

Exploration of the Key Elements of Traditional Residential Housing for Cultural Heritage in the Southeast, Nigeria

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ABSTRACT

The essence of traditional building style is to portray its unique regional cultural features, which reflect the social, history and culture of the people. These unique regional cultural features in the Southeast, Nigeria include the wall decoration with motif, use of courtyard, placement of Obi, carved materials (doors, timber columns/ posts), use of mud, house design and forms and locally sourced construction materials. The traditional building has changed from one stage to another and to such an extent that the socio-cultural and housing identity aspect are absolutely getting lost. However, non-availability of documented traditional housing elements to the construction industry leads to non-adaptation of such elements by the construction industry or stakeholders. The aim of this research is to explore the key elements of traditional residential housing of the Southeast, Nigeria with a view to promote cultural heritage of the people. Qualitative research carried out through the administering of questionnaires, interviews and observations in some villages in the Southeast part of Nigeria has shown that buildings are designed and constructed without identity which does not promote the cultural heritage of the people. This research therefore, recommended that for sustainability of cultural heritage, Architects and designers at preliminary design stage should consider the unique regional cultural features in that region.

Keywords: cultural features, heritage, housing, key elements, traditional residence.

INTRODUCTION

The beliefs, cultures, and traditions of a people are reflected in the architecture of such places. This condition can be effectively in either a traditional residential housing setting or an environment with a high level of cultural respect (Hou and Li, 2006, Eze, 2018; Owoicho *et al.*, 2024). Before the advent of contemporary residential housing, the traditional residential method of housing has been the practice of day. This has helped man to secure a reasonable shelter for protection against the impulse of his environment. Traditional house owners made use of their available local building materials and self-help efforts to create sustainable and affordable houses for their habitation with ease. Olotuah and Ajenifujah (2009) attested that housing is a subset of traditional architecture. The community's culture determines the evolution of it, taking into account its people's lifestyle, available construction materials, and the technical possibilities available to them.

The socio-cultural and housing identity aspects of traditional buildings are being completely lost as they undergo transformations from one stage to

another (Oliver, 1990; Nguluma, 2003). The absence of documentation for traditional housing elements in the construction industry causes non-adaptation by the construction industry or stakeholders. Traditional residential housing has been a significant source of housing and a possible method of identifying housing in various regions. In housing developments, there are many to be discovered as it unfolds indefinitely by observing the transformation on the use of materials and elements (Nguluma, 2003; Eze, 2018; Owoicho, *et al*; 2024). It is noteworthy that stakeholders have not fully identified, documented, or adopted these elements necessary for traditional housing construction. The absence of traditional elements in modern housing has highlighted an issue and a knowledge gap for investigation.

In Nigeria, the data bank for building industry has not fully identified the key elements that make up the traditional residential housing. The Igbo people's traditional architecture can be attributed to both physical and cultural factors (Nsude, 1987). It's worth pointing out that Nigeria has a rich history of architecture that can serve as the foundation for expressing building culture. Nevertheless, those who are responsible for the loss of Nigerian architectural key traditional elements have realised its importance (Eze, 2018). These essential housing elements in Southeast Nigeria have not been determined and documented in this new era. The research tends to find out also what are the key elements of traditional housing in the Southeast, Nigeria. The aim of this research is to explore the key elements of traditional residential housing in South-East Nigeria with the aim of promoting cultural heritage of the people.

LITERATURE REVIEW

Importance of Traditional Building Materials

Building materials sourced locally within the country reduce cost in buildings since there is less material transportation and other expenses to the site. It encourages traditional architecture as well as combining traditional and modern building materials to obtain an acceptable housing for the people. The study makes clear those elements that are continuously in use and those that have transformed. The essence of traditional building style is to portray its unique regional cultural features, which reflect the social history and culture of the people (Hou and Li, 2006). Ahianba (2009) states that the type of housing built is greatly influenced by the type of materials used for building construction.

Architecture, Culture and Traditional housing

Traditional residential housing is a residential building made from locally sourced building materials; such materials include loam, mud, clay, gravel,

stones, timbers, fruits and barks, bamboos, and leaves from raffia palm and oil palm trees for roofing (Eze, 2018). According to Eze (2018), traditional residential housing is a home built from the best material man could find around a particular environment to suit his need. According to Gerald (n.d.) and Owoicho, *et al.* (2024), traditional housing is a pre-capitalist building or settlement that was created by local people in a particular area. The building type that is affordable to the people evolves from the lifestyle and culture of the people. According to Lipi *et al.* (2010), cultural differences can influence how individuals experience and perform in workplace interactions. Akintokunbo (n.d.) averred that affordable housing is a term used to describe residential units whose total housing costs are consider “affordable” to particular group of people within a specified income range.

