

UNIVERSITY OF EDUCATION, WINNEBA
DEPARTMENT OF MUSIC EDUCATION

ALUMINIUM STATUES AND THE IMMORTALISATION OF
GHANAIAN SPORTING LEGENDS

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Arts, submitted to the School of Graduate Studies in partial fulfilment
of the requirements for the award of the degree of
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(Arts and Culture)
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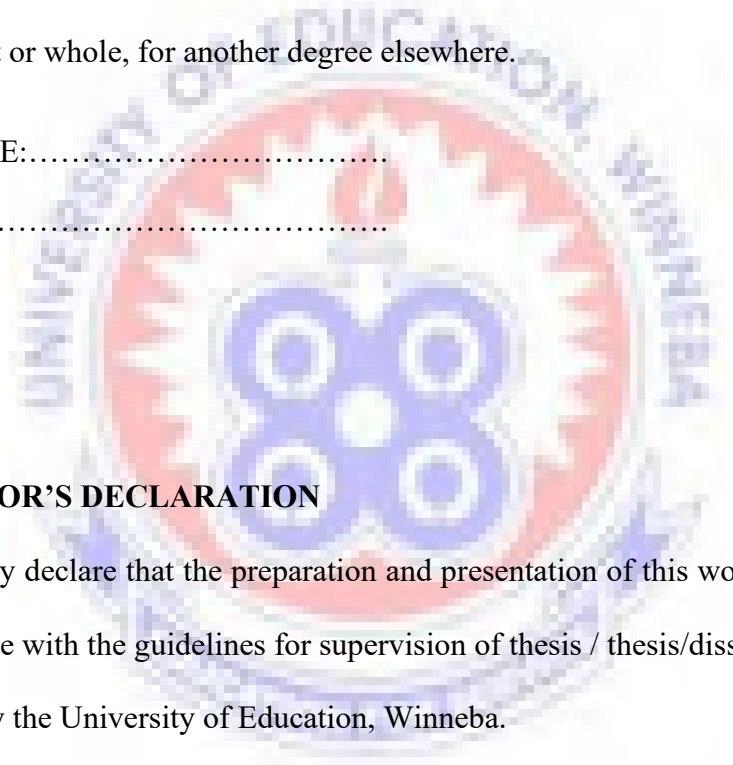
DECLARATION

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DEDICATION

To Nhyiraba Yaa Gyebua Ankrah and Nyameba Papa Kwabena Ankrah



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ABSTRACT

The study was a studio-based research on *Aluminium statues and the immortalisation of Ghanaian sporting legends*, that exhibits praxis and exegesis of Azumah Nelson's statue. It advances the immortalization of Ghana's most outstanding sporting legend and material sustainability which is rendered in scrap aluminium sculpture. It encourages the Ghanaian sculptor to contribute positively to Ghana's history by sculpting Ghana's sports legends in their daily practice. The study was premised on the fact that quite a number of statues in Ghana are produced to honour the kings, politicians and individuals without the consideration of sports icons who in their own way contributed largely to the development of Ghana. Within the praxis, a sculptural artefact of a sporting icon, Azumah Nelson was created using scrap aluminium. The research employed qualitative research method to collect data and to analyse the data on how scrap aluminium could be used as a material to cast a statue. Semi-Structured interviews and observation were used. Purposive sampling technique was used to select the sporting legend for the study. The clay model was built and the resulting mother mould was created using P.O.P and sand combinations for the newly created wax sculpture. This was eventually de-waxed in a kiln and the molten aluminium metal poured into it (mould) at the foundry to create Azumah Nelson's Statue. Though aluminium is scarcely used to sculpt, the finished work proved the viability of modelling in sculpture with aluminium. The outcome of the study indicated that there are quite a number of sportsmen and women who have contributed immensely to the development of Ghana but have not been recognised officially in forms of statue and therefore a lot must be done to correct or remedy the situation. It also shows that the material, aluminium, is the cheapest among all the traditional materials; it is sustainable and does not rust, and above all it has greater resistance to the external forces of the weather as compared to concrete statues.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

National honours are mostly categorised and recognised under themes such as politics, science, academia, business, arts and sports. The various forms of honours include presentation of medals, induction into halls of fame, naming after monuments and erection of statues. All these are done to remember, commemorate and show appreciation to heroes and heroines while they are alive or dead.

Ghana has honoured some of her citizens in the past and continues to honour them. In fact, since the beginning of the fourth republic, all successive governments have honoured deserving Sons and Daughters. Former President Jerry Rawlings built the Kwame Nkrumah Mausoleum, where the first President of Ghana is buried, in honour of the first President (Essel, 2014) and went on to restore Nkrumah's name on KNUST three decades after it was removed in 1966 coup (Adomako, 2004).

In the same vein, in 2002, President Kufour put the images of the 'Big Six' on the nation's banknote to honour them for their contribution towards Ghana's independence (Essel, 2014). This was continued in 2007 during the 'Ghana at Fifty' celebrations where he unveiled the busts of three distinguished citizens of Anomabu, namely George Ekem Ferguson, Nana Amonu IV and Dr. James Kwegyir Aggrey (Yankah, 2007). The presidential honours continued with President John Evans Atta-Mills. Atta-Mills printed the GH¢2 with Dr Nkrumah's name firmly embossed on it (Essel, 2014). In 2011, the President honoured two foreigners, public servants, statesmen, footballers, religious leaders and the judiciary, among others for their distinguished and meritorious services

to Ghana. In the same 2011, President Mills honoured the Black Stars for reaching quarter finals of the 2010 FIFA World Cup in South Africa (Ghana politics, 2011).

The recent presentations of National awards were organised in 2015 by President John Mahama. At that ceremony, twenty-seven prominent Ghanaians, including former Finance Minister Dr. Kwabena Duffuor, received awards for making Ghana a better place to live in (Boadu, 2015). The President at the same event awarded President Mills, his predecessor, with a school and a statue at Ottuam, in the Central Region of Ghana.

Outside the national award regime, Traditional Authorities also awards citizens of their localities that are seen as 'outstanding contributors' to the wellbeing of the communities in which they live. These include past Kings and Chiefs who attained the status of heroes and heroines. In the Ashanti Region, some Senior High Schools (SHS) such as Opoku Ware, Tweneboah Kodua, Yaa Asantewaa, Prempeh, Dwamena Akenten, Afia Kobi, are all named after Kings and Queens of Ashanti. In addition to this, some of them that is, Prempeh II and Opoku Ware II, have statues sculptured, erected and mounted at vantage locations in their honour (Adomako, 2004).

Since most of the awards were given to citizens other than sportsmen and women, the government, through the ministry of Education, Science and Sports, commenced honouring some well-deserving sporting heroes who have distinguished themselves creditably in the development of sports in the country (Chronicle, 2011). The Accra Sports Stadium for instance was named after Ohene Gyan for his sports development and as an administrator. Ohene Gyan was very pivotal in the Ghana Black Stars' African Cup of Nations triumph of 1963 and 1965. Cape Coast Stadium was also named after Robert Mensah, an Africa number one goal keeper of his time. In Kumasi, Baba Yara's name was inscribed on the Kumasi Sports Stadium. The National Sports College, the Kaneshie

Sports Complex and the National Hockey Pitch were named after C. K. Gyamfi, Azumah Nelson and Mrs. Theodosia Okoh, who designed the Ghana flag respectively (Chronicle, 2001).

Most of the sports facilities are named after these great sporting heroes whose legacies are worth emulating. In this wise, the committee and government are highly commended for that after all, it is said that; a country that does not honour its heroes is not worth dying for. Sadly, however, most of the honourees have passed on to glory with no statues to show of them. In 2015 alone, the likes of former Black Stars Coach C. K. Gyamfi, Cecil Jones Attuquayefio of Hearts of Oak, George Arthur of Kotoko, Emmanuel Kwasi Quashie of Hassacas and Cyclist Samuel Anim passed on (Gyamfi, 2015). Although all these departed heroes were given befitting burials by the State, their places in history lack physical representation due to lack of statues erected in their honour. The absence of statues is not a lack of understanding of their value but probably, an oversight. The researcher's observation, however, is that the committee that worked on the recommendations to honour the above-mentioned sports icons in 2003, did not recommend that statues be erected in front of these edifices. Indeed, honouring persons with statues is regarded as the highest form of recognition. The main purpose of a statue is to remind citizens of the person's benevolence and support to the nation (Gilbert, 1998).

The value of sportsmanship is better understood through the physical and psychological reflexes of a personality (sportsman). The significance of sports brings physical and mental fitness to the person involved and plays a vital role in developing values and mutual trust of a nation. Based on its major contribution to a nation's development, it is realised in nation building by creating a sense of oneness and togetherness among its citizens where peace and unity are paramount. A sense of cooperation, team building,

strong character and elevation of confidence are all the successful traits of sports in the nation's development.

In the context of sculpture and sports, sculpture has a historical role of making real and solid representation of issues across the world. It has been a way of publicly honoring and immortalizing figures or icons of historical importance. In addition to the accounts just mentioned, however, in order to get a clear understanding of sculpture and sport, the motivation of this study is to consider the human kinetics (focused on the comprehensive study and practice of human movement and exercise, and its impact on health and physical performance) of social significance of sport where these philosophical values of sport are imbued and reinforced through the production of aluminium sculpture.

The virtue of aluminium as a material has not been much exploited by contemporary sculptors in Ghana for sculpture works which are fairly standardized or largely in scale. However, Ghanaian sculptors have used metals (often silver, gold, brass or bronze) in the past for ornamentations and casting purposes. In this contemporary era of technological advancement where materials keep changing, the study, therefore, identified the virtue of aluminium as material for casting due to its anti-rust component, aesthetic properties, durability and availability which can equally be suitable for sculptural works.

Again, the study identified the less documented production processes on Aluminium lost wax casting and to revive this metal casting technique on practical treatise of the fundamental metallurgical processes for being the precursors to all metal casting. Considering precision casting, the study sought to illustrate a step by step procedures to achieve ultimate surface resolution obtained by cast aluminium metal taken from a detailed statue of a mould (Meeks, Tulp & Söderberg, 2012).

1.2 Statement of the Problem

Honouring people with sculpture has grown from the solitary image Dr Kwame Nkrumah created for himself in 1957 to a host of others (Essel 2014). In fact, the new list boasts of the Nkrumah Mausoleum, the Big Six around Kotoka International Airport and the Busts of the three High Court judges in front of the Supreme Court. In the other Regional Capitals, the Otumfuo Opoku Ware II, Nana Agyemang Prempeh II, Nana Yaa Asantewaa and Otumfour Osei Tutu II in Kumasi of the Asante Region, the Paa Grant statue at Takoradi in the Western Region and the Busia statue at Sunyani in the Bono Ahafo Region, among others constitute works of sculpture that were constructed to honour citizens of Ghana other than sportsmen and women. With exception of Abede Pele whose statue was erected at the Tamale Round About, the countless calls for sportsmen and women to be sculptured has yielded no results. For instance, Ms Theodosia Okoh, an ardent supporter and Patron of Ghana Hockey, could only managed her name on the Ghana Hockey Pitch, though a number of reasons were adduced for her to be sculptured (Asare-Donkor, 2015). Though the likes of Ohene Gyan, Robert Mensah, Baba Yara and Charles Kumi Gyamfi, all have monuments named after them, none has a statue in their name.

Sculpturing sports icons and individual is one of the many ways the youths can be encouraged to contribute to nation building (Clark, 2014). In the words of Akosah-Sarpong (2007) that the nation Ghana must walk out of this 'dilemma' of waiting for honourees to die before choosing to honour them. Again, national heroes often recognised in the form of sculpture. This gives the nation opportunity to remember and commemorated the heroes long after they are gone (Bocicault & Danner, 2014).

The sculpturing of sporting icons has proven to be immensely beneficial to society by honouring and paying respect to their heroes. However, this sculpturing processes by sculptors in Ghana have been mostly concentrated on materials mainly in cement, wood, bronze and other metals apart from aluminium. Aluminium in this perspective has fantastic properties which can provide loads of advantages to sculptors as it is durable and fares well against the environment. However, in spite of these values that aluminium as a material for sculpturing possesses, sculptors have given it a little attention in producing their sculpture works. This study therefore, uses scrap aluminium as the main material to sculpt the statue of sporting icon in Ghana. Additionally, the lack of statue for sports personalities in Ghana is a 'gap' that must be filled in order to properly situate the contributions these sport icons have made to the country.

1.3 Objectives of the study

The main objective of the research is to cast a life-size statue of Ghana's sporting icon in aluminium. The study suggests to achieve the following objectives:

1. Identify Ghana's sporting icons and select one for the project.
2. Sculpt and cast the selected icon's statue in aluminium.
3. Use the cire-perdue hollow (Lost-wax casting) method.
4. Use the step casting technique to cast the lie-size figure of the icon.
5. Aesthetically appreciate the work (cast sporting icon).

1.4 Research Questions

1. Who is considered a sporting icon in Ghana?
2. How effective is aluminium casting compared with other methods of casting?
3. How would the use of the cire-perdue hollow method help in the production of the life-size sculpture?
4. How would the step casting technique encourage other Ghanaian sculptors to cast a life-size statue in metal?
5. How will the aesthetics appreciation of the work (cast sporting icon) encourage sports and the production of other sports statues in Ghana?

1.5 Significance of the Study

The research is important in preservation of history, promotion of sports tourism, sports development as well as having economic and aesthetic values. Again, the work has more value for metal casters, museum curators, Sculptors, Art educators, and students in their line of work and studies.

The study is significant because of the method of casting which appropriately situate the study into a studio-based research. It offers the Ghanaian artist the opportunity to work in scrap aluminium metal since most statues in Ghana are done in different materials than aluminium. The aluminium casting of statues which is new will therefore provide academia a new way of casting in Ghana.

1.6 Delimitation (Scope)

For the purpose of this study, the research was focused on the use of scrap aluminium in producing a statue in honour of one of Ghana's sporting Icons, Azumah Nelson. It focused generally on material sustainability on the environment and the impact of sports

statues on Ghana. The research also covered sculpture and metal casting in general. It studied human figure and used half-size human proportions for the experimental stages and life-size human proportion for the main work.

1.7 Definition of Terms

- Alloy* A substance composed of two or more metals. Alloys, like pure metals, possess metallic lustre and conduct heat and electricity well, although not generally as well as do the pure metals from which they are formed.
- Aluminium* It's a lightweight silvery metal with the atomic number 13 on the periodic table and symbol Al.
- Casting* This is the process of producing solid objects by pouring molten liquid material into a shaped mould and allowing it to cool and harden.
- Catalyst* A substance that increases the rate of a chemical reaction without itself is undergoing any permanent chemical change.
- Cire-perdue* A process used in metal casting where wax model is covered in clay, when it is melted out, the hollow is filled with metal.
- Conductivity* The degree to which a specified material conducts electricity or heat.
- De-waxing* This is the essence of the lost wax process which is removal of wax from the refractory mould.
- Ductility* A metal or other materials that can be drawn out into a thin wire.
- Electrode* A conductor through which electricity enters or leaves something.
- Environmental* The surroundings or conditions in which a person, animal or plant lives or operates.

<i>Ferrous</i>	Are chiefly metals containing or consisting of iron.
<i>Foundry cast</i>	The process of casting using the molten metal.
<i>Greens</i>	This refers to the surface excesses in casting.
<i>Grog</i>	Crushed fired clay for investment lost-wax moulds by the block method.
<i>Gypsum</i>	Basic raw material for plaster of Paris.
<i>Life-size figure</i>	A figure of average human size 1.7-2.0 meters.
<i>Lost-wax</i>	The process of casting metal by melting out wax model from a mould and replacing it with a molten metal.
<i>Malleable</i>	Describes some metal or other materials that can be hammered or pressed into shape without breaking or cracking.
<i>Metal</i>	It is a solid material which is typically hard, shinny, malleable, fusible and ductile with good electrical and thermal conductivity, e.g. iron, copper and silver.
<i>Metallurgy</i>	A branch of science concerned with the properties, production and purification of metals.
<i>Non-ferrous</i>	Are chiefly metals that do not contain or consist of iron.
<i>Pattern</i>	A model around which the mould cavity is formed.
<i>Sand casting</i>	The process of casting metal using sand for the mould.
<i>Sanitation</i>	It is a condition relating to public health.
<i>Scrap</i>	A small piece of material or amount of something especially metal that is left over after the greater part has been used.

<i>Statue</i>	A carved or cast figure of a person or animal, especially one that is life-size or larger.
<i>Steel</i>	A hard, strong grey or bluish-grey alloy of iron with carbon and usually other elements, used extensively as a structural and fabricating material.
<i>Welding</i>	A process in which two or more pieces of metals are joined together by the application of heat, pressure, or a combination of both.

1.8 Organisation of the Rest of the Chapters

This research is organised into six chapters where Chapter two discussed literature related to the research. This is structured under topics counting; introduction, Ghana sports, sculpture and its types (*modelling, sand casting, lost-wax casting, Ashanti lost wax casting, casting procedures among others*), mould making, human factor in sculpture, National honours (*Ghana's achievement in sports*), Sports Honours and Sculpture, aluminium as a sculpture material, properties of aluminium, methods of processing aluminium, aluminium in Ghana, Historic information on aluminium sculpture, aluminium scraps (*sources and some uses*) and aluminium sculptors. Chapter three focused on the research design, methodology, visits to scrap aluminium dealers and casters for observation and interviews. Tools and materials, skills and procedure for the work. Chapter four covered the techniques and procedures used in sculpting and casting of the aluminium statue (Icon). Chapter five discussed the appreciations and discussions of the cast statue while chapter six deliberated on the summary of findings drew conclusions for the research. It gave recommendations, references and appendix as well.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1. Overview

This chapter reviews literature on the main objective of the research where casting of a life-size statue of Ghana's sporting icon in aluminium was sculpted. The researcher believes there are enough resources in literature that identify the various reasons why sports personalities are honoured as icons and aluminium as a sustainable material that can be used to sculpt.

2.2 Theoretical framework

Sculpting a life-size statue of Ghanaian sporting icon in aluminium are sought to convey a truthful and objective vision of Ghanaian sport heroes and their involvement in everyday sporting life events hosted globally. It is significant fact to examine the concept of sculpting reality based on accurate observation. The study examined the purpose and concept of sculpting realism to have a better understanding of the material dimension of aluminium casting and encourage the practice of aluminium sculptures by material sustainability.

2.2.1 Theory of realism

The theory of realism provided a scope into artistic realism, which explained some conventional understanding or artistic coherent of aluminium development within the context of research findings. From this understanding, Niederle (2015) argues that artistic realism is characterised unproblematically as a complex, true, and faithful description of reality or similarity to reality, but the main focus of realism is not to construct beauty, but

to achieve truth. Finocchio (2004) is of the view that artistic realism is practiced to avoid artificiality in the treatment of human relations and emotions as treatments of subjects in a heroic or sentimental manner.

Therefore, this artistic realism is framed under two key areas which focused on heroism and material sustainability. Heroism underpinning artistic realism talks about the spotlight of this study by given attention to Ghanaian sporting icons who had dedicated their lives to promote the national identity of Ghana through thick and thin of winning laurels in all the sporting disciplines on the global sports platform for Ghana. The concept of heroism in immortalizing Ghanaian sport icons in aluminium is portrayed by the identity and belonging which are significant in history. Heroism in this context is marked by deep and strong symbolic character of a person in heroic values and attributes to national development.

From another perspective of prioritizing heroism, Mentz (2012) reiterated that heroism works in the opposite way. The hero, the example of human greatness, invites attention and focus, so that the heroic body itself becomes a vessel for transcendent values. The history of art provides probably individual clearest of how heroism becomes embodied. For instance, Michelangelo's famous sixteenth-century sculpture of David, poised nude just before his combat with Goliath, visually presents the singularity and physical force of human heroism. The hero, the shepherd boy about to slay the Philistine giant, stands out from the crowd. Rather than being defined by relations, the hero exceeds them.

Taking a deep thought on Mentz's assertion on heroism, his force of assertion drives the philosophical foundation of heroism of this study as it also characterised on Bernstein's (2002) concept of heroism as a high-level abstraction. It is primarily a moral concept and requires a rational philosophical system, including the principle of mind-body

integration, as its proper base. Without such a basis the concept can be neither rigorously-defined nor adequately understood. Heroism as described by Bernstein was an individual of elevated moral stature and superior ability who pursues his goals indefatigably in the face of powerful antagonist(s). The hero because of his devotion to the good, no matter the opposition, a hero attains spiritual grandeur, even if he fails to achieve practical victory. Bernstein's four components of heroism were moral greatness, ability or prowess, action in the face of opposition, and triumph in at least a spiritual (to be used in methodology), if not a physical, form. Of these, the hero's moral stature is unquestionably the most fundamental. An uncompromising commitment to morality is the foundation of heroism. Although the point can be stated simply that hero points out the good achievement of someone. Its reasons are philosophical and apply to all instances of the concept. The essence of a rational morality is a ruthless dedication to reality and to the factual requirements of man's life on earth. Man's life requires the achievement of values: he must build his houses, grow his food, develop the medicines that cure the diseases which afflict him, and discover the principles in logic, philosophy, science, that make possible all these accomplishments and more. The achievement of values is not guaranteed, automatic or effortless. Struggle, that is the act of strongly motivated striving, the pursuit of goals involving great exertion, even difficulty, is inherent in the nature of life. Man's nature provides him with built-in needs and the ability to satisfy them but not with the goods their satisfaction requires. These are the product of his own effort, often prodigious and sometimes in the teeth of antagonistic forces, be they insentient, bestial or human.

The characteristics of heroism as illustrated by Mentz (2012) and Bernstein (2002) prove the fact that heroism in artistic realism can be achieved through philosophical point of view where this study is focused.

The second key area is material sustainability where the provenance of aluminium is to make this material a common practice for sculpture production and use, especially in this contemporary era and other centuries to come as described by Kidwai (2017) that following the advent of the industrial age, material sustainability like aluminium has involved the extraction of raw materials and a discard of the same after it has been depleted meaning it can be recycled and reuse again.

Aluminium as a sustainable material can be also considered one of the most efficient and most widely recycled materials through the recycling process which saves 95% of the energy that it would cost to produce new aluminium (Zahner, 2018).

From the study's standpoint on material sustainability, aluminium is a clear choice for sculptors seeking a durable, long lasting and beautiful material option for artwork. The myriad of benefits, including the recuperation of cost once the material reaches its aesthetic lifespan, make aluminium one of the sustainable metal options available for the artists.

Based on the established theory on realism and its concepts by looking at heroism and material sustainability from various standpoints of authors, the study therefore does not formulate a new theory but it is situated on the existing theory of realism for its execution of a studio-based work.

2.3 Ghana and Sports

Ghana is a sporting nation with appreciable patronage in almost all the known disciplines. Football is the most popular and it is played in all the corners of Ghana. Basketball, boxing, athletics, volleyball, swimming and many other sports are well organised and played. This is seen in the formation of national and regional sports associations of various disciplines with the Ghana Sports Authority being the apex body that sees to the day to day running of sports and games within the country.

Ghanaians engage in sports for various reasons. These reasons can be diverse - 'fun, self-expression and health' (Agyei, 1971) while others indulge in sports for social, economic and political reasons (Otoo, 2014).

Socially, communities and associations organise games such as football and Ghanaian keep-fits during festivities, holidays and weekends to foster unity, compete for honour and exercise for good health. These games are also organised at the various levels of Ghana's educational system; inter-college sports festival was a celebrated festival in most of the Regional capital. While schools seek to win the ultimate prizes; old students engaged in bragging rights which are always interesting and fun. Economically, there existed sporting clubs which gave employment to potential sportsmen and women. Football teams such as Accra Hearts of Oak, Kumasi Asante Kotoko and Sekondi Hassacas among others continue to give employment to a myriad of people including footballers, coaches and backroom staff, manufacturers and other auxiliary jobs such as vendors, designers and television and radio broadcasters. In some cases, some security agencies such as Ghana Immigration Service, Ghana Armed Forces, Ghana Navy, Ghana Prisons and the Police Service, employ new members for their sporting skills. The

universities in the world, including Ghana sometimes admit students based on their abilities in sports.

Politically, sports have been used by politicians as a way of instilling national pride and national unity as well as in the pursuit of various international relations policies. In the 2018 Winter Olympics in Pyeongchang in South Korea, North Korea agreed to march under the Korean Unification Flag though they were and are still in both political and social conflict. In Ghana, Dr Kwame Nkrumah used sports in varying ways to highlight Ghana and Africa as potential country and continent full of people with ideas and talented abilities when he stated that;

Knowing the tremendous part that sports can play in the development of the African Personality, I propose to encourage its promotion here in Ghana. I hope to arrange at the earliest moment, a special sport contest to be held here in which prominent sportsmen of African descent in America, West Indies and other parts of the world will be invited to participate. This will inspire and encourage us in our efforts to establish the African personality in its entirety (Obeng 2009, p. 24)

Sports is used to rally groups of people for political activities (Otoo, 2014), to influence class and map generational divisions, shape masculine identities, and serve as a mobilizing force for township and political organizations (Alegi, 2004). One of the many ways politicians get their 'loyalty' from the youth in Ghana is through political 'keep-fit clubs'. By organising walks and games, politicians are assured of unfettered loyalty and votes from the youth (Morrison, 2014).

What Otoo (2014) and Morrison (2014) are saying is that, with sports at the centre, people forget their differences and come together to achieve their goal. In sports, tribe, creed, politics, etc., do not matter much so long as the people are doing their sports.

