

## The Role Of Art Objects In Technological Development Of Nigeria: An Archaeological Perspective

*Chidozie Sebastine Agu*  
&  
*Vincent Egwu Ali*

### **Abstract**

Prior to colonial rule, Nigeria possessed technological feats that were comparable if not better than their foreign counterparts. These feats were facilitated by the existence of guilds of craftsmen in various parts of Nigeria who produced masterpieces particularly sculptures. Indeed, the creative ingenuity of our past generations of artists is the mainspring of our civilization. The archaeologists, to a great extent, have thrown some light on these achievements which have continued to fashion the course of our future technologies. Our focus, therefore, is on the role of artifacts or material culture in the technological development of Nigeria. We seek to examine how the various art objects (sculptures, pottery, textiles etc) discovered by the archaeologists have helped to encourage and improve the technological development of the nation.

### **Introduction**

It was Tilley (1989:188) that pointed out that “if archaeology is anything, it is the study of material culture as a manifestation of structured symbolic practices meaningfully constituted and situated in relation to the social” life of the people. Okpoko and Chukwuezi (1993:146) are of the view that “material culture embraces technology, subsistence, land use and settlement pattern. Technological aspects of material culture include the following, among others: stone tools, pottery, metal tools, bone and wooden tools, textiles and leather materials”. They also averred that “an object can express both ritual and aesthetic values. Indeed, an understanding of a people’s material culture (arts and crafts) is useful for

a proper appreciation of the people's technological growth including some aspect of their history and socio-political setting.

In enumerating the place of archaeology in Nigeria, Andah (1982:28) has drawn our attention to the fact that "particularly in the aspect of technology of manufacture and use of tools, resources, patterns (and processes) of settlements as well as markets, useful lessons can be learnt about the place of past generations of artist and their works in the technological development of Nigeria. Hammond (1971:29) has equally stated that "technology is the aspect of culture that encompasses all the tools, artifacts and techniques a people use to meet their material needs. It can be usefully examined" under four basic categories: food, shelter, manufacturing and transport. Our focus, therefore, is on the role of art objects (Artifacts) in the technological development of Nigeria. Given the nature of this research endeavour, library materials constituted the only sources of data used.

### **The Role of Artifacts in the Technological Development of Nigeria**

Technology, as an aspect of material culture, covers a wide range of activities. For Sharer and Ashmore (1979:405) "there are countless specific technologies that could be discussed but the focus here is on sculptures, ceramics and textiles, which are among the important aspects of our cultural heritage on which Nigerian civilization was built.

#### **Textiles**

Through time, man in Nigeria has clothed himself with several materials which portray his artistic ingenuity. It has been suggested, based on archaeological discoveries, that before the introduction of cotton ... the Igbo knew the art of weaving (which was done in various patterns) from ancient times and has since improved tremendously in the art" (Okpoko and Chukwuezi, 1993:162).

Thus, Igbo-Ukwu stands out as the most prominent archaeological sites in Nigeria to reveal the antiquity and designs of textile technology. There, highly skilled textile artisans produced cloths with exquisite dexterity. Okpoko and Chukwuezi (1993:163-3) noted that "the Igbo-Ukwu weaving tradition was quite complex and of great antiquity. It is therefore, plausible to suggest that the art of weaving might have spread among the Igbo from the earlier known sources of textile production especially within the northern Igbo areas of Igbo-Ukwu and environs".

Archaeology does not only trace the antiquity of textile technology but indicates that the processes of manufacture have not

drastically changed. According to Okafor (1989:239), “the lint processes of cloth production started with the collection of the lint. Cotton lint was collected from the cotton tree, and then ginned (i.e. seeds removed)”. The ginned cotton was next spun into threads with which the cloth maker wove cloths. Thus the main processes were the collection of the lint, ginning, spinning into yarns, weaving and dyeing”. Many towns are today noted for textile technology in Nigeria. These include, Akwete, Okene, Bida, Abeokuta, Ijebu, Nsukka, Edem, Aku, Awka, Nri, Abakaliki, Ezeamgbo, Ndoki, Asaba, Ibuzo, Ogwashi-Ukwu, among others. Hence, “one would hear of Akwete cloth among the Igbo’s the “riga” among the Hausa’s and the “adire” and “sanyan” among the Yoruba’s (Okafor, 1989:238).