The architecture of the traditional housing in the past should not be regarded as obsolete; rather it should be lather for future. This is perhaps the reason Eliot Norton opined that the past be regarded as something not dead but an integral part of existence in one of his essays on architecture (Nsude, 1987; Eze, 2018). The success of a society's architecture is greatly impacted by the continuity of traditional housing maintenance. Eze (2018) asserted that the current negligence of traditional architecture and resulting absence of continuity in Igbo land and Nigeria at large has posed an obvious and embarrassing question, which many Nigerian Architects and planners avoid.

Architecture is capable of summarizing the history of a place in terms of social, cultural, and technological aspects (Gbotosho, 1996; Ahianba, 2009; Eze, 2018). The way people live is a reflection of their culture, just as the placenta and baby are linked together by an umbilical cord. In other words, vernacular architecture is a structure or a constructed shelter of a group of people according to their ethnicity, culture, traditions, religion and environment. However, their climate, locally available materials and their unique features become a constraint (Danja *et al.*; 2017). The architecture can be influenced by the culture of the people and the building materials they have at their disposal.

Traditional house forms in South East Nigeria

In terms of material options and construction methods, Igbo housing has much relation to that of the Yoruba, though with few differences in the aspect of spatial configuration (Osasona, 2007; Eze, 2018; Handoko and Kusumawanto, 2022). The traditional Yoruba compound layout supports massing of the building, while a typical Igbo homestead comprised of separate units, ranked in significance according to their relative access to the “obi” (the compound head’s hut). The Igbo traditional house unlike the Yoruba traditional house is made of decorated walls. The houses of the Igbo in South East Nigeria are

arranged collectively within a fenced wall in a compound having a single doorway with a covered porch. Sometimes, defensive devices are built strongly on the fence or compound walls. In constructing Igbo houses the materials commonly utilized include mud, sturdy timber, palm leaves, bush twine and pawpaw trunks for crafting a drainage system in a structure known as impluvium (Rikko and Gwatau 2011; Eze, 2018).

Houses, in the region typically have rectangular shapes. The common types of structures used in Igbo house building are load bearing mud walls timber framed and composite structures. The load-bearing wall consists of monolithic non-reinforced mud walls of 300mm to 600mm thick that carry the load of the roof only. This type of structural system is common in the northern part of the Igboland (Eze, 2018).

Housing and Social Development in South- East Nigeria

The Igbo people constitute the majority in South Eastern Nigeria. Igbo people have diversified strong cultures comprising many sub-ethnic groups with different vernaculars. The cultures of Igbo people are diverse and strong, with several sub-ethnic groups and different vernaculars. The Igbo people inhabit a recognized geographical zone, speak an Igbo language, exhibit a similar cultural style, and believe in the existence of a higher being known as "*Chi-ukwu*," "*Chineke*," or "*Obasi di n'elu*" despite their dialectical differences, breakup, and disorganized settlement pattern (Nsude, 1987).

An Igbo man appreciates his home, especially one created for his exclusive use, possibly in his own city. However, Marut et al. (2020) argued that various alternative building materials were introduced for sustainable development. Like other African communities, the Igbo community concept was inspired in terms of development and social welfare by West European evolutionary and functionalist thinkers (Eteng, 2002; Eze, 2018). The development study's community concept is based on self-help throughout the traditional Pre-colonial period and the colonial period, which is when Igbo-land's rural housing was delivered. The pre-colonial, colonial, and modern eras are the three main phases that the Igbo community concept in housing and social development actually fits under.

Key Elements of Traditional Housing of the South East, Nigeria

It's also critical to recognise that some elements - those that have changed and those that are still in use - are constants. The use of carved doors and posts, wall decorations, forked posts, enlarged caves, general planning techniques (placing courtyard, *Obi*, and sacred house), thatched roofs (made of grass, palm tree leaves, raffia palm, and mat), wattle and daub, and loam platforms

for sitting and sleeping are a few examples of traditional housing elements (Nsude, 1987; Dmochowski, 1990; Eze, 2018).

i. Carved Doors and Posts:

The Igbo housing characterized with carved doors and posts, whereby the crafts-men, who are talented and specialised in woodwork, carved the doors and posts with interesting designs and decorative arts. It has been observed as if it is a rule that all Igbo doors were made of single, massive plank produced by chipping whole trunk of wood, usually Iroko, from both sides until the desired thickness was obtained (Dmochowski, 1990). In general, the structure of Igbo doors is same, while some have shapes that give the illusion of a panel conformation, shown in Plate I (a-d).