2.4 Ghana's Achievement in Sports

Ghana has chalked some successes in organised competitions worldwide. Ghana first participated in the Olympics in 1952 with seven (7) athletes under the colonial name 'The Gold Coast' but won no medals. Subsequently, Clement Quartey won Ghana's first medal (Silver) at the Olympics in Rome in 1960, Eddie Blay won bronze in Tokyo in 1964 while Prince Amartey also won bronze in Munich 1972. Ghana's last Olympic medal (bronze), was won in the football category by the Black Meteors in Barcelona in 1992. In the junior Olympics in Nanjing, China, Ghana won Gold medal in 800 meters through Martha Bissah in 2014.

In football, Ghana is a proud four times champions of the African Cup of Nations Cup (AFCON) winning in 1963, 1965 1978 and 1982. Interestingly, the Black Stars have appeared in the finals more than any other country in the competition's history. They were the runners up in 1992, 2010 and 2015. On the FIFA World Cup stage, the Black Stars have represented the nation three consecutive times in 2006, 2010 and 2014.

The junior national teams have also raised the flag of Ghana high by winning major international competitions. The Black Starlets (U-17) won two gold medals in 1991 and 1995 and two Silvers in 1993 and 1997. The Black Satellites of Ghana became the first African team to win the FIFA U-20 World Cup in 2009, after coming in as runners-up in 1993 and 2001 respectively.

Ghana has made tremendous impacts with her sportsmen and women at both the Commonwealth and other International Sports Competitions. In the 1962 Commonwealth

Games, Michael Ahey (the star) won gold and silver medals in the sprint events. With three gold medals in the Africa Championships in Athletics and a silver and bronze medal in the IAAF World Athletics, Aziz Zakari also made Ghana proud with his achievements. Again, Ignatius Gaisah, won gold medal for Ghana in long jump at the All-Africa Games (2003), gold at Commonwealth Games (2006) and another gold at the World Indoor Championships (2006).

Writing Ghana's athletics history cannot be without the mention of Alice Anum, 'The first lady of track', who dominated the sprints and long jump during her days with three medals at Commonwealth Games in 1970 and 1974 and three gold medals in All Africa Games.

Another female athlete who won laurels for Ghana is Margaret Simpson. She competed in the heptathlon winning six medals in both All Africa Game and African Championships. She also won bronze medal in the 2005 World Athletics Championships. Vida Anim who is said to be the most decorated female athlete in the history of Ghana, has fifteen medals to her credit, with an enviable treble of gold medals at the 2006 African Championships with victory in the 100 m, 200 m and the 4 x 100 m relays.

Boxing obviously sets Ghana's achievement in sports in 1960 at the Rome Olympics. David Kotey, popularly called "D. K. Poison" was the first Ghanaian to turn professional and also won a world title in the featherweight boxing division between 1975 and 1976. Azumah Nelson, known as the 'Professor' is undoubtedly, Ghana's and Africa's greatest boxer. Losing just six (6) and two (2) draws fight before retiring, he fought forty-seven (47) bouts and won thirty-nine (39) with twenty-eight (28) Knock Out (KO) between 1979 and 1994. The three-time world champion held the Featherweight and the Super

Featherweight titles for unprecedented period of 10 years from 1984 to 1994. Azumah was called to the International Boxing Hall of Fame in 2004.

In 1994, Ike Quartey won the WBA welterweight title. Nana Yaw Konadu also won the WBC Super Flyweight Title in 1989. Joseph Agbeko won the IBF Bantamweight title in 2007 while Joshua Clottey in 2008 became the IBF Welterweight Champion. All these boxers raised the flag of Ghana so high that the country got the accolade as ‘a Boxing Nation’.

Before the upsurge of organised sports, national organisational sports were the legacies of the British colonial rulers (Nauright and Parrish, 2012), however, indigenous sports such as *Asafo Atwele* of the Ga, *Atentam* and *Osibir* of the Fante were played as a form of entertainment and selection of strong men to serve in the community by Ghanaians (Otoo, 2014). Although these traditional games are still played, it has been overshadowed by the organised sports.

2.5 Symbols and Nationalism

Nationalism, according to Billig (2008), is “an all-pervasive phenomenon that has so deeply engrained in communities that it often goes unnoticed”. Therefore, the creation of a nation is done through subtle processes but not the application of force. Billig (2008) asserts that nationalism is characterized by its predictability and is mostly consistently reproduced through routine practices. For example, the use of a language in the arts. Again, Billig (2008) insists that nationalism is reproduced through the employment of what he terms as “routine deixis” and rhetoric of “us versus them” in various cultural texts. Therefore, a boxing contest between Ghana and other countries exudes much supports because Ghanaians demonstrate their love for their country by supporting the boxer who is fighting.

The honour systems that nationalism provides is a legacy and heritage that grounds a nation to respect its past. This on the other hand, serves as a vehicle to spur the citizenry to look forward to a future based on community and a desire to live together. Sculpture is able to bring the past to the present by sculpting heroes into immortality through platforms that are provided by the present-day nation and in turn, propel its citizenry to move forward together towards the future.

2.6 Sports Icons (Heroes) in Ghana

Because the main focus of this research work is to build a statue to honour a Sport icon within the Ghanaian context, it is important to discuss the idea of the Sport icon as a key figure in the creation of a national identity. In the view of Billig (2008, p. 70) “national histories will have their special moments, in which heroes and heroines seem to step out of the banal progress of calendrical time”. As a result, with the passage of time, the modern-day icons or heroes are made immortals and their stories become etched into the memories of society. While narratives of such nature are reconfigured to fit into the ever-changing milieus of a nation, they always contain basic mythical elements in place. This concept of the heroic as an integral key narrative in the conceptualization of a nation is one that is universal. For example, Makolkin (1992) believes heroes and heroines are constructed through the exploits they make and as a result, transfer their heroics to their nation which also becomes emboldened through these achievements. In her study of poet Taras Shevchenko as a symbol of heroism in the Ukraine nation, Makolkin (1992) insists that this need for the heroic is one that is shared by all nations, with some putting more salience on this myth than others. In accepting heroes as universal symbols, she highlights the myth-making capabilities of iconic hero-figures and similarly, how this relates to national cohesion;

The history of various cultures in different periods has convincingly demonstrated that there is a persistent attempt to establish heroism. Numerous thinkers throughout history already acknowledged this persistent need of the heroic, and Freud summarized in this century what had already been known: “We know that in the mass of mankind there is a powerful need for an authority who can be admired (p. 13).

2.6.1 Strategies for elevating Sports Icons (Heroes)

Now that the modus for identifying icons and heroes/heroines has been highlighted, the next item is to look at the strategies employed by countries or nations to elevate the stature of men and women to the privileged status of the icons and heroes. For a person to become a hero, certain factors have to work to aid his rise apart from his raw talents. Some of these factors include the media which must report and bring their exploits to society in who also put value on them and cast their achievements as extraordinary in order to court the public’s affection for those individuals. Azumah Nelson has fulfilled all these process by virtue of his various exploits and the respect and trust he has gained from Ghanaians and the world at large.

Against this background, it is safe to say that heroes are formed or made, dignified, and repeatedly refreshed within the histories of nations and one of the ways of doing that is through statues. It is good to emphasise that frequently the hero who often becomes an icon is a person who is capable of achieving achievements which are deemed impossible; the symbol of the hero serves as a metaphor for possibility. The fact that Azumah who comes from a poor and uneducated background, was able to rise, fight and defeat boxers around the world, most especially, the “colonisers”, made him a hero. This feat embodies characteristics that resonate within the Ghanaian context of values of national

achievement and therefore citizens who defend the well-being of the state. Serving as a symbol of the nation, this figure must be accepted and admired by its citizenry. Viewed this way, the hero does not only serve and represent his nation, but the person transcends their national borders and provides hope for others to follow. As a result, a country's addiction to icons or heroes comes from their (the nations) need for survival and cohesion.

2.7 The Concept of Heroes in Ghana

Ghana is one of the countries colonised by Britain. As a nation which endured years of foreign domination, there is a feeling of maltreatment ingrained in the minds of the citizens. It is therefore no surprising that every little opportunity that present itself for a Ghanaian to demonstrate their superiority in sports is grabbed with both hands. Sports is one of the many ways Ghanaians have demonstrated and exacted their superiority over the colonisers. In one of his fights, Azumah Nelson described the contest between him and the Australian as fight lesson between “father and son”. With him Azumah being the “Father” while his opponent Jeff Fenech an (Australian and a former oppressor) as “son”. Nonetheless, the fundamental element that projects Ghanaians into the jurisdiction of the heroic is the idea of sacrifice or suffering they go through for the good of the country.

The question now is how do Ghanaians or nations institutionalise or formalize their heroes or icons? In the view of Rafael (2000) (as quoted in Costello, 2009), the historical, political and educational relevance of the heroic myth is evident in the concrete ways in which the State authorizes and sanctions these individuals as heroic figures. So Dr. J. B. Danquah, Dr Kwame Nkrumah, etc. who have been integrated into our educational curricula and immortalised in monuments is as a result of the formal efforts taken by the state. Though Ohene Gyan, Baba Yara and few others have been immortalised by the state but not in a form of statues, boxing heroes are yet to receive such accolades. It is

against this background that this researcher considers important for a nation such as Ghana which has politically, economically and socially pursued sports as one of the ways to exert itself both internationally and locally, by sculpting and erecting a statue in honour of a sporting icon.

2.8 Profile of some Ghanaian Sports Icons

Ghana has produced quite a celebrated number of sportsmen and women who in their own small way have contributed immensely to the development of sports and other social developments. Their contributions, apart from winning laurels for the nation include the helping out of the sports they engaged in, building of homes for the needy, feeding and clothing the homeless. The following are few of the celebrated sports icons;

2.8.1 Stephen Appiah

Stephen Leroy Appiah was born in Accra on 24 December, 1980. Currently, he has retired from football and he is part of the management team of the senior national team, the Black Stars. Appiah who played as a midfielder during his active days was an enviable member of the Ghana national team, which he has represented at the youth, Olympic, and senior levels. He captained Ghana at the debut World Cup in 2006 and was a participant of the squad during the 2010 World Cup.

Appiah's career as a footballer started at the age of fifteen (15) with Accra hearts of oak where he sustained himself as one of the finest young men in the team. In spite of his incredible talent, he failed to make up the Galatasaray's youth team when he had trials with them in 1996.

In his attempt to play football abroad, he joined Udinese, Serie A team in Italy firstly played as a striker in 1997. After spending three seasons with the club, he changed from

playing as a striker to a midfielder, position he played until his retirement. He was transferred to Parma in 1999 where he played for two seasons. He was later transferred on a loan to Brescia where he was regular for the season he played there, scoring seven (7) in thirty - one (31) appearances.

The achievements of Appiah at the various clubs in Italy, informed the then defending champions decision to secure for his transfer with €2 million in the summer of 2003 on loan, with an enviable permanent €6 million transfer in 2004. His stay at Juventus was fantastic, appearing in thirty (30) games and crowning it with the Coppa Italia finals. He also made his first appearance in the UEFA Champions League while he played for Juventus.

Appiah was transferred to Fenerbahçe, a Turkish football club for €8 million in July 2005 where he won the Turkish Super League Championship with the team in their centenary year. After the season in 2006/2007, Appiah felt an interest to leave the club to a German team which offered to pay Fenerbahçe €4 million but the team declined to accept.

Appiah's love for his country was overwhelming; he got injured in one of the international duties with the Black Stars in 2007 which he delayed in operating on until the season ended. This extended his lay off for some time since it became on and off the field for him. This affected his inclusion into the national team for 2018 African Cup of Nations. He was however part of the team as a special advisor.

Appiah who had an issue with his club, Fenerbache on an issue of mistreatment, left the club after submitting a claim to leave as a free agent. He was paid €2 million for the 2008/2009 season. Although the case had gone to FIFA which earlier asked Appiah to €2,281,915 to Fenerbahçe, but rescinded the decision when Appiah appealed the decision. In the end, Appiah paid nothing to his former team.

In 2008 / 2009 season, Appiah have not had lots of failure to sign for teams such as Tottenham Hotspur and Rubin Kazan, he remained in the national team even though there were complains of his knee and fitness. Playing for the national team however, brought him some luck, he signed for Bologna on a free transfer in November, 2009. His dexterity secured him another deal in 2010 where the newly promoted Serie A team of Casena approached him for his signature on a one-year contract with an extension of another year if he wished. He stayed at Casena till the 2010 / 2011 season.

After Appiah left Serie A, he went ahead to play for Vojvodina, a team in Serbia where he excellently challenged the dominance of Belgrade, a team in Serbia. He appeared in eleven league matches and helped his team to qualify for the UEFA Europa League in the 2011 / 2012 season.

Appiah, as a brilliant, determined, and exceptional midfielder, who could score more goals, also had the ability to defend and created opportunities for teammates to score. He had vision with powerful techniques, very aggressive in tackling and was very athletic in nature qualities. As versatile as he was and a powerful hard-working player, there is no doubt about his qualification into a sport icon of Ghana.

Outside football, Appiah has a foundation named StepApp which gets its proceeds from a clothing line named StepApp. Through these, he is able to give back to his motherland Ghana.

2.8.2 Michael Essien

Michael Kwabena Essien was born on 3rd December, 1982 to Aba Gyandoh and James Essien. He is a brilliant professional footballer who has played for his country Ghana fifty (50) times. His physical attributes and his tough defensive play qualified him to play for

the Black Stars. With his offensive dexterity to score goals and robust nature in the midfield, he was the best to handle the situation when Ghana needed him.

Before moving to France to join Bastia in 2000, Essien had played for Liberty Professionals, a local team in Ghana. At Bastia, he spent three seasons with an appearance in sixty (60) games. Moving to Lyon in 2003, he won two league titles and also made a debut in the UEFA championships league. Joining Chelsea in 2005, he received £24.4 million as a signing on fee, an amount that did not appear surprise at the time because Essien was the most expensive African player. He won two (2) premier league titles in 2006 and 2010, Three (3) FA Cups and a League Cup. His most outstanding record is the UEFA Champions league he won in 2012. Interestingly, in 2008 his team Chelsea was the runners up. As a prolific goal scorer, he won twice the award for goal of the season.

Playing for his country, Essien played for the youth team in 1999 in both UEFA U-17 World Championships and FIFA World Youth Championship in 2001. Ghana's Starlet came second in the FIFA World Youth Championships and the Satellite came third in the UEFA U-17 World Cup respectively. Adorning the Senior National Team jersey in 2002 was a dream come true for him, he was the box-to-box midfielder that Ghana needed. Essien's outstanding performances caught the alertness of the numerous scouts and was commonly listed to be one of Africa's next growing stars. He played in Three (3) African Cup of Nations and also appeared in 2006 and 2014 FIFA World Cups. It must be noted that, he had earlier played for Ghana in some friendly encounters in 2002 against Egypt where he was being watched to ascertain his maturity into the senior national team.

2.8.3 Anthony Yeboah

Anthony Yeboah is a retired footballer who was born on 6th June, 1966 in Kumasi where he eventually had his basic education. He played professionally from 1981 as a striker who scored many goals for his teams and Ghana, his home country. He is noted as one of the prominent and fruitful goal scorers in the history of African football. Most of his goals were outstanding and often would feature in the goal's competition at the end of the season. He retired in 2002.

Yeboah's career as a footballer started in Ghana where he played for teams such Okwawu United, Asante Kotoko and Kumasi Cornerstones where his youthful exuberance played part of him before joining the German team FC Saarbrücken in 1988 as one of the few blacks who played in Germany at the time. This move was a bitter pill for Yeboah since he was booed and racially abused sometimes. He made his mark and scored seventeen (17) goals for his team in the second season.

In 1990, Yeboah got transferred to Eintracht Frankfurt. This period was the worse for the young African player who was the first black signed by the team. The racial abuse by the supporters escalated where some would verbally abuse him and pass other racial comments. Yeboah, overcame the insults and built himself to the level of becoming the first black to captain his team. He was able to silence the fans with his assertive strikes that won him two Bundesliga golden boot titles in 1993 and 1994.

Moving from Germany to England, Yeboah joined Leeds United in an enviable £3.4 million in 1995. Appearing in sixty-six games, he scored a total number of thirty-two (32) goals. He is celebrated by Leeds fans and highly respected in Yorkshire where majority of the fans lived. The most notable goals of Yeboah is that of one in 1995 and 1996 against Liverpool and that of Wimbledon. These goals featured in the goals of the month

in the premier league. He has achieved quite a number feat, apart from winning most of the goals of the month and goals of the season, he won a successive BBC match of the day goal in September and October in 1995, a feat he shares with Gareth Bale who has equalled it. Scoring three hat-tricks for Leeds was the first any foreign player has ever done for Leeds United.

Yeboah picked up several injuries during games he played for Ghana. This annoyed his new manager, George Graham, who had been appointed as Leeds manager. This led to Yeboah sitting at the bench in most games. He was then sold to Hamburger SV in 1997. He stayed with the team and scored twenty (28) goals until he joined Al Itihad where he finally retired.

Yeboah represented Ghana in Three African Cup of Nations where he played as a striker. He appeared in fifty-nine games and scored twenty-nine goals which is the third highest goal scoring in the history of Ghana. He played for ten (10) years in the Senior National team.

Yeboah's achievements include the Ghana Premier League Top scorer in 1986 and 1987. Bundesliga top scorer in 1992/93 and 1993/94 seasons. He was also third in the African Footballer of the Year in 1992, second in 1993. In the same year 1993, he was the ninth in the FIFA World Player of the Year. He again won the Leeds United Player of the Year in 1996 and Ghana Footballer of the Year in 1997.

He tried his luck to manage a team when he was appointed the Chairman of Brekum Chelsea, a premier league club in 2008, but that did not materialise. Currently, he runs his Hotels named after his memorable goal named 'Yegoala' in accra and Kumasi respectively.

2.8.4 Abedi Ayew Pele

Abedi Ayew Pele was born on 5 November, 1964 at Kibi a town in the eastern region of Ghana but grew up mostly in Accra. He hails from the Northing Region of Ghana where he has made a lot of impact when he played football. He played in the midfield and mostly attacked by scoring goals. Ayew was the captain of Ghana where he is seen as one of the best footballers of all times.

Abedi played most of his football abroad, he started in Switzerland, moved to Germany, and to Italy and France where he became famous. He was an astute footballer and one of the African forerunners who made a great impact in European Football. Playing in France, he was a dominant force in Marseille's continuous stay at the top in the French league, where they won four league titles and also appeared in the European Cup on two occasions. He was a dribble magician, a skill he carried with him from childhood. He scored some amazing goals which often would appear in 'goals of the week' in television programmes across the globe.

As an ardent star player, Abedi Ayew has featured in FIFA organised charity matches, surpassing all African footballers in that category. He appears very popular in most of the French speaking countries in Africa and this may be attributed to the fact that, he was one of the few Africans to have spearheaded playing football in France. Secondly, his achievements in France was simply super. In Ghana and other African countries, Abedi is revered as an icon and is most cherished in high esteem as one of the football ambassadors. This could be seen in his inclusion by the south Africans in their bid for the 2006 world cup where he was a spokesperson. He is a FIFA football committee member and also serves on CAF and FIFA player status committees as well.

Abedi's exploits for his country, Ghana is worthy for his amazing honour done him by the government and the people. He was awarded the Order of the Volta (civil division), making him the first Ghanaian sportsman to be so honoured. He appeared seventy-three (73) times playing for Ghana where he is deliberated as the best player of Ghana, and one of the best in African history. His thirty-three (33) goals for his country led the leading goal chat for quite a long time until Asamoah Gyan recently beat him to it. Although Abedi Pele fought hard to qualify for the world Cup but he failed in every occasion to qualify. On the African Cup of Nations, he appeared for Ghana in more than a decade where he won the title in 1982. He holds the record for most appearances at the Nations Cup where he started in Libya 1982 in and ended in Burkina Faso 1996.

The most outstanding tournament of Abedi Pele for Ghana is realised in the Senegal 1992 Nations Cup. He dominated the competition and fought hard to put Ghana in the finals where he missed because of two yellow cards he had received in the preceding games. The crucial finals ended in penalties and Ghana was beaten by Ivory Coast.

Abedi Pele played for CAF-UEFA all-star game in 2001 called the Meridian Cup All-Star match. This was done to bring together old players who represent a certain status (Icons) to purely entertained themselves. Again in 2001, Abedi got the nod to be the FA Chairman for Ghana football but he gave up the opportunity on the grounds that he was inexperienced. He argued that, he needed to learn from the experienced who are his superiors. He currently manages his Nania FC, giving back to society and he is also engrossed with lots of charity activities on the African continent.

2.8.5 Asamoah Gyan

Asamoah Gyan was born in Ghana on 22 November, 1985. He is currently the Ghana National team, the Black Star's captain who plays as a striker for Kayserispor. Starting

his footballing in school, Accra academy where he proceeded to Liberty professional, a premier league club in Ghana. He appeared in sixteen (16) games and registered ten (10) goals during his stay.

Gyan, continued his amazing performances at Udinese, a Serie A club where he spent three (3) seasons and scored eleven times in thirty-nine games. With the three years at Udinese, two was spent on loan to Modena where Gyan did what he does best, he scored fifteen (15) in fifty-three (53) games. Again, in 2008, Rennes, a French league one club signed him on for two seasons where he scored fourteen (14) goals in forty-eight matches. His exploits were overwhelming, he got another two seasons sign on to England to play for Sunderland with an enviable transfer record for the club. He scored ten (10) goals in thirty-four (34) games.

Gyan was in 2011 loaned to a UAE club named Al Ain where he dominated the Pro-league by winning the topmost award for becoming the top-scorer award. He played in twenty-seven matches and scored twenty-four goals. He was signed on by the club permanently and again maintained his scoring prowess. He helped the team to hold on to their lead by scoring a staggering twenty-eight (28) goals playing in thirty-two (32) games. He was unstoppable in the following season, he extraordinarily netted in forty-four times in forty impressive games.

Interestingly, Gyan wrote on his website and indicated that he has left Al Ain to join the blossom Chinese football club Shanghai SIPG. Although his entitlement was not revealed, the grapevine has it that he enjoys one of the best salaries in the world. Gyan has changed clubs again, on 5 July, 2017, he signed on to play for Kayserispor, a club in Turkey.

Leading his motherland in the Black Stars, Gyan, the captain of the team has scored goals more than anybody in the history of the country. With his fifty-one (51) goals and seven (7) appearances at the nations cup, he is arguably one of the finest footballers Ghana could ever produce. He has led to country to win the bronze medal and silver medal twice and his six (6) goals he has scored at the FIFA world cups is the highest on the African continent.

Outside football, Gyan is a super charity giver and a sports developer. He has done countless charity show for Kids in Accra and other areas in the country. He has also built an astro turf soccer pitch for his former school, Accra academy. It is expected that; his sculpture piece would be erected at the venue of the pitch. In the meantime, Gyan has been spotted with an amateurish statue of him in Kumasi. The researcher is very certain that whiles he waits to do one for himself what Ghana has not done; he would make do with what has been presented to him by an armature and a way side sculptor.

Again, he has a boxing promotion company where he promotes the young ones to augment what Azumah Nelson, Ike Quartey and Joshua Quartey have done. His Airline, Baby Jet has just been granted a licence to operate by the Ghana Civil Aviation authority, a feat Ghana as a country have not been able to do. No wonder he is revered anywhere he goes in Ghana as an Icon.

Gyan's international achievements are as follows; AI Ain UAE pro League champion from 2011 to 2012, 2012 to 2013 and 2014 to 2015. Again, he won the UAE President's Cup in 2013 to 2014 and Arabian Gulf Super Cup in 2012.

On his individual achievement, he has won the BBC African footballer of the year award in 2010, CAF team of the year awards in 2010, 2013 and 2014 respectively. He has also won the UAE Pro league to Scorer in 2011/2012, 2012/2013 and 2013/2014. He has

under his belt also the AFC Champions League top scorer in 2014 and foreign player award for the same year.

2.8.6 Azumah Nelson

Azumah Nelson was born on 19 July, 1958. He is a retired Ghanaian professional boxer who is broadly appreciated as the utmost African best boxer of all time. He is a Boxing hall of Famer and also on the ladder board number seventeen (17) for pound for pound boxer on the Box Records. He was once a WBC Featherweight and twice a WBC Super Featherweight title holder.

His mature boxing is classed as one of the best and records Fifty (50) to Two (2). He appeared in the All African games in 1978 where he won gold in the featherweight division. He also fought in the same division in the 1978 commonwealth games winning gold as well.

Azumah who turned professional after the common wealth games lacked international recognition due the fact that he was not well known by the boxing world. He did so in 1979 in Accra where he was very much appreciated and recognised. His reputation and recognition begun to soar when he started beating his opponents. Beating Billy Kwame in the eighth (8) round marked the beginning of the professional bout in 1980. Henry Sandler was the next in line for Azumah whom he knocked down in round Nine (9). Winning the African Continent where he won the African continent belt, Joe Skipper had to fall in round ten (10) to make way for the Champion.

Fighting for the first time abroad as a professional fighter, Azumah fought in a nearby country, Togo where he beat Bozzou Aziza in 1981. He continued to California, United States of America to beat Miguel Ruiz. He again beat Brian Roberts for the Common Wealth Nations Featherweight title. He did this in the fifth round.

