

MANUFACTURING PROCEDURES AND TECHNIQUES OF INDIGENOUS POTTERY TECHNOLOGY: AN ETHNO- ARCHAEOLOGICAL INVESTIGATION ON WEST GUJI ZONE OF BULE HORA DISTRICT, SOUTHERN ETHIOPIA.

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Abstract: This an ethno-archaeological study focused on the investigation of indigenous pottery technology in West Guji Zone of Bule Hora district, Southern Ethiopia. Thus, the aim of the paper was to conduct an inclusive investigation about the traditional pottery manufacturing technology, procedures and its ethnographical tradition of the local communities (selected kebeles) in the district. The research was conducted on five kebeles (two rural kebeles, Goroo Gudina and Harroo; and three of Bule hora town kebeles) of West Guji Zone. These kebeles has own distinctive pottery making procedure, technique, styles, features and materials to their cultural clay products. The data in these areas were studied through employed primary and secondary sources. Primary sources include site observation, interview, photographs, and group discussions, while secondary sources also embraces brochures, books and documents. Potters of the study area mainly used black and brown clay and tempering material like, powdered potsherd and white clay to prepared paste. Besides these, some of the potters also used similar kinds of raw materials in molding, shaping and decorating pots while others used different treatment techniques and firing woods. This indigenous technology was mainly controlled by female potters who have long experiences in producing pots, jars, kets and other clay products.

Key Words: Ethno-archaeology, Pottery Technology, Clay soil, West Guji, Bule Hora

1. INTRODUCTION

Ethno-archaeology refers to an approach in which archaeologists try to study the present material culture through ethnographic way of study (David and Kramer, 2001). An Ethno-archaeology concerns the combination of ethnographic and archaeological data. But it differ from ethnography in that it aims to document and understand a culture in its own terms, while ethno archaeology documents the material aspects of people's lives in order to understand archaeological evidences (Bahn etal, 1996). Regarding to this, Gedef (2011) stated that, the reason behind the establishment of an ethno-archaeological investigation by archaeologists was the insufficient supply of information on material cultures by ethnographers.

The formal emergence of ethno-archaeology as a sub-discipline of anthropology is best dated to the appearance in 1956 of a paper by Maxine Kleindienst and Patty Jo Watson, entitled "Action archaeology: the archaeological inventory of a living community." This called on "the archaeologist to take to the field of living communities with his/her own theoretical orientation and gather the necessary information (David and Kramer, 2001)".

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Regarding to the creation of craft technology scholars argued that, forms ubiquitous components of the material cultures of the last pre-historic and proto-historic peoples. In the African context, there are different types of craft production technologies. For example, technologies like, pottery production is the one which documented by different researchers. This technology is widely accepted as a technological achievement of the Neolithic communities in which people exercised to domestication of plants and animals (Renfrew et al, 2008). According to Barnet (1999) pottery might be considered as the first synthetic material, human created and utilized for various purposes. It had far reaching significance in human prehistory, before the beginning of writing system. It has been serving as utilitarian good as well as a base of livelihood of different communities. Pottery production also provided a valuable data to establish chronology and evidences of contact and cultural interactions of trader of societies at different parts of the world (Price et al, 2001).

Price et al (2001) argues that, fragmented pottery evidences can yield information about human knowledge and experience, resources, technological processes (Price et al 2001). By investigating the evidences and studying the present pottery products, archaeologist argues that, pots are important for storage, transporting, cooking, boiling, brewing and detoxifying plant and animal foods, as well as planting and cultivating crop products (Barnet, 1999). Ethno-archaeological studies on pottery production has now become an established traditional archaeological research; and the last 15 years have seen a proliferation of research on a variety of topics germane to archaeologists and experts of the discipline (David and Kramer, 2001; Bula Sirika, 2011).

