrical and in unity and very high formal composition. They assessed condition effect no 2 highly geometrical; high in verticality and very simple form. In the assessment by the Law students of condition effect no 2, this group saw the building to be geometrical, highly symmetrical and very high in unity. To them also the condition effect no 2 was highly formal form and 'unity', likewise it had very 'simple form'.

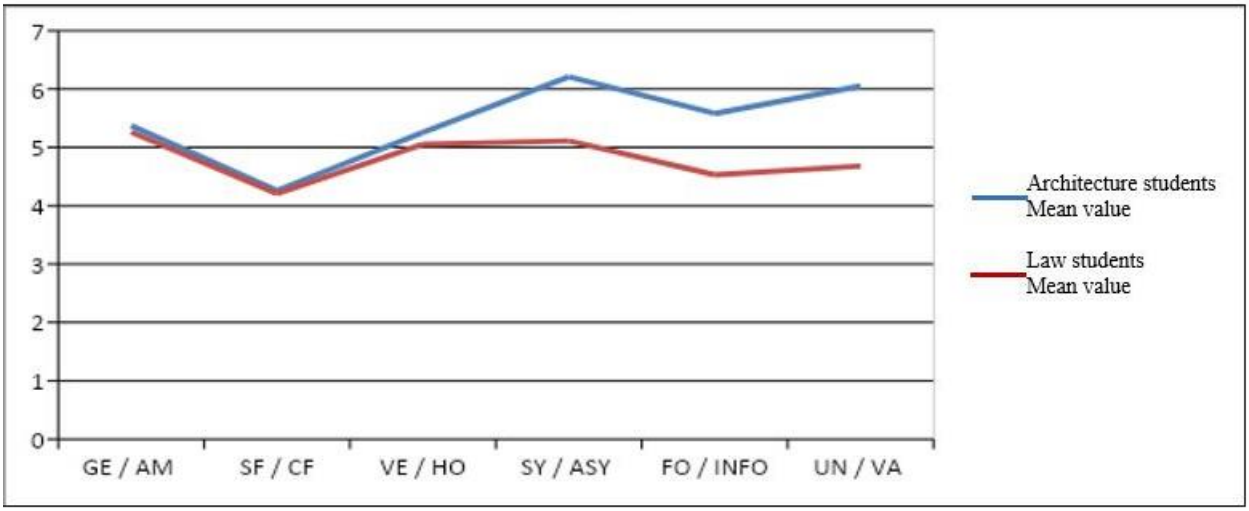

Figure 2: Architectural Composition for Condition effect no 2 by Architecture students and Law students

In the condition effect no 2 the assessment by the two groups are very similar however the difference lied in the intensity of the rating as the architecture student's rating was higher than the law student's as shown in Figure 2.

In condition effect no 3, the architecture students assessed the condition effect highly geometrical; high in 'simple form' and very high in 'unity'. They assessed the building as highly 'formal' and high in 'unity'. To

this group of respondent the condition effect no 3 was asymmetrical and was rarely vertical. To the law student's the building in condition effect no 3 was high simple in form, highly formal; the respondents also showed in their response that the building is highly symmetrical and highly geometrical.