Dyes were equally made from the leaves of plants and applied to these clothes. Okafor (1989) noted that “sometimes special designs were needed in woven fabrics to be dyed .... Such designs which could be birds, fishes, crocodiles, lizards, geometric lines or abstracts were usually added through the clever and intelligent use of cassava starch which were carefully painted on the fabric according to the desired pattern”. He holds that “it was through the use of starch and in some cases both starch and raffia fibres that Yoruba dyers dyed the “adire” cloths for which Abeokuta, Ibadan and Oshogbo were famous; the Igbo of Arochukwu dyers used them in dyeing the “Ulara” cloths ...; the Gwari of Niger State and the Tiv of Benue State also used them in dyeing”. Most of the designs and patterns in the clothes could be drawn from the decorative motifs in recovered archaeological materials (Okafor 1989:240).

### **Sculpture**

There is evidence of more advanced technology in various parts of Nigeria during the bronze and metal age. Indeed, one of the most active periods of technological efforts in Nigeria was around 500BC to 200AD (Omolewa, 1986:16). Okafor (1995:75) after citing several authorities opined that:

There is hardly any division of Nigeria that had no remains of bloomery iron working. For instance, Iron working remains have been mapped and studied in Argungu, Daura, Katsina, Zaria, Maidi, Chawai, Ashafa, Ekurmin, Mazuga, Zagomida, Nok, Taruga Birom and Gombe in the North. In the West they have been observed in Oyo, Ola, Igbi, Igbira, Ogbomosho and Esie, They have also been studied and mapped at Awka,

Ukehe, Aku, Opi, Abakaliki, Orba, Umundu, Owerre-Elu, Lejja, Abiriba and Okigwe.

Diya (1995:104) also maintains that “a solid proof of the advancement made in iron technology, was the archaeological findings in different parts of Africa”.

Okafor (1995:75) opines that “ethnographic, ethnoarchaeological and archaeological investigations ... show that there were many differing systems of iron smelting with different apparatus and techniques within the same ethnic group”. Unfortunately, harsh weather had led to the disintegration of most of the remains of this industry so that what have “survived are tuyere, furnace fragments and slag which are almost indestructible”. However, from these pieces of evidence, archaeology has helped in increasing our knowledge about the antiquity, apparatuses and techniques as well as progress made during this period of technological wonders in Nigeria.

Thus, through archaeological research, iron working apparatuses and techniques have been reconstructed and this has helped in demonstrating their continuity in Nigeria. According to Jemkur (1995:75), “with little difference in details, the smelting processes and apparatuses collected in the field seem to be identical in most part of the savanna area of Nigeria”. And in the words of Legene (1995:40); “from archaeological evidence, we know that a wide variety of furnaces were used all over Africa...”

From the foregoing, it is obvious that “archaeology plays an important role not only in reconstructing iron techniques but also in visualizing these early Iron Age Cultures” (Legene, 1995:4). We are aware that iron played significant role in the growth and expansion of many empires and city states in Nigeria such as Benin, Oyo, the Hausa city states, among others. Thus, “rulers involved their empires in warfare in order to maintain or enlarge their power. Well aware of the strategic importance of iron, they centralized iron smelting and forging activities and/or they became associated with the blacksmith in a political or cultural sense” (Legene, 1995:41).

Though iron smelting has disappeared, iron working has continued in various parts of Nigeria in the form of blacksmithing. According to Etta (1995:5), “from about 1950s onwards, iron working was continued through the blacksmiths who used scrap metals, motor chassis and discarded iron tools to forge new implements”. The

innovativeness of the blacksmiths in Nigeria attracted the attention of several scholars such as Anozie (1979), Akinjogbin (1995), and Jemkur et al. (1995) among others. For instance, Akinjogbin (1995:87) observed that “blacksmiths prided themselves in being able to manufacture just about anything so long as it could be clearly described. And they could not have been too far wrong for soon after the introduction of guns into Yorubaland, in the nineteenth century, they quickly mastered its manufacture and the making of iron shots instead of the lead ones brought by the Europeans”. According to Jemkur et al (1995:89), “following the decline of traditional iron smelting, the blacksmith now obtains his scrap metal from the junk yards in the urban areas. The farming communities had always been entirely dependent on the blacksmith for the production and repair of their farming tools and household implements”.

The same role could be said to apply in the area of bronze/brass technology in Nigeria. According to Aremu (1990:209), “Brass/Bronze casting in lost wax techniques has been widely used in Nigeria. The archaeological materials of Igbo-Ukwu and Ife and the ethnographic materials of the Nupe and Benin indicate that they were produced and used there; and there are a number of other places where they are still being used”.