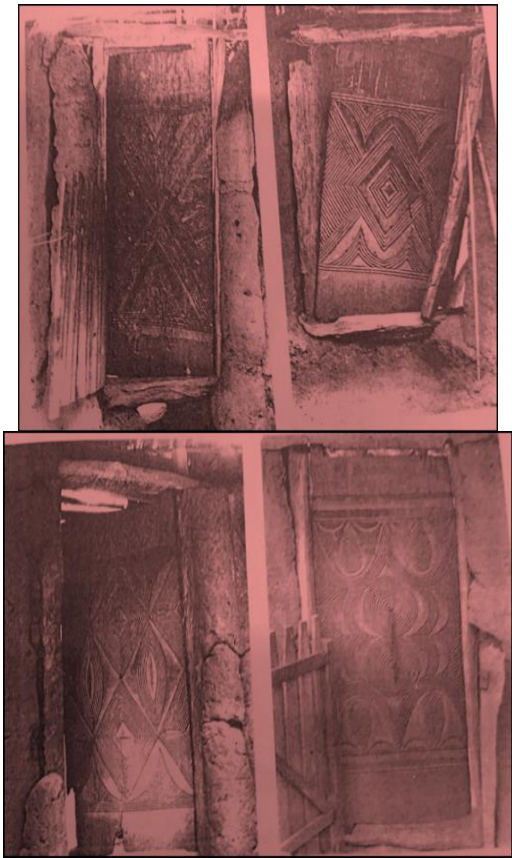


Plate I (a) Carved doors 1 and 2

Plate I (b) Carved doors 3 and 4

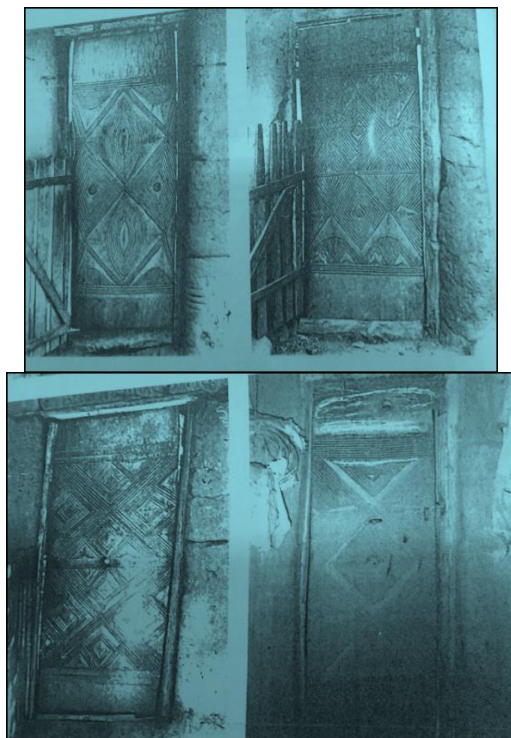


Plate I (c) Carved doors 5 and 6

Plate I (d) Carved doors 7 and 8

Plate I: (a – d) Various Types of Carved doors used in Igbo traditional Compounds. Source: Eze, 2018.

(ii) Wall Design and Construction:

The Igbo people are artistic in nature, and the structure of their walls is determined by the quality of building soil available in the area. A specific piece of land is set aside for digging building soil. In the middle of the rainy season, soil is excavated from a trench near the construction place. When the top soil is removed, the red clay soil beneath is visible. The red clay lumps are ground with a hoe and then water is added. Young men knead the clay, though occasionally loam (mixture of clay and sand) is used. A wall with a similar thickness of 30 to 40 centimetres is utilized with a shallow base that is dug to a depth of 15 to 45 centimetres. After processing, the loam is often placed in 30- to 50-centimeter-diameter lumps (Nsude, 1987; Eze, 2018). Once the wall is up, decorating happens. It has been noted that, similar to how Igbo people from different places speak their own languages, they also employ varied decorating techniques for their homes' walls (Eze, 2018). Between the 1960s and the present, there were three main categories of art applied to Igbo architecture: polychrome, carving and chipping of wooden posts and panels, and moulding of clay surfaces and the ornamentation of interior and exterior

walls with inserted materials like as glass, shattered bottles, or enamel. Generally speaking, moulded ornamentation was only used on sturdy walls made of high-grade loam.

Additional embellishments comprise the utilisation of *Uli* and geometric patterns that historically may have had a paranormal influence as well as polychrome. *Uli* or *Uri* refers to widely practised art of drawing decorated patterns usually applied on the body by Igbo women to enhance beauty. These patterns of using *uli* in decoration are the source of many motifs found in traditional Igbo house decorations (Basden, 1966 and Eze, 2018).

Majority of geometrical motifs are created by simply manipulating geometrical forms and symbols, such as the dot, line, arc, quadrangle, triangle, circle, and polygon. These types of motifs are not restricted to wall. The other types of motifs used in architectural decoration in Igboland include the use of motif derived from objects like python that have religious significance, though not a general rule. Various plant species and their components, celestial bodies like the sun, moon, and stars, animals (both domestic and wild, with a strong presence in Igbo folklore), reptiles like lizards and pythons, musical instruments, masques, and people are among the often-used objects (Eze, 2018).