It is interesting to note that, in spite of the numerous successes of winning thirteen (13) times, Azumah was still unfamiliar with the Boxing world. This in a way, created an opportunity for him as an underdog when he fought for the WBC featherweight bout in the Madison Square Garden. Azumah was defeated in that fight by Salvador Sanchez on 21st July 1982. The loss did not destabilise Azumah, he kept his pace and won his next fight against Irvin Mitchell in an astonishing eight (8) rounds.

In 1983, Azumah's greatness begun to show, he won four (4) of his bouts and in 9th March, 1984, he begun by beating Hector Cortez. That same year in December, he dropped Wilfredo Gomez in the eleventh (11) round to amass the WBC featherweight title. Winning the bout was quite amazing, this is because Azumah rated behind the score cards of all the three Judges. This spirited him to bounce into full force in the eleventh round to put Gomez on the canvass. This fight was staged in the home ground of the champion, Puerto Rico.

Before Azumah could fight again, he had rested for nine (9) month after the Gomes fight. He retained his title when he knocked down Juvenal Ordenes in September 1985 in Miami. He retained the title again in that same year the following month where Pat Cowdell was knocked down in round one (1) in Birmingham, England. It is noted that, the Champion had kept the title for three years. In 1986 the following year, Azumah beat Marcos Villasana and Barry McGuigan. He retained the title once again in 1987 after defeating Mauro Guitierrez with a knockout in the six round of the bout. Azumah Nelson abandoned the WBC featherweight title after fighting with Villasana the second time.

The journey for the super featherweight title begun in 1988 where he beat Mario Martinez in a twelve-round bout. It was judged in a split decision and the untaken WBC super featherweight title became occupied by Azumah Nelson. He retained the title after

knocking out Lupe Suarez in round nine (9) and also finished Sydney Del Rovere in round three (3).

Azumah's rematch with Martinez ended in round twelve (12) where he knocked him out. And with Jim McDonell facing precisely the same agony, he was knocked down four good times before the referee called off the bout. The fight happened in 1989 in London where it was admired by boxing fans across the world.

Azumah's second defeat happened in 1990 where he fought Parnell Whitaker in an attempt to challenge the light weight champion. The match ended in a twelve (12) round Unanimous decision for Whitaker to retain his title. Azumah went to Australia to fight Juan Laporte where he beat him in twelve (12) rounds to maintain the world Junior Light-weight title.

Fighting only two bouts in 1991, Azumah knocked Daniel Mustapha in a round four non-title bout in Spain and also drew with Jeff Fenech in Las Vegas. The Fenech fight drew lots of controversies where some critics felt that Fenech deserved a win, but was given to Azumah since the fight was rendered in a draw. This made way for another bout to be staged in March 1992 where Azumah knocked out Fenech in the eighth round out of the stipulated Twelve round battle. This fight was staged in Australia where Fenech came from. In November that same year, Calvin Grove was defeated by Azumah in a twelve-round decision.

Fighting in front of about one hundred and twenty thousand (120,000) fans, Azumah beat Gabriel Ruelas in February 1993. He again retained his title against Jesse James Leija in a draw encounter. That controversial fight was announced as Azumah has won, later the announcer came back declaring the fight draw. This did not deter the champion; he rather gave Leija a second match, which Azumah lost to Leija in 1994.

In December 1st 1995, Azumah knocked down Ruelas who had taken the title quickly from Leija, in a fifth round. He stayed without a fight for almost a year after the Leija fight in 1996 where he defeated him in round six (6) of the bout. Genaro Hernandez was one fighter who beat Azumah to take the titles he has accrued. This happened in 1997 and 1998, Azumah lost again to Leija in their fourth bout and later, he retired from Boxing. His record stood at thirty-nine (39) wins, six (6) losses and two (2) draws, knocking in twenty-eight wins.

Interestingly, but sadly, Azumah's trainer Buffalo, died in a car accident in 1988, the same year Azumah's boxing also died. He tried for ten (10) years to come back but he was not successful. Azumah's comeback attempt in 2008 saw him fight at the age of forty-nine (49) with Jeff Fenech who was forty-five (45) winning the bout. This happened in Australia on June 4, 2008.

Azuma Nelson is indeed a National hero, an Icon who has been celebrated over the years and is considered the greatest boxer ever to have come from Ghana and Africa at large. He has been celebrated in Ghana by naming after him the Kaneshie Sports complex in Accra.

2.9 Sculpture

Sculpture is the making of works of art that possess height, width and depth (Katz, Lankford and Plank, 1995). Appiah (2004) and Nyarko (2011) defined sculpture as the skill or art of making three-dimensional representations in wood, metal, stone ivory or glass by modelling, carving or casting. These definitions described the nature, materials and methods used in sculpture but does include other things like dimension and concept of depth (Getlein, 2002). This assertion by Getlein (2002) required the sculptor to be

circumspect and observant from all angles in respect to fashioning out a well-proportioned sculpture.

In respect to the on looker, sculpture gives them the opportunity to view and access from all angles, a reason that makes sculpture a three-dimensional art. It is not surprising therefore, that Canaday (1980) described sculpture as a structure of strong and solid volumes. Burnham (1982) conceived sculpture as an art of solid form and mass with virtues related to spatial occupancy. By this, the materials used to sculpt must depict quality that in turn reflect on the persona of the sculpted individual.

Sculpture must reflect the attitude, behaviour and the aspirations of the people, the area or the country that is being sculpted (Getlein; 2002 and Nyarko (2011)). This clearly shows that, the thinking, expression and handiwork of societies have been preserved in the form of sculpture. Appiah (2004) stated that some relics of sculpture convey to us traditions and cultures of the past, the natures of men, their religions and philosophies. To him, it is not far-fetched to say that sculpture embodies the history of societies for generations to come. This demonstrated the various reasons Ghanaians sculpt their heroes and heroines. Their past lives and good attributes that their performances in their fields of endeavour left on Ghanaians are preserved as examples to future generations to emulate.

Canaday (1980) is of the view that, the transformation of sculpture has been more exciting, more thrilling than any of the arts. This is affirmed by Katz, Lankford and plank (1995) who dated their views to pre-historic times. Numerous sculptures of the past have been found through excavations in tombs and ancient cities (Appiah, 2004). Venus of Willendorf are classic examples of prehistoric sculptures which Getlein (2002) assumed they were created for fertility purposes. Ivory and metal figures were found in Benin as

well as brass figurines in Ashanti which were used for weighing gold dust (Appiah, 2004).

Sculpture is a multipurpose and vibrant form of artistic countenance. This is owing to the datum that it has since age-old used all kinds of materials, different methods and techniques and subject matter. Burnham (1982) broadly related sculpture and technics as an extension of an urge to control and shape a limited part of man's environment. This urge, as asserted by Burnham, has seen the modern sculptor adopted and adapted to changes in the use of materials and techniques. Getlein (2002) agreed and stated that, a major reason for the vitality of contemporary sculpture is the use of materials, techniques and concepts that were unheard of just a century ago. The effect of sculpture on the people is reflected not only in beauty, but quality of the materials used to construct the edifice. The more durable the materials, the longer and the effects that it leaves on the people. Aluminium is a good casting material that can withstand the torrents effects that the weather brings.

2.9.1 Technology and Sculpture

Modern sculpture owes a lot to technology which has made it possible for industries to use wide range of materials to be treated in ways that hitherto had not been possible. Technology has led to consumerism with its attendance culture of disposable and this has made the old value of sculpture, as a durable object, no longer an idea to subscribe to. For the purposes of this project, durability and sustainability of material is of greater essence to the sculptor.

Sculpture may be made out of a variety of media, such as clay, bronze, plaster, wire, wood, cardboard, aluminium, glass, plastic, neon tubes, wood and even mounds of earth and rock (Katz, Lankford and Plank, 1995). Irvin (1966) stated that the wide range of

materials and the technical superiority essential to an industrial society have provided resources for sculpture. Irvin's statement clearly shows the dynamism, adoptability and adaptability of sculpture. Sculpture is broadly divided into three thematic areas known as Tomb Sculpture, Religious Sculpture and Architectural Sculpture. It must be noted here that, sculpture has grown to encompass various and numerous areas such as politics and sports of which this project falls under the latter.

Sculpture is categorised either in relief or in the round. Sculpture in the round refers to any sculpture that is completely detached from its original material, so that it can be seen from all sides, for example the Nkrumah Statue in Accra. Relief sculptures mostly appear on the surfaces of architecture, over doorways, or on the doors themselves, in low or high reliefs (katz, Lankford and plank, 1995) and (Getlein, 2002). They have a flat back and are attached to a background, and are meant to be viewed from the front. The sculptures in front of Akroma Plaza Hotel in Takoradi is a typical example of relief sculpture.



Figure 1: Murals in front of Akromah Plaza Hotel, Takoradi

(Source: Field Study, 2016)

Sculpture may be naturalistic or abstract with the latter being expressed in two ways; the reduction of natural appearance to simplified forms known as symbolic forms, and the construction of figures from non-representational basic forms called geometric forms

(Appiah, 2004). Burnham (1982, p.3) writing on abstraction observed the superiority of realism by stating that; ‘Sculpture reached its apogee when human anatomy triumphed through realism and became spiritually renewed through naturalistic vitalism’. This quotation by Burnham confirmed the supremacy of realism in our day today artistry which is often referred to as naturalistic.

2.9.2 Methods in Sculpture

There are four basic methods of working in sculpture that we know traditionally but the advents of new materials have expanded methods. These are modelling, carving, casting and assemblage and construction (Katz, Lankford and Plank, 1995 & Getlein, 2002). Modelling and casting are considered to be additive sculpture (Getlein, 2002). Here, the sculptor basically builds his image from a simple framework by adding his material till he reaches his desired piece. Katz, Lankford and Plank (1995), however believed that modelling involved both subtractive and additive processes. Building with malleable materials such as clay and plaster could both be additive and subtractive but that could not be said of assemblage and construction which mostly uses non-malleable materials such as off-cuts of metals and wood. Assemblage and construction therefore uses additive method when materials are bonded together either by soldering, gluing or nailing to form sculpture (Katz, Lankford and Plank, 1995). Additionally, sculptors such as Ibrahim Mahama and El Anatsui use coal sacks (jute sacks) and bottle tops respectively for their sculptures which are highly patronised.

Carving on the other hand, is considered to be subtractive simply because the desired piece of sculpture is carved out of a block or a mass of material which are normally larger than the carved sculpture. Katz, Lankford and Plank (1995) explained carving to mean

the removal of sculpting material in order to create a form. Carving materials include wood, stone, marble, ivory and even soap.

Getlein (2002) explained that any slurry material that solidifies with time can be used for casting. Materials such as clay, cement, plaster, fibre glass and aluminium are some examples. Casting on the other hand, is where by aluminium in its molten state is poured into a mould or ingots to cast finished aluminium product. Casting involves the pouring of liquid (slurry) materials into mould or cavity designed by the artist (sculptor). In terms of metal casting, the liquid metals (molten) must cool and harden into a solid form (Katz, Lankford and Plank, 1995). Getlein, (2002) described casting as fluid, dramatic or experiential. In his view, an element of uncertainty still remained since it is impossible to see what is happening inside the mould. Getlein's assertion called for adherence to proper procedures in casting metal, its limited damages that may occur.

This project employed the casting method of sculpture to achieve its main objective of casting a life-size sporting icon in aluminium and therefore needed the understanding of all the processes that go with it, such as mould making either permanent or not permanent, piece mould or breakable moulds. To begin with, the sculptor built his image in a modelling material, mostly in clay. An impression of the modelled work was made which took the form of the negative of the actual work. This is done either by covering the sculpture in plaster or wax, or pressing the work in a wet sand. The indentation left in the material by the sculpture formed the mould (Katz, Lankford and Plank, (1995).

Casting is an indirect method of sculpture (Gilbert 1998). Sometimes the sculptor never touches the final piece at all; some sculptors today send their sculptures to be cast by craftsmen, unlike earlier sculptors who often cast their own work (Getlein, 2002). The researcher used the knowledge he has acquired in aluminium casting and applied that to

do his work. Volavková (2015) writing on material formulation, splits the production of sculpture into two stages, naming them the 'creative' and 'carried' out stages. He asserted that the modern sculptor chose the creative stage and abandoned the actual material formulation. This project however, seeks to combine the two stages since the practitioner is part of the 'creative' and the 'carried' out stages of the production process.

2.9.3 Sand Casting

The major method employed by industry is sand casting. The sand-casting principle is to use patterns (wood or plastic forms) to impress chemically bonded sand into the desired shape to receive the molten metal (Judge, 2001). Wang (2010) and Hurst (1996) described the process as a mould-based manufacturing activity where the mould cavity is created by withdrawing a pattern from sand that has been packed around it. The mould making material, sand, is normally mixed with clay as a bonding agent and moistened with water to develop strength and plasticity to make the aggregate suitable for moulding. When the material cools off, the solidified part is broken out of the mould to complete the six-stage process which involves pattern making, mould making, core making, melting of metal and pouring, cooling and solidifying, cleaning of casting and inspection. This process is an indirect method of creating sculpture, as described by Gilbert (1998).

In his view, Rich (1988) explained that, when a mould is filled to capacity, the result is referred to as a 'solid cast' while a mould which has its core left empty, is referred to as 'hollow cast'. Solid cast object consumes lots of materials and at the same time are quite cumbersome to transport when the cast exceed a certain weight (huge). Hollow cast however uses less material and are very easy to transport. Rich (1988) believes casting is a reproductive mechanical process where the form of an object is reproduced in another general and more durable material. The researcher does not agree in total on this assertion of mechanical process since most casters in Africa and for that matter, Ghana, use the

manual process. This is mostly seen with the traditional aluminium casters where the researcher cast his work. Hurts (1996) confirmed this when he wrote that a natural sand could be compressed by hand or mechanical ramming around a pattern. This explanation confirmed that either process could be used.

There are two different methods of sand casting which are green sand and the air set method. The term 'green' which is the oldest refers to the fact that the sand is wet in the moulding process but not in colour. The air set method uses dry sand bonded with glue which sets very fast. Two types of moulding sand are natural attached (bank sand) and synthetic (lake sand). The latter is generally preferred due to its more uniformity composition. Sand casting generally is inexpensive in terms of capital since the equipment normally used to start a foundry is also inexpensive and not sophisticated. Sand casting is simple and easy to understand (Christian, 2004, Hurst, 1996 & Merten, 2012). The researcher adopted the process as one of the methods in achieving the aims of this project because of the advantages described above. The researcher used the sand-casting method to protect the mother mould from blasting during the casting process.

2.9.4 Lost Wax Casting

Lost-wax casting is one of the casting methods that helps to produce works of complex and detailed nature (Judge, 2001). Judge (2001) thinks that lost-wax process is still the finest method that can obtain and capture the detail and difficulty of figures and portraits. It is the most common method for casting metal, a process sometimes called by its French name *cire-perdue*. Johnson (1970) explaining the nature of the casting trade stated that, metal smiths cast objects from brass, iron and gold through the use of the *cire-perdue* (lost wax) process.

The lost wax technology dates back to the third millennium B.C.E. with the basic concept being simple and original (Getlein, 2002). Clarke & Arkenberg (2006) credited the lost wax casting technology to Africa and stated that it is an important one in Africa. He cited the virtuoso life-size cast metal sculptures of Ife as works sculpted before the Europeans mastered the craft to a large scale. Judge (2001) however credited the discovery of lost wax to China and Mesopotamia and attested to the fundamental technique of the ancient technology being same as today. The explanations above from the two writers was unable to confirm where the technology was actually discovered, but they mentioned Africa, China and Mesopotamia as the possible places where the technology was first discovered. The researcher therefore was unable to ascertain where the technology originated from.

The Asante's, as a result of their rich background in art expression and art making, reached a high degree of perfection in metal work (Johnson, 1970). Excavations of metallurgical workshops at Begro and Bono Manso as stated by Cole, (2009), showed advanced casting techniques using the *cire-perdue* method. She concluded that, the Asante's learnt the art of casting from an earlier civilization. They used the lost-wax casting processes technology to create objects made from metals such as bells and trinkets. The major objects they cast were small brass figures used in weighing gold-dust (Okyere-Boateng, 2003). Such figures represented mythological characters or experiences from everyday life (Johnson, 1970).

2.9.5 Casting Procedures

The Asante used various materials to reach their objective of casting metal figures. The processes begin by modelling over a core of clay with wax for the direct modelling process. In the indirect process, wax is made pliable by fire or warm water which is

pressed into a mould either made of plaster or cement. The wax layer could also be carved and detailed by the sculptor using the modelling tools (knife and spatula). A mixture of Clay, sand, palm fibre, charcoal dust and water form a slip which ultimately becomes the mother mould. It is applied onto the modelled wax figure layer by layer until it is good enough to bear the heating procedure known as de-waxing. A narrow opening is left at the top of the mould which receives the molten metal during the casting process. Clarke & Arkenberg (2006) summarised this by saying that, the molten metal is poured into the mould and allowed to cool off after which the mould is broken open to reveal the cast work. That is how sculptures are created by the foundries around the world and the traditional craftsmen. And this is evident at the cultural centre and Krofufrom in Kumasi, Ghana.

Some tools used by the Asante's in the casting process included forge, knives, tongs and spatula. Rattray (1927) stated that all tools used by the craftsmen were consecrated before used. Clarke & Arkenberg (2006) confirmed Rattray's statement by saying that, most iron working throughout sub-Saharan Africa included greatly ritualized practices, as the method of changing ore into metal was equated to the conception of human life. While the tools are still used today, the ritual aspect and sanctification of tools are quite minimal.

2.9.6 Mould

Mould is the channel through which a finished sculpture work is achieved. It is very essential in this project since the realization of statues in honour of Ghana's sporting icons cannot be achieved without them. The moulds were cases which were used in taking the casting substance which in this case is the molten aluminium. Mould could also be described as a hollow, form or shape into which a substance (slurry material) is poured into, to take the form of the casting object after cooling.

There are two main types of mould namely waste and reusable moulds. Waste moulds are destroyed in the process of casting; plaster therefore renders itself to be used with only one cast taken. Reusable mould is mostly made up of silicon rubber which is used for repetitive casting. Years back, several types of mould made in clay, stone and bronze where reusable depending on the abilities of the sculptor.

2.10. Human Factor in Sculpture

Sculpture has been a part of human life in almost everywhere in the world since prehistoric times to the present day (Appiah, 2004). And human figure in sculpture is reportedly the most used subject that cuts across time and cultures (Getlein, 2002). They (human sculpture) delivered to us traditions and cultures of the past, the nature of men, their religion and philosophy (Appiah, 2004). Relics such as Menkaure and Khamerernebty of Ancient Egypt and Akuaba doll of the Asante tell how the two generations saw life in terms of beliefs and practices.

Clarke & Arkenberg (2006) confirmed that human figure is the main subject that traditionally engaged African Artists. Burnham (1982) opined that sculpture has been universally figurative. It is understandable therefore, to read from Judge (2001) a Churchill Fellow, when she stated that her visit to see Rodin's work in Paris was somewhat of a pilgrimage to her as a figurative sculptor.

There are so many ways in which historical events, occasions and prominent personalities are remembered. This may be in the form of photographs, videos, paintings, statues, (including busts) or the naming of important national monuments after them (Baidoo, 2013). Former President of the United States, George Washington commissioned sculptor Horatio Greenough to sculpt his image as the father of the nation (Wallach & Craven, 1995) and Former President of Ghana, Kwame Nkrumah commissioned sculptors to execute symbolic sculptural images of himself to resound and create an indelible

impression of the historical independence of the state (Essel, 2014). These evidences show power and authority rulers exerted through the use of sculpture. Portraits of preceding leaders documented successional lines of leadership and served as a visual notice of the present king's legacy. Clarke & Arkenberg (2006) said that such portraits generally presented an idealized depiction of a youthful and vigorous king and emphasised the various trappings of royalty. As true as the statement above may be, Getlein (2002) declared that, portrayals of rulers, heroes and heroines, and religious or spirit figures united the many sculptural traditions of the world. Indeed, sculpture asserted some power, it showed respect to people who came before us and it is the researcher's belief that, it does show lots of respect today. More importantly, casting Azumah Nelson as a boxing hero will present to the youth, a youthful Azumah who is fresh and evergreen in their memory and which will also inspire them to work harder for mother Ghana.

Human factor in sculpture also stemmed from the fact that, as humans, we normally practice what we know before moving to the unknown. Most humans are perceived to be self-indulgent and may be more interested in themselves, especially in things that touch their immediate concern (Gilbert, 1998) of which sculptors are no different. Additionally, Sculptors tend to bring to life creations (sculptures) which attract the attention of admirers who in most cases psychologically respond to them like real human beings.

In conclusion, the human figure gives sculptors the opportunity to create, manipulate and bring to life, beings that live forever and are admired and cherished by society at large. Through this work, the researcher proposes to sculpt a life-size sculpture of (Azumah Nelson) which will help boxing enthusiasts, the nation and sports lovers in general to continue to share in the glory of a great sporting hero.

2.11 Sports Honours and Sculpture

A nation's heroes often take the form of statues so that they can be remembered and commemorated long after they are gone. Athletes who are heroes are honoured for their talents and dedication to games that unite fans in loyalty and pride (Bocicault and Danner, 2014). Conventionally, sculptures have been used through history to display and record human qualities in sports. An example is the Discobolus or Discus thrower by Myron 450 BC (Figure 2).



Figure 2: Myron's Discobolus.

(Source: The British Museum)

Greek sculptures celebrated the beauty of athletes more frequently than that of deities (Canaday 1980). This observation above tells us the link that existed between sculpture and sports. This link is prevalent today as sports statues are erected in honour of sports men and women on regular basis. On football alone, Clark (2014) confirmed that the

United Kingdom is home to eighty football statues. He observed that, nations such as Brazil, Spain, Holland, Argentina, Russia, Mexico, China, Bolivia, Israel, and Indonesia have each erected more than twenty statues to honour their players.

Standing as a symbol of pride for the entire country, Clark (2014) acknowledged Sculptor Philip Jackson's England's 1966 World Cup Monument 'The Champions'. It captured Bobby Moore, Geoff Hurst, Martin Peters, and Ray Wilson, located in Newham in London. Though Ghana has not won the World Cup but the country has achieved a lot on the African soil. The 1963, 1965 1978 and 1982-year groups that won the African cup of Nations deserves an honour of a statue in nature. The likes of Asamoah Gyan, Michael Essien, Isaac Dogboe and Sean Safo-Antwi, and many others deserve statues in their honour.

Bocicault and Danner (2014) writing on the 25 Most Important Sports Statues built by sculptors observed some very interesting developments. First, they note the controversy that surrounded the erection of the 12-foot-high statue of the tennis player and humanitarian, Arthur Ashe. Sculpted by Paul DiPasquale in 1996, the statue was erected on a Monument Avenue Richmond, Va., Ashe's home town. Residents argued that the venue is reserved for the commemoration of confederated heroes therefore the statue has been mounted on a monument. Controversies on sports statues is not peculiar to America alone. The 'Headbutt' statue of Zinedine Zidane infamous head-butt to Italian soccer player Marco Materazzi in the 2006 World Cup is described as one of the most infamous of all soccer monuments, wrote Clark (2014). The sculpture is now housed in Arab Museum of Modern Art, Doha, Qatar, after the conservative protesters argued that it promoted violence and encouraged idol worshipping. The sculptor Adel Abdessemedn was however praised to have stylized the piece to Greek Mythological statues. Sculptors

are encouraged by these two incidents to be particular about locations of their sculpture and the scenes they capture in their concepts.

Deford (2016) observed an interesting twist writing on the agitation to remove the statue of Jefferson Davis, the President of the Confederacy, and replaced it with one of Muhammad Ali, the greatest of all time boxers. While acknowledging the fact that many of the statues in the United States of America have been of military leaders, he embraced the new trend of sports stars which he described as 'larger than life' are the ones which are more likely to be honoured.

In situations where sports statues get damaged through mob actions or even stolen, they are always repaired and re-sculpted. A case in point is the Pele statue in Brazil where anti-sports protesters broke the arms of the statue and that of Ronaldo in Portugal where fans of Messi of Barcelona and Argentina fame, defaced the statue with Messi's team jersey number. Georgakopoulos (2016) writing on a stolen of Efklis's statue which was created in 1997 (the year Athens was awarded the 2004 Olympics) by sculptor Cosmas Tsolakos, confirmed that the City of Rafina promised to pay in full for the replacement of the Stolen Marathon messenger statue.

Located outside the Staples Centre in Los Angeles are two huge statues of Magic Johnson and Kareem Abdul-Jabbar, Sculpted by Julie Rotblatt Amrany and Omri Amrany. Bocicault and Danner (2014) observed that, the immense contribution by these two basketball superstars made history by winning 5 NBA Championships for the Los Angeles Lakers and therefore deserved to be honoured with statues. The statues are an embodiment of history and at the same time challenges the current generation to achieve greatness. The same sculptors sculpted the bronze statue of Michael Jordan which was unveiled in 1994 outside the United Centre in Chicago, honouring his three-time

championship legacy. They observed the marketability of the legend, the level and skill that Jordan possessed which impacted greatly on the NBA and the world over. To them, Jordan solidified his dwelling in sports history hence, a statue in his honour.



Figure 3: Michael Jordan Statue.

(Source: www.nba.com, 2011)



Figure 4: Vandalised Cristiano Ronaldo Statue.

