
POTTERY PRODUCTION IN OBINAGU, EZEBINAGU COMMUNITY: AN INSIGHT FROM ARCHAEOLOGY FIELD SCHOOL

¹Chidinma C. Oguamanam, ^{*2}J. Kelechi Ugwuanyi, ³Helen N. Anunobi, & ⁴Henry C. Ezezim

^{1,2,3&4}Department of Archaeology and Tourism
University of Nigeria, Nsukka

*Corresponding author: jkelechi.ugwuanyi@unn.edu.ng

Abstract

The continued production of pottery products in Africa in the 21st century and the changing uses from primordial household usage to more commercial uses call for more critical enquiries. Attention has been paid to understanding the production processes, design, firing, and changes in pottery tradition in Nigeria from archaeological, ethnographical, and historical perspectives. In an archaeological sense, the focus has been on the reconstruction of the cultural history of Africans through studies of pottery. Among the Igbo, our case study area, archaeological studies have shifted to focus more on iron technology with little or no studies on pottery in recent times. This archaeology field school organised for a group of third-year students of the Department of Archaeology and Tourism, University of Nigeria, Nsukka in December 2021 was aimed at studying the past and present pottery technology of Ezebinagu autonomous community in Eha-Alumona, Nsukka Local Government Area, Enugu State. It applied archaeological reconnaissance and excavation to examine surface and buried evidence of pottery to trace the historical changes in production and use over time. The result shows that there is evidence of continuity in pottery production and uses in Obinagu community.

Keywords: Pottery, Excavation, Reconnaissance, Ezebinagu, Eha-Alumona

Introduction:

Pottery is proven to be one of the earliest technologies in human history. The earliest evidence of pottery production in Nigeria dates to the fourth millennium BC in the Rop Rock shelter (Fagg, 1972). To date, ceramic objects remain important in the economic and socio-cultural life of Nigerian/African peoples. Many studies have shown that traditional pottery products were and are still being used for cooking, eating and storage, as well as the keeping of bees for honey production. They also play a prominent role in religious rites and cultural ceremonies (Ottenberg, 1968; Onyeoku, 1976; Okpoko, 1987; Ali, 2014). Beyond these primordial uses, it is found that there is a more recent usage of it in arts and decoration (Okafor 2022). The continued production and use of pottery products have made them continue to appear in archaeological contexts. Therefore, this increases the importance of pottery to archaeologists working especially in tropical Africa. Potsherds are always in abundance in archaeological sites because pottery is not easily destroyed by the changing weather condition when compared to other organic materials (Nze, 2006).

A number of archaeological studies in the Nsukka area of southeast Nigeria starting from the late colonial and early independent periods have shown evidence of pottery production and uses (Hartle, 1967; Shaw, 1970; Okpoko, 1987). However, more recent archaeological studies around the area are centred on iron technology (Okafor, 1992; Okafor and Phillips, 1992; Eze-Uzomaka, 2007; 2009, 2010) and none have attempted to re-examine the state of pottery production and uses in the area. Consequently, this archaeology field school

organised for a group of third-year students of the Department of Archaeology and Tourism, University of Nigeria, Nsukka in December 2021 was aimed at studying the past and present pottery technology of Ezebinagu autonomous community in Eha-Alumona, Nsukka Local Government Area, Enugu State. It applied archaeological reconnaissance and excavation to examine surface and buried evidence of pottery to trace the historical changes in production and use over time. The result shows that there is evidence of continuity in pottery production and uses in Obinagu village in Ezebinagu, Eha-alumona. The site excavated was named “Michael Ugwu 2021”. The name was derived from the name of the owner of the compound where the excavation was carried out.

Study Area

Ezebinagu is an autonomous Community in Eha-Alumona town Nsukka LGA, Enugu State. Its Geographical point location is $6^{\circ} 45' 08''$, $6^{\circ} 49' 09''$ North and $7^{\circ} 28' 03''$, $7^{\circ} 28' 36''$ East. The community comprises seven villages which include: Okpulo, Obinagu, Ise-agu, Ise-akweka, Ise-ulo, Igboroagu, and Adaricha. Some of these villages are geographically detached and dispersed in the Eha-ndiagu area of Eha-alumona. This study purposively focused on Obinagu, locally pronounced as ‘Oblegu’ by the natives.