(iii) Fork Post/ Carved Column:

The Igbo buildings are not dependent on applied decoration, but also on the skilful treatment of the structural elements that enhances aesthetic satisfaction such as the composite pillars (fork post) that support the eaves of front veranda. In the construction process, fork posts made from branching tree stems are used. The post features a blend of geometrical, botanical, and human images sculpted in high relief, including dancers, soldiers, ladies carrying weights, and performers wearing masks (Dmochowski, 1990). As shown in Plates II, the Igbo carved timber columns are primarily employed as interior columns.

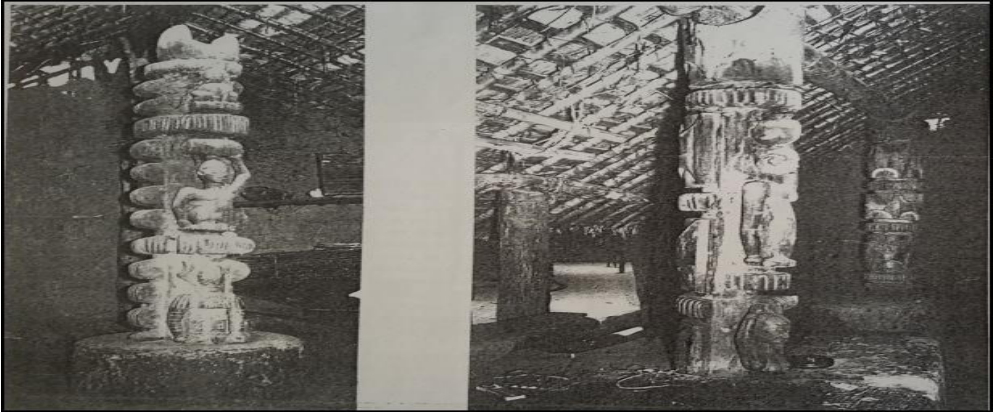


Plate II: Different Igbo Carved Columns/ Posts used as Interior Decoration and Structural Column.

Source: Dmochowski, (1990) and Eze (2018)

(iv) General Planning Techniques:

According to Osasona (2007) and Eze (2018), the Igbo general planning technique for traditional housing entails managing the site layout in placement of the main traditional house, the sacred house, the courtyard, and the "Obi" or "Nkoro" (small house meant for the eldest male in a family and to receive visitors and elder meetings). Courtyards are enclosed outdoor spaces that are typically open to the elements at the top. In other words, an unroofed area totally or partially surrounded by walls or structures, usually as part of a castle or huge home (Abass et al; 2016; Eze, 2018; Ofiedane and Eze, 2019).

The general layout in Igboland varied in shape, resulting in different units, each sheltering a whole family group. Each enclosure was surrounded by a boundary wall with a single main entrance that was solidly built and, while not fortified, did contain certain defensive features. Another rear exit entrance to the compound was occasionally used as an escape route (Dmochowski, 1990).

RESEARCH METHODOLOGY

The research design used is descriptive survey research, which involves conducting a simple survey of the Igbo built environment to identify the key elements of traditional residential housing. The research is also based on historical research, which examines past events, attitudes, and facts to better understand the present and predict the future.

The Study Area

The research area includes the five states in the South East geopolitical zone. The five states are largely indigenous Igbo-speaking territories, with Christianity as the primary religion. The selection of the five states in the South East geopolitical zone as the study area was based on the following criteria:

- (i) Cultural housing has a stronger influence on traditional style in the study area compared to other geopolitical zones.
- (ii) That each of the five study States (Anambra, Enugu, Imo, Abia and Ebonyi) have a unique pattern of traditional housing in the South East Nigeria.
- (iii) That, while being located in the same geopolitical zone, the selected States differ little in terms of geophysical characteristics.

Method of Data Collection

The primary data used in the study was obtained from fieldwork done in single-family traditional housing in rural sections of the study area. The quantitative data include a description of building architectural aspects, particularly the identification of key traditional housing elements of high cultural significance, as well as a description of building types and sizes.

The data collected was examined using content analysis. The research questionnaire data on the elements of traditional residential housing in South Eastern Nigeria was evaluated using descriptive statistics, including charts and frequency distribution tables. The administered questionnaires were evaluated using the Linkert scale of measurement. The ranking was based on their level of contentment with the people's acceptable cultures on a 4-point Linkert scale: 1 = strongly disagreed, 2 = disagreed, 3 = agreed, and 4 = strongly agreed. Choosing four points instead of five Likert scale exclude individuals who are undecided, and the number of Traditional/Hut Houses is based on the National Population Commission (2006).

Table 3.1: Sample Size Distribution for Single Family Traditional Residential Housing in South-East Zone.