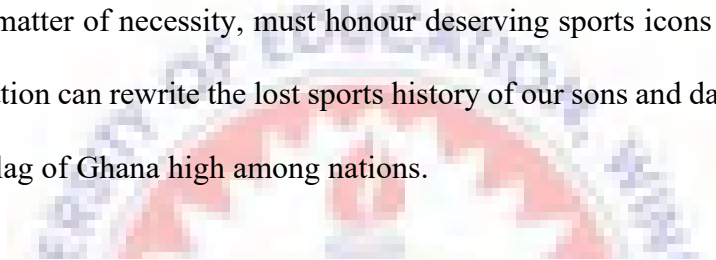
(Source: Independent, 2016)

Ronaldo's statue which is 3.40-metre-high is made of bronze. The statue was unveiled in December, 2014, a few meters away from where Ronaldo's museum is situated in Funchal seafront. The statue was made to honour the three time Ballon d'Or. Sadly, the statue was painted with Argentine star jersey number after Messi won the best player of the world award for the Fifth time.

After being knighted by the Queen of England, Alex Ferguson got his statue erected in Old Trafford Stadium, the home of Manchester United football club. Clark (2014) speculated, saying if his knighthood does not call for a statue then he does not know what does. Indeed, his managerial acumen led the United win thirteen league championships, five F.A. Cups, four League Cups, one European cup winners' cup two

European Cups and the most enviable feat, the treble. Sculptor Phillip Jackson was honoured with the contract to sculpt Sir Alex Ferguson.

Most professional athletes aspire to get honoured through an erection of their statues. To some sportsmen, partaking in a competition is alright for them, to others, only a win will satisfy them. To those who deserve statues, are those who have conquered all they could in their own sport and have become so beloved in their own town, that the city feels it necessary to show some love (Tran, 2014). It is the researchers view that, Ghana as a nation, as a matter of necessity, must honour deserving sports icons with statues. By so doing, the nation can rewrite the lost sports history of our sons and daughters who fought to raise the flag of Ghana high among nations.



2.12 Sports statues in Ghana

Ghana as a sports nation has not seen many sports statues and thereby, has not honoured our icons. The few that are available are to some extent rendered in sub-standard and horrendous renditions. Until recently, the only available statue of a sports personality was that of Abedi Pele which in the researcher's opinion is very much appreciated by the general public. Some few statues that are available now are either in private collections which are mostly foreign, the rest sought to increase the derogatory expose of the situation. The following are some examples of statues in Ghana.

2.12.1 Azumah Nelson's statue at KNUST, Kumasi

Azumah Nelson's statue was carved out of a marble and it is located at the Museum of Kwame Nkrumah University of Science and Technology (KNUST), Kumasi. It was carved by Mr Emmanuel Bonsoo, a Research Fellow at Sculpture department, KNUST. He carved the work during his undergraduate studies at a period where stone carving was

not popular in Ghana. But presently, sculptors are carving in stones. Kwame Opoku Bonsu (Zinc), who is also a lecturer at KNUST, carves stones in abstract proportions. He admitted that stones dictate to the sculptor how it should be carved. He also disclosed that the reason why most people shy away from carving stones and more over carving human figures in stones, are simply because of the structures of the stones.



Figure 5: Azumah Nelson's Statue at KNUST

(Source: Okyere Boateng)

The carved portraiture of Azumah Nelson appeared to be in his youthful age where he virtually beat any opponent that came his way. The face protrudes from the marble with a distinct feature of the facial elements, carefully carved out of the marble. The eyes, the nose and the mouth are perfectly carved out and very well positioned at the right places.

Mr Bonsoo, an astute sculptor, made a very good use of the measurements used when carving out faces.

The work is sculptured so well as if it was modelled and yet, it is a carved piece of the greatest Azumah Nelson. The sculpture wears an expression of a serious person who is ready to assimilate the uncertainty of an outcome of a fight. As serious as the work looked, Azumah Nelson is a calm person and people admired him for that. The significant feature of the figure (statue) is the beard which pronounces an attribute of Azumah Nelson. The back of the work is left in the natural form of the marble, suggesting that Azumah Nelson appears ordinary, coming from a humble home and a poor background as stated by Morrison (2014).

The sculpture is left in the natural colours of the marble which adds some beauty to the carved piece. The shoulders extend to merge into the background of the block which is left to also show that, the sculpture was born out of a marble which is a solid block that signifies the strength of the person carved, Azumah Nelson. Azumah's integrity and honesty is likened to the marble which features calmness and peaceful tranquillity when it sits at its place of abode. The marble does not move unless it is picked and used just like Mr Bonsoo picked and carved the unstoppable Azumah from it. The sculpture assumes an authority from the weight of the marble; it cannot be picked by just one person which in effect calls for many hands when handling it. It brings unity in such situations and underscores understanding to work together.

The sculpture is one fine piece that carries history of the once great boxer of all time, Azumah Nelson whose achievement is unparalleled.

2.12.2 Tennis Player at University of Education, Winneba

This is an unknown sculpture figure situated at the Sports College in Winneba tennis court. It is a female figure clad in tennis apparel ready to receive a ball.



Figure 6: Tennis Player

(Source: Field Study, 2017)

She appeared smart and squatted with the left foot forward. She holds a racket but it seems to have been broken off. Wearing a red vest which appeared faded over white dress and trainers, the work looked stunning and very well executed. On the pedestal reads “For sports development” which presupposes that the Statue was made purposely for sports development. It is the researchers’ belief that the intended objective of the sculptor has

been greatly achieved, though the maintenance culture of the Ghanaian has greatly affected the work since some part has broken off.

2.12.3 Gymnast at University of Education, Winneba

The unknown gymnast can be found at the University of Education, Winneba. The sculptor is unknown but the researcher was told the work was done by a student from the Physical Education Department.



a

b

Figure 7: Gymnast

(Source: Field Study, 2017)

The sculpture work looks good with the image of the sports lady appearing foreign. She is dressed in the gear of a gymnast and attempts to do the front flip with the two hands on the ground. The legs are separated with the left leg flipped over the head which

appeared to touch the ground, while the right leg hangs in the air suggesting her readiness to touch the floor. The weight of the work falls on the arms that is acrobatically planted on the pedestal. The work is finished in cement and painted all white, including the pedestal that carries it.

2.12.4 Asamoah Gyan's statue in Kumasi

Asamoah Gyan posed with a curious statue as stated by Forrester, (8th January 2018). He described the statue as sinking into the ground while at the same time the player appeared to be dribbling on the turf.



Figure 8: Asamoah Gyan with His Statue (Source:

<https://www.thesun.co.uk/sport/football/5290844/asamoah-gyan-footballer-bizarre-statue-michael-essien/>)

Dominic Ebo Bismark, the sculptor was excited about his creations and stated that he did that of Asamoah Gyan and Michael Essien's Statues to honour them. He admitted however that he was self-trained.

There appeared to be some mix-calculations of the head-count into the body and this is labelled as the head and the arms being too big for the body.

He appeared to be excited about the statue anyway, the fact that he posed with it. Again, the sculptor, an unprofessional who saw the need to honour his countries football captain by producing the statue, speaks volumes. Spencer, J (January 2018) writing for dailymail.com, believes that the sculpture was made to honour Asamoah Gyan for being the all-time scorer of the Black stars, reason the statue was erected in Kumasi. The researcher believes that, an act that should have been carried out by the government to honour its deserving sports heroes, was done by an individual.

The sculpture is painted in Ghana football jersey, red, with an arm-band showing Asamoah Gyan's captaincy. His jersey number appeared on the chest of the sculpture with the puma logo showing on the right chest. The hair-do and some facial features would tell that the sculptor intended to sculpt the Captain. The face and other parts of the body are also painted in brown colour, signifying Asamoah's body colour. The work looks like it was directly modelled which means that the sculptor had little access of control over the mortar. Describing the work, Taiwo, (<http://www.goal.com/brasilglobaltour/en-gh/news/date>, date accessed 10, 01, 2018) stated that 'Though the statue shows the talisman's trademark hairstyle, it appears that his legs are bent into a painfully unnatural position and his forearms belong to somebody three times his size'. The researcher is of the view that, the amount of mortar that was put

on the metal armature was too heavy and that may have accounted for the sinking nature of the statue.

2.12.5 Michael Essien's statue

The statue of Michael Essien, one of Ghana's fine footballers has also popped up in Kumasi, the Ashanti Region of Ghana. It has been attributed to the sculptor who made that of Asamoah Gyan.



Figure 9: Statue of Michael Essien

(Source: <https://www.thesun.co.uk/sport/football/5290844/asamoah-gyan-footballer-bizarre-statue-michael-essien/>)

There is a perception that Michael's statue was the first to be made among the two by the sculptor, Dominic Ebo Bismark. The statue has also attracted lots of comments, especially on the social media space. Most people are of the view that the sculpture piece is a ridicule of Michael Essien.

2.12.6 Abedi Ayew Pele's statue

Abedi Ayew Pele's statue is located at Tamale, the Regional capital of the Northern Region. Arguably, the statue appeared to be the only statue of a sports fellow that has been displayed to the public eye in the whole of Ghana. This is so because the statue finds its location in an important round about that leads to the Alliu Mahama Sports Stadium and other locations in the region.



Figure 10: Abedi Pele's statue in Tamale.

(Source: Field study, 2016)

The statue is a life-size with a ball which appears like a striker on the move. The stance of the statue is typical of Abedi Pele who would normally stick the ball between his legs, raise a thumb on the left palm and dribbles to the admiration of the fans. Painted in all yellow outfit, the sculptor informed onlookers of the jersey that Ghana used to wear for

tournaments before changing to the all-white and red jerseys Ghana wear lately. The statue represents a generation of footballers across the Northern parts of Ghana who toiled to raise the flag of Ghana high on the international scene.

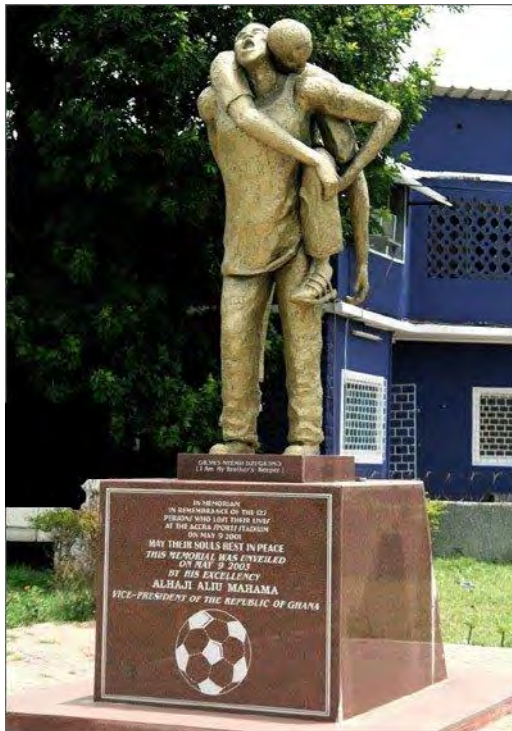
The specifics of the statue appeared uneasy, the measurements of the figure and facial recognition are not in conformity. It appears the sculptor may be a street one who used the direct modelling method to execute the work. This is seen in how the work looks static and the muscles are so large to be true. The jersey appeared in a straight fit with a very unfavourable folds which makes the statue looked funny. The face specifics do not look like Abedi Pele, the eyes appear too big and it is situated above the middle line in the face construction. The nose looks too pointed and stiff. The ears are too deep into the face, creating some uneasiness when one looks at the face. Generally, the statue is in a bad state but the people of Tamale seems to like it. The statue honours a native of the land and whether it looks like Abedi Pele or not, the most important thing to them, is the fact that there is a roundabout with a statue named after one of the best players Ghana and Africa has ever seen.

2.12.7 May 9th disaster statue in Accra

The May 9th statue represents one of the saddest days in Ghana football where over hundred football fans lost their lives. The sad event happened at the Accra sports Stadium where Kumasi Asante Kotoko football club played against Accra Hearts of Oak.

The statue was put up to commemorate the sad event and also to represent the number of people who lost their lives. The figure is made up of two with one carrying the other at the back with a despair and sorrowful posture. The standing figure opens the mouth wide which appears that he is crying or wailing while carrying an injured person. The injured

is effectively wrapped round the shoulders of the carrier with his whole body loaded at the back where his right leg trails behind.



a



b

Figure 11: May 9th Statue

(Source: <http://mobile.ghanasoccernet.com/ghana-marks-16th-anniversary-of-may-9-accra-stadium-disaster-today>)

The sculpture was cast in cement, finished in gold and mounted on a granite pedestal where all the names of the deceased are embossed.

2.12.8 Marcel Desailly's statue in Accra

Marcel Desailly's statue is found at his sports complex in Accra. The bust was sculpted by Dr. G.P. Waldron to honour the former French captain for his meritorious services he rendered during his football days. Marcel is a native of Ghana who lived in France and played for the French National team. He was often linked to the Ghana football

association job which he has always declined. His love for sports made him to set up a sports complex where people settle to play at nights during the rush hours in Accra.



Figure 12: Marcel Desailly and His Statue

(Source: mobile.ghanasoccernet.com/uk-based-firm-unveil-statue-honour-retired-ghanaian-footballer-marcel-desailly)

The bronze bust captures the emotional moments in the life of Marcel Desailly. It describes his nature and exposes the hard work he has to put up to be able to upsurge to prominence which he gives back that opportunity to the younger generation. This is seen in the establishment of an all-important sports facility in Accra among other philanthropic activities he undertakes.

2.12.9 The Black Starlet statue

The statue is made of cement in a full figure composition which has the hands broken. The nature is that of a young fellow who appears to be playing football. It looks as if the statue originally had a ball on the thigh which gives meaning to the stature of its

appearance. Unfortunately, the ball appears not to be there. The statue appears to have been left in the natural colours of cement which is grey. The face looks all bright with the eyes closed which suggests he is looking down at the ‘missing’ ball on the thigh. The mouth opens in surprise which excites the player to have trapped the ball. The statue generally looks good and the researcher believes that if it was intact as it was first sculptured, would have been good and portrayed lots of stories of the Black Starlets who became champions of the world.



Figure 13: The Black Starlet Statue

(Source: Researcher)

The inscription on the statue boldly read “In Honour of the Black Starlets JVC U-17 World Champions, Italia 1991”. This was a bold step by the sculptor Eric Akator, to honour a generation of footballers who raised the name of Ghana high. The Italia ’91

football team brought lots of joy and happiness to Ghanaians. During that period, Ghana was starved of silver wares; the nation has not won a major competition for some time. It took these youngsters to salvage that dull, gloomy encounter to bring that glory to honour Ghana with the under -17 World Cup.



Figure 14: Plaque of the Statue

(Source: Researcher)

2.13 Aluminium as Material for Sculpture

Aluminium is the major material used in this research. It is a silvery-white metal with many valuable properties. It remains the most abundant metal and the third most abundant element comprising about eight per cent (8 %) in the earth's crust after oxygen and silicon (Akoijam, 2012) and (Budd 1999). Boin and Bertram (2005) stated that aluminium is one of the youngest industrial metals. Aluminium has largely been established worldwide by scientist to have been born through high temperatures and collisions of hydrogen atoms during the formation of the solar system. Budd (1999) opined that aluminium is found in most rocks, clay, soil and vegetation combined with oxygen and other elements. Judge (2001) in agreement with Budd, confirmed that the discovery of metal is strongly linked

to the refinement of clay technologies. Shakhashiri (2008) sponsored the above assertions by affirming that; aluminium is too reactive chemically which regrettably is not found naturally in the whitish metallic state but in the form of its compounds such as alumina with strong attraction to oxygen.

Bauxite is the raw material for primary aluminium production which aluminium oxide is extracted from. The process of extracting aluminium from bauxite is known as electrolytic reduction process on the primary line, explained by Schmits (2006). The secondary production line uses aluminium scrap as its raw material (Wernick and Themelis,1998). This observation explained the nature of how aluminium is produced from two different sources.

History has it that, aluminium bearing compounds have been used in the earlier civilisations for pottery in clays which were rich in hydrated silicate of aluminium and that it has been useful for centuries (Budd, 1999).

It has been established that aluminium was first described by Sir Humphrey Davy, a British chemist for the first time in 1807 with an argument that ‘alum’ which he later called ‘aluminium’ and later re-spelt ‘aluminium’ was the salt of an unknown metal (Budd, 1999). The production of metallic aluminium form is attributed to Hans Christian Ørsted, a Danish chemist/physicist for the first time in 1825. He asserted that, Ørsted reduced the chloride with potassium amalgam to produce aluminium. He explained that Friedrich Wöhler, a German chemist in 1827, used the same process to separate globules in determining essential properties.

The production of aluminium received a further impetus when Robert Bunsen and Claire Deville showed how the metal could be produced electrolytically from its ores Sheasby and Pinner (2011). Shakhashiri (2008) stated that, the electrolytic production of

aluminium metal was first established by two workers, Charles Martin Hall working in America and Paul Heroult working in France in 1886. He continued to say that, 'electrolytic process for the production of metallic aluminium in tonnage quantities was not possible until Michael Faraday discovered the principle of electro-magnetic. Budd (1999) declared support for the attempts by various scientists to produce metallic aluminium in commercial quantities which he described as necessary invention. In his view, the Hall-Héroult process remained the only method by which aluminium metal is produced commercially. Budd (1999) affirmed that this interesting breakthrough of electrolysis of dissolving alumina in cryolite was done independently.

2.14 Properties of Aluminium

Aluminium is light in weight, resistant to corrosion and has a low melting point (Wang'ombe, Maranga, Kihiu, Kosgey and Maube, 2011). Sheasby and Pinner (2011) are of the view that, there are three main properties on which the application of aluminium is based which are its low density, high mechanical strength and high corrosion resistance. They are of the view that its additional properties such as light weight, high corrosion resistance, good formability, and non-toxicity, makes it the fastest-growing metallic material in the past 100 years, which Boin and Bertram (2005) estimated a global primary aluminium use of 27.4 million tonnes. On low density, they described aluminium as a very light metal, with a specific weight of 2.7 (g/cm³). Shakhashiri (2008) confirmed that, the low weight reduced energy consumption related to transportation, nontoxic, and can be easily machined or cast.

Sheasby and Pinner (2011) defined corrosion as the reaction between a metal and its immediate environment, which can be natural or chemical in origin. It is a common knowledge that most metals react to the environment with rusting being the highest of

reactions. They explained that aluminium has the highest resistance to corrosion with pure aluminium showing the highest corrosion resistance due to its affinity for oxygen but this excellent purity decreased when alloys are added to the metal.

Aluminium is bound when other small quantities of metals are added to it as alloys, increasing its mechanical strength. This allowed the material to be used in building, constructions and transport equipment because of its non-combustible nature. Aluminium melts at 660 °C temperatures and above.

Aluminium has changed the society tremendously and has increased the economy to be more efficient in terms of innovations. Products in air, on road, rail, and sea transport; food, beverage, and pharmaceutical packaging; construction; electronics; and electricity transmission are evident of this claim. Osborn (2009) writing on durability of aluminium stated that it is essential to the artisanal casters in west Africa. She again stressed on the malleability of the material which makes it easy to manipulate even with limited equipment. Aluminium's sustainability property, durability and easy manipulation informed this research.

The following gave a simplified property of aluminium according to Donkor (2015),

- *Strength*—Pure aluminium is soft enough to carve but, mixed with small amounts of other elements to form alloys, it can provide the strength of steel at only a third to half the weight.
- *Durability*—aluminium is tough enough to withstand both the rigors of spaceflight and challenging climatic conditions such as those found in the Arctic and seaside(salty/damp) environments.

- *Flexibility*—Its physical properties allow aluminium and its alloys to be shaped easily by any of the primary industrial metalworking processes—forging, casting, rolling, or extrusion.
- *Low Weight*—Aluminium can lower vehicle weight, reducing fuel use and emissions; lighten structures’ “dead load”; and in packaging applications shrink the environmental footprint associated with shipping.
- *Resistance to weather conditions* – (because of the closeness of the statue to the sea – the Atlantic Ocean)

2.15 Methods of Processing Aluminium

The most common methods for processing primary aluminium are extruding, rolling and casting. By extruding, aluminium is basically forced into an opening after it has been processed to form a shape. Writing on aluminium rolling, Singh (2006) explained that the process has a very short history of about two centuries, and that aluminium is processed into aluminium sheets for easy manipulation into products. This research project used the casting method to cast a sport icon of Ghana who deserved a statue.

2.16 Aluminium in Ghana

Ghana prides itself with an endowment of natural mineral bauxite, the material used in making aluminium. Patterson (1976) opined that the largest and most valuable deposits of bauxite that have been mined in Africa are in Guinea and Ghana. Apart from south Africa and Mozambique, Ghana is the largest smelter of about 200,000 tonnes of aluminium in Africa (Husband, McMahon and van der Veen, 2009). Amponsah-Tawiah and Dartey-Baah (2011) quoting (Coakley, 1999) confirmed Ghana’s position when they wrote that; ‘Ghana is the third-largest African producer of aluminium metal and manganese ore and a significant producer of bauxite’.

History has it that bauxite was first discovered in Ghana in 1914 in the Atiwa range near Kyebi in the Eastern Region by Sir Albert Kitson, a renowned Geologist and former Director of the Gold Coast Geological Survey (Patterson, 1976 quoting Cooper, 1936,p. 6). He argued that though a franchise was given to a British company in 1928 to mine the ore in Awaso, which is currently the bauxite mining enclave, proper mining began in 1941 with an average yearly export of 159,000 tonnes between 1955-59. Currently, the annual capacity production of aluminium stands at 200,000 tonnes (Husband, McMahon and van der Veen (2009).The major deposits are grouped in the following areas: Nyinahini in Ashanti Region, Affoh, near Sefwi Bekwai in the Western Region; Asafo near Asempanaiye also in the Western Region, Mount Ejuanema near Nkawkaw and Atiwa Range both in the Eastern Region (Patterson 1976).

The construction of Akosombo Dam that also resulted in the construction of VALCO smelter was the brainchild of Ghana's first President Kwame Nkrumah. The construction of the VALCO plant began in 1964 and commercial production of aluminium began in the Plant in March 1967, aimed at establishing and integrating aluminium industry in Ghana. (Husband, McMahon and van der Veen, 2009).

Ghana was allowed as a member of the International Bauxite Association in November 1974. Ghana Bauxite Company has been working on the mining site at Awaso since 1941, which is said to have enough reserves to last for more than three decades. Other bauxite reserves of Ghana are said to have reserves to last for more than a century.

2.17 Historic Information on Aluminium Sculptures

Kalzip (2009) reported that the two most talked about works of art made in aluminium that demonstrated the materials durability are Eros, and San Gioacchino. Erected in 1893 in Piccadilly Circus in London, the statue of Eros was cast in high purity aluminium.

Despite London's high polluted atmosphere, the cast material remained excellent when it was first cleaned for the Coronation celebrations in 1953. The statue of Eros by the sculptor R. A. Gilbert which is 125 years old was cast and erected in June 1893 using aluminium produced by the sodium process. Another aluminium sculpture Diane de Gabbies which predates the Eros between thirty and thirty-two years (1858-1860) was also made using aluminium (Harris, 2015). See images below.

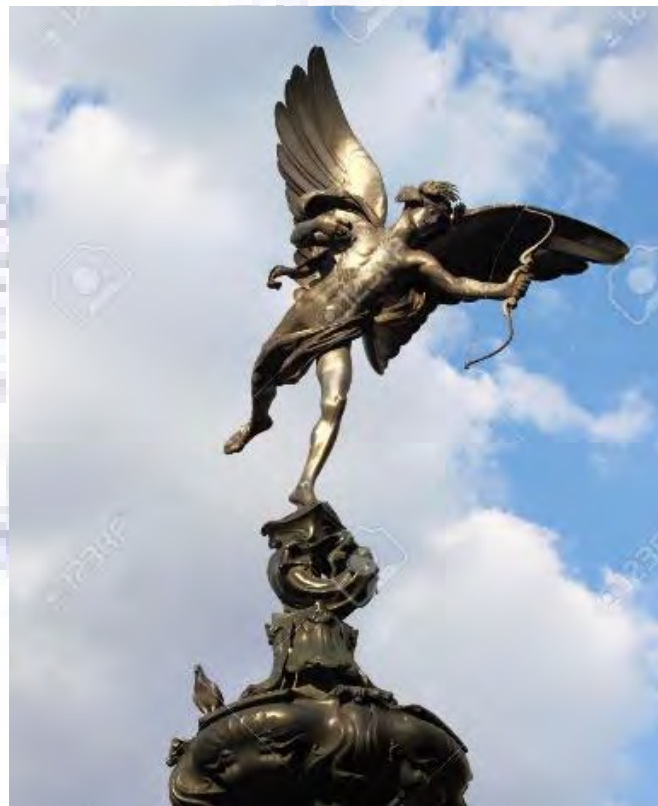


Figure 15: The Eros at Piccadilly Square

(Source: Wikipedia, 2014)



Figure 16: Diane de Gabies

(Source: Wikipedia)

The cupola of the church of San Gioacchino in Rome which is made of aluminium, is described by Kalzip (2009) as durable since 1897. They predicted a long-life span for both the Eros and San Gioacchino to extend far into the future. This extension also inspired the researcher to use aluminium.

Hydro (2012) described Aluminium Cap stone of the Washington Monument which was established in 1884 as the largest piece to have been cast at that time with 100 ounces (2.8 kg) aluminium. The historic facts above tell how durable aluminium is and the fact that it could withstand even unfriendly weathers. Again, it showed that aluminium has been a material for casting sculptures since it was discovered.