The seven villages in the Ezebinagu community engaged in the business of pottery products within and outside their frontiers. Pottery production in the area may have been influenced by the landscape, geological formation, and climatic condition of the area which made available abundant clay and other resources required for pottery production. The topography of the area is mainly that of the residual hills of the Udi-Nsukka plateau formed at the upper coal measure from the late cretaceous period to early tertiary period, at the late Maastrichtian to early Paleocene age (Ofomata, 2002; Echebo and Okafor, 2013). The depositional environment has a similar environment to the Mamu Formation. It is comprised of transitional shorelines (Fig. 1), mud flats, and swamps deposited during the period of water regression and are found around some villages in Eha-Ndiagu which facilitate pottery activities and the materials (Echebo and Okafor, 2013).

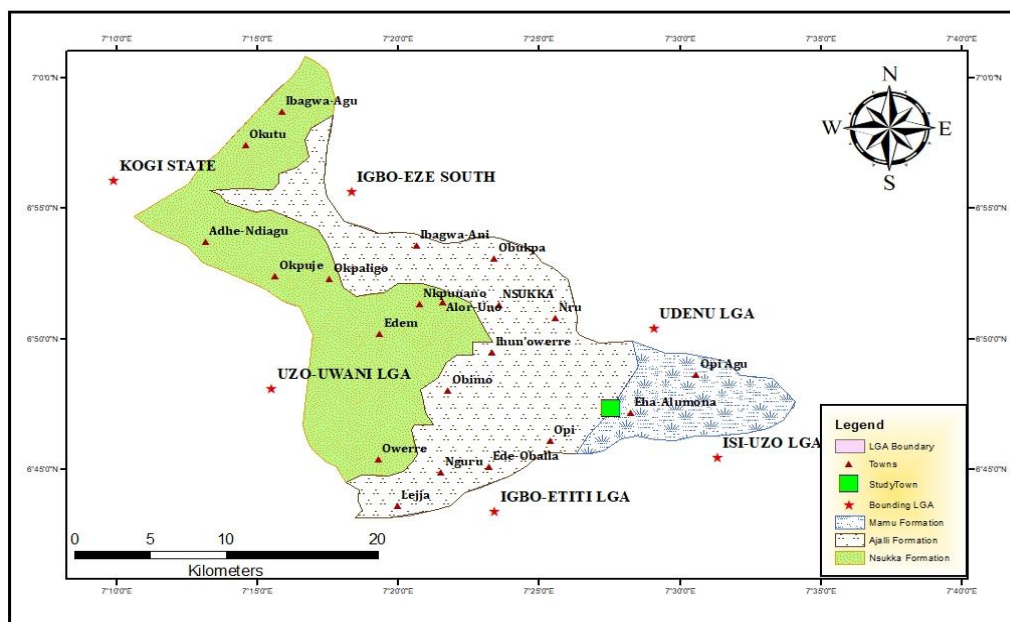


Fig.1: Geological Map of Nsukka
 Source: Ugwu and Ezema (2014)

Materials and Method

Archaeological reconnaissance and excavation methods were employed to collect data for analysis and interpretation. The archaeological reconnaissance involved a physical survey of the area and surface collection of cultural materials while excavation was carried out on a 2x2m test pit to uncover material remains buried beneath the earth's crust for analyses and interpretation.

Data Presentation

Reconnaissance

A survey of the area was done to collect and record surface materials, and the features identified include a fireplace (open hearth), and the serene setting of the environment with several trees which include palm tree (*Elaeis guineensis*), soursop (*Ammonia microcars*), bush mango (*Irinvigia gabonensis*), pawpaw (*Carica papaya*), etc. We also observed the difference in soil colour along the roads in Obinagu through to the site of excavation at Mr Michael Ugwu's compound. We found some damaged pots, two pottery firing spots, a storehouse for pottery production, stored clays, ground tempering materials, and a hearth in Mr Ugwu's compound. One expected that several potsherds will be scattered in the surroundings of this community that produces pottery. However, no potsherd was found except for some damaged pots (Fig. 2). It was gathered that the reason why potsherds were not found around there is that producers use them as tempering materials in the process of making pottery products. Besides this scarcity, the number of potters has declined from what used to be the entire village's activities to four potters at the time of this study.