In the case of Ethiopia, pottery production is practiced among many communities in the different parts of the country. For instance, it has been practice among Gamo (Dorze ethnic groups) of southwestern Ethiopia, Amhara (among Falasha communities), and Oromo of Wollega at Dongoro district as well as Tigray National regional state has been documented (Bula, 2011; Arthur, 2002, 2003; Gedef, 2011; Tilahun, 2016)

Like other societies of Ethiopia, the Oromo people (a speaker of Cushitic language and largest in population number) has been practicing different pottery productions in different periods of time. Those technologies have cultural, anthropological, an ethno-archeological and historical meanings (Bula, 2011; Burka, 2006). As I observed and informed in the west Guji zone, there are different potters who involved on this technology. Despite of the fact, such technology are identified and has different significance, still there is a great need of documenting and promoting them.

1.1.The Concept of Ethno-archaeology: its Nature, Origins and History

As David and Kramer (2001) argue that, the term "ethno-archaeologist" was coined 100 years ago by Jesse Fewkes on his paper called "Native American migration traditions". He used it to mean an archaeologist "who can bring as preparation for his work an intensive knowledge of the present life" of the people whose prehistory is under investigation (David and Kramer, 2001). The formal emergence of ethno-archaeology as sub-discipline of anthropology is best dated to the appearance in 1956 of a paper by Maxine Kleindienst and Patty J. Watson entitled, "Action archaeology: the archaeological inventory of a living community". This called on "the archaeologist to take to the field of living communities with his own theoretical orientation and gather the necessary information" (Ibid). This approach was mainly used by archaeologists for the explanation of pottery,

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stone tools and architectural remains, but it is also useful for the reconstruction of cultural systems. The practice of the discipline provides a great understanding about ancient artifacts and the people who made that. It is not only the recording of material remains but also the interpretation of it through quantitative analyze, sampling strategies and observations (London, 2007: 1-2).

A better understanding of ethno-archeology can also be derived from the following definition by Kent (2019),

The formulation and testing of archeologically oriented hypotheses, models and theories with ethnographic data. Ideally one starts with archaeological testing of hypotheses, models and theories about those interests and the return to the archeological record to implement the understanding gained from the ethnographic data (Kent, 2019).

As regards to its foundation, scholars (for example, David and Kramer, 2001) suggested that, the discipline of an ethno-archaeology study was a western intellectual root and it was launched in the era of western expansion during the late nineteenth century.

1.3 Previous Ethnoarchaeological Research on Pottery Production in Ethiopia

Ethiopia is a cradle of both human evolution and material cultures (Pankhurst, 1992). It is also considered as the center of early crop plant domestications (Hilderbrand, 2003). It lies in the transitioned zone between African and Near Eastern crops and plants seem to have been domesticated in the country. Hypotheses for the origin of Ethiopian Neolithic could be divided into two groups: those that focus essentially upon the migration of peoples from outside Ethiopia, and diffusion of domesticates and their products as the main stimuli for food production; and contrary to this others argue that, in stimuli domestication by indigenous hunter/gatherer populations (Pankhurst, 1992). Likewise, also, there are different hypotheses which arose by scholars besides to the origin of pottery production in the Ethiopian context.

Kabangi (2013) argued that, as a result of Mid-Holocene climatic desiccation, "Pre-Nilotic" Eastern Sudanic speaking populations migrated from Sudan into the highlands of Ethiopia, through bringing with them their domesticated plants, animals and agricultural knowledge. Following that those Eastern Sudanic population began to adopt pottery, to transporting and stored their food.

Pankhurst (1992) suggested that, pottery technology in Ethiopia was exclusively hand made. Barnet (1999) further explains that, ceramic materials in Ethiopia are distinct morphologically compared with early ceramics of the surrounding region. Many archaeological expeditions have shown that, the existence of ancient pottery production remained in different parts of Ethiopia. For instance, in the Southern parts of Ethiopia, evidences of pottery were discovered in Yabello, Moche- Borago and Melka Kunture (Arthur, 2000). Shred evidences of pottery remnants in Eastern Ethiopia was discovered from the sites of Lake Basaka (Barnet, 1999), Porc-Epic, Laga Oda and the Macho and Waso sites of Lake Ziway. Sites in the Rift Valley and those on the adjacent edges of the plateau escarpments of eastern Ethiopia have offered few evidences of Terminal Pleistocene and Holocene Occupations (Barnet, 1999).