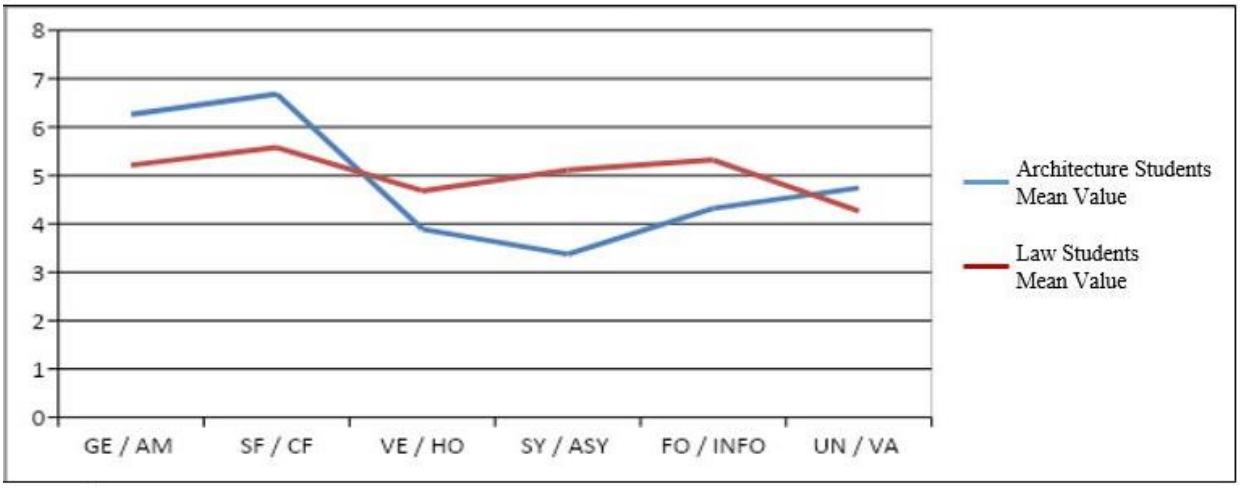

Figure 3: Architectural Composition for Condition effect no 3 by Architecture students and Law students

In summary as shown in Fig 3, there are sharp contrasts in the assessment of condition 3 effects by the two groups and also in the variables where there are similarities there are difference in intensity of the rating as the architecture students ratings are higher than the Law students rating.

The architecture student in their response to condition effect no 4, assessed the building highly 'geometrical', high 'verticality' and high in 'simple form'. In their assessment of the condition effect the building was highly 'symmetrical', highly 'formal' and high in 'unity'. To the law students, condition effect no 4 was highly 'geometrical'; high 'verticality' and high in 'simple forms'. They equally assessed condition effect no 4 highly 'formal' and high in 'unity'. The two groups of respondents in their assessment of the condition effect no 4 showed very strong similarities in their descriptive assessments of the condition effect but there are differences in the intensity of the rating as seen in Figure 4.

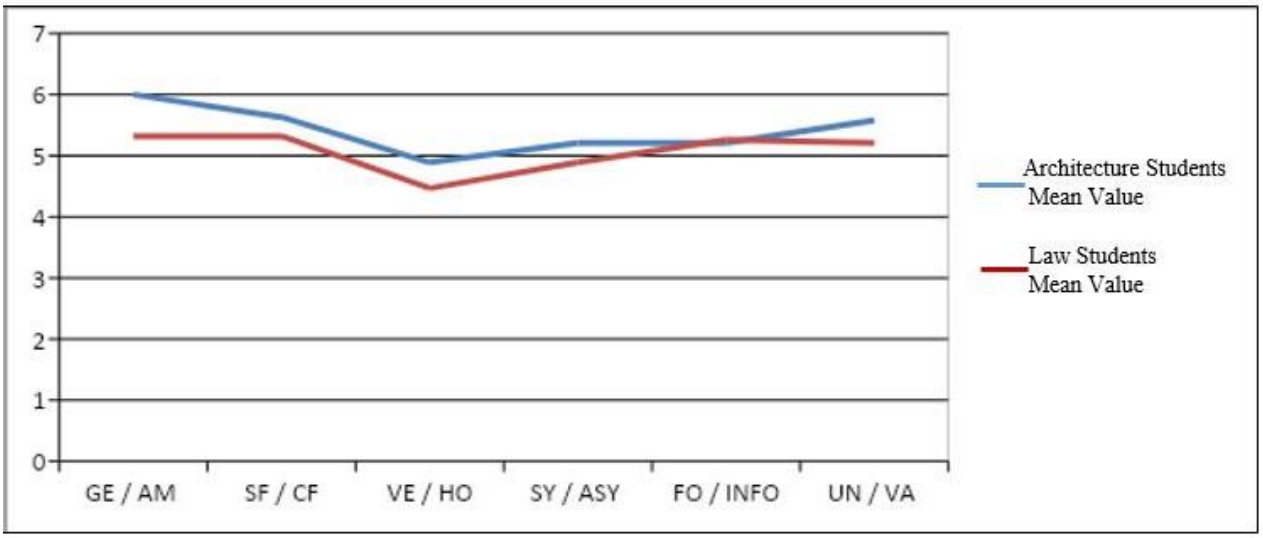

Figure 4: Architectural Composition for Condition effect no 4 by Architecture student and Law students

In their assessment of architectural composition in condition effect no 5, the architecture students assessment showed the building was highly geometrical and verticality, very high in simple form.