Bronze objects have also been reported from Jebba and Tada. And through archaeological excavations, we are able to know that “while distinct from Ife and Benin brass-objects, the Igbo-Ukwu bronzes present us with a vast array of spectacular objects whose technology will remain part of the future challenges to Igbo art historical scholarship” (Aniakor, 1993:134). Archaeology could then play a crucial role in our technological development by revealing the technical devices employed in extinct bronze production which we could borrow and improve upon. As Eyo (1977:84) rightly explains:

Of the two methods used in bronze casting, the solid cast and the hollow cast, or *cire perdue*, the latter was the one used in Nigeria. There are three kinds of *cire perdue* casting but the one usually adopted in Nigeria involves the making of a core with a refractory material and then moulding a wax form over it.

Eyo (1977:84) notes that archaeological researches carried out in Nigeria affirm that “no one really knows when this technique was first developed

in Nigeria. However its first appearance in Igbo:Ukwu represents the height of development in this technique” (Eyo, 1977:88). And as Aniakor (1993:134) rightly observed, “the radio-carbon 14 dating of 9th century A.D. for the Igbo-Ukwu bronze places them as the earliest known metal tradition in Nigeria even while the archaeological dating for Ife and Benin remains imprecise”. Thus, “excavated brass objects reveal the fact that the ancient craftman was very knowledgeable in bronze casting. Evidence from the bronzes of Igbo-Ukwu, for example, indicate that modeling techniques were extremely advanced” (Simmonds, 1975:76). Simmonds also posits that “these bronzes exhibit the highest development in the art of bronze casting yet discovered in Africa”.

Archaeology also portrays “the native idioms in which the bronze objects were executed and their aesthetic delicacies are testimonies to the existence of a craftsmen class of unique dexterity and rich imagination” (Njoku, 1988:45). “Professor Thurstan Shaw, after a close analysis of the Igbo-Ukwu artifacts and modern Igbo cultural practices, observed that it is tempting to suppose that there has been a basic continuity of underlying ideas, but a modification of details in the course of centuries”. A few examples will eloquently illustrate this. There are “some parallels and possible correspondences between Igbo-Ukwu bronzes and some of the insignia of Ozo title holders. The Igbo-Ukwu materials that easily furnish this evidence are those from the site of Igbo Richard” (Aniakor, 1993:139). Eyo (1977:142) maintains that in the Benin bronze, “the subject matter ranged from new heads of their kings, to figures of noblemen and warriors”. He also points out that “memorial plaques were made ... to record life and events in the court. Altar pieces were made to represent the cult of the hand (Ikengobo), a symbol of achievement”.

Most of the archaeological excavations that unearthed bronze objects in Nigeria had helped us to understand how some states antiquity may have functioned. Of particular interest is that bronze technology is said to be a court art and some of the archaeological materials led to state formation. Ancient Benin art is a typical “court art” where artists produced works exclusively for the Oba and were forbidden, even at the point of death “to work for anyone outside the court” (Eyo, 1977:132-4). In Igbo-Ukwu, the materials have been associated with the Eze Nri institution and later with the Ozo title holding system. Aniakor (1993:130) has equally pointed out that “in the Igbo-Ukwu corpus, many of the forms/motifs suggest some levels of functional symbolism. These

are the ram head, snake, pot, egg, leopard, Jam head, flies, knotted wrestles, fish, monkey, bird, leopard skull, and several others". Moreover, "through archaeology we are discovering the lost techniques of brass casting, and we hope that brass casting techniques will gradually improve as a result of modern caster taking interest in the highly developed art of their forefathers (Simmonds, 1975: 79).

"Carving as a special type of art was widely practised in Nigeria by highly talented artisans" (Okafor, 1989:23). Here emphasis is laid on wood, calabash and ivory carving. As Eyo (1977:142) puts it, "some ninety percent of Benin works are in bronze, the rest in ivory, terracotta and wood". He maintains that: the wood carvers, on the other hand, were probably the oldest guild to work for the Oba. Carving in wood, particularly stools and mask heads production, has equally been known in various parts of Nigeria especially among Igbo, Yoruba, Ibibio and Efik. The carving traditions continue to excite our people, and there is continuity in the art to the present day.