STATES	No. of Tradition al/Hut Houses	% of Sample Size Distributio n	Expected Minimum Populatio n Sample	No. of Question- naires Distribute d	No. of Question -naires Returne d	% of Question -naires Returne d
ABIA	17,396	10.4	40	50	44	88
ANAMBRA	33,946	20.3	78	90	82	91
EBONYI	65,498	39.1	149	160	153	96
ENUGU	28,237	16.9	65	75	72	96
IMO	22,290	13.3	51	60	54	90
SUB- TOTAL	167,367	100	383	435	405	461

Source: Eze (2018)

Table 3.1 shows a sample size distribution for single-family traditional residential housing in the South East zone. According to NPC (2006), the South East zone has a traditional housing/hut population of 167367. According to Morgan's table for determining sample size, 167367 populations require a sample size of 383; however, a total of 435 questionnaires were distributed proportionally among the States to ensure that the expected minimum by Morgan is finally achieved. The excess of 52 surveys represents potential errors during questionnaire administration. The percentage of sample distribution was determined by the differences in geographical areas of the study area. A total of 405 questionnaires were returned, and their percentages are displayed in Table 3.1.

Sampling Method and Sample Size for Architects and Builders:

A sample was drawn from the population of registered but resident members of the Nigerian Institute of Architects (NIA) and the Nigerian Institute of Builders (NIOB) in each State Chapter. The sample was purposefully drawn from members of these institutes who are fellows and full members, as well as professionals with more knowledge of Igbo traditional architecture than the housing residents. In addition, when giving questionnaires, percentages based on the number of these members were evaluated. Table 3.2 displays the sampling method and sample size for architects and builders in their respective chapters, which are proportionately dispersed to each State based on its size.

Table 3.2: Sample Size Distribution for Registered and Resident Architects and Builders in the State Chapters of South-East Zone

	STATE CHAPTERS						% SZD	SAMPLE SIZE	NOQA	NOQR	% OQR
	AB	AN	EB	EN	IM	TOTAL POPULATION					
Architects (NIA)	24	14	16	158	62	274	60	126	158	152	96
Builders (NIOB)	23	39	24	15	80	181	40	84	122	98	80
Sub-Total	47	53	40	173	142	455	100	210	280	250	176

Key notes: **AB** = ABIA, **AN** = ANAMBRA, **EB** = EBONYI, **EN** = ENUGU, **IM** = IMO, **%SZD** = % OF SAMPLE SIZE DISTRIBUTION, **NOQA** = NO. OF QUESTIONNAIRE ADMINISTERED, **NOQR** = NO. OF QUESTIONNAIRE RETURNED, **%OQR** = % OF QUESTIONNAIRE RETURNED

Source: Eze (2018)

Table 3.2 shows a population of 274 architects and 181 builders, totaling a sample population of 455 from various NIA and NIOB chapters in the South East of Nigeria. The percentage of sample size distribution for architects was 60%, compared to 40% for builders, which was dispersed proportionally throughout the two stated professionals in the five states studied. Morgan's table specified a minimum sample population size of 210. During the fieldwork, 280 questionnaires were delivered to architects and builders based on the fraction of the sample size found in their state. A total of 250 questionnaires were returned, with 96% for architects and 80% for builders.

RESULTS AND DISCUSSION

Based on the nature of the research, data was gathered from experts (architects and builders) and residential tenants (traditional and contemporary dwellings). Respondents were distributed based on registered and resident architects and builders with the State Chapters of NIA and NIOB in the study area.

Table 4.1 shows that the researcher used 405 and 452 respondents for traditional and contemporary housing in the South East zone, respectively. In traditional housing, Ebonyi State has the largest percentage (38%) of responders, while in Contemporary housing, Imo State has the highest percentage (28%). The distribution was determined using the population of traditional and contemporary housing in each unit of the research region.

Table 4.1: Number of Houses (Single Family Traditional and Contemporary) covered in the Study Area

	Traditional Housing		Contemporary Housing	
STATES	Frequency	Percent	Frequency	Percent
ABIA	44	11	82	18
ANAMBRA	82	20	95	21
EBONYI	153	38	58	13
ENUGU	72	18	89	20
IMO	54	13	128	28
SUB-TOTAL	405	100	452	10

Source: Eze (2018)

Examining the Key Elements of Traditional Housing in the Southeast

This section discusses some of the important aspects of traditional housing in the South East. The first objective of the study was not developed solely by personal observation; however, because some of these components are no longer found in the study area, a questionnaire was distributed to architects and builders as well. In a nutshell, the fundamental characteristics of traditional building during that time period were established by a historical study (examination of related literature) and responses from architects, builders, and building owners via questionnaire and interview. The information gathered was enhanced.