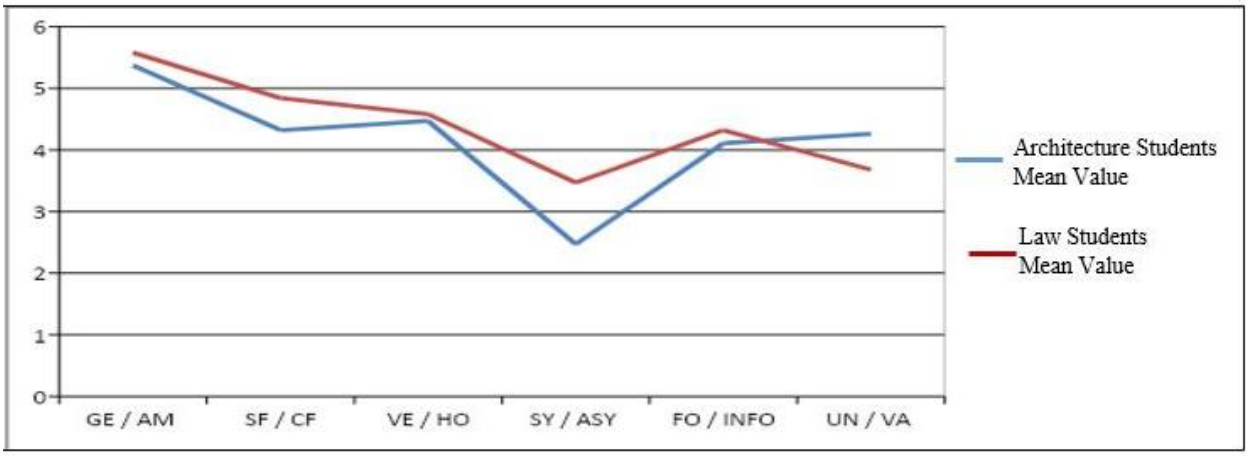

Figure 5: Architectural Composition for Condition effect no 5 by Architecture student and Law students

To architecture students, condition 5 effect building more asymmetrical, but was more formal and displayed more unity in composition. In the assessment by law students of condition 5 effect, to them building was highly geometrical and high in verticality. They also saw high simple form and formal form in the condition effect with rarely unity in the composition.

In summary as shown in Figure 5, there are sharp contrasts in the assessment of condition effect no 5 by the two groups coupled with difference in intensity of the rating as the law students' ratings are higher than the architecture students.

3.2 Findings on architectural composition

The two groups' assessment of the architectural composition of the five condition effects showed both similarity and differences in their response. In addition, the study findings revealed there are both across group and within group similarity and differences in the responses from both groups of respondents. The similarities in the responses from both groups showed most variables are above the average mean value as seen in condition effects numbers 1, 2, 4 and 5. Likewise there are differences in the assessment of the architectural composition by the two groups as the variable with the highest mean value within each group differs across the five condition effects. Also, the comparison of the highest mean value across the condition effects showed sharp contrasts among the two groups; the variable 'geometrical' recorded the highest mean value in condition effect numbers, 2, 4 and 5 while variable 'simple form' was assessed to have the highest mean value in condition effect numbers 3 and 4 with variable formal was rated the highest mean value once in condition effect no 1 for the non-architects group. /

In the architecture student group the descriptive summary of all the 5 condition effects showed variables 'simple form' and 'geometry' had the most frequencies of re-occurrence as the highest mean value occurring twice in two condition effects each; conditions effect numbers 1, 3 and 4, 5 respectively and the variable 'symmetry' was rated the highest once in condition 2. In addition, the response to measure of architectural composition in each of the condition effects by the architecture students showed variable 'simple form' as the most distinguishing in condition effect no 1 and 3. The architecture student's assessment of architectural composition of condition effect no 2 indicated that the variable 'symmetrical' was the most distinguishing while, in conditions effect numbers 4 and 5, the variable 'geometrical' was the most distinguishing variable.

In summarizing the law students' response they assessed variable 'formal' as the most distinguishing in condition effect no 1, while variable 'geometrical' was the most distinguishing in the condition effect no 2, but variable 'simple form' was the most distinguishing.in condition effect no 3. However, this group assessed condition effect no 4 in a unique way as two variables 'geometrical' and 'simple form' were assessed as the most distinguishing in condition.. In assessing condition effect no 5, to the non-architects the variable 'geometrical' was the most distinguishing among the other variable in this study.