Fig. 2: Some damaged pots

Excavation

The excavation started by setting out the site plan (Fig. 3) and initiating a datum point, a permanent feature that serves as a reference point from which other measurements are taken during excavation (see Nze, 2006). A datum point can be a monument, road, building, electricity pole, etc. In our case, Mr Michael Ugwu's house was used as the datum point for this excavation with the Geographical Positioning System (GPS) reading 6°48.210' North and 007°35.017' East from the wall of the building to the NW of the trench. The measurement from the datum point to the northern pole of the test pit is 5.87m.

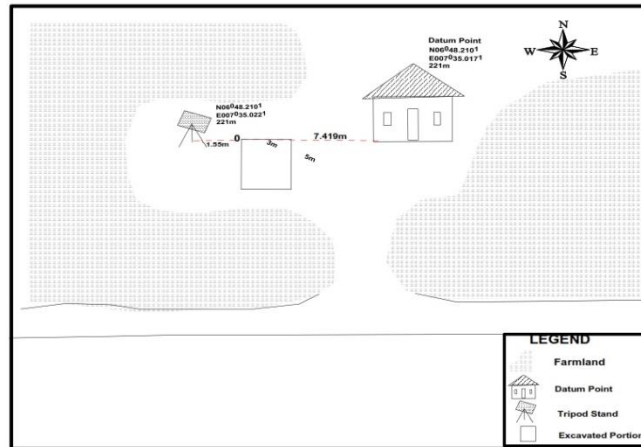


Fig.3: Site Plan

In setting out the excavation site, we applied a grid system in which we divided the site into squares for easy recording of features and objects and named the site “Michael Ugwu 2021”. A trench was initiated with a measurement of 3m × 5m to get a total of 15 boxes numbered 1 to 15. After setting up the grid, and pictures of the grid taken, boxes 7, 8, 11, and 12 were excavated (Fig. 4). Our choice of the four boxes is due to possible evidence of rich material deposit as shown in the soil colour. However, at the depth of 25cm, the digging was narrowed to boxes 7 and 8 (Fig. 5) because we anticipated that we will not be able to dig the four grids to a sterile layer within the days set out for the archaeology field school.

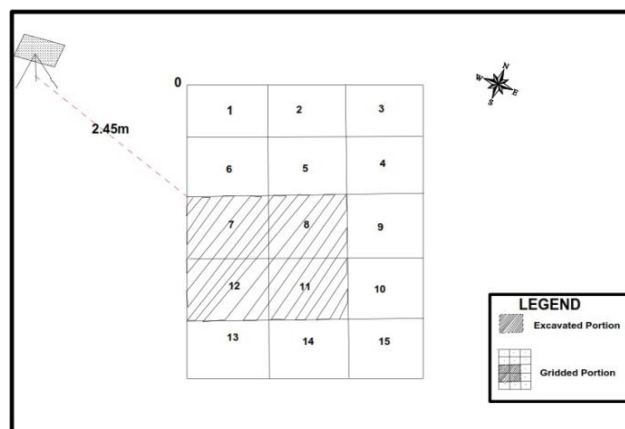


Fig. 4: The grid

In every archaeological study, the choice of excavation method to be used depends on the site under investigation and on the specific goal to be achieved at the end of the practice. Hence, an arbitrary spit of 0-25cm was chosen to guide the digging. A total of three spits were dug starting from 0-25cm to 50 – 75cm (Fig. 6a, 6b, 6c & 6d). When the digging got to a depth of 75cm, there was no more evidence of human activities, thus, bringing the digging to its sterile, and the excavation was stopped at that point.