2. RESEARCH METHODOLOGIES AND METHODS

2.1. Description of the Study Area

The Guji people, as stated by Dejene (2009) and Gemechu (2020), are among the Oromo ethnic branches and spoke *Afan Oromo* language (that uses *Qube* letters of Latin alphabet), one of the most widely spoken language

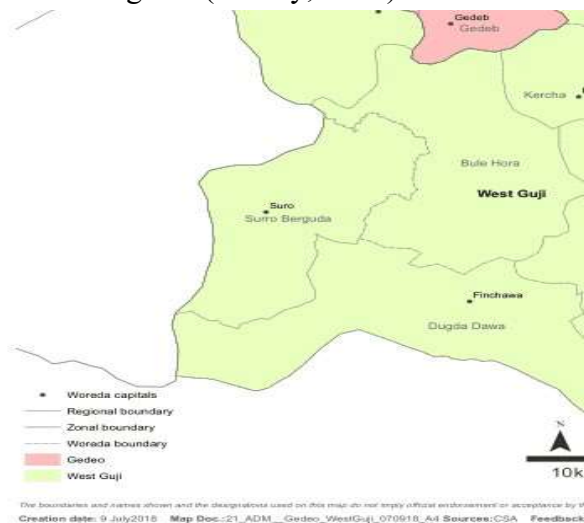
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in Ethiopia. Guji is part of the Oromia Regional State and found in the southern parts of Ethiopia; and its population is estimated to be more than a million (Tadese, 2004; Mengesha et al, 2021). Historically, like other Oromo clans of the country, the Guji Oromo has been ruled by the Gada system for a long period of time (Gemechu, 2020; Mengesha, 2021). Some documents justified that, the beginning of the Gada system among the Guji people traced the year of 1424 (Dagm, etal, 2018). From this time onwards, the Guji began to administering in an organized form of governance (Gemechu, 2020). But from technological aspect, the practice of pottery production is goes before this time. Hypothesis explained that, the production of pottery production in Ethiopia in general and in southern part in particular was begun during the Mid Holocene period. Many archaeological expeditions have shown, the existence of ancient pottery remains in different parts of Ethiopia. For instance, in southern Ethiopia, few evidences of pottery was discovered in Yabello, Moche- Borago and Melka Kunture (Price et al, 2001).

Geographically, in the southern part of Ethiopia, which many ethnic groups inhabits, the Guji people share borders with Borana in the south, Burji, Konso, Koree, Gamo and Amaro in the southwest, Wolayita in the west, Arsi in the east and Gedio and Sidama in the north (Gemed, 2019). The Guji Oromo have been in constant contacts with these neighboring groups from time immemorial. The Guji-Oromo contact with the Amhara and other groups from the North started with Menilek II expansion and with their neighbors of southern nations and nationalities (Tadese, 2013; Gemechu, 2020). Bule Hora is the one district in the Oromia region of Ethiopia and formerly included Dugda Dawa and Kercha districts. It is part of West Guji Zone and bordered South by Dawa River which separate from Arero on the South by Yabello on the West by SNNPRS and on the North by Uraga on the East Odo Shakiso. The largest town of Bule Hora district is Bule Hora/Hagere Mariam (Dagim, 2018).

The 2007 national census reported a total population of the district was 264,489 of whom 133,730 were men and 130,759 were women and 13.33% of its population was urban dwellers whereas majorities are rural settlers (Gemechu, 2020). The inhabitants are also followers of different religions like, protestant, Orthodox Christianity, Islam and other traditional religions (Tsehay, 2017).