3.3 Result of Respondents' Response to Aesthetic Value

In the response of the first group of respondents, the architecture students to condition effect no1 revealed only adjectival scales of 'pleasant', 'subtle', 'bright' and 'likeable' were rated above the average mean score of 3.5, which represents 15%. This implied that to the architecture students' condition effect no1 have very poor aesthetic value. However, to the Law students, condition effect no 1 showed all the adjectival scales had their mean value above the average mean of 3.5, representing 81%, except for 'sensuous', 'subtle', 'unique', 'cheerful' and 'idyllic' which had mean value below the average mean. This implied that to the law students condition effect no 1 have high aesthetic value as shown in figure 6.

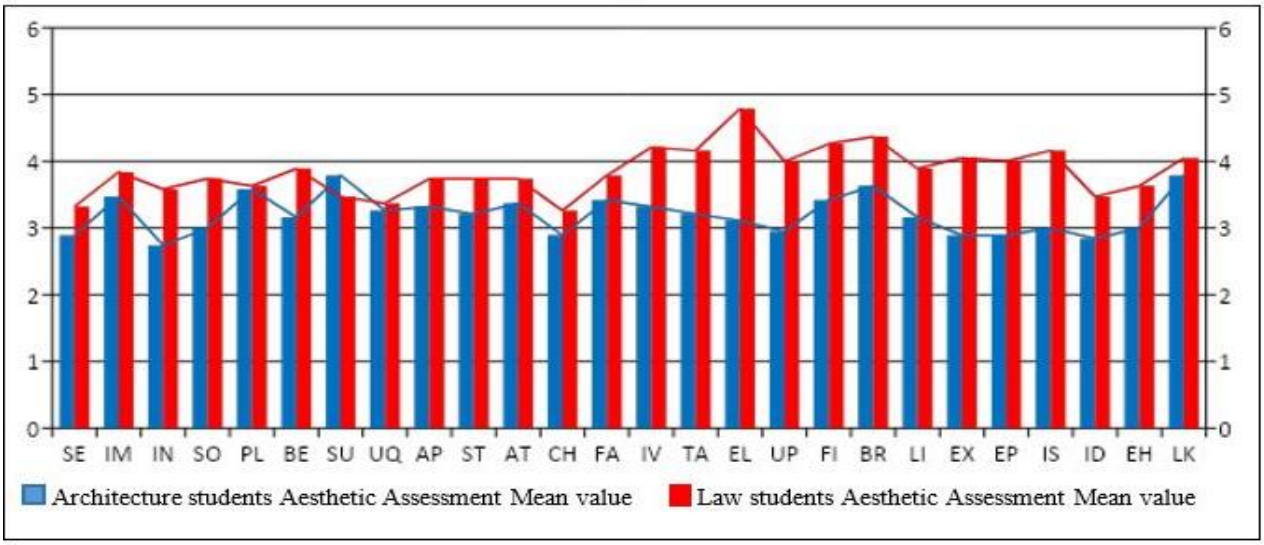

Figure 6: Assessment of Aesthetic value for condition effect no 1 by Architecture and Law students

In condition effect no 2, the architecture students' response showed sharp difference from condition effect no 1, in their measure of aesthetic value; only adjectival scale of 'subtle' and 'lively' had mean value below average mean score of 3.5 will other adjectival scales were above 3.5 mean score representing 92%, meaning that to the architecture students' condition effect no 2 had a very high aesthetic value based on the adjectival scale as shown in Figure 7.