Wood carving was recovered from the Igbo-Ukwu excavations. "Given that the Igbo-Ukwu finds have been dated to about 9<sup>th</sup> century A.D., Isichei (1983:79) is the opinion that there seems to be continuity of wood carving over a period of more than one thousand years. This then further suggests that wood carving was of great antiquity in Igbo land and neighbouring areas" (Okpoko and Chukwuezi, 1993: 160). Eyo (1977:168), affirms that "Ere Ibeji are carved in all parts of Yoruba land. There are many styles of carving that provide an excellent record of the Yoruba carvers and carving styles". Thus, archaeological discoveries in Nigeria cannot only aid the present carvers but could give them ideas and models upon which to produce unique works.

Calabash carving forms the next important aspect of this discussion. According to Okafor (1989:235), "calabash carving and decoration were carried out in many places in Nigeria before, during and after colonial rule. The industry was, however, more widespread in the southern part of the country as well as the forest areas of the north than in the farther and grassland areas of the nation". He opines that "people well known to have practiced this craft extensively and who had a tradition for it were the Oyo and Kwara Yoruba, the Igbo, the Ibibio, the Fulani, the Tiv as well as the small ethnic group of Yungur in the" former Gongola state. He also noted that "the decoration which was usually a slow painstaking task, involved carving intricate designs such as concentric rings or geometric lines, animals, insects, leaves and even

abstracts. Instruments such as knife, razor and pincer-like tools were often used for calabash carving”. The ideas and innovations in such carvings could be drawn from archaeologically retrieved materials.

Finally, ivory carving has been recorded in antiquity which continue to play important role in the present Nigerian society particularly in the realm of Ozo title institution and symbolism of richness. For instance, the symbol of FESTAC 1977 held in Nigeria was an ivory mask head carved in Benin. Writing on the archaeological discoveries in Benin, Eyo (1977:144) pointed out that, “among the carved ivory objects were gongs used by the king at certain rites, leopards for altar decoration, marks in the form of human faces for neck and lip pendants, small plaques representing the king and his attendants which were worn as pendants and figures of women holding bowls. Elephant tusks presumably mostly belonged to the Oba, so he could order relief carvings on them which depicted him and his courtiers in many respects”. The elephant tooth pendants unearthed from Igbo-Ukwu and their link with the Ozo title system which utilize such objects today, are pointers to the continuity of a technological tradition rooted in remote antiquity.

### **Ceramics**

The techniques of ceramic or glass ware manufacture requires “extensive understanding of the fundamentals of chemistry and physics: the capacity for accurate recognition and evaluation of the properties and potential of a variety of raw materials, how they can and cannot be used, and the ways their physical condition can be altered by heat, cold, acidity, and moisture or by the application of pressures by striking, pounding, kneading, stretching and grinding” (Hammond, 1971:79). Archaeological findings in various parts of Nigeria point to the fact that man has over time utilized this basic understanding to make pots, terracotta figurines, house pavements, smoking pipes among others. Notable sites where these finds have been uncovered include: “Nok, Benin, Igbo-Ukwu, University of Nigeria Nsukka Agricultural Farm, Ezi-Ukwu Ukpa Rockshelter and Ugwu Egu in Afikpo, Daima, Tivland, Onyoho among numerous others” (Nzewunwa, 1983). The indestructible nature of pot sherds makes it an indispensable archaeological data.

From archaeological research, both pottery forms and designs have been recovered which show that the processes of manufacture, decoration and functions of these ceramics have not greatly changed



through time. Researchers have equally revealed the antiquity of pottery in Nigeria. Okafor (1995:80-1) notes that “the archaeological materials excavated from sites in the north of Igbo land, particularly from Nsukka by Hartle, suggest that the area was occupied before the third millennium B.C. The study of pottery recovered from the excavated sites shows that there are close similarities in colour, form and decoration between the excavated sherds and those still in use in the area today”. Okpoko and Ekechukwu (1993:52), observe that “pottery recovered from the latest phase of Afikpo (Ukpa Rockshelter) site dating from 1050 to 1500 B.C also show elements of similarities in terms of forms and decorations with present day pottery in the area, thus suggesting continuity of occupation by the same or related people since at least 3, 000 years ago”. While assessing Igbo Ukwu wares, Aniakor (1993:139) posits that “even the pottery vessel, with deep grooving, unusual and complex decorations are quite similar to Igbo ritual vessels. They follow the known Igbo aesthetic model that ritual and ceremonial vessels are the most skillfully executed in Igboland and more especially in the Central region of the Awka-Nri complex”.