The scale of measurement was a 4-point Likert scale, with cut-off points for Mean value ranging from 1- 1.75 = Strongly Disagreed, 1.76 - 2.50 = Disagreed, 2.51- 3.25 = Agreed, and 3.26 - 4.00 = Strongly Agreed. The mean is the most commonly used metric of central tendency. In other words, it is the arithmetic mean of a set of scores (Awotunde and Ugodulunwa 2002). The formula used is displayed below:

$$\text{Mean} = \bar{X} = \sum x/n \text{ or } \sum fx/n$$

Where \bar{X} is the arithmetic mean, \sum is the Greek letter Sigma meaning "summation of", X is the Scores, n is the number of cases, and f is the frequency. Where 1, 2, 3, and 4 indicate "Score" and f symbolizes SD, D, A, and SA. Using the formula, the mean is computed as given in Table 4.2.

Each of the survey statements in Table 4.2 is explored separately in each subheading. However, considering the stated mean range for decision-making, respondents' consensus judgement on the major characteristics of traditional residential housing in South-East Nigeria spans from 'Agree' to 'Strongly Agree'. Table 4.2 shows the architects' and builders' responses on identifying the major elements of traditional residential housing in South-East Nigeria. Using the formula, the mean is computed as given in Table 4.2.

Table 4.2: Architects and Builders response on the identification of the key Elements of Traditional Residential Housings in the South-East Nigeria

S/No	Code	Survey Statement	SD (%)	D (%)	A (%)	SA (%)
1.	TE01	Use of local materials like thatch, mud, laterite and clay for roof and wall	24 (9.6)	15 (6.0)	80 (32.0)	131 (52.4)
2.	TE02	Use of fork post, carved doors and posts for support and closing openings	13 (5.2)	24 (9.6)	128 (51.2)	85 (34.0)
3.	TE03	Placement of courtyard and “ <i>Obi</i> ” or “ <i>Nkoro</i> ” house in the compound	- -	18 (7.2)	124 (49.6)	108 (43.2)
4.	TE04	Decoration of wall through the use of “ <i>Uli</i> ” and geometrical motif (e.g. Quadrangle, triangle, circle, polygon and other motifs derived from objects.	6 (2.4)	27 (10.8)	117 (46.8)	100 (40.0)
5.	TE05	Use of loam platform for bedding and sitting	12 (4.8)	56 (22.4)	112 (44.8)	70 (28.0)
6.	TE06	Use of small window opening covered with timber or mat	6 (2.4)	26 (10.4)	123 (49.2)	95 (38.0)
7.	TE07	Use of none or shallow foundation	37 (4.8)	22 (8.8)	113 (45.2)	78 (31.2)

Key: SD = STRONGLY DISAGREE, D = DISAGREE, A = AGREE, SA = STRONGLY AGREE

Source: Eze (2018)

Use of Local Material like Thatch, Mud, Laterite and Clay for Roof and Wall as key elements of Igbo Traditional building

Since the beginning of time, man has been utilizing the local construction materials that are accessible, such as thatch, mud, laterite, and clay, for the roof and walls. This appears to be a fundamental component of traditional Igbo housing.

In Table 4.3, code TE01 (Use of local materials like thatch, mud, laterite and clay for roof and wall) that has a Relative Importance Index (RII) of 0.818 is ranked second with a mean value of 3.36. Using the Likert scale, it implies that a Mean value of 3.27 gives a consensus opinion that respondents strongly agreed that the use of local materials like thatch, mud, laterite and clay for roof and wall is one of the key elements of traditional housing of the South-east.

Most of the houses in the sampled areas are made from local sourced materials like thatch, mud, laterite and clay for their roof and walls. Most of the houses seen are found to contain these elements. This is in agreement with the observation that most of the houses seen are made of local materials like thatch, mud, bamboo, and clay for roof and wall, while most of these buildings still have small window openings with mat or timber depending on the location. The builders and architects also agreed with this fact that most of the housing units in the sampled areas contain most (at least each house contain up to three or four of these elements) of these elements.

Table 4.3: Examination of Consensus Opinion on each of the Key Elements of Traditional Residential Housings in South East, Nigeria.

Code	Survey Statement	Respondents' Ranking				Sum	Mean	Rank Order	Consensus Opinion
		1 S D	2 D	3 A	4 S A				
TE01	Use of local materials like thatch, mud, laterite and clay for roof and wall	24	15	80	13	81	3.27	2	Strongly Agree
TE02	Use of fork post, carved doors and posts for support and closing openings	13	24	128	85	78	3.14	5	Agree
TE03	Placement of courtyard and "Obi" or "Nkoro" house in the compound	0	18	124	10	84	3.36	1	Strongly Agree
TE04	Decoration of wall through the use of "Uli" and geometrical motif (e.g. Quadrangle, triangle, circle, polygon and other motifs derived from objects.	6	27	117	10	81	3.24	3	Agree
TE05	Use of loam platform for bedding and sitting	12	56	112	70	74	2.96	6	Agree
TE06	Use of small window opening covered with timber or mat	6	26	123	95	80	3.23	4	Agree
TE07	Use of none or shallow foundation	37	22	113	78	73	2.93	7	Agree