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Figure, 1. Map of the study area

2.2. Research Design

The researcher gave more insight to qualitative research method. According to Creswell (2007) qualitative method is developed in the social science to enable researchers to study the social and cultural contexts with in which they live. With the purpose of giving qualitative exploratory insights to the issues under study, to meet the suggested objectives and to give answer for research questions of the study; I employed a qualitative research paradigm.

Sampling Technique and Sample Size

The researcher employed purposive sampling technique whereby renowned contemporary potters were the beginning point for investigation. Subsequently, from these renowned contemporary potters the researcher snow balled to other potential sources of information.

2.3 Sources and Methods of Data Collection

In this research, the researcher used both primary and secondary sources of data. Primary data was collected by means of interview, observation, and target group discussion.

2.3. 1. Primary Data

Primary data are those data which can give first-hand and authentic information for researchers and writers. It includes like, assessing archival centers, conducting interview for potters, photographing of stage of production, field observation and focus group discussion. Thus, to develop this research, I employed different techniques/methods to gather primary data, methods like, site observation, questionnaires and interviews. An observation sheet was used to enter data which revolved around materials used to form, stylistic, technological and functional attributes. The interviews had open ended questions. These questions probed on general information around pottery 30 manufactures and sale in West Guji of Bule Hora districts. Interview schedule was considered appropriate for the study due to the literacy levels of the respondents.

2.3. 2. Secondary Sources

Secondary sources are sources of data, which are crucial to develop background information. In this research I consulted several historical and an ethno-archaeological written sources those done on archaeological perspective of pottery technology. Sources like, journals, articles; books and brochures were employed.

2.3.3 Data Analysis

In most cases, data analysis was in line with data collection. It involved observable attributes such as form, shape, style and function. Specifically, attribute analysis was the hall - mark of analysis in this work and it involved analyzing the form, stylistic, technological and functional attributes.

Archaeological materials were analyzed physically in terms of their properties. This involved investigating the physical properties of pottery such as color, texture, shape and tempering materials which often indicated methods used in production such as forming, finishing, decorating and firing. In addition to this, the researcher tried to *analyze* the potters' socio-cultural interaction with the entry community of west Guji Zone, southern Ethiopia.

3. DATA PRESENTATION AND ANALYSIS

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3.1 Indeginous Pottery manufacturing technology and Procedures in Bule Hora district of West Guji Zone

The reconstruction of indigenous production technology for pottery involves establishing, first, what raw materials was used and how they are prepared, and second, how the pottery vessels was formed, surface-treated, and fired (Kabangi, 2013; Barnet, 1999). These stages constitute the three pottery attributes, that is, form/function, stylistic and the technological attributes (Kabangi, 2013). This Ethno archaeological research on pottery in Bule Hora district of West Gujii Zone focuses on aspects of indigenous pottery production technology in different aspects. Consequently, this section presents the process of pottery manufacturing procedures, such as site selection, procurement of raw materials, molding of pots, form, styles, decoration, drying and firing of pots as well as marketing of pottery products.

According to my informants, traditional potters of Bule Hora district basically agro pastoralist communities, who live in rural areas and rely on the cultivation of vegetables and herding of cattle. There are also urban potters who manufacture pottery products for urban communities in Bule Hora town. But unlike rural potters; urban potters produce pots by using advanced way of manufacturing (Informants: Adis and Yeshe). The rural pottery makers use different raw materials, shaping and molding techniques. They also use traditional supportive materials and decoration techniques in pottery production (Iddris, 2017; Duresa, 2021). For instance, as I observed most of potters in *Haro kebele* quarry and transport clay from *haro* stream to the production site of their compound and mold by using *bikilla* (instrument used to smooth the pot) to manufacture it. Pottery production in the study area is a female occupation. Kabangi (2013) and Kent (2017) argued that, the females have a high credit in processing the procedures manufacture techniques even though in some extent their husbands and children's support them. Potters have long year of experience in pottery production technology and have remained major suppliers of different earthen ware to local communities (Informant: Loko). Based on my observation and interviews in Goro Gudina *kebele* the time required to manufacture of pottery products was controlled by different factors. These are mainly, the availability of clay and tempering materials, weather conditions during production and cultural factors, such as, traditional ceremonies and holidays.