Equally, archaeological evidences from Tiv land have not only identified how certain decorative motifs were achieved but show that “the decorative techniques and motifs on the archeological pots were more than those of the ethnographic examples”(Folorunso, 1993:100). He asserts that “among the archaeological materials were identified various forms of incision, including chevron, wavy lines of various forms, slanting lines and so forth. There were also various forms of punctuation and applied crusts which had been incised or had thumb impression”. He contends that the ethnographic pots have only simple forms of incisions and none of the above described motifs associated with the archaeological materials”. Thus, a careful study of these decorative techniques and motifs can inspire present day potters to improve their craft.

“The other and special type of pottery, terracotta, required production processes similar to those of pot making. And Eyo (1977: 60) holds that.

Terracotta means baked clay, the “baking” is done after the modeling is over. The clay is fired to such a temperature that it becomes very hard, the hardness varying according to the temperature at which it is fired. The difference between terracotta and most Nigerian

pottery is that ordinary pottery vessels are fired only at a low temperature.

In fact, wide range of terracotta sculptures have been retrieved through archaeology in Nok in Northern Nigeria that portray activities post human behaviour of every day life. "Potsherd pavements are the most common types of pavements known in West Africa" (Nzewunwa, 1989:93). Excavations at Old Warra, Kagoge, Obalara's land, Ife, Oduduwa College, Ogudu, Ikeja Daima II and III among so many others revealed potsherd pavements of varied proportions.

Archaeological research or excavation also reveals smoking pipe technology which illustrates the adaptive nature of our extinct technologies that could be recreated to foster progress in Nigeria. It has been demonstrated through archaeological findings at Daima II and III, Old Warra, Old Bussa, Old Oyo , Isoya , Benin, Ogoloma, Onyoho, Agadagbobou, Koroama and Saikiripogu (Ewoama) that there was a corresponding change from native smoking pipes to the alien ones when European smoking pipes arrived in the country. This adaptive mechanism can spur the country to "Nigerianize" the foreign technology that arrive in this country instead of seeking for an illusive technological transfer.

### **Conclusion**

The above expositions represent aspects of the role of artifacts in the technological development of Nigeria. They show that our present has some reminiscent with the past, that is, Nigerian technology and culture have not been drafted from outside but are deep rooted here in our soil. They also show that Nigeria had attained a high level of civilization in artistic achievements before the advent of the Europeans.

Therefore, there is need to search for appropriate ways in which we can harness our extinct technology to aid development or make life more meaningful to us. The ancient technologies exposed by archaeology in Nigeria, clearly demonstrate that "in practice, therefore, there is concrete evidence of the competence of our ancestors in antiquity to give us confidence in our own ability to create, and to challenge us to use their achievement as the starting point of our own progress into the future" (Alagoa, 1999: 99).

In fact, the role of archaeology in the technological development of Nigeria lies principally on the fact that through revealing extinct

technologies, we could lean on them to evolve local technologies that would form the basis for further advancement in all fields of human endeavour. This is based on the premise that such technologies are rooted in the country and “if developing countries including Nigeria, honestly aspire to become advanced technologically in order to improve the living standard of their peoples, they should aim at technologies which cost less, employ more energy and consume less other resources. These technologies can only be evolved locally through objective and enlightened government planning and policy decisions, research training and challenge to ideal engineering personnel” (Abdul, 1981: 5). As Aig-Imoukhuode, (1991:14) sums it, “countries seeking economic self-reliance should, therefore, seek their solution in such endogenous development adapting indigenous technologies (including traditional medicine and building techniques) to their present day requirement”. We, therefore, stand to learn great lessons from artifacts in our development efforts and strategies in Nigeria.

## References

- Abdul, N.A. (1981), “Can Technology Be Transferred?” *Business Times*, August 10. pp. 12.
- Aig-Imoukhuode F. (1991). “The National Cultural Policy: Parameters, Linkages and Strategies – An Assessment”. *Culture and Decision Making in Nigeria*; Abuja, National Council for Arts And Culture, pp. 12-30.
- Akinkogbin, I.A. (1995), “The Impact of Iron in Yoruba land”. *Report of the first Meeting of the International Scientific Committee on UNESCO’S Iron Roads Project for Africa*; Abuja, pp. 84-88.
- Aloagoa, E.J. (1991), “Antiquity And Future As Cultural Perspective”. *Culture and Decision Making In Nigeria*; Abuja, National Council for Arts and Culture, pp. 93-102.
- Andah, B.W (1982) “African Development in Cultural Perspective with Reference to Nigeria” *Occasional publications of the Department of Archeology and Anthropology*, University of Ibadan