MEAN RANGES: 1- 1.75 = Strongly Disagree, 1.76 – 2.50 = Disagree, 2.51- 3.25 = Agree and 3.26 – 4.00 = Strongly Agree

Use of Fork Post, Carved Doors and Posts for Support and Closing Openings

Source: Eze (2018)

Another key element of Igbo traditional building that was identified is the use of fork post, carved doors and posts for support and closing openings. In Table 4.3, use of fork post, carved doors and posts for support and closing openings (code TE02) that has a mean value of 3.14 is ranked first with. Using the Likert scale, it implies that a mean value gives a consensus opinion that respondents agreed that use of fork post, carved doors and posts for support and closing openings is one of the key elements of traditional housing of the South East.

Placement of Courtyard and *Obi* in Compound

One of the identified key elements of traditional housing in the study area is the placement of courtyard and *Obi* in compound. The use of courtyard has been for the purpose of achieving adequate ventilation and lighting in a house. However, it also serves as indoor working environment within a structure. Likewise, *Obi* or *Nkoro* (a small house meant for eldest male in a family) serves a place for receiving visitors as well as for holding kinsmen meeting by the eldest man of the family. In Table 4.3, code TE03 (Placement of courtyard and “*Obi*” or “*Nkoro*” house in the compound) that has a mean value of 3.36 is ranked first. Using the Likert scale, it implies that a mean value of 3.36 gives a consensus opinion that respondents strongly agreed that Placement of courtyard and “*Obi*” or “*Nkoro*” house in the compound is one of the key elements of traditional housing of the South East.

Decoration of Wall through the use of *Uli* and Geometrical Motif

Among the identified key elements of traditional housing in the study area, is the decoration of wall using *Uli* and geometrical motif. In Table 4.3, decoration of wall using *Uli* and geometrical motif (Code TE04) that has a mean value of 3.24 ranked third. Using the likert scale, it implies that a mean value gives a consensus opinion; that respondent agreed that decoration of wall with *Uli* and geometrical motif is one of the key elements of traditional housing of the South East. The implication was that wall decoration as ascertained is one of the key elements of Igbo Traditional building in the study area.

Use of Loam platform for Bedding and Sitting

The use of loam platform for bedding and sitting was identified as one of the key elements of Igbo traditional residential housing. The research has shown that the use of loam platform for bedding and sitting was identified as one of the key elements of Igbo traditional residential housing. In Table 4.3, the use of loam platform for bedding and sitting (code TE05) is rank sixth owing to it

is a mean value of 2.96. This Mean value implies a consensus opinion that respondents agreed that use of loam platform for bedding and sitting is one of the key elements of traditional housing of the South East.

Use of small Window Opening covered with Timber or Mat

The use of small window openings covered with timber or mat are identified as one of the key elements of Igbo traditional residential housing. In Table 4.3, the use of small window openings covered with timber or mat (code TE06) that has a mean value of 3.23 is rank forth. This Mean value implies a consensus opinion that respondents agreed that the use of small window openings covered with timber or mat is one of the key elements of traditional housing of the South East.

Use of None or Shallow Foundation

Foundation determines the strength of any structure. The foundation depth in the traditional housing was observed to be shallow while some do not have foundation at all unlike in the contemporary housing that has a good structured foundation. In Table 4.3, the use of no or shallow foundation (code TE07) that has a mean value of 2.96 is ranked seven. This Mean value implies a consensus opinion that respondents agreed that the use of no or shallow foundation is one of the key elements of traditional housing of the South East.

Existence of *Obi* or *Nkoro* in Traditional and Contemporary Housing

Majority of the houses visited did not have *Obi* even in the traditional housing units used in the study. In the contemporary buildings, higher percent (78.1%) of the respondents that are 353 in numbers have declared there is no existence of *Obi* in their houses. This is evidence that *Obi* is fading from existence as one of key elements. A typical sample of *Obi* house found in the rural housing setting shown in Plate III, few were in existence though deteriorated.



Plate III: A typical *Obi* in a rural area in Imo State built with conventional building materials showing sitting arrangement. Source: Eze (2018)

Table 4.4: Data from Personal Observation Schedule on Traditional Building Elements Used in South East, Nigeria