3.1.1 Collecting Clay Soils for Pottery Preparation

Ashmore and Sharer (2003) argued that, clay is the principal resource to manufacture pottery products. Clay has been used dominantly for pottery production throughout the world. The same is true of the study areas where clay is an important raw material for the process of manufacturing pots (Ashmore and Sharer, 2003). Clay minerals derived from the weathering of rocks give clays the physical and chemical properties which allow them to be worked into shape and baked, to create pottery vessels (Kabangi, 2013). In West Guji Zone of Bule hora district clay soil occurs naturally (Informants: Chaltu). Some clay is derived directly from weathered rocks which are in situ while others are collected along the river beds and streams where they are deposited during rains (Umoru, 2017; Kent, 2017). But, there is a great deal of inter-site variation in the distance between quarry and production sites. Some of the potters obtain clay from their own localities while others travel a long distance from their homesteads. Potters type of clay different from localities to localities, societies to societies and region to region. This is witnessed in two *kebeles* namely Haro and *Goroo Gudina* which are located in the southern part of Bule Hora town. In these *kebeles* potters travel many kilometers from their houses to clay site. This site is located in the eastern part of Bule Hora district so called *Horo*. According to my informants from different local markets

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and from the site many of the pottery makers dig out the clay near by the stream of this locality (Informants: Kalo and Chaltu).



Figure: 2 Excavation site of potters ,in Horo *Kebele* of Bule Hora district

In addition to, clay soils the potters also responsible for procuring waters which is essential for further processing. They brought is from nearby their homestads by using different transportation system (Kabangi, 2013).

3.1.2 Molding, Decorating and Dring pots

Once paste is prepared, molding, sizing, rolling and shaping pots would take place (Iddris, 2018). Potters in *Horro* and *Anna Sorra* localities of west Guji Zone put emphasis on molding pots. The techniques of molding pots employed in village are modeling and coiling. First, potter places a supporting device or similar surface on the ground and puts the paste on the device, then pulls the clay upwards while slowly rotating the supportive device (*Bikilla /emed*) (Informants: Kiyya and Chaltu). Usually, potters know how much lump of clay is needed for a vessel of a particular size. But for large vessels, it is impractical to start with all the clay that is required. Therefore, additional coils are added when needed. Modified coiling involves drawing up the clay from one thick coil to make the walls of a vessel (Bula, 2011; Umoru, 2017). As I observed more coils or portions of coils are added and drawn up as needed to achieve the desired shapes and sizes. For instance, as I observed traditional stoves (*mandeja*) pots are made in two stages. First the potters put the paste on the supportive instruments and tried to mold it. Next they smoothed the paste by using broken woods.

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Figure 3 : Potters shaping the griddle at *Goroo Gudina kebele*

Decorating are also another parts of pottery production procedures which characterised by beautification of pot products in order to attract the consumers in the market (Iddris, 2017). According to informants (Chaltu and Kalo), potters decorate pots before preparing for drying. Pots are decorated before drying right after they lose most of the moisture content. Different patterns are produced by using finger and fingernail of potters, scraper pieces of calabash and stick (Morie, Kankeo, 2005). The decoration patterns vary from one village to another and district to district. To some extent potters decorate pots using available materials. In this case, potters of the study area employ metallic objects to decorate pots, wood and fingernails (Kabangi, 2013; Morie Kanekeo, 2019).