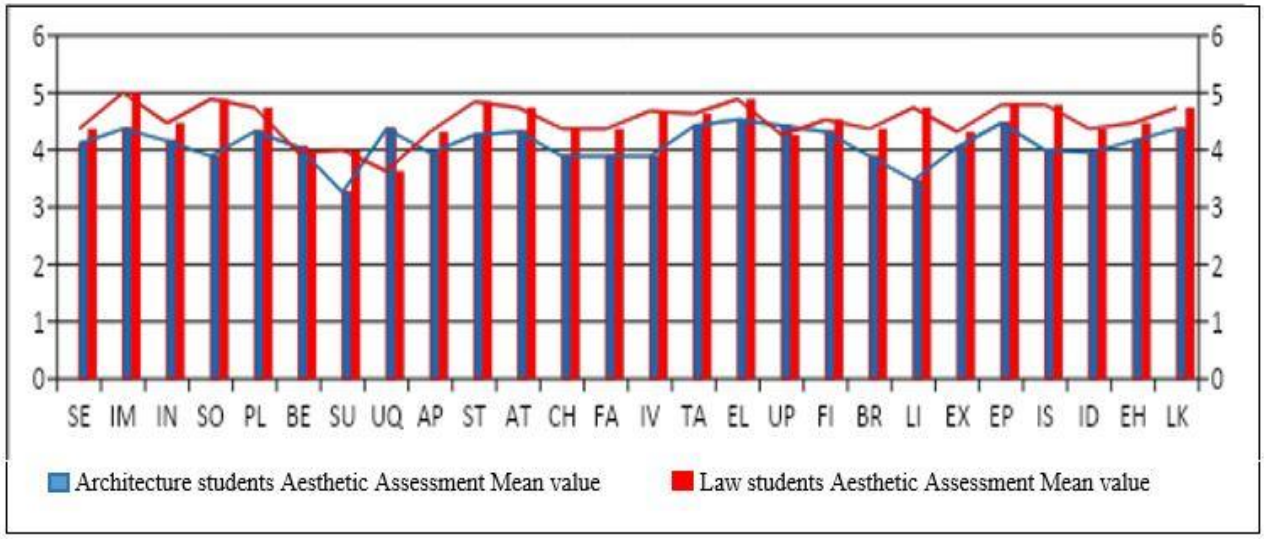

Figure 7: Assessment of Aesthetic value for condition effect no 2 by Architecture and Law students

There was similarity in the assessment of condition effect no 2 by the non-architects and architects 'assessment of condition effect no 2. In condition effect no 2, the 24 adjectival scales with mean value above average represented 92% which implied that to non-architects the building had very high aesthetic value.

In the assessment of aesthetic measure of condition effect no 3 by the architects, all the adjectival scales had their mean value below the average mean value of 3.5, the highest mean value was adjective 'unique' with mean value below 3.0, it inferred that condition effect no 3 had very poor aesthetic value as shown in fig 8.

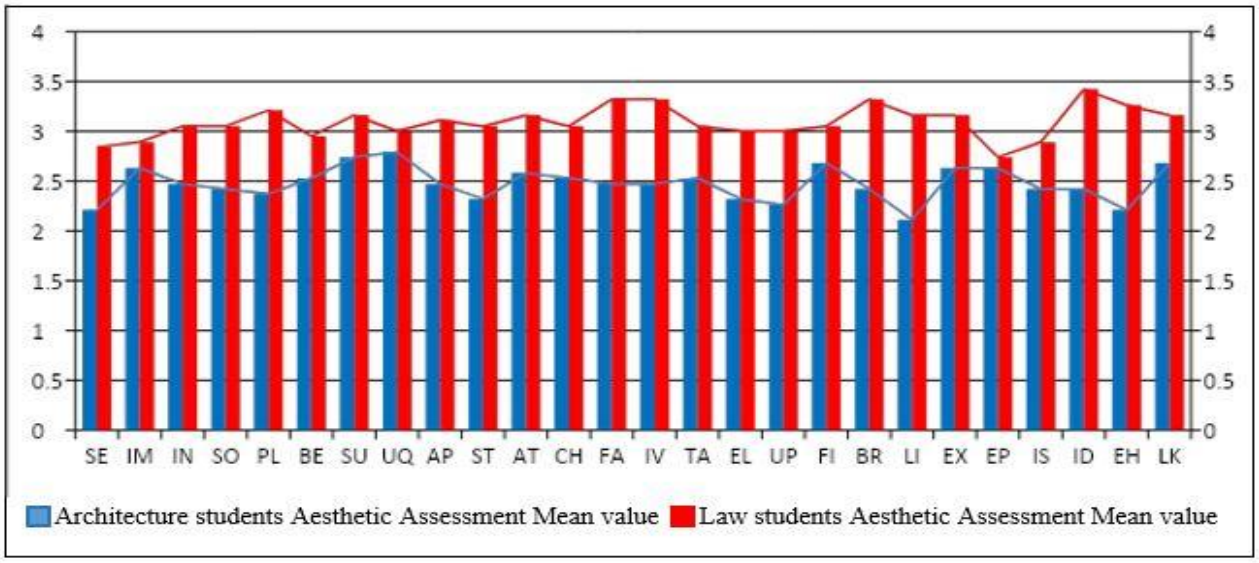

Figure 8: Assessment of Aesthetic value for condition 3 effect by Architecture and Law students

Similarly, assessment by the non-architects of condition effect no 3 showed none of the adjectival scales had mean value above the average mean of 3.5, although majority of the adjectives had mean value above 3.0; with the highest adjective been idyllic with mean value of 3.42, which also mean condition effect no 3 had a poor aesthetics assessment based on the adjectival scales. Although there are similarity in the assessment of aesthetic value of condition effect no 3, the degree of passion of the assessment varies as the non-architects rating was slightly higher that the architects rating.