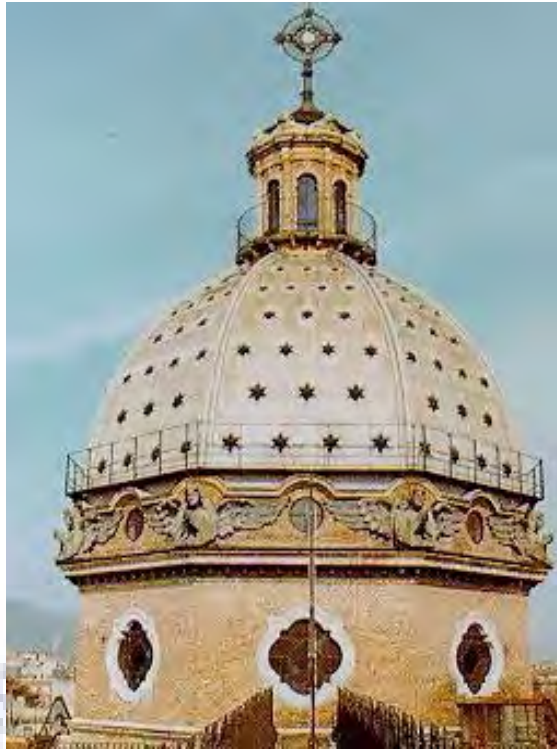


Figure 17: San Gioacchino

(Source: Kalzip, 2009)

2.18 Scrap Aluminium

The process of turning scrap aluminium into reusable material is known as recycling. This occurs when an aluminium product outlives its initial lifespan and is melted to model a new product (Schmits, 2006). Bell, S., Davis, B., Javaid, A., and Essadiqi, E. (2003) and Das, S. K. (2006) writing on emerging trends on aluminium recycling confirmed that an increase amount of aluminium that goes into the production of aluminium alloy products for many applications come from recycled products.

Wernick and Themelis (1998) opined that the practice of recovering metals for their value dates back to earliest civilizations. Emery, Gibbs, Griffiths, Myrddin, Williams, (2000) observed the need for the early bronze age man to have recycled his discarded and dented metal which to them, is a precious resource. They estimated that the industrial revolution which brought about the beginning of large metallurgical productions, is viewed as the

period when large scale metal recycling truly began. Boin and Bertram (2005) on the other hand, viewed recycling activity of re-melters to have significantly increased in the 1980s, and that the fundamental trade of the aluminium recycling business is to melt scrap into aluminium alloys that can be reabsorbed into the aluminium life cycle.

Aluminium is a nonferrous metal which could be manufactured using two approaches known as primary production and secondary productions. The primary production uses the primary material bauxite which goes through the electrolytic reduction method while the secondary production uses aluminium scrap as its raw material through melting in a boiler to produce new aluminium products. Wernick and Themelis (1998) described the secondary approaches as one that included all metals that have been created to fashion but no longer served a purpose in the economy. The aluminium produced from these two approaches has the same physical properties according to the Aluminium Association (2011).

2.18.1 Sources of Secondary Aluminium

Aluminium is the most abundant metal (by volume) found in domestic waste (Emery, Griffiths, & Williams, 2000). Aluminium scraps are mostly sourced from densely populated areas of cities and suburbs, where individuals give up their used beverage cans, cooking utensils and electrical appliances to serve as materials for secondary aluminium. Other Sources included vehicle and transportation, construction and building sites as well as aluminium packaging waste. Sometimes, a single source of scrap metal can provide the necessary material for secondary aluminium, and one of such according to Wernick and Themelis (1998) is obsolete products from discarded automobiles. Boin and Bertram (2005) estimated recycled aluminium production from purchased and tolled scrap at 13.1

million tonnes in 2003, and to them it has taken the top position of all the non-ferrous metals.

In Ghana, aluminium scraps are sourced from Volta (VALCO) and from aluminium dealers (Andrews and Gikunoo 2011). Donkor (2015) looking at the sources of scrap metals in Ghana, specifies that it has been a trade among the people of Sekondi- Takoradi and other regions in social and economic context. In his view, there has been a remarkable increased in scrap business on our environment and that the practices have contributed to job creations for the youth. This assertion is also confirmed by Andrews and Gikunoo (2011) when they stated that the industry has created several jobs for the people of Ghana and has minimised the burden on government to find ways of disposing scrap metals generated within the country.

Nkansah, Attiogbe and Kumi (2015) observed that aluminium production from the raw sources is highly energy dependent on Ghana. They are of the view that policy makers and authorities should help to intensify aluminium reuse and recycling since it will save energy as well as virgin resources. Evaluating the views by various authors on sources of scrap metals, Donkor (2015) postulated that scrap metals in Ghana abounds in the regions especially in commercial, industrial, household and demolition companies as well as from junkyards, landfills, fitting shops and metalwork yards. Nkansah, Attiogbe and Kumi (2015) confirmed Donkor's assertions by indicating that refuse dumps and the households amounts about 77 % of scraps sourced in the Sunyani Municipality. The aluminium scraps are regularly sold in small amounts by scavengers and traders who deal in scraps of a well-structured industry (Wernick and Themalis, 1998). They identified scrap collectors, brokers and scrap processors as the players of the industry.

The Aluminium Association (2011) outlined four stages in dealing with aluminium scraps. These stages are collecting, sorting, storage and transportation. They described scrap collection as a “green-collar job” and one of the most important resource extraction activities for the aluminium industry today, where the society are encouraged to recycled their used objects on principle or for money. Orr (2014) reviewing on turning junk into gold stated that, aluminium metal scrap abounds in earnest and can be found all over the place. He is of the view that sometimes people throw away these ‘precious metals’ because they do not know their value. Scrap dealers therefore pounds on these abundance materials to make fortunes and this is very common in the city of Sekondi – Takoradi and other big cities in Ghana.

Scrap collection is basically the first step in aluminium recycling, where young men and scavengers spend hours combing scrap yards to collect and sell for cash. Moyes (2005) asserted that the methods of collection vary. While metal detectors and magnetic instruments are used in the advance countries for collection, ‘hands and experience’ are used in Ghana and this is attested by Andrews and Gikunoo (2011) when they write on small scale industries in Ghana. They continued to say that scraps are sorted based on knowledge by foundry men and are identified by visual examination. The aluminium is sorted through identification and later grouped based on weight and its alloying types. It is further exported or used locally to fashion out new products.

Smelting is the final stage and the most important that aluminium scraps undergo to become the new material, secondary aluminium. Hwang, Huang and Xu (2006) confirmed that most aluminium-bearing scrap is recycled through a smelting process. The Aluminium Association (2011) indicated that the core of secondary aluminium production is the melting and casting processes. They explained that, the scrap is put into

melting boilers to melt the metal into the desired alloy for onward processing into a finished product.

Writing on indigenous casting trade in Nigeria, Siyanbola, Egbetokun, Oluseyi, Olamide, and Sanni (2012) observed that the major raw materials are obtained from scrap aluminium from household utensils and other disused aluminium products. They described that the scraps are melted in earthen furnaces and locally fabricated crucibles using firewood or palm kernel shells for fuel. Molten aluminium is poured into mud or clay moulds to form desired products. These observations sum up the process which included the identity of the material, how it is sourced and how it is processed into new products.

Yang, Xiao, Zhou and Reuter (2005) advocated the need for experimental results of aluminium scraps before the actual melting process. They are of the view that scrap type, size, surface conditions and cleanness of scrap, provides them the basic knowledge and the scrap behaviours in molten state, which they believed have a significant impact on the melting process. Wang'ombe, Maranga, Kihui, Kosgey and Maube (2011) concluded that controlled additives known as flux (borax) materials are continuously added to the molten metal to improve cast ability, fatigue and impact properties during the melting processes.

Smelting scrap aluminium demands the use of power as the primary source of energy. The Aluminium Association (2011) advocated for the use of natural gas as the cleanest, efficient and available energy source for aluminium melting. This largely depended on the nature of furnace being used. Electric furnace would obviously demand electricity while earthen (cupola) furnace mostly used in Africa demands firewood as fuel.

2.18.2 Some uses of Secondary Aluminium and its Advantages

Secondary aluminium has been used in a number of areas, for example in transportation, building, and packaging industries (Yang, Xiao, Zhou & Reuter 2005). In Africa, the products made from scrap (secondary aluminium) are cast products such as corn mill plates, automotive parts, manhole covers, cooking pots of various sizes and construction equipment items among others (Andrews and Gikunoo 2011, Osborn 2009).

Osborn (2009) writing on casting aluminium cooking pots indicated that, aluminium pots can be found almost everywhere that cooking takes place in west Africa. She said that the informal sectors managed by artisans specialised in taking aluminium scrap and recycled them into new shiny aluminium goods. She tied aluminium casting in Africa to older working metal traditions such as blacksmithing but she was quick to admit that, aluminium is a Twentieth Century metal. The casting practice has advanced to the level that personalised products are made for groups and individuals (Siyanbola et al., 2012).

The greatest advantage of recycled aluminium is the lower production cost over primary aluminium which use as twice the energy used by secondary aluminium. It is therefore the preferred source with an increase of over 40 % per cent according to Yang, Xiao, Zhou and Reuter (2005). The sustainable nature of scrap aluminium reduced the pressure on the environment which plays an important role in establishing a long-term readily available source of non-ferrous material for the aluminium industry. Wernick and Themelis (1998) observed that the protection of Earth's resource endowments and ecosystems adds to the incentive for recovering metals after use.

Andrews and Gikunoo (2011) stated that the scrap aluminium industry has created several jobs for the people of Ghana and has minimized the burden on government to find ways of disposing scrap metals generated within the country. The recycling of nonferrous

scraps has the potential to generate lots of income for the country through exports (Broni-Sefah, 2012). The assertions above have compelled the Kenyan government to banned the export of aluminium scrap into Europe and other advanced countries. This in their view would promote local foundries who cast utensils for local consumption (Wang'ombe et al., 2011). Recently the government of Ghana placed a ban on the export of scrap metals because of the threat it poses to local industries which require scrap metals as raw materials (Ghana web, 2012).

2.19 Scrap Aluminium Recycling and Environmental Sanitation

The status of environmental sanitation of the five largest cities in Ghana which included Sekondi-Takoradi, is estimated to generate about 3,200 tons of solid waste daily. This amount to about 19 % of the total population according to the 2000 population and Housing Census of Ghana. It has been established by the MMDAs 2007/8 data on sanitation that about 76 % of households disposed of their solid waste improperly. The situation contravenes the national policy on sanitation. It is stated clearly to aim at developing and maintaining a clean, safe and pleasant physical and natural environment in all human settlements, to promote the socio-cultural, economic and physical well-being of all sections of the population.

Mosler, Drescher, Zurbrügg, Rodríguez, and Miranda, (2006), observed that urbanisation, population growth and changes in lifestyles in low- and middle-income countries contribute to increasing the per capita domestic waste generation. Njoroge G. Kimani (2015) writing on Environmental Pollution and Impacts on Public Health in Kenya admitted that, improper management of solid waste is one of the main causes of environmental pollution and degradation due to lack of solid waste regulations. The observations made by Njoroge may be true since the influx of metal waste from Europe

worsens the sanitation situation greatly. Caravanos, Clark, Fuller, and Lambertson, (2011) stated that 75–80 % out of 20–50 million tons of e-waste per year is shipped to countries in Asia and Africa for recycling and disposal.

Amankwaa (2014) stated that recycling activities are characterised by manual dismantling and crude processes for material recovery like burning of cables without basic occupational safety. Fofana (2009) referred to Amankwaa's assertion as occupational hazards when he revealed that scrap metal collection poses a threat to the health of collectors from bodily cuts and pains and an exposure to disease contamination due to lack of protective clothing such as boots and gloves. Caravanos, Clark, Fuller, and Lambertson, (2011) and Donkor (2016) observed the environmental and health hazards that confronted the recycling activities when they make known some hazards around the world and Sekondi-Takoradi to included lead wheel weights, chrome-plated engine parts, and silver electrodes. Donkor (2016) is of the opinion that scrap metals pose hazards in both handling and trading. Amankwaa (2014) recognised these hazards and drew synergies among livelihood, environment, and health in developing country cities. He concluded that Ghana's recent pursuit of technological advancement in socioeconomic growth accounts for the worrying patterns. Survival to livelihood is key in this context and in spite of the dangers that comes with the recycling trade, people still pursue it.

Fofana (2009) regarded scrap metal recycling as an environmentally friendly activity in terms of maximisation of resource utilization, resource conservation and waste reduction. The pollution of recycling processed can however not be completely avoided according to Ipeaiyeda, Umo, and Okojevoh (2012), stating that smelting of aluminium does not come without its environmental problems. They acknowledged that during the aluminium smelting process, heavy metal loads pollute water bodies with serious effects on our ecosystem and continued to reveal that, these contaminated impurities affect human life

through the food chains and inhalation of polluted air. Wang'ombe, Maranga, Kihui, Kosgey and Maube (2011) also confirmed that environmental conservation is lacked in small foundries whose workers are exposed to heat, dust and fumes. They advocated that strict regulations and proper adherence to safety ethics must be enforced to save the situation.

The areas of environmental benefits of recycling aluminium covers environmental conservation and resource management, solid waste management, energy conservation and pollution prevention. Wens, Gillner, Hornsby, and Pretz (2010) wrote that non-ferrous metals exhibit considerable ecological value when they are recycled and that they increased the resource and energy efficiency in society. Other benefits of scrap aluminium recycling are the establishment of available source scrap material for the aluminium industry. It also reduced the environmental pressures that modern society has placed upon the earth's limited supply of mineral resources.

Comparing energy and resource used in primary and secondary aluminium production, the aluminium Association (2011) assessed that the overall share of energy and resource used in smelting scrap aluminium is very low compared to the total energy and resources used for primary metal production. They are of the view that the environmental impact is lower because the material is renewable which prevents the depletion of the natural resource. Clean up Australia (2009) estimated that Metal manufacturing using recycled scrap metal reduces air pollution by 86 %, water pollution by 76 %, water use by 40 %, and consumer waste by 105%.

2.20 Aluminium Sculptors

The three most outstanding sculptors to have perfected the use of aluminium for sculpting humans are Lorenzo Quinn, Mariele Neudecker and Charels Ray.

2.20.1 Lorenzo Quinn

According to www.lorenzoquinn.com/biography/, Lorenzo Quinn was Born on 7 May 1966 in Rome, Italy. He is married to Giovanna Cicutto with three sons and currently lives in Spain. His quest to become a Surrealist painter at the American Academy of Fine Arts in New York came to a halt when his desire and love for sculpture increased earnestly. He noticed this when he created Eve (torso) from Michelangelo's Adam in 1989. He was influenced in his early stages by his father, Anthony Quinn who was an actor, painter and architect. He was later influenced by sculptors Michelangelo, Bernini and Rodin with his greatest inspiration coming from observation of 'life's everyday energy'. He would usually perceive his idea by writing poetry which eventually explained the sculptures he has created.

His subject matter is mostly captured in human hands where he described the hands as holding so much power to love, to hate, to create and to destroy. He used aluminium as a medium to bring to life his creations. His commissioned sculptures included the Tree of Life which he produced for the United Nations and issued by the organisation as a stamp in 1993 and the Saint Anthony for the Basilica del Santo in Padua, Vatican which he sculpted in commemoration of the 800th birth anniversary of the Saint. Lorenzo Quinn has been an international exhibitor for the past twenty years with incredible sculptures such as; 'Hand of God, Equilibrium and Vroom vroom' that communicated to the viewers and collectors. He stated that 'I make art for myself and for people who wish to come along for a ride through my dreams'. To him, the greatest importance of his Sculptures

conveyed values and emotions which centred on how life is led. Indeed, these values and emotions of his works and the aluminium as his material encouraged the researcher to pursue to undertake the modelling of the icon (Azumah Nelson).



Figure 18: Hand of God, 2011.

(Source: Chris Jackson/Getty Images for Halcyon Gallery)



Figure 19: Quin's Equilibrium.

(Source: Matthew Lloyd/Getty Images for Halcyon Gallery, 2009)



Figure 20: Quinn's Vroom Vroom, Aluminium.

(Source: Getty Images for Halcyon Gallery, 2011)

2.20.2 Mariele Neudecker

Mariele Neudecker is a talented sculptor and photographer who played with distortions and sizes in her works. She lives and work in Bristol, England, as a teacher at Bath Spa school of art. She is a German with great foundation in art after she studied Goldsmiths and sculpture at Chelsea College of Art. Her aluminium sculptures as captured in figures 21, 22 and 23 are outstanding are collected worldwide. Her Awards and Exhibitions included the Henry Moore Sculpture Fellowship in 1998, First prize for Sculpture at the 7th International Biennale of Sculpture and Drawing at the Gulbenkian Foundation in 1997 and the Exhibitions at Tate Britain and Tate St Ives. The “articulation” of Mariele Neudecker offered the researcher the spirit to push for the honour of presenting Azumah Nelson in Aluminium.



Figure 21: Mariele Neudecker aluminium sculpture

(Source: <http://www.philiphewatjaboor.com/contemporary/mariele.htm>)



Figure 22: Side view of Mariele Neudecker aluminium sculptures

(Source: <http://www.philiphewatjaboor.com/contemporary/mariele.htm>)



Figure 23: Frontal view of Mariele Neudecker aluminium sculptures

(Source:<http://www.philiphewatjaboor.com/contemporary/mariele.htm>)

2.20.3 Charles Ray

Charles Ray is a renowned sculptor who lives and works in Los Angeles, United States of America. He was born in 1953 and has produced numerous sculptures and participated in many exhibitions. He uses variety of mediums of which aluminium stands out in both his abstract and figurative forms. Davis (2015) describes Charles Ray as a Brilliant Sculptor but Occasionally Creep. He is of the view that, Ray deliberately uses the state-of-the-art fabrication to fashion out his sculptures. This assertion by Davis brings to the fore, the use of modern equipment and tools in the execution of colossal and life-size sculptures, which quicken the production and finishing processes. Ray's Awards and exhibitions are the Documenta 9 (1992), Venice Biennale (1993, 2003, and 2013), Whitney Biennial (1989, 1993, 1995, 1997, and 2010) and Art Institute of Chicago in May 2015. Few of his works, mime and the horse rider capture Ray's idea of using fabrications to sculpt his works which are quite fascinating. The researcher wished he had such equipment to help him with his works, but he had to fall on the few equipment available to him.



Figure 24: Mime, 2014 Aluminium

(Source: http://www.matthewmarks.com/los-angeles/exhibitions/2014-11-01_charles-ray/works-in-exhibition/#/images/13/)



Figure 25: Charles Ray, Horse and Rider.

(Source: Ben Davis, 2014)

The successes of these three sculptors on the use of aluminium as a medium, proved its workability, cast ability, malleability and surface finish which gives sculpture an outstanding advantage over other materials. These, inspired the researcher to use the available scrap aluminium in Ghana which is only used for the casting of cooking utensils, to cast a life-size figure in aluminium.

2.21 Summary of Chapter Two

Chapter two dealt with the review of related literature. Topics such as Ghana and sports, discussed the disciplines of sporting activities that the country participates in. Football was seen as the most favourite sport that people play. It went ahead to mention boxing, basketball, athletics as the other disciplines that people enjoy. Various reasons were mentioned why people partake in sports, and these included personal strengthening and competitions which was generalised under topics such as social, economic and political. Ghana's achievement in sports was also captured where icons who have achieved laurels for the nation such as Azumah Nelson, Clement Quartey, Eddie Blay, Prince Armatay, Alice Anum, David Kotey and the Black Stars among others were talked about. It mentioned most of the achievements that these icons have achieved for themselves and mother Ghana.

The methods in sculpture which included carving, modeling and casting and assemblage and construction were explained. Again, sandcasting, wax casting and Asante lost wax casting which cover the procedures in the casting processes were clarified. Mould making which sustained the modelling processes were equally, discussed.

Human factor in sculpture established the fact that sculpture has been part of human life in a very long time. It confirmed that it has been the most treated subject in sculpture.

Sports honours and sculpture were also discussed. It exposed how sculpture (statues) have been used to honour many statesmen and women for their achievements. It shown the link that has existed between sculptures and sports by citing Myron's Discobolous as an example. It pictured some important personalities outside Ghana, like Sir Alex Ferguson, Michael Jordan and Cristiano Ronaldo who are honoured in statues to the admiration of their countrymen. Some controversies concerning sports statues were also talked about, the defaming of Ronaldo's statue and Zinedine Zidane infamous head-butt among others were discussed.

Aluminium as a material for sculpture, its properties and the methods of processing them were also discussed. Some historic facts in Ghana revealed some aluminium deposits which confirmed clearly that, Ghana indeed is the third largest producer of aluminium in Africa.

Historic information on aluminium sculpture which shown the first aluminium used for casting sculpture like the Eros, San Gocchino and Diane de Gabbies were deliberated on. Scrap aluminium metals was also discussed, it talked about the two approaches that outsources aluminium. Places such as landfill sites, mechanic shops and the streets were mentioned as the sources of aluminium. Some products of secondary aluminium were stipulated to include corn mill plates, cooking pots and automotive parts. It also revealed that the major advantage of secondary aluminium was that the production process was very low.

Scrap aluminium and sanitations was the last to discussed here. It stated the improper management of scrap aluminium and its damming effects on the society. Again, it resolved by stating how recycling activities, casting of some artefacts have helped to

solve the problem of sanitation. Some sculptors such as Lorenzo Quiin, Mariele Neudecker and Charles Ray who sculpt with aluminium had their works displayed.

2.22 The gap

Looking at the literature and the number of sculptures identified and reviewed especially in Ghana, apart from Azumah Nelson's stone carved by Mr. Bonsoo of KNUST, the rest of the works are made in cement with some amount of associated challenges. The challenges as observed from the statues such as that of Abedi Pele in Tamale and the Tennis player in Winneba, have developed cracks, defaced and some broken-down. The ruins of these statues are as a result of the material 'cement' used for the sculptures.



Figure 26: Abedi Pele Statue in Tamale

(Source: Ghana F. A 'Gold Coast Blackstar and Laurent Brender, 2009)

The challenges enumerated above such as cracks, defacement and breakdowns, calls for an alternative material such as aluminium to make statues. The researcher is of the view that, aluminium statue would stand against the rigorous weather conditions of Ghana.

It is also believed that, when sports personalities are recognised and honoured in a more durable material such as aluminium in statues, it would encourage other sportsmen and women to ‘fight’ for laurels for the nation.



CHAPTER THREE

METHODOLOGY

3.1 Overview

Chapter three focuses on the methodology planned under the ensuing headings: Research Design, visits to small scale aluminium casters, observation, interviews, Tools and Materials.

3.2 Research Design

The philosophical positioning of the study reflected on the realist theory of heroism in sport and material sustainability in sculpture. Qualitative approach in philosophical context of this study is understood by relating the importance of beliefs and theories that informed the study (Carnaghan, 2019). Creswell (2012) as cited by Carnaghan (2019) described that philosophical stances in qualitative approach are assumptions and frames as interpretive frameworks where it is understood by the study's own research significance. The purpose of this study sought to identify aluminium as a material for sculpture by developing a feasible and formalize approach to metal casting in lost-wax technique. Based on these research objectives and questions, the study adopted subjective interpretative analysis or framework approach to qualitative research. This subjective interpretative analysis allows the researcher to interpret and analyse the produced work through aesthetic appreciation. The research was a studio based, grounded on qualitative research approach. It involved the researcher as a practitioner that allowed the researcher to access the state of scrap aluminium in the Sekondi /Takoradi Metropolis as a material to produce sculpture in honouring Sports icons in Ghana.

Sullivan (2005) explained that visual arts research has to be grounded in practices that come from art itself, especially inquiry that is studio based. It further explained that arts-based research represents an unfolding and expanding orientation to qualitative social science that draws inspiration, concepts, processes, and representation from the arts (Knowles & Cole, 2008). Based on these definitions by Sullivan and Knowles and Cole, aluminium statues and the immortalisation of the Ghanaian sporting legend was conceived to be based on studio practices.

Studio based research includes the making of an art work (praxis) and a written (exegesis) which describes the procedure of how the art was made. The project lends itself to visual analysis which involved the identification of the sculpture (Statue of Icon), the technical data and subject matter. Again, the analysis covers the sculpture through the fundamental content, volume, space and principles of design as prepared in relation to the technique and material to form. Marshall (2010) stipulated that the imaginative and intellectual works undertaken by an artist are considered to be forms of research. Sullivan (2010) opined that artists employ their imaginative intellect in creating, criticising, and constructing new knowledge that transforms understanding of what is known. These assertions by Sullivan support the sculpting of a statue in honour of sports icons in Ghana with the use of aluminium as the art of lost-wax technique.

Reflecting on the studio-based research as clearly illustrated by Marshall (2010) and Sullivan (2010), Skains (2018) added that practice-related research involved the identification of research questions and problems, but the research methods, contexts and outputs then involve a significant focus on creative practice. Based on the research questions and problem of this study, the context of creative practice of this studio-based research is geared toward two main areas namely the sustainability of aluminium as material practice in relation to the environment and deconstruct the virtue properties of

aluminium as a material for sculpture in honouring sporting icons in Ghana. These two main areas of the study are grounded on Graeme Sullivan's 2009 model which identified a framework of four key areas in which a practice-led or -based research methodology is applicable and appropriate namely theoretical, conceptual, dialectical and contextual (Skains, 2018). The study adopts the conceptual model of Graeme Sullivan's 2009 as shared by Skains relatively to the creative mapping and exploring techniques and processes of aluminium casting as an attempt to understand the scholarly gap between the context of sculpture and sports in Ghana. The conceptual model by Graeme Sullivan's 2009 in the context of sculpture and sports for this study gives form to thoughts in creating aluminium cast of sporting icon that become part of the research process.