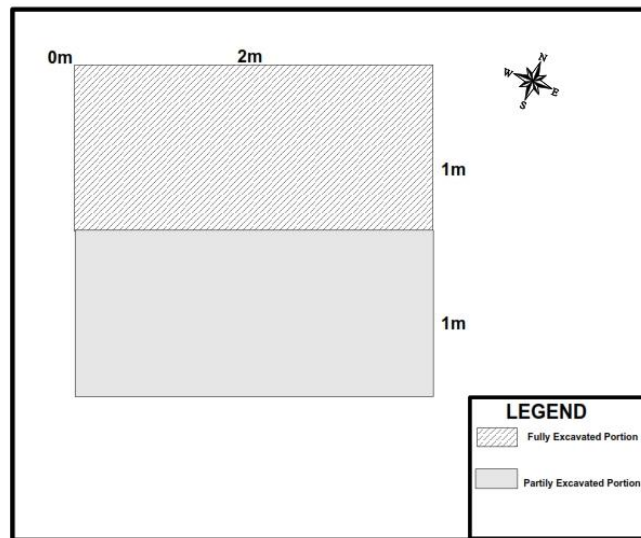


Fig.5 Excavated site



Fig.6a: Overburden



Fig. 6b: Spit 1



Fig. 6c: Spit 2



Fig. 6d: Spit 3

Stratigraphy

The identifiable stratigraphy from the excavation wall was arrived at based on observation of soil texture, colour, and contents. It is based on the law of superposition where the top layer is considered younger than the lower layers as deposited over time. It is essential to archaeologists because it studies and interprets the stratification of rocks, sediments, soil, or cultural debris. At the site of Michael Ugwu 2021 in Obinagu, the stratigraphic measurements were taken from the North-East wall and three layers were identified through physical observation (Fig. 7).

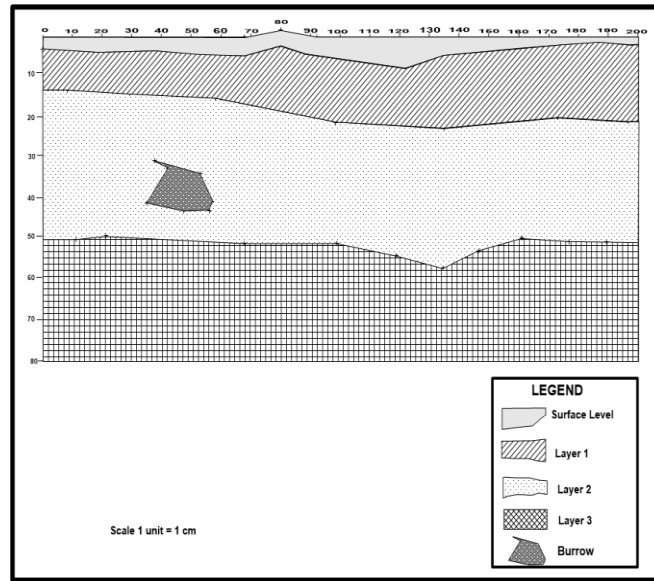


Fig 7: Stratigraphy graph

Analysis of the Cultural Materials

The result from the materials collected through reconnaissance and excavation show that quartzite (iron ore) and potsherds are predominantly available in the area (table 1) and we have represented these collections in a pie chart (Fig. 8a, 8b, 8c, & 8d). Palm kernels were found in a smaller quantity of 20, which represent 7.5% of the entire findings, mostly collected from surface areas and at Spits I and II. Surface collections show evidence of palm-related activities but failed to appear in the excavation. Palm kernel shells and charcoal were found in Spit I, which is the most recent in the stratigraphy.

Table 1: Materials Collected from the Excavated Site

S/N	ITEMS	SURFACE COLLECTIO	SPIT 1	SPIT 2	SPIT 3	TOTAL	PERCENTAGE
1.	Raw clay	4	-	1	-	5	3.6
2.	Baked clay	6	-	-	-	6	4.3
3.	Palm kernel Shell	4	2	-	-	6	4.3
4.	Tree bark	6	-	-	-	6	4.3
5.	Stone flakes	5	-	-	-	5	3.6
6.	Stone (quartzite)	1	25	17	10	53	38.1
7.	Stone(iron ore)	2	11	2	5	20	14.4
8.	Pot shards		5	2	1	26	18.7
9.	Palm kernel	3	4	3	-	20	7.2
10.	Charcoal	-	2	-	-	2	1.4
	TOTAL		49	25	16	139	100