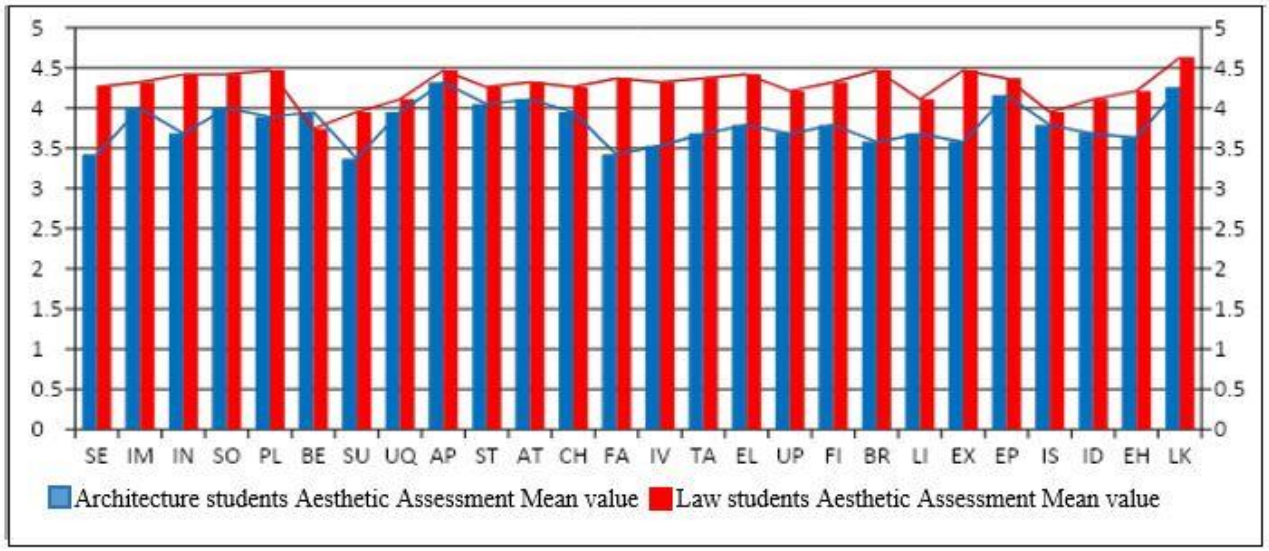

Figure 9: Assessment of Aesthetic value for condition effect no 4 by Architecture and Law students

In condition effect no 4 the assessment of the architects showed that only 3 adjectival scales of 'sensuous', 'subtle', 'fashionable', were rated below the average mean score of 3.5, by respondents. These 23 adjectives rated above mean average represent 89%, which implied that condition effect no 4 had high aesthetic assessment based on the adjectival scale.

In the assessment of non-architects' group of condition effect no 4, showed the mean value of all the adjectival scales were above the mean average of 3.5; the least mean value 3.74 was for adjective 'beautiful'. In summary condition effect no 4 to the non-architects' had a very high aesthetic value.

The assessment of the aesthetic value of condition effect no 5 by the architects showed that only eight adjectives had mean value above average mean value of 3.5 which represented 27% as shown in figure 10. The descriptive interpretation from the architects' assessment of condition effect no 5 was that it had a poor aesthetic value.