The descriptive research design was adopted to access and describe the suitability of available tools, materials, equipment and various methods of production in the study (Best, 1981). It was also chosen to analyse scrap aluminium as a sustainable material for sculpture in promoting environmental sanitation and to cast and document scrap aluminium sculpture as means of honouring Ghana's sports icon.

The descriptive research design was used to elaborate the activities on scrap aluminium. It helped the researcher to convey how sculpture can be used as a means of honouring sports icons and also promote environmental sanitation. It also helped in segmenting all the information gathered for explanation and understanding. This research method was suitable in grouping the information gathered under the questions for easy analysis. Using a studio-based on qualitative research approach, procedures were followed to produce scrap aluminium sculpture through casting methods, where techniques and procedures were carried out by creative, intellectual, praxis and reflexive manner to substantiate the results of data gathered from the field into work of art. Works of art are made through a process which, in every significant respect, mirrors processes of inquiry in other fields;

they result in products that embody those processes through which information is generated, analysed, and interpreted (Thompson, 2006).

The following were followed:

- Contextual review of published and unpublished literature and visual examples of related images.
- Experimental stages of miniatures, construction of armature and design plan, sculpting of the main figure in clay and wax, making of POP moulds and mother moulds in sand and POP, de-waxing of wax moulds, assembling of scrap aluminium, melting and casting aluminium. Finishing of the sculpture piece and mounting.
- Extensive illustrated documentation of the sculptures from clay modelling to aluminium casting. Gray and Malins (2004) state that if practice is part of your body of evidence from which to make research claims, then good quality documentation is essential.
- Evaluation interviews with key participants.

The research approaches engaged various methods, strategies, techniques and procedures to model and cast the appropriate icon for the project.

3.3 Visits to small scale aluminium casters for materials and study

The study located scrap aluminium dealers and casters at Kokompe in Takoradi, where some materials were acquired and some studies made as to their operations. Sculptors and Sculpture Lecturers in Takoradi Technical University and Sports enthusiast, administrators, presenters and icons also in Takoradi, and a member from the Environmental Protection Agency (EPA). These areas are parts of the visits.

3.3.1 Observation

The study used observation that involved structured viewing of participant's behaviour and demeanour towards scrap aluminium casting in Sekondi/Takoradi Metropolis. This provided an opportunity to get past the selected populations thoughts, understanding, viewpoints and behaviour towards an assessment of their undertakings in practice of scrap aluminium casting. Sarantakos (1993) defined observation as a means of data collection that employs vision as its means of data collection. He believes that the technique could be used alone or with other techniques in a study. He again opined that observation is an indirect method of data collection since in most cases it collects information without the full knowledge of the respondent. He classified the types of methods of observation as naive and scientific, participant and non-participant, structured and unstructured, natural and laboratory, open and hidden, active and passive and direct and indirect observations. Observation as used in qualitative research, usually consists of detailed notation of behaviours, events, and the contexts surrounding the events and behaviours (Best, 2002). The participant observation was adopted where the researcher visited and observed scrap aluminium casters and dealers whose mainstay is a significant interpretation to the problem relating to the study.

3.3.2 Interview

Interview chosen was verbal interaction conducted in which the interviewee gave the needed information vocally in the presence of the interviewer concerning the study. According to Kothari (2004) investigator follows a rigid procedure and seeks answers to a set of pre-conceived questions through personal interviews. This method of collecting data was usually carried out in a structured way where output depends upon the ability of the interviewer to a large extent. In a direct verbal interaction, the interviewer asked the

interviewee certain questions for response. The responses of the interviewees were noted and used later on. The interviewees at a point were given the opportunity of freedom to respond to the questions asked them. The researcher used the interview method to collect information from the selected aluminium casters, sports icons and presenters, environmental agency, sculptors and lecturers at the Sekondi/Takoradi metropolis. Interviews conducted were both done in English language and the local dialect (i.e. Twi and Fante). The local dialect made it easy for interaction and furnished the accurate answers since some of the interviewees did not speak English. An average of one and half hours were spent on the respondents during the interviews.

3.4 Tools, Materials and Equipment

Various tools of various shapes, materials of different kinds and equipment of different functions were employed in the production of the sculpture (Icons) in the study. Tools for this study comprised of hand implement which were used for the modelling of the figure. Equipment involved the powered tools and machinery at the foundry that were used during the casting of the sculpture (Icon) in aluminium. Materials were the physical substance that the sculpture (Icon) was made from. Organic materials such as clay and wax were used for the initial models and inorganic material such as aluminium was used for the final casting. The tools consisted of spatulas, brushes, tongs, files, chisels, hammers. Equipment included kiln, welding machine, crucible, modelling stand, bowl and bucket. The materials were made up of clay, wax, POP, iron rod, copper wire, nails, electrodes, sand, grog, protective gloves and goggles. All these were used during the production process.

3.4.1 Tools

- **Spatulas** are modelling tools mostly made in wood but there are metal and plastic spatulas very much in use. Wooden and plastic spatulas are often used for clay modelling and it is exactly so in this study, they were used to sculpt the icons in clay. Metal spatulas are however used for cement works done in the direct modelling procedure. All spatulas come in different sizes and shapes depending on the choice of the sculptor.
- **Brushes** are implements with a handle and a block of bristles, hair or wire used especially for cleaning, applying a liquid or powder to a surface. They were used to clean the moulds and also used to apply wax to the moulds during the wax casting of the Icon.
- **Tongs** are an instrument with two movable arms that are joined at one end which are used for picking up and holding things. The tongs were used to pick the crucible from fire during the melting of aluminium for casting Icons.
- **Files, raps and hammers** are usually hardened steel with cutting ridges for forming or smoothing surfaces especially of metals. They were used during the finishing process of Icon.

3.4.2 Equipment

- **Kiln** is a thermally insulated chamber, a type of oven, that produces temperatures sufficient to complete chemical changes. The kiln was used to de-wax the mother mould for the actual casting to begin.
- **Welding machine** is a gas metal arc welding fabrication or sculptural process that joins materials or thermoplastics, by causing fusion, which is distinct from lower temperature metal-joining techniques such as brazing and soldering, which do not

melt base metal. It was used to sculpt the armature for icon before the actual modelling of clay begun.

- **Crucible** is a ceramic or metal container in which metals or other substances may be melted or subjected to very high temperatures. It was used to melt the aluminium for casting Icon in the study.
- **Modelling board** is a flat board which holds the armature for modelling. It was used for the modelling of the clay figure of Icon.
- **Bowl and bucket** are containers that are open at the top which is deep enough to hold items and water. They were used to mix POP during the mould making process of the icon.

3.4.3 Materials

- **Clay** is a natural earthy material that is plastic when wet, consisting essentially of hydrated silicates of aluminium used for making ceramics and sculptures. It was used to build the Icon statue before the final casting into aluminium.
- **Wax** also known as beeswax is a solid, yellowish, non-glycerine substance allied to fats and oils, secreted by bees, plastic when warm, variously employed in making candles, casts, ointments. It was used to cast the Icon sculpture from the clay model after the mould was taken.
- **Plaster of Paris (POP)** is calcined gypsum in white, powdery form, used as a base for gypsum plasters, as an additive of lime plasters, and as a material for making fine and ornamental casts: characterised by its ability to set rapidly when mixed with water. POP was used to take the mould of the clay model of Icon in the study.

- **Iron rod** also refers as wrought iron, a non-ornamental iron used in building and heavy construction. It was used to build the armature for the Icon sculpture before clay was added to it.
- The **electrode** is formed by a metal rod known as the core covered by a flux coating of mineral or organic materials. The consumable electrodes were essential in the electric arc priming and are used as additional material as well. The armature was joined together by the use of the electrode.
- **Protective Goggle** is a close-fitting protective glass which was worn with side shields for protection of the eyes against injury. Proper safety precautions are required to avoid accidents related to casting and the sparks, heat, fumes, and visible and invisible rays from the heat source. This was worn to ensure protection against injury.

3.5 Skills and Procedures for the Execution of Work

The studio-based research method allowed the researcher for personal interpretation and approach in achieving the work. The concept involved in the practical procedure, skill and fundamental ability coupled with dexterity, developed the researcher's knowledge to focus on the casting of a statue in honour of a sports legends in Ghana. The researcher employed elements and principles of art, conceptualisation of direct observation, research style and subject, scientific and structural approach that accounted for the skills and procedures for the execution of the scrap aluminium sculpture. These skills and procedures are highlighted in the Chapter four for the production of the scrap aluminium sculpture (Sport Icon).

CHAPTER FOUR

TECHNIQUES AND PROCEDURES USED FOR THE MODELLING AND CASTING OF THE ICON

4.1 Overview

This chapter focuses on the procedure and techniques used in modelling Azumah Nelson ‘The Professor’, the icon for this project work. The experimentation aspects of the projects were also carried out with the modelling of babies for casting in aluminium to understand the material to be used for the project.

The researcher (practitioner) employed the modelling and casting technique methods in executing and finishing the project. The modelling and casting technique methods as used in executing the project started with acquisition of pictures of the Icon, then preparation of clay for the modelling of the icon, buying of wax, P.O.P, sand, scrap aluminium and other items needed for the smooth production of the research project.

4.2 The Notion of Hero (Icon)

The notion of hero is measured in the background of the circumstances surrounding the person’s rise to stardom or demise. As a typical street person with little education, who at the beginning of his career could speak or read little or nothing at all, but was able to conquer almost all his opponents. That was the case of Azumah Nelson, who is one of the classical heroes (grass to riches) and commonly identified and commensurate with all classes of people in and outside the country.

As Womack (2003; 20) suggested ‘heroes are bigger than life’ and the consideration of them goes beyond the scale of normal daily life. A hero surpasses the ordinary by extraordinary actions or achievements to become elevated in status. A hero by definition

has surpassed being a human to become god-like or immortal and to be revered or even worshipped as such.

Azumah's invitation to the International Boxing Hall of Fame (IBHF) attests to the significant successes he achieved in his career and the impact he made in the boxing scene. Though David Kotey "Poison" was the first significant Ghanaian boxer of certain repute, Azumah's work and rise is further afield than that of D.K. Poison hence his invitation to the IBHF and why he is considered an icon.

Azumah Nelson manifested his heroism on two levels, first, as a "Boxing Professor" and second, as a "Legend". As a professor, the "illiterate" boxer was through his prowess, wisdom and intelligence, disposing and teaching lessons to his boxing opponents some of whom were more knowledgeable and wide read. During his after-fight interviews, Azumah would explain to the audience the ways and means he used to defeat his opponent. He also taught lessons to his opponents and followers. In 1991 at Las Vegas, Jeff Fenech claimed he was cheated out of a fight which allowed Azumah to retain his WBC Super Featherweight title. Azumah quickly agreed to a rematch in Australia where according to the Professor, the fight became a "father and son" bout. He taught Fenech a lesson.

As a "Legend", Azumah permeated every home and mind in Ghana and across the world not only in his weight division, but in boxing exploits. This led him to be described as one of the best 'pound for pound' boxers ever lived. In Ghana, his legendary status was cemented in the various philanthropic works he undertook. Added to this, his humility made him available to almost everyone. This typified him as a true "Ghanaian". The humility- a virtue Ghanaians across the world and home are known by but that did not leave him even at the apogee of his stardom.

4.3 Technique

Technique is basically explained as a way of doing things requiring some special skill especially in the arts and sports. They were the means in which the practical details or basic physical procedures were used to achieve the casting of the statue in honour of Ghana's sports icon, Azumah Nelson.

Experimentations and constant practice are the rigorous skill that one must adopt in order to obtain the technique of doing something. It was important for the researcher to go through series of experiments to develop a technique suitable for the sculpturing of the statue. By this, the researcher experimented with the material to be in tune with the dynamics of the material to be used in the main project. *See figure 27* for pictures of the experiments.

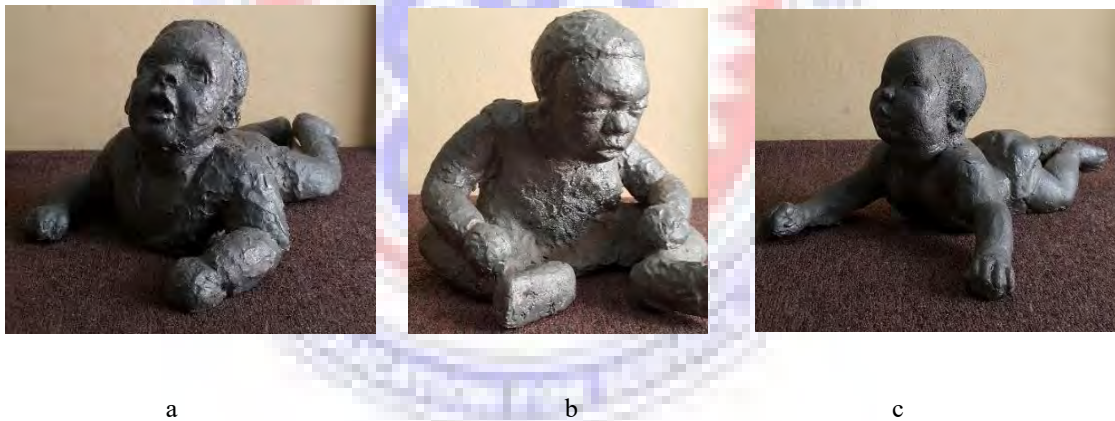


Figure 27: Some Experiments with Scrap Aluminium Casting

(Source: Researcher, 2016)

The production of the armature basically employed the arc welding technique which was used to keep the connecting joints together. The benefit of this technique is that, joint made by welding is very firm and stress-free to work on. The soldering and brazing techniques are not suitable for load bearing material since they are not firm enough and are mostly used for joining thin parts of the metal.

Applying the clay on the armature required a special skill which allowed the sculptor to select from the two main applications, building with clay in bits until the figure is done or applying clay all-round the armature and carve the figure out which is called addition and subtraction technique. In this regard, the researcher chose to apply the clay in bits, simply because it allowed the researcher to see the lower and higher dimensions to apply the clay.

The technique of making moulds for the sculptured icon played quite a large part. There are a number of moulds that one could use when making a sculpture of that nature, the flexible, agar composition and the rigid negative which are mostly produced in P.O.P. which may be in sections of two or more and even complex which consists of many sections. The practitioner was motivated by the fact that the POP set quite early and that allowed the practitioner to make the moulds for the whole figure in no time. Indeed, it quickened the practitioner to work with speed since the setting of the plaster meant that, if the work was not done on time the plaster would go bad.

Rich (1988) writes about mould saying that they look like shell impression into which the casting materials are poured. He classified them as the mould, negative mould, the mother mould or the containing mould. The practitioner used the rigid negative mould using P.O.P as the waste mould material which was broken off to free the wax model. He again used the mixture of P.O.P and sand for the mother mould for the aluminium cast. The motivation to use sand and plaster was the fact that they are easily broken off after the cast and this was evident during the experimentations.

The wax model was cast in the mould. The skill to apply the technique requires patience and it is focus driven. Some schools of thought imply that the wax after melting should be poured into the prepared mould. While others say that it should be applied little by

little using brushes to paint the mould which the researcher obliged. This allowed him to get all the undercuts in the mould to be filled with wax. The wax was wrapped in a mother mould which would help during the de-waxing.

The de-waxing could be done in two applications, the open firing and the kiln methods. While the open firing uses firewood to fire the mother mould, the kiln could be used, using three different fuel types which are gas, electricity and firewood. The gas was more efficient for the researcher.

Pouring of the molten aluminium requires a technique that must be learnt for some time, a little mistake can endanger first of all the attendant and the work itself. The proper apparel must be worn and safety measures should be adhered to at all times. The scrap aluminium molten must be poured with all carefulness, holding on to the tongs with lots of strength so as to avoid spillage. The researcher knowing all these, applied them to the very end of the casting process.

4.4 Procedures

Procedures are fundamentally a set of actions which are the established way of doing things and this was done to the exact end to achieve the desired results. The essential aim of this project was to cast a sculpture piece of an icon who has contributed immensely to the development of sports in Ghana, who needed to be honoured. It challenged the researcher/practitioner and the Ghanaian artist at large, to stay off the traditional materials such as gold, bronze and brass, and explore into alternative materials like scrap aluminium for casting. This will serve as a contributing factor to the environmental sanitation in diverse ways. It is clear that Ghanaian sculptors have used the traditional materials in the past for ornamentations and casting purposes. In this era of technological advancement where materials keep changing, it would be prudent to use scrap aluminium

for casting. The researcher chose scrap aluminium for the production of the icon. Electing to embrace this idea of essential concept with clear step by step and progressive approach which were fashioned and established for the production of the cast piece, the researcher used creative procedure and skills to produce appealingly attractive icon, Azumah Nelson.

The study employed eighteen procedures in producing the scrap aluminium sculpture by acquisition of pictures from the icon, acquisition of metal rod for the armature, application of clay on the armature. Again, making of mould for the clay work, the removal of mould from the clay figure and the preparation of the mould for wax casting were done. Fixing of vents and risers, removal of cast wax from the mould, investments with chicken mesh and binding wire were done before the mother moulds were put in a kiln. The pouring of aluminium into the mould and breaking of mother mould from cast aluminium, cutting of greens, assembling the parts/welding, filling and filing, using the car body filler and the final piece were all executed.

4.4.1 Acquisition of Pictures

The acquisitions of pictures for the project were collected when the researcher paid a courtesy call on the Champion, Azumah Nelson in Accra. The renowned icon made available various pictures for the researcher to find the most appropriate which were needed to support for the project. He also posed for the researcher to take some shots of him. Again, a book on Azumah Nelson was also acquired which helped in providing additional pictures for the project.



a



b



c

Figure 28: Pictures of Azumah Nelson

(Source: Azumah Nelson, 2016)

4.4.2 Acquisition of rod metals for the armature

Metal rods were acquired to use as armature to hold the clay together (statue). These were bought in Takoradi in various sizes, cut to size and arranged to the preference of the researcher. It was composed to look like how the finished work would look like (Boxer, ready to fight). The figures below (29) show how the armature was constructed.



Figure 29: Armature for the Icon, Side Views

(Source: Field Study, 2016)

4.4.3 Application of clay on the armature

The armature was covered up in clay in the modelling process until the desired result was achieved. They were applied bits by bits until the desired shape was achieved.



a



b



c

Figure 30: Modelled Figures of Icon

(Source: Field Study, 2016)

Various details such as the belt which needed additional attention was taken care of. The laces of the shoe were also done and this added a lot of beauty to the work.



a

b

Figure 31: Modelled Figures of Icon

(Source: Field Study, 2016)

4.4.4 Making of Mould

Moulds were taken after the modelling was done. Plaster of Paris was used as the material for the mould which was sprinkled into water, mixed quickly and applied onto the body surface of the work. It must be noted that, divisions were created on the work to allow for 'piece' mould to be created. Figure 32 shows pictures of the procedure.



a



b



d



e

Figure 32: Moulds Taken of the Icon

(Source: Field Study, 2016)

4.4.5 Breaking of Moulds

The piece moulds were broken by taking off the pieces from their joints. This was done by removing them in pieces with extra care not to break them. It must be noted that, the P.O.P was enhanced by adding fibre to it. The fibre strengthened the mould from breaking.

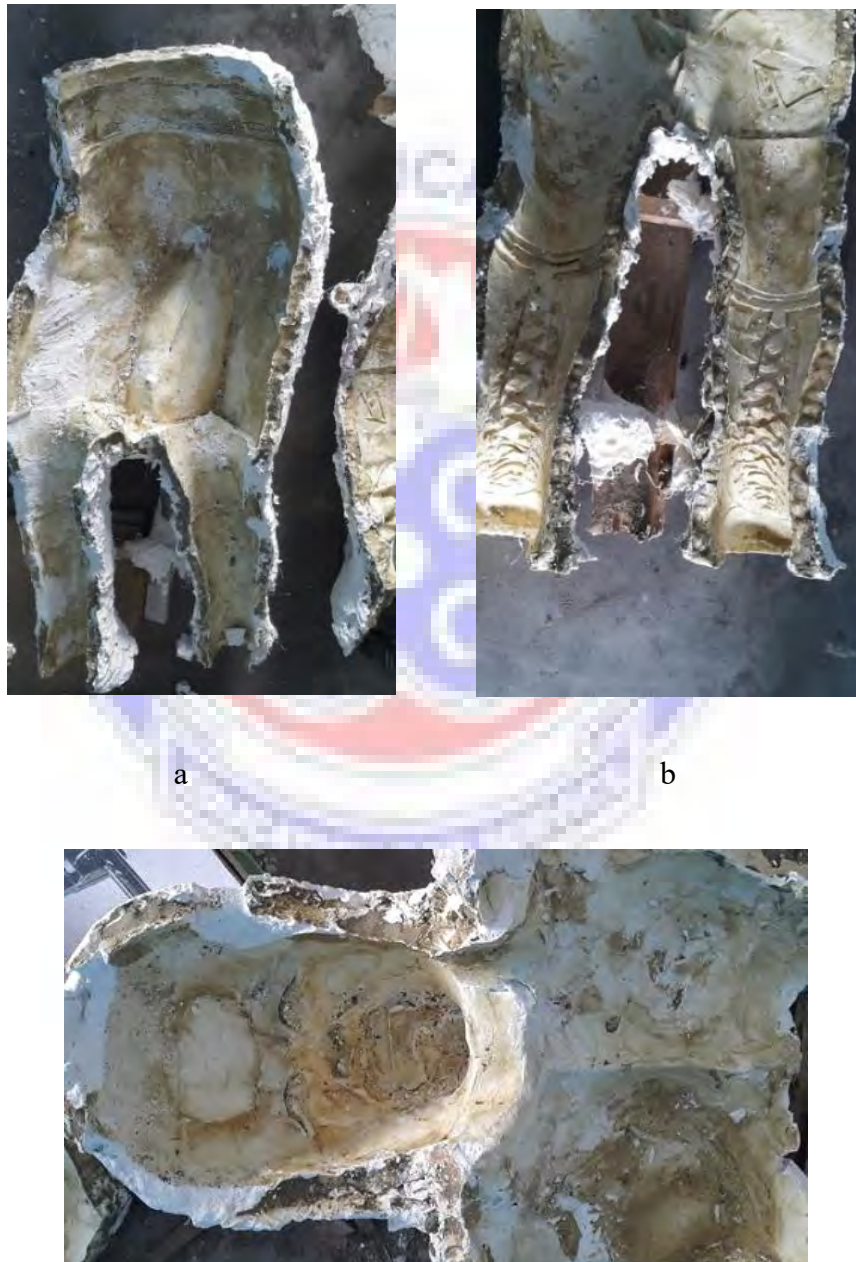


Figure 33: Pictures of Moulds Taken

(Source: Field Study, 2016)

4.4.6 Preparation of Mould for Wax Cast

The moulds were prepared for the wax cast by removing the tiny clay particles from the corners of the mould with the help of the modelling tool. The moulds were then washed and cleaned with water. After, they were dried for some time before red oil which served as sealing and parting agent were applied with the little cracks concealed with clay.



Figure 34: Moulds of the Trunks Applied with Oil

(Source: Field Study, 2016)

4.4.7 Wax Casting

This was done by first assembling the bees wax which came in blocks. They were acquired from Krofofrom a town in Kumasi. About seven blocks of them were bought which were enough for the project. They were broken into smaller pieces and put in a pan. By then, fire was already set to melt the wax.



Figure 35: Broken Bee Wax in a Pan

(Source:Field Study, 2016)

After the wax was melted, brushes which were acquired at New Site, a suburb in Takoradi, Ghana, were used to apply the very first layer of the wax unto the mould.



Figure 36: Wax Application onto the Mould

(Source:Field Study, 2016)



a

b

Figure 37: Wax Casting

(Source: Field Study, 2016)

4.4.8 Removal of Cast Wax From Mould

The removal of the cast wax was done at this stage. The cast wax which were in the smaller moulds were easy to be removed while the ones in the big moulds were tough to expell. This could be attributed to the undercuts found in the bigger moulds. It is also possible that the wax was too fragile to stand on its own. This lead to the application of the mother mould on the cast wax while still in the P.O.P mould. The P.O.P moulds were later broken to reveal the cast wax.