	PERCENTAGE	35.3	35.3	17.9	11.5		
--	-------------------	-------------	-------------	-------------	-------------	--	--

Percentage of Materials according to Surface Collection and Spit

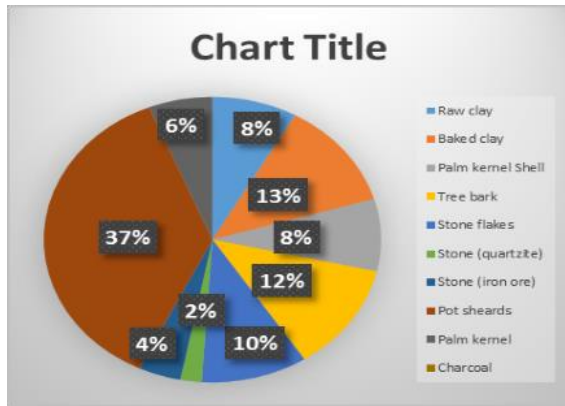


Fig.8a: Surface Collection

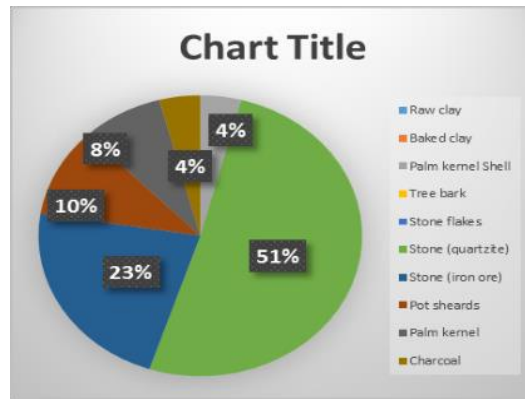


Fig. 8b: Spit 1

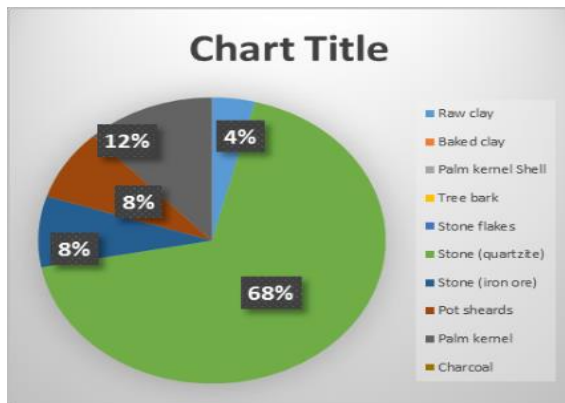


Fig. 8c: Spit 2

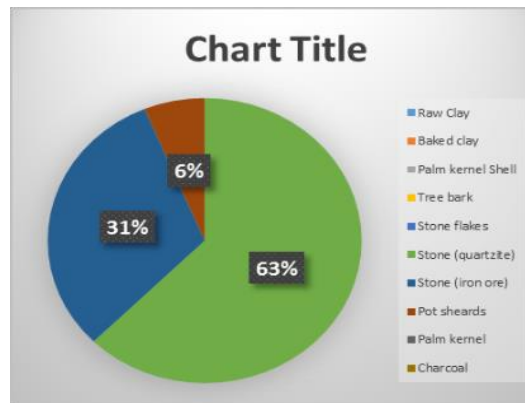


Fig.8d: Spit 3

Pottery Analysis

A pot has two major parts, the body and the rim, and in some cases, the neck. However, Ezebinagu pots do not have necks but only the body and the rim and this is the criteria we applied in the classification of the potsherds collected from the surroundings and the excavation. A total of 26 potsherds were collected comprising 23 body shards and three rim shards (table 2).