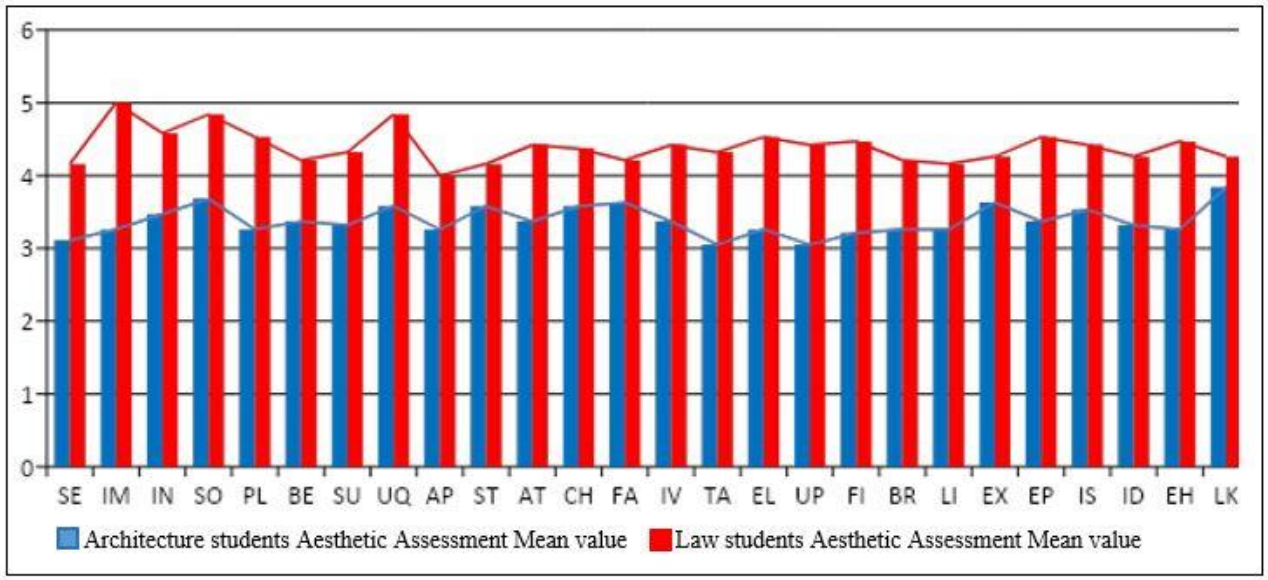

Figure 10: Assessment of Aesthetic value for condition effect no 5 by Architecture and Law students

But there was strong contrast in the assessment of the same condition by the non-architects group where in all the adjectival scales had men value above the average mean of 3.5, with the lowest of them adjective being 'appealing' with mean value 4.0. This inferred that condition effect no 5 had high aesthetic value based on the assessment by non-architect.

3.4 *Findings on Aesthetics Values*

There are similarities and differences in the response by the two groups of respondents in the aesthetic value of the 5 condition effects in the study. To the architects condition effect no 1 had low aesthetic value while the non-architects group rated the aesthetics value high, this showed across group difference in the rating. The difference was also exhibited within group. However in condition 2 both groups of respondents assessed the condition effect very high in aesthetic value showing across group similarity. Although with 92% mean value above the average mean in both groups there are within differences in each group assessment of adjectival scales. There are different high and low points across the graph of the two groups across all the condition effects. In the non-architects group the adjective 'impressive' had the highest mean value of 5.0, while to the architects the adjective 'elegant' had the highest mean value of 4.53.

In condition effect no 3 there existed across group similarity in the assessment by the two groups as they both assessed the condition effect very low in aesthetic value. There are within group contrasts in their assessment by the two groups of condition effect no 3. To the architects the adjective 'unique' had the highest mean value while adjective 'idyllic' had the highest mean value for the non-architects group. The two groups assessed

condition effect numbers 4 and 5 high and very high respectively in the aesthetics value showing across group similarity although the non-architects' group assessment was more intense than the architects group in the two conditions.

The differences in the assessment are even sharper in the condition effect no 5, showing wide gap between the assessment by the non-architect and architects. In this condition effect also there are both within group and across group differences.

4.0 Conclusions

The importance of architectural composition has been further established in this study because it could have influence on the aesthetic value of buildings, particularly prototype buildings. Architects are to pay special attention to architectural composition in their design as it goes a long way in influencing the aesthetic measure and value of the built form. This study also suggests that architectural composition could influence aesthetic measure and consequently influence aesthetic value. Architects and non-architects perceive and judge the built environment differently, and also inherent in this study are some similarities that seek to confirm that this is true for prototype bank buildings. The study also suggests that there are significant relationship between architectural composition and aesthetic value. The significant role of architectural composition in the design process should be brought to the fore with emphasis on its impact on façade and subsequently the aesthetics of buildings. There is also the need for effective and efficient training of architects in schools of architecture on the importance and effective manipulation of architectural composition. Architects should proffer design solution that meet aesthetic expectations of all because buildings are expected to serves as agents of visual aesthetic comfort and appeal for a purposeful and functional design.

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