Figures 38a and 38b shows the cast wax which were easily removed from the mould.



a



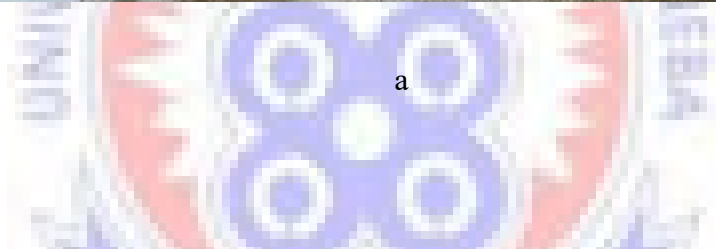
b

Figure 38: Cast Wax Easily Removed

(Source:Field Study, 2016)

4.4.9 Mother mould preparations

Figures 39a and 39b shows how the mother mould were prepared. A fifty percent sand and fifty percent POP were mixed with water into a fine paste to form the material for the mother mould.



b

Figure 39: Mixture of Sand and P.O.P Mixed with Water for the Mother Mould

(Source: Field Study, 2016)

Figures 40a and 40b shows the application of the paste into the wax on the moulds. The paste were spread out evenly on the wax in the mould.



b

Figure 40: Mother Mould being poured into the cast wax

(Source:Field study, 2016)

Figures 41a and 41b shows the researcher breaking of the outer mould of POP after the mother mould was dry in the inner core of the wax. When the POP moulds were broken

off, the wax models were washed after some chicken mesh were used on the mother mould as reinforcement. Figures a,b and c (42) shows the washed models of the cast wax.



a

b

Figure 41: Breaking of P.O.P Moulds on the Cast Wax

(Source:Field Study, 2016)



a

b

c

Figure 42: Removed and Washed Wax Cast

(Source:Field Study, 2016)

4.4.10 Fixing of Vents, Risers.

The risers and vents were fixed at this stage. The cast wax was first washed with water from all the impurities until they got cleaned. The vents and risers were modelled using wax and fixed on the higher portions on the modelled figure in wax.



a



b

Figure 43: Cast wax with Vents and Risers

(Source: Field Study, 2016)

4.4.11 Investments with Chicken Mesh and Binding Wire

After the vents and risers were done, another mixture of P.O.P and sand were mixed and used to cover some layers of the cast wax before the chicken mesh was wrapped around the whole circumference of the cast wax. That is known as the mother mould.



a



b

Figure 44: Mother Mould in Chicken Mesh

(Source:Field Study, 2016)

Figures 45 shows the practitioner and an assistant tying a binding wire around one of the smaller mother moulds. The binding wire strengthens the mould during firing. Figure 46 shows a picture of the tightened mould.



Figure 45: Binding Wire being used to Tighten the Mould

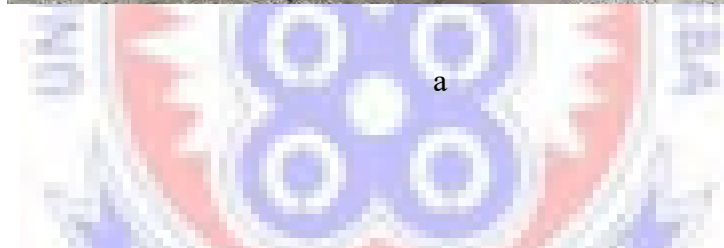
(Source:Field Study, 2016)



Figure 46: Tightened Mould

(Source:Field Study, 2016)

Figures 47a and 47b shows the complete covering of the mother mould which has the actual modelling of the icon in wax. Again, it has the chicken mesh and the binding wire which reinforces it during the firing.



b

Figure 47: Mother Moulds Ready for Firing

(Source:Field study, 2016)

4.4.12 Mother Mould in Kiln

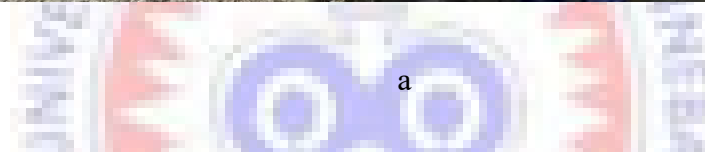
The mother moulds were carried and arranged in the kiln in batches. This was because the kiln used was not spacious enough to carry all at the same time. The researcher used the gas kiln to de-wax the mother mould. They were fired for seven hours each and this took close to a week to de-wax all the mother moulds. The bigger moulds were fired in rather a large kiln which was pre heated for about an hour, after which the fire was increased in smaller bits until the smoke were detected, signifying that the mould was completely de-waxed.



Figure 48: Mother Moulds in a Kiln

(Source: Field Study, 2016)

The mother moulds were then removed from the kiln and sent to the aluminium casters at Kokompe. This was done in all carefulness since the firing made the mould very fragile. Some of them had to be carried by four to five men, it made movement quite cumbersome but with lots of patience and tactfulness, they were carried safely.



b

Figure 49: Fired Mother Mould Being Carried to be cast into Aluminium

(Source: Field Study, 2016)

4.4.13 Pouring of Molten Aluminium into Mother Moulds

The moulds after being carried to the studios of the aluminium casters were assembled and covered in the sand they use for their moulds. The idea was to protect the mould from breaking during pouring of the molten aluminium into the mould. This was done whenever a mould was sent to the studios.



Figure 50: Mould Placed in the Sand

(Source:Field Study, 2016)

The scrap aluminium was put on fire after the moulds were assembled at the aluminium casters' foundry. The fire place was made of traditional mud and fuelled by palm kernel shell with a blower which was powered by electricity. The crucible which carried the aluminium is made of a motor container from the refrigerator. The fire was constantly fed with the palm kernel fuel until the aluminium was red hot signifying its readiness to be poured into the moulds.

Figures 51 shows the preparations of the scrap aluminium and the melting processes.



a

b

c

Figure 51: Pictures of Aluminium, Fire Place, Crucible and Tongs

(Source:Field Study, 2016)

Figure 52 shows the pouring of the molten metal into the de-waxed moulds.



a



b



c

Figure 52: Pouring of Molten Metal into the Moulds

(Source:Field Study, 2016)

Figure 53 shows that the moulds smoked during the pouring of the molten metal. This indicated that the moulds were not well de-waxed.



a



b

Figure 53: Pouring of Molten Metal

(Source:Field Study, 2016)

4.4.14 Breaking of Cast Aluminium

Aluminium sets very fast although it is very hot. This made it easy for the researcher to break the mother mould few minutes after the cast was done, to reveal whether the cast came well or not.



a

b

Figure 54: Broken Aluminium Cast

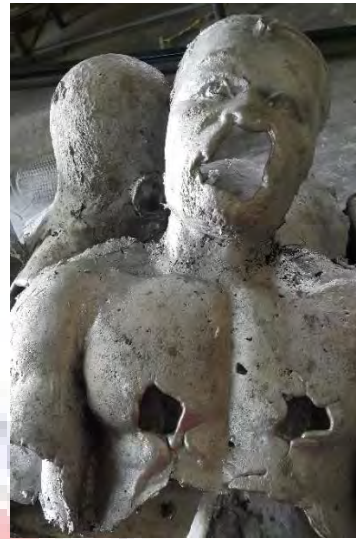
(Source:Field Study, 2016)

Figures 55 shows the deformity that appeared in the cast works, it indicated the flaws in the de-waxing process which was not properly done, leaving some amount of wax in the

mother mould. All the pieces had some amount of damages which were managed and repaired using car body filler.



a



b



c

Figure 55: The front and Back Views of the Cast Aluminium

(Source:Field Study, 2016)

4.4.15 Cutting of the Greens

Greens here refer to the vents, risers and any additional unwanted metal on the cast work. There were few that had to be taken off so that the work would look complete. Some were taken off with the help of the hack saw and at the confines of the aluminium casters while the rest were taken off at the sculptors' studio with the electronic cutting disc and grinder.



Figure 56: Cutting the Greens Off

(Source: Field Study, 2016)

4.4.16 Assembling the Parts

The various parts were assembled using the step casting technique after the greens and unwanted parts have been taken off. It was started from the feet of the object, to the middle part which is referred to as trunk and then the face and the arms were added. First, an aluminium electrode which was difficult to get was finally purchased in a welding shop in Takoradi at quite a higher price. It was used on an arc welding machine at the sculptors' studio with all the safety measures taken into consideration. They included safety goggles, helmet, safety shoes and overall coat.



a



b

Figure 57: Aluminium electrode and Arc welding Machine

(Source: Field Study, 2016)



a



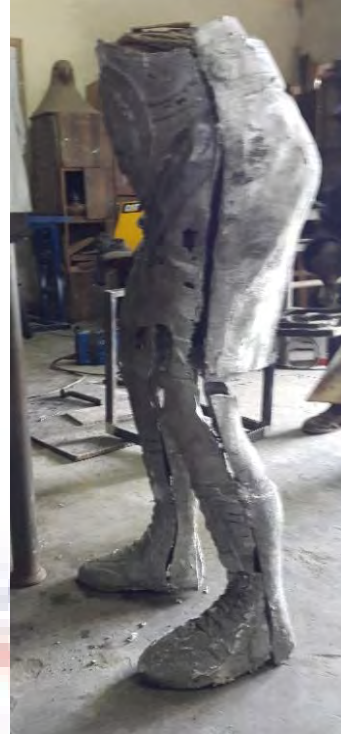
b



c

Figure 58: Welding the Legs

(Source: Field Study, 2016)



a

b

Figure 59 Welding the Trunk

(Source:FieldStudy, 2016)



Figure 60: Putting the Head Together

(Source:Field Study, 2016)



a



b

Figure 61: Welding the Cast Pieces Together

(Source:Field Study, 2016)



a



b

Figure 62: Head on the trunk

(Source: Field Study, 2016)



Figure 63: Arms Attached to the Body

(Source:Field Study, 2016)

4.4.17 Filling and filing

The filling and filing were done at this stage. Plates of aluminium were cut into smaller pieces and welded into the spaces created during the casting. It must be said that; they were welded to make the statue stand on its own. Certain areas were also filed so that the precision of the seams would match.



a



b

Figure 64: Filing of the Sculpture

(Source:Field Study, 2016)



Figure 65: Using the Grinder

(Source: Field Study, 2016)

The filing was also done with the electronic grinder apart from the hand file. The grinder was also used to bring out some of the details that did not appear well on the aluminium cast statue. The foot is an example of this as shown above.

4.4.18 Using the car Body Filler

The car body filler (P-38) was used to fill in the blow holes in the work. The fillers were bought at Kokompe, a suburb in Takoradi, Ghana. It is made up of a paste and a hardener which normally comes in small packs. The colour of the paste is off-white and that of the hardener being red. To get it to work demanded that an amount of paste must be mixed with a little portion of the hardener.



a



b

Figure 66: Car Body Filler

(Source:Field Study, 2016)



a



b

Figure 67: Application of the Filler on the Statue

(Source: Field Study, 2016)

At some point of the filler application, some fibres were applied in the bigger holes in the work. This was done to sustain and melt with the filler to give it strength and durability.



a



b

Figure: 68: Applications of Fibre

(Source: Field Study, 2016)



Figure 69: Filing of the Filler

(Source: Field Study, 2016)

Filing off the filler to get even with the aluminium piece was done at this stage. The electric grinder was powered by electricity to execute the job after which the sanding paper was also applied to smoothen it. Water was applied onto the affected area for effective application of the sanding paper. The water made the job more relaxed and quite real.



Figure 70: After Filling

(Source: Field Study, 2016)



Figure 71: After filling

(Source: Field Study, 2016)

4.4.19 The Reconstruction of Face

The face was reconstructed at this stage, and this came about as a result of the failures in the de-waxing process. The lower part of the face from the mouth down to the chin did not take the aluminium when the pouring was done. This was lesson to the researcher. It is his personal philosophy that sculptors solve problems, and this he did solve. The opening in the mouth area including the philtrum was first sealed with smaller aluminium scraps which were welded together. This was followed up with the modelling of the area using the P38 car body filler. The following pictures shows how the affected area was reconstructed.



Figure 72: Reconstruction of the Face

(Source: Field Study, 2016)

4.4.20 The Finished Work

The 'professor' was finally finished in an aluminium colour. This was done after the sandpapering which gave the 'Professor' an outstanding look.



Figure 73: The Rough Finished Piece

(Source: Field Study, 2016)



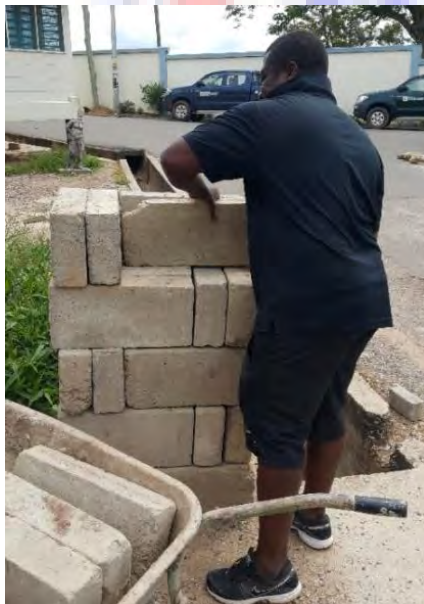
Figure 74: The finished figure

(Source: Field Study, 2016)

4.4.21 Mounting the Cast Sports Icon at the Selected Location

The Sekondi sports stadium was selected as a location where the statue was mounted. The selection of Sekondi sports stadium was based on attention for sports expansion and proximity for the researcher. It was pretty much easier for the researcher to gain permission to mount the sculpture in the premises. First, the researcher had to go to stadium to speak to the Sports development officer, Mr Jeffrey Manzan Owusu before a letter was sent to the sports authority for permission to mount the work. (letter attached to the appendix). Permission was given few weeks after presentation of the letter through a phone conversation with the secretary to the office, Ms Eunice Appiah Kubi.

The mounting of the sculpture started with the building of the pedestal. The blocks and the sand were first conveyed to the site from the Takoradi Technical University where the items were gathered.



a



b

Figure 75: Conveying blocks

(Source: Field Study, 2018)



Figure 76: Sand and Blocks in Truck

(Source: Field Study, 2018)

The items that were needed for the construction of the pedestal were conveyed to the Sekondi sports Stadium in a pick-up truck from Takoradi Technical University. Three assistance helped in this direction which significantly suggest the efforts that others put in the work.



Figure 77: Sand and Blocks Conveyed

(Source: Field Study, 2018)

The other item such as cement was also purchased from a shop at new-site, a suburb of Takoradi, Ghana. A block layer was commissioned to assist in the building of the pedestal, he laid two blocks on the space allocated to us and measured for the commencement of the building of the pedestal.



Figure 78: Blocks as a Measure

(Source: Field Study, 2018)

The sand and the cement were mixed in a sixty to forty percentages. The mixture was evenly mixed with the help of a shovel before water was added to make it slurry to lay the blocks.



Figure 79: Mixing Sand and Cement

(Source: Field Study, 2018)



a



b

Figure 80: Mixture of Sand and Cement added with Water

(Source: Field Study, 2018)

The slurry mixture was taken with the trowel and put on the floor where the blocks were laid on them. The build-up of the pedestal begun from building the first round of blocks.



Figure 81: Blocks Lay

(Source: Field Study, 2018)

The second blocks were added with the mortar filled in-between the blocks. The mortar served as adhesive which holds the blocks together when it hardens. Again, it prevents the build-up from shaking or moving which allows the structure to be used for its intended purpose.



Figure 82: Block Laying

(Source: Field Study, 2018)

The height of the pedestal was achieved by just using two build-ups of sixty by sixty centimetres tile measurement. The work was left to dry for two days after which the created hole was filled with the sand. After that, the structure was adorned with tiles to beatify and also identify the honouree in a form of signage.



Figure 83: Pedestal and Plaque

(Source: Field Study, 2018)

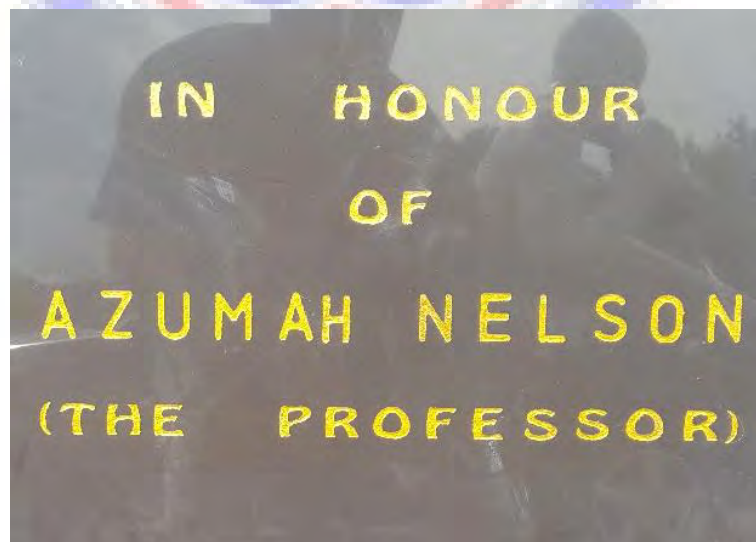


Figure 84: Plaque

(Source: Field Study, 2018)

4.4.22 Mounting the Statue (Icon)

The statue was washed and given a final spray before it was conveyed to the stadium. It was carried into a pick-up truck with the help of about three men. An old tire was put into the open space of the pick-up where it served as a resting place for the statue. It prevented the statue from unusual movement at the back while the car moved.



Figure 85: Statue Being Conveyed to the Stadium

(Source: Field Study, 2018)

The statue arrived at the stadium safely and was carried down from the pick-up by students who assisted the researcher. It stood on the floor to wait for the final finish on the pedestal before it was moved onto the pedestal. But before that the base was reinforced with some iron rods by first creating holes in the base of the shoes, the iron rods were then put through the holes and cut to the measurement of the pedestal.



a

b

Figure 86: The Perforated Base and Statue Ready for Mounting

(Source: Field Study, 2018)

The statue was carried onto the pedestal with precision and adjustment. It was made possible by the researcher, the tiler and the people who were around during the mounting. The statue was basically corrected on the pedestal to look alright and also to stand firm before a concrete was poured on the base.

The concrete was made up of chipping stones, sand and cement which were mixed with water, and with the help of the trowel, it was applied onto the base of the statue which at that moment was on top of the pedestal. The concrete was used to cover the iron rods that has been used to run through the base of the statue. The idea covering the perforation and the attachment of the iron rods are that, when the concrete sets on them it would hold the statue firm which would not be shaken by the rigorous natural weathers. This again would

make it difficult for thieves to break the statue down, since the statue is finished in aluminium.



Figure 87: The Concrete

(Source: Field Study, 2018)



Figure 88: The mounting of Statue

(Source: Field Study, 2018)

The base of the statue was rammed on the pedestal with concrete. First, the iron rods were submerged under the concrete and later a sledge hammer and a wooden bar which was found around was used to ram the concrete.



Figure 89: The Ram Base

(Source: Field Study, 2018)

The work was left to dry for about four days but the rains came heavily which disturbed the work from finishing on time. Eventually, the rains calmed down after raining cut and dogs for almost two weeks. The final tile for the upper part of the pedestal was put on. This was done by cutting the tile into two equal parts and later cut the shapes of the trainers of the statue on the tile; this enabled the tile to fit onto the pedestal.



Figure 90: Cutting the Tile

(Source: Field Study, 2018)

The two parts were placed on the pedestal to measure and fit for the trainers before the application of the slurry mixture of tile cement and cement.



Figure 91: The Final Tile

(Source: Field Study, 2018)

Cement and tile cement were mixed with water without any impurities. This was applied onto the pedestal and the tiles placed on them. The mixture of the tile cement and the cement served as adhesive for the tile and the pedestal to bound.



Figure 92: Tiles Joined Together

(Source: Field Study, 2018)

Finally, the sculpture was cleaned, adorned and displayed for public appreciation at the Sekondi Sports Stadium.



Figure 93: The final piece of the Icon (Azumah Nelson)

(Source: Field Study, 2018)

CHAPTER FIVE

AESTHETIC APPRECIATION AND DISCUSSIONS

5.1 Overview

This chapter aesthetically appreciates the sculpted icon of Azumah Nelson in aluminium as it encompasses the size, the material and appearance of the sculpture piece. This was done to answer objective five of the research objectives; how will the aesthetics appreciation of the work (cast sporting icon) encourage sports and the production of other sports statues in Ghana?

The chapter again discusses the findings gathered from the sculpted work where data gotten from interviews and observation carried out on *Aluminium statues and the immortalisation of Ghanaian sporting legends* also informed the study. This discussion is centred on the findings of procedure and techniques used in modelling Azumah Nelson 'The Professor', who is the icon for the study. The testing aspects of the project were also carried out with the modelling of babies for casting in aluminium to understand the material used for the research. The researcher employed the cire-perdue (Lost-wax) hollow casting method and step casting technique in executing and finishing the project. The project started with the acquisition of pictures of the icon, clay for the modelling of the icon, wax, P.O.P, sand and scrap aluminium for the metal casting. Other items needed for the smooth production of the research project were also bought.

5.2. Aesthetic Appreciation of Cast Work (Statue of Professor Azumah Nelson)

5.2.1 Title

The work was entitled the “Professor” which was a name given to Azumah Nelson by himself. The researcher exploited the name to engulf the real image and livelihood of Azumah Nelson who has a modest personality, hardworking and one who has his country at heart. It was observed from the review that, Azumah Nelson who is a drop out from school never gave up his dreams to become a better person. He trained himself through difficult and challenging moments to outwit the gloomy situations that stared at him in the face. This, he did with love, fought with aggressiveness and in the end became the most glorious sports citizen that Ghana has ever produced. The researcher agreed on him with the name “Professor”, just like how the title demands sleepiness nights, struggle and hard work, so is Azumah Nelson’s life. The ‘professor’ makes the work him, with all the humility that goes with his generosity and willingness to do things beyond his capability. The display of an imposing scrap aluminium and a well-crafted, sculptured statue of a well-known sports icon dwells in the ‘Professor’. The production was inspired by the hustle, the struggle and the survival of the ‘Professor’ Azumah Nelson, to fight, help the needy, make a name for himself and to make history in the annals of Ghana. This was achieved through the personal conviction that it was doable.

Aesthetically, the sculpture piece (the professor) advocates strength, patience, hard work and the fortitude to achieve greatness. Strength as seen from the ambience knot encased in the world class gloves, ready to punch and fight till victory becomes his. Ghana experienced these glorious moments for 39 times from 1/12/1979 until his last defeat in 24/01/2008 which he had to come back after ten (10) years of retirement. Patience, that glamour around the ever-peaceful statue of the ‘professor’, seemed to reveal his silent

nature. He is a very quiet man, simple in how he carried himself and yet, he worked very hard. The stance of the statue and the bent structure, gazed into the fierce opponent, called for hard work which the ‘Professor’ never relented. He gave his all; he trained and achieved the world.

5.2.2 Philosophy

The silvery nature of scrap aluminium that forms when the discarded pieces are put together in the crucible, the bubble slurry that flowed in thick but sturdy into the mother mould, the broken mould that revealed the sprout of a new birth of sculpture, was an elegance of artistry and sculpturing in particular. The philosophy that sets this scrap aluminium sculpture was the brilliant simplicity of the cast sculpture (Professor) and its astonishing sophistication of delivery. The mark of expertise and the skill that engulfed the welcoming of a new ‘birth’ was amazing. It started from the scratch where clay was used to create the object to be cast and surprisingly, the object was seen again in aluminium that looked same as that of the clay work. The ‘magic’ happened at the blind side of the onlookers, the moulds, the wax, the mother mould and the pouring of the aluminium molten which eventually brought the ‘baby’ out. That’s the beauty of scrap aluminium sculpture, the missing ingredients made the sculpture aesthetically beautiful. The discarded aluminium has been given a new life that dwelled in the ‘Professor’, to battle and fight until the overall cleanliness is achieved. This is the researcher’s philosophical expediency, aluminium statues and the immortalisation of the Ghanaian sporting legends.

The philosophy basically observed the ambience of the material, aluminium used for the casting of the icon Azumah Nelson. It explains the beginning of the sculpturing from clay to the casting in aluminium which may look somehow ‘magical’ to the viewer; it admits

the use of the moulds and other ingredients that helped the icon to be produced. The review showed how the material was used to cast figures whose identities were not revealed to the researcher, they all appeared as just art. The appearance of the nature of the material, philosophically related to the icon who gave Ghana enviable great fights of thirty-nine times.

5.2.3 Description

The 'professor' is an in-the round life-size sculpture in aluminium, which came into life through the casting of scrap aluminium metal. This was made possible through the shedding of P.O.P from the clay model which eventually gave the researcher the opportunity to cast bees-wax, which when de-waxed, gave way for the slurry aluminium to flow into the awaiting 'mother mould'. The work is in life-size human form, realistic of Azumah Nelson in full fighting regalia. It is about 1.64 metres tall with an average width of about 36 centimetres.

The description of the statue was also made which gave a vivid look and outlook of the statue. It shows how the work was sculpted to appear in a proper stance of a boxer with one of his accomplished belts around the waist. The gloves and the laced boots are all accompanying ingredients of the trade the 'icon' engaged himself in. All these are obvious spectacles and can be seen when the statue is observed.

It was observed that, the work looks a little bigger than the life size of Azumah Nelson whose height is 1.64 metres. This was intentionally done to promote him as a hero and a king of boxing, and as stated in the review he looks 'Larger done life'. The statue projected him as a distinct gentleman but a good fighter who did all for himself, Ghana and Africa at large.

The statue is slightly leaning forward with the right foot in front. The head is tilted a little towards the left and appeared to be focused on the unseeing challenger. The eyes are popping up ready to see whatever looms ahead. The nose looked a little bigger as if it was swelling from an opponent's punches with the mouth raised slightly because of the mouth guard he seemed to be wearing. With some moustache, the trade mark of the great 'Zoom zoom' is seen on his mouth.

The arms are clinched into the boxing gloves suggesting his readiness to fight. The biceps are bulging, showcasing the number of hours he has spent at the gym; it looked slightly bigger which advocated strength and power that he appeared to possess. The belt which is the centre of attraction and the authority of boxing was cladded on the waist of the statue. This showed the accomplishment and the overall respect that Azumah acquired for himself and the nation, Ghana. The belt was inscribed on it the overall champion of WBC and other glittering effects that beautifies the belt were also captured.