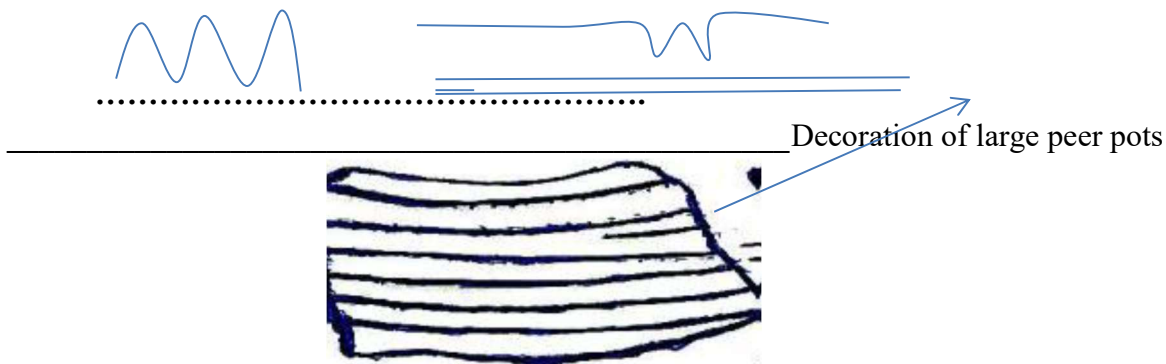


Figure 4: Some of the decoration style of pots in *Horo Kebele* of Bule Hora district

Drying pots is a step by step process of plummeting the moisture content of pots. It takes place in the compound of potters. Potters first dry pots under the shade of their house (Philip, 2019). This helps to avoid cracking that might be caused by an immediate exposure to sunlight. Once pots start to lose moisture, they are exposed to direct sunlight. The time required for drying pots is determined by the size and the type of pots as well as the prevailing weather conditions (Kabangi, 2013). For example, large and thick pots require longer time ranging between three and four days while smaller pots like incense burner and stew pots dry in one or two days. On the other hand, weather condition also affects drying of pots. During rainy season, drying pots takes more days where as vessels quickly after two days in dry season (Informants: Diknesh; Philip, 2019).

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Figure 5. Drying pots in the localities of Horro *kebele*

3.1.3 Firing of Pot products

According to the information collected from Bule Hora district of different *kebeles* and Umoru (2017), the firing process of pots started by collecting woods and straws from the nearby areas of the potters' villages. Some how the potters began to order their children to bring the materials which are essential for firing. My informant, Kalo Shebera told me that, after the collection of firing woods, husbands of potters go to dig the ditch in which the pots are going to be fired. After that they began to collect the dried pots from their village and put them in the ditch (Informants: Kalo and Kiyya). Pits might be dug under a shelter constructed in a compound. Firing pits are between 2 m deep and 1.5 m wide. Digging firing pits is a task done by the husbands and children of potters. In firing pots, potters use dry wood from acacia trees or use animal dung. Dry wood is arranged over the surface of the pit on which pots are laid. The arrangement of pots depends on their type and size. Bigger pots are placed right over the dry wood and small pots are placed between large pots.

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Figure 6: Firing of pot products at Gudina *Kebele* of Bule Hora district

Post firing treatment of pots is carried out with the purpose of smoothing the exterior surface of pots. Potters use leaves of eucalyptus tree and grass. Surface treatment of pots varies among potters. After firing what the potters doing that treating them and pickout the broken pots from ditches (Kabangi, 2013).



Figure 7: Post-Firing treatment of pot products

3.1.4. Marketing of Pottery Products

Pottery production in Bule Hora district is an important source of income which substantiates income for agro-pastoralists societies. In districts potters sell their products in two markets places namely Monday and Wednesday market. Monday market is located in the center of Bule Hora town in *kebele* two (Informant: Dinkenesh). In this market place the potters sold their products on Saturday and Monday. On those days they brought from different rural *kebeles* and meet their customers in the town in order to exchange them.