Table 2. Classification of Potsherds

PART	COLOUR	TECHNIQUE OF DECORATION	MOTIF OF DECORATION	DIAMETER CM	THICKNESS CM	RIM TYPE
Rim 1	Brown		Rough	14	1.0	Everted
Rim 2	Ash		Rough	8	1	Straight
Rim 3	Dark Brown		Rough		1	Everted
Body 1	Ash Brown	Stamping	Net		0.7	
Body 2	Dark	Stamping	Net		0.6	

=====

	Brown						
Body 3	Ash		Stamping	Net		0.5	
Body 4	Brown		Stamping	Net		0.4	
Body 5	Dark Brown		Stamping	Net		0.5	
Body 6	Brown		Stamping	Net		0.4	
Body 7	Brown		Stamping	Net		0.6	
Body 8	Ash		Stamping	Net		0.5	
Body 9	Brown		Stamping	Net		0.5	
Body 10	Ash		Stamping	Net		0.5	
Body 11	Brown		Stamping	Net		0.7	
Body 12	Brown		Stamping	Net		0.5	
Body 13	Brown		Stamping	Net		0.4	
Body 14	Dark Brown		Stamping	Net		0.6	
Body 15	Brown		Stamping	Net		0.5	
Body 16	Ash		Stamping	Net		0.6	
Body 17	Brown		Stamping	Net		0.5	
Body 18	Black		Stamping	Net		0.8	
Body 19	Brown		Stamping	Net		0.4	
Body 20	Dark Brown		Stamping	Net		0.6	
Body 21	Brown		Stamping	Net		0.4	
Body 22	Ash		Undiagnosed	Undiagnosed		0.7	
Body 23	Brown		Undiagnosed	Undiagnosed		0.8	

An examination of the 23 body shards collected revealed that 18 of them were decorated, three were undecorated and two could not be diagnosed. The analysis was based on identifiable textual features and colours of the potsherds. A calliper was used to measure the thickness of the potsherds, and an eye examination was applied to identify their colours. All the decorated potsherds were identified to have just net decorative motifs, and 13 of them are brown.

Soil Analysis

Soil is the loose surface material that covers most land. Soil gradation tests seek to determine the particle levels of certain types of soils and their proportion. Table 3 shows the soil colour, type, and texture we found at the site of Michael Ugwu 2021.

Table3. Analysis of soil sample

Levels	Soil Colour	Soil Type	Soil Texture
Surface Level	Ash	Clay	Smooth
Spit 1	Dark Brown	Clay	Smooth
Spit 2	Dark Brown	Clay	Smooth
Spit3	Brown	Lateritic	Hard & Stony

Interpretation

The result from the materials collected shows that stone quartzite (iron ore) is predominantly available in the area. The presence of potsherds is the evidence of a lithological unit which Uzoegbu (2014) classified as the Grey shale lithology formed under the environmental deposition named as the Campano-Maastrichtian or Maastrichtian/Campanian and Sandtonian (see also Ofomata 2002). This Grey shale lithology contains carbonaceous shale (Quartz grains, Clay minerals, and mudstones) as seen in the result of the findings in figures I and II above. The availability of these natural resources must have necessitated the invention of pottery technology in the area. The palm kernel shale, palm kernels and charcoal found in spit I and II are evidence of human activities within the period of depositions. Spit III can be seen to have only one piece of potsherd which could be assumed to have occurred from intrusion and the spit depositional environment can be assumed to have occurred during the changing climatic conditions which harshly supports human existence in the late Miocene period as indicated in the findings of Uchebo and Okafor (2013).

It was also evident from the designs on the excavated potsherds and those collected from the surroundings that pottery production has continued without stop from generations of Obinagu people through to the present generation. The designs are related, and the thickness of the shards is within the same range as the ones produced by past and present generations of potters. However, information from the reconnaissance points to the fact that there is a decline in the production of pots and other pottery-related products in the area. The reason for the decline is due to the difficult processes involved in the primordial production techniques and the use of modern materials that provides the same services that pottery products exclusively provided in the past.