Locations	Traditional Building Elements Used				
	House Form	Courtyard	Placement of <i>Obi</i>	Wall Finishes/ Decoration	Door/Finishes
Abia	Rectangle & L-shape	No courtyard	<i>Obi</i> exist in few compounds	Some houses are without finishes, while some were finished with <i>Uli</i>	Ordinary timber
Anambra	Rectangle	Majority (95%) of houses are without courtyard	<i>Obi</i> exist in few compounds	Few houses were finished with mud, laterite, some plastered with cement, while few were decorated with <i>Uli</i>	Use of timber doors without carving
Ebonyi	Square and rectangle	No courtyard	No longer in existence	Few houses were finished with laterite walls, some are partly plastered with cement, while few houses were decorated with <i>Uli</i>	Timber doors without carving
Enugu	Square and rectangle	Majority (95%) of houses are without courtyard	No longer in existence	Some houses are without finishes, while some were finished with <i>Uli</i>	Timber doors without carving
Imo	Rectangle	Majority (95%) of houses are without courtyard	<i>Obi</i> exist in few compounds	Few houses were finished with laterite walls, some are partly plastered with cement.	Timber doors without carving

Source: Eze (2018)

Fieldwork Sample Photographs of Traditional Housing in Anambra State



Plate IV: Traditional Residential House of Late Mr. Ikebuaso Ofolagoro of Ihite-oha Orsumoghu, Ihiala L. G. A, Anambra State. Showing Transformation on Roof and Plaster on the Mud wall.

Source: Eze (2018)



Plate V: Late Mr. Humphrey Okuma's Transformed Traditional Building at Ihiala built in 1960, showing timber post, raffia palm ceiling, mud wall plastered with cement and roof covered with zinc.

Source: Eze (2018)



Plate VI: Wattle and daub construction of traditional housing made with mud wall and transformed zinc roof.

Source: Eze (2018).



Plate VII: Wattle and daub construction of traditional housing made with mud wall and thatch raffia palm leaves roof.

Fieldwork Sample Photographs of Traditional Housing found in Ezzangbo and Ozibo, Ebonyi State



Plate VIII: Traditional housing made with mud wall and thatch grass roof



Plate IX: Traditional housing made with *Uli* decorated mud wall and zinc roof.

Source: Eze (2018).

Fieldwork Sample Photographs of Traditional Housing found in Akpuoga-Nike and Ezza-Akpuoga, Enugu State



Plate X: Traditional housing made with mud wall and thatch grass roof.



Plate XI: Researcher posing at the traditional housing made with mud wall and thatch grass roof.

Source: Eze (2018).

Fieldwork Sample Photographs of Traditional Housing found in Amugbaraezealaire and Isuobishi, Imo State



Plate XII:
Transformed traditional housing made with laterite wall, plastered with cement plaster and covered zinc roof.



Plate XIII: Transformed traditional housing made with laterite wall, and covered with zinc roof.

Source: Eze (2018).

CONCLUSION AND RECOMMENDATIONS

The Igbo people believe that most of South East Nigeria's architectural challenge stems from the complete disregard and abandonment of indigenous traditional building. According to the fieldwork, South East Nigeria's architectural identity (traditional dwelling elements and materials) is fading in majority of the sites visited, albeit a few villages retain it. Nonetheless, the people rejected a shift in their identity and beliefs brought about by European architecture. It is a well-known truth that the Igbo way of life did not entirely collapse despite European influence. However, its effect gradually led to re-enforcing cultural growth, so that the society's culture and beliefs still have their relevance. In nutshell, for current architecture to serve present society efficiently, it must reflect this cultural continuity.

The fieldwork also demonstrates that architectural identity may be maintained by identifying and exploring key elements such as decorations, *Obi* or *Nkoro*, home design and shapes, as well as building materials, in order to provide appropriate dwelling for people in accordance with their cultures. As a result, professionals should avoid discarding traditional hereditary competence related to design evolution and execution. This is to prevent huge tragedy and enormous loss if traditional architectural styles and construction processes perish from the continent. There is a need to spread the great benefits received from our indigenous methods, materials, and elements, while any shortcomings with the conventional approach can be addressed.

In order to explore the key traditional elements for the cultural heritage for the people of South East Nigeria, the researchers recommend that Architects as designers in the building industry should endeavour to identify and possibly specify those key traditional elements and building materials that have cultural values during design of the contemporary aspects.

With the advancement in contemporary housing, most of the trained craftsmen are no longer involved in the construction of houses as a result many have lost their jobs. Not only this, people are no longer trained in such job areas since the housing trend do not have them in picture. Training of building craftsmen and artisans should therefore be encouraged to meet the rural/local requirement skills as well as conforming to the social and economic situation. This as a result will provide jobs opportunity to many Nigerians.

There is need to incorporate various regional key architectural elements of traditional housing to the school curriculum, not only in architectural department but also in building department. The knowledge of these elements of traditional housing will enable the student architect(s) and builder(s) to

study, understand, implement during design and pass on to the next generation.

Nigerian architecture should not deteriorate or left to deteriorate as result of influence by European architectural style, whereby some of the traditional building elements and culture of the people left eroding. Architects in Nigeria should design houses taking into cognisance the culture and lifestyle of the people. In order to achieve this, there should be a policy on the implementation on use of some key traditional building elements in housing whereby, the regional development control in the South East Nigeria will be in charge for its regulation and implementation.

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