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Figure 8. Potters selling their products at Monday market of Bule Hora town

The second market place is Wednesday market. This market is located in *kebele* three of Bule Hora town in some meters far from Bule Hora University. In this market place it is not only pot products are marketing but also other commodities and products which are essential for both rural and urban settlers. When we come to our study area potters brought their products from different rural villages and supplied for users at western part of the market place. The following figure shows us how the potters and users marketing pots of the area (Informants: Kalo and Chaltu).



Figure 9. Potters selling their products at Wednesday market of Bule Hora town

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Figure.10 Customers' and potters exchange pottery products at market place.

According to my informant, Dinknesh, contemporary potters of the study area are adopted their skill from their parents and relatives through time and still manufacturing. From this we can inferred that even though there is change to manufacturing techniques of pot products, there would be continuity from generation to generation. I said these because of the children of potters are learning from their parents enough their interests is minimal.

According to my informant, Alemitu, the perception related to the skill of potters in somehow witnessed in the non- potters. They understood that the handy-craft workers in general and potters in particular have no equal status with the common peoples. But still they have a good social relationship with non-potters in different place (Informant: Alemitu). The social relationship has begun from material procurement to market places. During the preparation of paste, for example, potters obtain tempering materials from non-potters while at market places customers are eager to buy pottery products based on the quality and durability of pots. This shows us even though the peoples did not want to adopt their profession they have good relationships with them.

Generally speaking, in the process of pottery production the potters used procurement techniques of clays and waters, preparing paste, molding pots, firing them as well as marketing them for users. These are the common steps in traditional potters of Ethiopia across different part of the country and Bule Hora (Morie, Kanekeo, 2019; Duresa, 2021). But as I observed in different village of Bule hora district there are inter and intra variation in the techniques producing and using raw materials.

4. CONCLUSION AND IMPLICATIONS

This manuscript tried to address indigenous pottery production technology in Bule Hora district of West Guji Zone. It began to study from the early pottery production up until household significant the last discard of potsherds as archaeological findings. At the intial stage the potters of West Guji zone began to procrument the materiall from nearby areas in whcich clay soil can be found. The site of clay soil so called *haro*, offers relevant clay for workers. The preparations of paste takes place by mixing clay and tempering materials using either hands, homemade materials or legs of potters depending on the amount of clay. According to the this study, the supporting devices (*emed*), could be made from broken pots, plastic and basket and in those devices the paste are rotate in both anticlockwise and clockwise direction until pots are shaped completely. In addition, pottery in the context of giving information about the social, economic and cultural meanings of pot products, have significant

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in both rural and urban commentates as well as for potters and non-potters. But I have also able to identify the problems which existed in the study area. Among the challenges: shortage of clay excavation sites and procurement materials, transportation problem, fragile of the products, modern technology, and perception of the people /non craft workers.

4.1 IMPLICATIONS

Implication on source of income:

It is known that, Ethiopian in general and the study area people in particular major source of income is agriculture works, that is featured by subsistence (hand to mouth), poor resource availability, minimal use of modern technology packages, improved better seeds, fertilizers, irrigation works, extreme fluctuation of productivity (low productivity and reduction in yields and recurrent droughts). So to overcome such vulnerability, challenges and economic constraints societies should practice diversified livelihood works to get extra income. In support of this,, the recent economic policy of Ethiopian people focusing area is encouraging the indigenous knowledge technology (home grown economy) advancements, like, improving traditional technologies (black smith, pottery, weaving, and home kits) and advancing domestic production technologies (farming tools) for knowledge and economic transformation. Thus, anyone who wants to join these local grown economic activities has good incentives from government and policies. For years, pottery production in the study area is female occupation. Females have a high credit in processing the clay product manufacture techniques even though in some extent their husbands and children's support them. So to change this culture, men of the study area and surrounding districts should engaged in this alternative economic activity to increase their source of income opportunities, to support agriculture economy, to send children to school and to boost themselves economically.