Conclusion

There is no doubt that pottery production in this community started a long time ago with most of the potters being indigenous to the land. The production process and techniques belong to them and were not borrowed. It is very obvious from the findings of this study that pottery production is an age-long practice in the Ezebinagu community and has been passed down from one generation to another. However, this once cherished craft is slowly losing relevance due to a preference for modern wares that serve the same purposes as locally made pottery products as well as the tedious nature of the production processes. To preserve this skill, the existing potters should adopt new techniques of production. It is also recommended that government should encourage the youths to participate in the production by organising training programs. Relevant tools and equipment should also be made available to ensure efficient learning of the art. The raw materials are readily available, and they are more natural and environmentally friendly than modern products. Even studies have shown that the use of pottery products for food preservation and preparation is healthier than the use of metal pots (Saxena et al., 2021). Therefore, Obinagu people should be encouraged

to increase their rate of production of pottery products.

References

- Ali, V. E. (2014). A Critical survey of the growth, decline, and sustainability of traditional pottery practice among the Igbo of South Eastern Nigeria. *The Journal of Modern Craft*, 7(2), 123-139.
- Eze-Uzomaka, P. I. (2007). Lejja Iron Smelting Site, Igboland, Southeastern Nigeria. *Studies in the African Past*, 6, 149-519.
- Eze-Uzomaka, P. I. (2009). Iron age archaeology in Lejja, Nigeria. *Studies in the African Past*, 7, 41-51.
- Eze-Uzomaka, P. I. (2010). Excavation of Amovoko: A further study of the Lejja iron smelting culture. *Studies in the African Past*, 8, 178-191.
- Fagg, W. (1972). Excavation of an occupation site in the Nok Valley, Nigeria. *West African Journal of Archaeology*, 2, 75-7
- Hartle, D. D. (1967). Archaeology in Eastern Nigeria. *Nigeria Magazine*, (93), 134-43.
- Nze, C.A., (2006). *Excavation of an iron smelting site in Richard Ugwuoke's compound tagged, Ugwuoke Richard Obimo*. Unpublished Fieldwork Report Submitted to the Department of Archaeology and Tourism University of Nigeria Nsukka.
- Ofomata, G.E.K. (2002). "A survey of Igbo Nation". Onitsha: African First Publishers Limited
- Okafor, E. E. (1992). *Early iron smelting in Nsukka Nigeria: Information from slag and residues*. Unpublished PhD Thesis, University of Sheffield.
- Okafor, E. E. and Phillips, P. (1992). New 14C ages from Nsukka, Nigeria and the origin of African metallurgy. *Antiquities*, 66 (252), 686-688.
- Okafor, M. (2022). [Re-]Creative rites: exploring the materiality of clay and its making processes, *Social Dynamics*, 48 (1), 85-103.
- Okpoko, A. I. (1987). Pottery-making in Igboland, Eastern Nigeria: An Ethno archaeological study. *Proceedings of the Prehistoric Society*, 53, 445-455.
- Ottenberg, S. (1968). *Double descent in an African society: The Afikpo village group*. Seattle: University of Washington Press.
- Oyeoku, O. K. (1976). *Pottery making in Afikpo*. Unpublished BA thesis. Department of Fine and Applied Arts, University of Nigeria.
- Saxena, S., Saini, S., Samtiya, M., Aggarwal, S., Dhewa, T. and Sehgal, S. (2021). Assessment of Indian cooking practices and cookwares on nutritional security: A review. *Journal of Applied and Natural Science*, 13 (1), 357 - 372.
- Shaw, T. (1970). *Igbo-Ukwu: An account of archaeological discoveries in Eastern Nigeria*. Faber and Faber, London.
- Uchebo, U. A. and Okafor, I. (2013). Lithostratigraphy of the Maastrichtian Nsukka Formation in the Anambra Basin, S.E Nigeria. *IOSR Journal of Environmental Science, Toxicology and Food Technology*, 5(5), 96-102.
- Ugwu, G. Z. and Ezema, P. O. (2014). Geophysics investigation for locating buried iron slags at Lejja, Enugu state, Nigeria. *Asian Journal of Science and Technology*, 5 (3), 260-264.

=====

Uzoegbu, U.M. (2014). Petrographic and structural implication on petroleum system in Igumale-Nsukka Area in relation to Anambra Graben, Nigeria. *International Journal of Advanced Engineering Research and Science (IJAERS)*, 1, (5), 2349-6495.