- Aniakor, C. (1993), "Igbo-Ukwu Bronze Objects (A Reappraisal of Techniques, Style and Iconography)" *West African Journal of Archaeology* Vol. 23, pp. 133-145.
- Anozie, F.N. (1979), 'Early Iron Technology in Igboland: Lejja and Umundu'; *West African Journal of Archaeology* Vol. 9, pp. 199-134.
- Aremu, G. (1990), "Demonstration of Brass Casting at Oba Aiyegenle Kwara State"; *West African Journal of Archaeology* Vol. 20, pp. 209-217.
- Diya, O. (1995), *An Address of the Chief of General Staff At the first Meeting of the International Scientific Committee of UNESCO'S IRON ROADS' Project for Africa*, Abuja. pp. 104-105.
- Etta, P. B. (1995), "Preface" To the *Report of the First Meeting of the International Scientific Committee on UNESCO'S IRON ROADS' Project for Africa*, Abuja, Nigeria, p.1.
- Eyo, E. (1977), *Two Thousand Years Nigerian Art*; Ibadan: Federal Department of Antiquities.
- Folorunso, C.A. (1993), "Ethnoarchaeology: Its Methods and Practice: The TIV Example"; *West African Journal of Archaeology* Vol. 23, pp. 92-104.
- Hammond, P.B. (1971), *An Introduction to Cultural and Social Anthropology*; New York: The Macmillan Company.
- Isichei E. (1983) *A History of Nigeria*. New York: Longman Group Limited
- Jemkur, J. F. (1995), "The Beginnings of Iron Metallurgy in West Africa". *Report of the First Meeting of The International Scientific Committee on UNESCO'S IRON ROADS' project for Africa*, Abuja, pp. 68-74.

- Legene, S. (1995), "Iron Routes of Africa: Transformation and Change; A Feasibility Study". *Report of the first Meeting of The International Scientific Committee on UNESCO'S IRON ROADS' Project for Africa*; Abuja, pp.40-47.
- Njoku, O. (1988), "Archaeology and Igbo Culture History". *The Excavator*. Vol. 1; Pp. 41-50.
- Nylander, C. (1964), *The Deep Well: Archaeology And The Life of the Past*; England: George Allen and Unwin Ltd.
- Nzewunwa, N. (1983), *A Source Book of Nigerian Archaeology*; Ibadan: Standard Printing and Publishing Co. Ltd.
- Nzewunwa, N. (1989), "Prehistoric Pavements in West Africa". *West African Journal of Archaeology* Vol. 19, pp. 28-51.
- Okafor, E. E. (1995), "Twenty-five Centuries of Bloomery Iron Smelting in Nigeria". *Report of First Meeting of The International Scientific Committee On UNESCO'S IRON ROADS' project for Africa*; Abuja, pp.75-83.
- Okafor, L. M. (1989), *History for Senior Secondary Schools*, Book 1 & 2. Ibadan: Jet Publishers Ltd.
- Okpoko, A. I. and Ekechukwu, L. C. (1993), "Archaeological Survey of Okigwe and its Environs, Eastern Nigeria: A Preliminary Report", Vol. 23, pp. 50-70.
- Okpoko, A. I. and Chukwuezi B. (1993), "Studies in the Material Culture of South-Eastern Nigeria since Igbo-Ukwu". *West African Journal of Archaeology*. Vol. 23. pp. 140-167.
- Omolewa, M. (1986), *Certificate History of Nigeria*; Ibadan: Longman Group Ltd.
- Plog, F.T (1973), "Diachronic Anthropology". *Research and Theory in Current Archaeology*; London: John Wiley and Sons Inc. pp. 131-198.

Sharer, K J. and Ashmore, W. (1979), *Fundamentals of Archaeology*; Philippines: The Benjamin Cummings Publishing Company, Inc.

Simmonds, D. (1975), "Archeology Adds to our Cultural Heritage". *Discovering Nigeria's Past*; Oxford: Oxford University Press, pp. 59-66.

Tilley, C. (1989), "Interpreting Material Culture". *The Meaning of Things: Material Culture And symbolic Expression*; New York: Harper Collins Academic, pp. 59-66.