Implication to contemporary pottery and industrial wares:

With regard to durability and features of pottery, there is some difference between the former and recent pottery producer potters. For instance, former cottage industry potters main aim was not to get much profit/benefits but they made quality, durable, decorated wares with cultural values and less breakable clay products in the field while contemporary potters' reality is not like that. It might be due to several factors, like, lack of essential skills, wisdom of clay soil selection, selfishness to get more wealth in short time, lack of interest in the work and etc. So, contemporary potters should give due attention and respect for product consumers and to the advancement of pottery technologies via keeping the originality and cultural values of inherit pottery products and manufacturing technology.

Although, to some extent, the religious, social and cultural significance of Bule Hora district contemporary indigenous pottery products continued to bring out the inherit norms, values and traditions coincided to the material culture and cultural practices; and it should not be replaced by the contemporary plastic, ceramic and metal products.

Similarly, in former times potters made advertisement of their products through sending it as gift for faraway relatives and families or government officials. Thus, it enabled them to get more customers and buyers. It indicates that, contemporary potters should not be limited to local markets rather through using modern transportation, online Medias and communication systems they could reach further consumers of their product/wares.

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4.2 RECOMMANDATIONS

In this section, some recommendations are suggested as a solution in order to strengthen linkage of the government, the private sectors and Bule Uora University at large, and avenues for future researchers in the field for effective community development process on craft production technology especially on traditional/indigenous knowledge of pottery production technology. Thus, the researcher has tried to provide briefly the following recommendations:

- ✓ The source of potters finance should not be limited on their pot products alone. Moral and materials assistance should be given for pot workers.
- ✓ It should have to have given awareness for both potters and non-potters regarding to the techniques/technology of manufacturing pots in order to develop their skill and get source of income.
- ✓ Promoting of local pottery products by exhibition, bazar and symposiums should have to establish its organizational structure up to *kebele* level.
- ✓ Preparing different methods of raising money from members and other sections of the community to build/rent a shade on local area industrial zones for potters; and it would be better for pottery producers to own adequate instruments, to made qualified and competent materials and have permanent production time.
- ✓ The work of pottery production should not be left as women job but men should be motivated to engage in the system.
- ✓ Market centers and producer-buyer/consumer linkage should be established to make potters good profit and love their work, to save time, energy and money of both parties and to promote local products and crafts to foreign visitors and state wide consumers.
- ✓ It should be prepare public meetings on monthly, semi-annually, and annual basis as needed. This is important to understand the feelings of the local community, to change community's perception to potters, the problems of the potters, and generally enable the community to deal with development of indigenous pottery production and technology transfer.
- ✓ Archaeological sites should be clearly identified and promoted for visitors and researchers.
- ✓ The researcher recommends further studies should be done on the potter technology in Bule Hora district kebeles in order to advance the quality of pots, to detect impure and low – grade types of clay that resort to pots breaking during drying and firing times.
- ✓ It is clear that this investigation on traditional pottery technology was done in southern parts of Ethiopia, particularly in West Guji zone of Bule Hora district few kebeles. So this study is not enough even to

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outline the issues of indigenous pottery technology of all Guji (west and east) people and Ethiopia. Thus, writers, researchers and interested scholars in the field are initiated to conduct synonymous studies in different regions, districts and kebeles to made all inclusive generalization/conclusion.

- ✓ Frankly, it is difficult to made conclusion about traditional technologies in Bule Hora districts is merely pottery production technology; because communities of the study area people are rich for different indigenous production technologies like, weaving, blacksmithing, farming tools, and etc. Previously, on the themes of indigenous pottery technologies enough studies are not well conducted and documented, so, by using this study as stepping stone further studies are encouraged both on pottery and related issues.

Finally I recommended it is important to have a cultural center for exhibition of local pottery production technology in Bule hora town specifically and Ethiopia in general.

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