The foot was nicely sculptured into the boxing shoes with lots of lines and repetition of the laces. The shoe looked quite long, almost at the knee. The tongue of the shoe was perfectly created which added some beauty to the statue. The shoe was well laced and the foot was well grounded on the floor which gave it stability, this confirmed how solid and agile the statue stood.

The overall posture and composition of the statue displayed aggressiveness, readiness and preparedness to fight, first to empower himself as one of the finest boxers of all times and secondly, to raise the image of Ghana high as a country of great boxers. The demeanour of the statue appeared to be calm showing the nature of the person sculptured. His accomplishment is shown in the belt which proposes authority and total accomplishment to the trade he engaged himself in.

5.2.4 Interpretation

The interpretation of the “professor” was the ‘fight’ to make a living worthy of emulation. From a humble beginning, Azumah Nelson has struggled to achieve greatness which is admired by quite a number of Ghanaians, Africans and the world at large. His devotion to accomplished these feats was unparalleled and it was worthy for such an honour to have his statue cast in aluminium.

Writing in the “professor” the life story of Azumah Nelson, Ashley Morrison (2014) described Azumah as ‘very few Champions have carried such a burden of expectation, and Azumah delivered success at a time when his country needed a hero. He never faltered and won the respect across the world’. When he fought, the country of Ghana fought, he was so admired by his people and they would keep wake just to watch the champion deliver, the promises he often made to Ghana.

It is well known how Professors struggle to attain the feat of becoming Professors. Buying books, reading and writing without sleep sometimes, so is Azumah Nelson, an almost uneducated who has achieved such a great laurel in boxing is some great feat to celebrate. It is the researcher’s belief that, this statue will accomplish its intended objective and help to promote the cleanliness of our streets and help the establishment of many statues of our icons who have given Ghana such joyous moments of our time.

In Azumahs Nelson’s own words, as written by Morrison (2014) said; ‘hopefully, my story shows that as Africans, we can conquer the world’. Indeed, he conquered the world.

5.2.5 Location

The Sekondi sports stadium was selected as a location where the cast sports icon was mounted. The selection of Sekondi sports stadium was based on the fact that, little attention has been given to boxing in the region which the researcher believes that, with

a statue of the professor, some recognition would be brought to the sport. Again, it was pretty easier for the researcher to carry the things needed and to gain permission to mount the sculpture in the premises. First, the researcher had to go to the stadium to speak to the Sports development officer, Mr Jeffrey Manzan Owusu before a letter was sent to the sports authority for permission to mount the work. (Letter attached to the appendix). Ms Eunice Appiah Kubi, secretary to the office phoned the researcher / practitioner in a few weeks' time after the presentation of the letter, to grant permission for the statue to be mounted at the Essipong Stadium.

The sculpture was mounted on a pedestal, which was built with blocks, sand and cement. The items were conveyed from the Takoradi Technical University to the Essipon Sports Stadium in a pick-up truck. See *Figures 75 - 76*.

A block layer who was hired started to lay the foundation of the pedestal with two blocks on the space given to the researcher for the mounting. The block layer used the blocks as a way to measure the space which covered 60 cm x 60 cm upon enquiry from the researcher. See *Figure 78*.

The shovel served as a tool during the mixture of the mortar, it aided the mixing of the cement and sand into a fine consistency of forty to sixty percentages. Water was added to make the mortar slurry so that it could be used for what it was intended for, fill in-between the blocks and serve as adhesive to hold the blocks firm. These were done with the first round of blocks which were laid with the help of the trowel. The routine continued like that until the desired height of about 120 cm x 120 cm² was achieved. See *Figures 78 – 82*.

The block work was left to dry and hardened for two days before the hole created in the pedestal was filled with the remaining sand. It was done to hold firm when the sculpture

was put on it. The sand was rammed each time it was put in until it reached the desired shape. The tile which was already bought had one of them used for the signage of the icons name. The mixture of cement tile and cement to fifty to fifty percentages were mixed to an even consistency with water before the application on to the block work. The trowel was used by the mason to fetch the mixture which was placed at the back of the tile which had rough surface. The mixture held the tile and the blocks firm. See *Figure 83*.

Conveying the statue to the Sekondi Stadium was made possible by a pick-up truck which was assigned to the researcher by the Takoradi Technical University. The Statue was given a 'bath' after it had stayed in the studios for some time. It also had a final spray to give it a glossy finish. A tire was placed in the bucket of the pick-up to give support and also help the statue against damage when the truck moved. The statue reached the stadium in about an hour when it left the studios. It was carried in both ways by student's assistants who were of tremendous help to the completion of the project. See *Figures 85*.

The base of the statue was reinforced with some rods which were cut and pierced through the statue. The drilling machine helped in this regard and the rods were cut to the size of the pedestal. Again, the last tile used for the top of the pedestal, was cut to measure where the legs of the statue was before the statue was carried onto the pedestal. The statue was adjusted to sit on the pedestal firmly and concrete of cement, sand and chippings were put on the reinforced base. It was ram to ascertain that it was fit and stood still. The statue was left to dry for about four days and left for public appreciations. See *Figures 89 - 92*.

Sports statues have generally been few in the country and the ones that are available are of mediocre standards. Some of them have been captured in the review of related literature which included that of Asamoah Gyan, Abedi Pele and some few Untitled at

the University of Education, Winneba. All these statues are sculptured to honour the icons and teams but the sad effect is that, the sculptors apart from the ones at the university are way-side sculptors who in their own way expressed their ingenuity in what they captured as sculptures. Generally, the statue of Azumah Nelson has brought some 'life' to the Essipong Stadium, people visit the stadium and the sight of the statue marvellously excite them.

5.2.6 Impact

The general views shared by the people the researcher interviewed was that, sports men and women put in a lot of efforts in carrying the name of Ghana high and yet receives less recognition. It was obvious from the interviews that the recognition they talked about was not the usual monetary rewards that are given to the sportsmen after their performances but were talking about monuments and statues that would carry the sportsmen and women's names and achievements.

Based on these facts, the icons statue was opened to the general public for appraisal after the completion of the mounting at the Sekondi Sports Stadium. The comments that followed were overwhelming and very much welcoming.

The people interviewed were of the view that the impact of the icon's statue is of great importance to the nation. According to them, though the honour is definitely felt by the icon Azumah Nelson, the long-term benefits that come with the statue to the nation shall be enormous. They talked about the history such statues would carry and also shared their views that, the statues would harbour in them valuable information and history that could be played and replayed to the citizens at large. This in their view will serve as a form of learning object for the young kids and the general public. They also felt that the statue would have a special significance and visual appeal to visitors who may patronise it.

The sculptors among those interviewed said that the impact have been great for artists in Ghana and that the statue of sports icon as seen is a remarkable artistic legacy to Ghanaians. This in their view showcases what the artists are capable of doing. They stressed that the statue when seen by the world would give them market and open up some greater opportunities for them worldwide. Another view shared was that of revenues from tourist who may visit the sites of the statues, they believe that such monuments could attract lots of tourist from the diaspora and locally when it is well managed. This they believe would bring lots of income to the nation. Again, they made a remarkable statement that the statue would serve as a landmark for the locality and the nation, just like that of Abedi Pele's statue at the roundabout in tamale. There was a general agreement that the statue would encourage the young ones to do their best for the nation. They believed that when people are honoured in a form of statues, it shall serve as a hallmark for others to emulate.

5.3. Interviews with sculptors

Sample of the questions that the researcher used to solicit information from the sculptors can be found in appendix 'F'. In all, eight sculptors who took part in the appreciation assessment were interviewed using the same questions.

The sculptors reviewed the work and concluded that the work is a full-size metal cast of Azumah Nelson. On understanding of the work, almost all of them agreed that, it represents a life likeness of Azumah Nelson. In answering how they were inspired by the work, the following said; "The complex method used in the casting processes inspires me to research into other methods of producing sculpture", said one sculptor. Another sculptor also said that, "I am inspired by the inexpensive nature of the final material 'Aluminium' for the production of the Statue and I think that it is the way to go for

teaching metal casting in our schools”. Generally, almost all the sculptors felt inspired by the work and agreed that for our heroes to be honoured, sculptors must explore other methods of casting like aluminium to reduce cost and produce quality works too.

On relevance, the sculptors were of the opinions that, the purpose of the statue is to promote the idea of using aluminium and they believed that the production of the statue would promote the metal since it is cheap and available. They also believed that the production process adopted by the researcher can easily be adapted for teaching and learning. Again, the statue would propel sculptors and students to appreciate and use different metals in their daily work. This would broaden the scope of materials used for sculpture and may also lead to economic gains.

Touching on education, the sculptors believed that the statue could serve as a sample work for sculpture students and the technique and method could equally be used for references and studies. More importantly, there was a general consensus that the work promotes the idea of hard work, dedication and resilience for one’s country. These, they believed would keep and sustain one as a hero and as such could be remembered always.

The sculptors confirmed that the work is attractive and is easily recognised as a true representative of Azumah Nelson. But not all agreed to this view: there was one sculptor who had some challenging issues with the resemblance. He argued that the work was slightly bigger than the actual size of Azumah Nelson. This was however explained to him that the difference in size was intentionally created to exert the hero aspect in the work. Azumah was always imposing in the ring therefore, any work about him should try to capture that image. On interpretation, the sculptors agreed that the work stands for strength and hard work in a selected activity.

5.4. Discussions of Findings

The discussion and analysis of findings were done using thematic analysis as subjective interpretative framework approach based on the results gathered from *Aluminium statues and the immortalisation of Ghanaian sporting legends*. Coffey and Atkinson, (1996) state that, analysis is not about adhering to any one correct approach or set of right techniques; it is imaginative, artful, flexible and reflexive. It should also be methodical, scholarly, and intellectually rigorous. Carol and Julian, (2004) states that, analysis is to examine something in detail in order to discover its meaning. As typical, in practice-based research in Art and Design, discussion of research results is not fixed to a particular style as Coffey and Atkinson (1996) urges us to be ‘artful’ and ‘imaginative’ but also ‘rigorous’.

The study was a studio based (praxis) which used qualitative research approach (exegesis) and descriptive and thematic analysis. Tesch, (1990) opines that, qualitative research is to a large degree an art. All twenty (20) participants were gathered from sports icons, sculpture lecturers, aluminium casters and environmental agency. The researcher was a practitioner in the study which saw the sculpturing of Azumah Nelson as the icon in aluminium. The researcher / practitioner reflects on the use of aluminium as a casting material and reveals the processes that goes with the production. The sculpture was done to honour the entirety of the greatest sports icons in Ghana who have not seen the best of honouring them with statues.

5.4.1 Identifying Ghana’s sporting icons and selecting one for the studies

The answers received from participants suggested that anyone who had exhibited excellence in their area of sporting activity could be considered as an icon. Again, any sports person who has shown consistency at the top level and has achieved certain level of general acceptance as a complete accomplished person in their field, could also be

referred as an icon. It further suggested that, to be called an icon transcends further beyond just playing the sports one is engaged in or have played before. Names such as D. K Poison, Aggrey Fynn, Abedi Pele, Alice Anum, Asamoah Gyan, Azumah Nelson and Rose Hart among others were all mentioned as people who contributed in their field of play to the development of Ghana. They are icons in their own right who deserves some form of recognition. Although some are dead and gone, the participants believed that their exploits are immeasurable and as such must have statues in their honour. The reviews on the sports icons placed much emphasis on the performances of the individuals to the nation.



Figure 94: A Photograph after the Interview with Frimpong Manso

(Source: Researcher, 2016)

The researcher looked at the year and place of birth, the early development of the icon, the professional career, service to the nation and awards won for themselves and the nation. Some sports men and women were discussed and indeed, all of them have and

continue to do their best for mother Ghana, reasons they are called icons. It is seen however that; some are rated higher in terms of silverwares they managed to accrue for the nation. Through the interviews, participants were made to ascertain the right person to be sculpted for the study. Participants were candid in their choice of who should be sculpted. Azumah Nelson came on top and the reasons gathered confirmed that apart from his record which stood at thirty-nine (39) wins, six (6) losses and two (2) draws with a technical knocking out in Twenty-eight wins, he is a social being, a philanthropist with the nation at heart. This confirms the participant's belief that, being an icon goes beyond just playing sports. Based on these findings, Azumah Nelsons was chosen and his statue was sculpted, cast and mounted.



Figure 95: Azumah Nelson and the Researcher during the Interview

(Source: Field study 2016)

5.4.2 Sculpturing and casting the selected icon's statue in aluminium

The sculptors who were interviewed were full of praises and said that “The production of the icons statue was a great contribution to Ghana's history and a contribution by sculptors in Ghana”. It was observed that people really cherished seeing statues of great men and women, especially those who have had enormous contribution to their country,

an example of Abedi Pele was cited by the people that the researcher encountered. Upon the researcher's personal visit to Tamale to see for himself the statue of Abedi Pele, he was overwhelmed by how history is endowed in the sculpture. Painted in the all yellow outfit of the black star's team jersey of the '90's would prick the question why the yellow outfits by a younger person who may not have seen him play football since black stars wear white lately. The discourse would continue to tell a lot about his football carrier and his achievements for Ghana.

Sculptors who create sculptural images of important personalities are considered to be history makers. They make images that capture the stories as they were told by their clients. Great sculptors such as Kofi Antubam whose sculpting of the Presidential chair and Parliamentary mace is captured in all the history books of Ghana. Fosu (1993) described him (Kofi Antubam) as the most knowledgeable person concerning the traditional customs of Akan society. It was no wonder that after speaking to the participants, they agreed that if sculptors' honour sports icons with their works, they would definitely be contributing to Ghana's history. This propelled the researcher to accept into making history by accepting the challenge to make the statue of Azumah Nelson.

The reviews show some statues that have been presented to some sports icons in the country by individuals who out of their own convictions felt the need to honour their heroes. Persons such as Asamoah Gyan and Michael Essien have had some ridiculous statues created for them. The only statue that seems to have been done by the State (not confirmed) is that of Abedi Pele in Tamale, which sits in a round-about that leads to Tamale Sports Stadium, now called Aliu Mahama Sports Stadium. Participants who confirmed to have seen the statue made a mockery of it saying that, it is too way out of a professional touch. The figures are not in conformity with the right principles of the

human figure. The positioning of the facial components is above normal; the eyes are above the central line of the face. The construction of the eyes, nose, mouth and the ears are all not well placed, reasons the participants made mockery of it.

The researcher observed that, the sculpture of Abedi Pele was produced using the direct modelling technique where an armature is built and a mortar is applied on it to form the sculpture piece. This was not seen in the making of the 'professor'. The proper adherence to the principles of modelling, the technique of casting for clay, wax and aluminium were obeyed. The rendering of clay into a fine sculptural piece of Azumah Nelson, with proper positioning of the face and its components, the hands and the legs were all based on the human figure anatomy.

The statue at the sports college in Winneba which is labelled in honour of the Italia '93 FIFA Under 17 world cup Champions is broken and has not been repaired since. It was observed that the statue had a professional touch on it; the body measurements are good when one looks at it. Indeed, all the other two untitled sculptures found at the university were perfectly sculptured but again, the tennis player has her racket broken and it seems all of them were produced in cement. The broken arms of these statues and that of Abedi Pele with cracks suggested to the participants and the researcher of the final material the sculptures were rendered in. It was unlikely therefore to use cement which has some examples as explained, aluminium which was cheaper than the other traditional materials helped in solving the problem. It was used to cast the icon to suggest its cast ability.

All the reviews and observations were taken into consideration before the researcher set out to commence the production of Azumah Nelson's statue. The practitioner was aware of the head into the body measurements, the components of the body parts: arms, ears eyes, nose, mouth, hands, legs and so on. The practitioner was also aware of the fact that

the direct modelling technique did not help matters with Abedi Pele's statue in mind. He was also aware that the production of sculpture pieces in cement did not help either, the two sculptures at the University of Education, Winneba, the tennis player and the Italia '93 FIFA under 17 statues, confirmed to that effect. The challenges however, could either be techniques or the sculptors themselves. All these inspired the researcher to consider the production of Azumah's sculpture in aluminium using the indirect technique as a method.

The project started off with an experiment to access the casting ability of aluminium, the principal material for the project. Three toddler's statues were sculptured for the task which came out successfully. The review on aluminium production was emphatic on its acquisition and processes. The primary and secondary processing channels explained further to the researcher that, the use of scrap aluminium falls under the secondary processing plan. The primary processing plan consumed more energy and natural resources but again, if that is not done, there would not be secondary aluminium where an overused primary aluminium item would become secondary aluminium.

An extensive review was also done on the most outstanding sculptors who have perfected the use of aluminium as a material for their daily sculptures. Charles Ray's outstanding human figures, Lorenzo Quinn's fantastic hands and Mariele Neudecker's all-embracing use of the material, proposed to the researcher on how to handle issues concerning aluminium. Understanding of the material in Ghana, from the historic facts to observation from the users of the materials were sought, where the aluminium casters used the sandcasting technique. The researcher observed the casters for over two months and he practically learnt the technique of pouring the aluminium into the mother mould.

The production process was overwhelming; the photographs were acquired from the ‘Professor’ when the practitioner paid a courtesy call on him in Accra. Azumah Nelson expressed his satisfaction on the proposal to honour him to the sculpturing of his statue. He was of the view that such monuments would do a great deal for the country.



Figure 96: Azumah Nelson and the Researcher after the Interview

(Source: Field study 2018)

He expressed his support for such ventures and told the researcher how he flew to Melbourne, Australia to support Jonny Famechon Statue project. It must be recalled that, Jonny Famechon is one of the greatest boxers in Australia and his Statue represents the fourth statue of a boxer in Australia. Ghana is yet to receive its first statue.

The rods that were purchased were used to strengthen the armature. It was used as the skeleton of the figure. The welding machine was used to join the areas that needed to put together, areas such as the knees, the elbows and the frame of the figure were welded to hold tight. The feet were bolted to the wooden base that carried the sculpture piece (icon).

Clay as a material served as means to get the icon sculptured into aluminium. It was procured from the researcher's studio and prepared for the task. The preparation was to refine the clay to become plastic so that it could be manipulated during the modelling process. The clay was then put through the pug-mill machine to soften it. The building of the figure started from here where bits and bits of the clay were added until the desired shape was achieved. The review spelt how clay came about through the activities of the rock's formation. It was essential to note that, quite a number of clay deposits are found in Ghana, Abonku in the central region and Obuasi Asokore in the Ashanti region are some examples. The building of the statue took more than three months to complete, attention to critical areas such as the face was very important.

5.4.3 Using the cire perdue (Lost-wax) hollow method

The study chose cire-perdue (Lost-wax) hollow method for executing a life-sized statue of Azumah Nelson (Sports Icon) in aluminium as part of its research objectives. Using cire-perdue method as in casting also called lost-wax process, helped the researcher / practitioner to sculpt a clay model of the sports icon and took a p.o.p mould from that clay model.

The review explained the use of the mould as cases through which a sculpture piece is 'born'. It further explained the two types to mean waste and reusable moulds of which the researcher used the waste mould. Two moulds were built for the project, one for the casting of wax which was basically the mould used for the clay, and the mother mould used for the covering of the wax and ultimately used for casting of aluminium. The vents and risers were built on the wax cast; this enabled the pouring of the aluminium into the moulds after the moulds were burnt to free the wax. The researcher observed that, the under-cuts in some of the moulds prevented the wax from burning off during the de-

waxing and this happened to most of the bigger moulds. The smaller moulds had their wax burnt easily because they had no under-cuts on them.

The first mould was made up of POP and the second was sand and POP compositions. The situation allowed for creativeness where the researcher was compelled to apply the mother moulds on the wax before breaking the POP moulds. To hold the mother moulds firm, chicken mesh and binding wire were used, this prevented the composition of sand and POP moulds to break after firing, and that is exactly what happened.

From the field study, the mother moulds were fired to free the waxes that were entrapped in them so that the pouring of the aluminium metal would go smoothly but that was not the case. It was observed during the pouring of the molten metal that, not all the wax melted out of the mother mould and these were seen from the outcome of the metal cast. It was observed that whenever a smoke came out from the mother mould during the pouring of the molten metal, it meant that the mould was not completely de-waxed. The situation happened with some of the moulds but the casting continued until all were done.

An observation from the three works which were cast to determine the outcome of the aluminium, the works were held by nails through the inner core and the mother moulds. This prevented the cavity from collapsing when the wax was melted out. This did not happen with the production of the 'professor'; the whole work was cast in pieces which did not need to be held by nails because there was no inner core in the main work, the inner core happened after the pieces have been welded together. Observing the pouring of the molten aluminium into the moulds, the following were learnt; the aluminium should be well burnt with the crucible red hot, the tongs must be held well when carrying the aluminium from fire to avoid any spillage and the mould must be well encased in the

sand at the foundry. All these observations were put into practice during the casting of the 'Professor'.

From the field study, the works were broken off from the moulds after the casting to free the newly cast pieces of the icon. Again, it was observed from the experiments that if the works were broken off immediately after the cast, the possibility of the attendants getting hurt was high since the material is extremely hot whenever it is cast. The attendants who work at the foundry were most often not in safety apparels which the researcher saw as very dangerous. The researcher took time to educate the attendants on the need to wear safety apparels but that did not hold since he always found them in their normal working gear. They were of the view that they have always worked like that and nothing has happened to them. The researcher however, was able to hold on to the breaking of the moulds and this prevented any on for seeing accidents from happening. The moulds stayed days before they were broken off.

Getting electrodes for aluminium welding was quite an experience for the researcher; they were difficult to come by. Eventually, he managed to get some from an offshore company that dealt with ships in Takoradi. It was observed that the electrodes flashed off within few minutes after it was used. This meant that, an extra care with precision was needed to put the cast pieces together which were done but not without difficulties. It was also observed that the holes that were left in the aluminium cast of the 'Professor' needed to be filled. The researcher through an interview with some of the lecturers who worked with metal casting, proposed the usage of P38, car body filler for the filling. It was used and it worked perfectly, with the bigger holes welded with some left overs of the aluminium pieces at the foundry. Fibres were used to support the P38 to fill off the big holes. They were touched with the grinding machine and sanding papers to smoothen the rough edges. It was observed that the P38 became hardened and held onto the aluminium

so well such that it was difficult to tell after the painting that a fabrication has taken place in the casting of the icon. From the field, the casting of Azumah Nelson was done after aluminium paint was sprayed on it using the spray gun. The spray protected the icon from the harsh weather conditions of Ghana.

5.4.4 Using the Step casting technique

Employing cire-perdue (Lost-wax) hollow method has many steps involved and there are essential things the researcher / practitioner has to consider when sculpturing a statue through the casting technique and processes. These technique and processes explained the studio-based process that involved with casting of Azumah Nelson's statue and its benefits of using this step casting technique. When life-size works are cast in pieces and welded together to form a complete work, it is called step casting.

The study therefore employed eighteen step by step casting techniques and procedures in producing the scrap aluminium sculpture by acquisition of pictures from the icon, acquisition of metal rod for the armature, application of clay on the armature. Again, making of mould for the clay work, the removal of mould from the clay figure and the preparation of the mould for wax casting were done. Fixing of vents and risers, removal of cast wax from the mould, investments with chicken mesh and binding wire were done before the mother moulds were put in a kiln. The pouring of aluminium into the mould and breaking of mother mould from cast aluminium, cutting of greens, assembling the parts/welding, filling and filing, using the car body filler and the final piece were all executed.

Based on the complexity of step by step casting techniques and procedures for sculpturing the work, there was one numerous procedure called de-waxing that went wrong resulting in casting defects also known as undesired irregularities (blow holes) in a metal casting

process. Some defects can be tolerated, others can be repaired but some must be eliminated. In order to ascertain the nature of the defect; examine the possible causes and take the appropriate corrective action, its location; appearance; shape and dimension must be determined (Investacast, 2019).

It was revealed that smoke emanated from the moulds during the pouring of the molten metal. This indicated that the moulds were not well de-waxed which led to the deformity that appeared in the cast works. This indicated the flaws in the de-waxing process which was not properly done, leaving some amount of wax in the mother mould. All the pieces had some amount of damages which were managed and repaired using car body filler.

It was also clear that these defects on the cast metal of Azumah Nelson were often due to surface issues, too much application of stress, and other factors (Superbmelt, 2019). Incomplete casting and cracks were some of common occurrences that were found on the surfaces of the cast work during the breaking of the cast aluminium process. These occurrences were made also as a result of improperly sprue. This sprue system was made on the moulds to allow the aluminium metal to enter easily and without restriction.

In all, the study showed that the defects on the cast aluminium work of Azumah Nelson were highly detrimental to the success of the work. These defects caused unnecessary pressure and delays in the production process and increase the cost of production. However, these occurrences helped the researcher (practitioner) to be conscious of new discoveries in using step casting technique and also to know the defects to look out for in any cire-perdue (Lost-wax) casting and how to avoid or mitigate the defects.

5.5. Relevance of the work

The casting of a life-size statue of a sports icon in Ghana using the cire-perdue casting method and the step-casting technique is a unique work of contemporary art in Ghana. According to Okyere-Boateng (2018), the cire-perdue casting method has been used for the production of miniature sculptures for both contemporary and natural objects by brass casters in Asante.

This particular work was cast in pieces (step casting) and joined together by the aluminium welding process. The relevance of the work includes; preservation of Ghanaian history, promotion of sports tourism, development of sports, development of metal casting, value for museum curators, sculptors, Art educationists, as well as Art students.

5.6 Summary of appreciation and Discussions

The outcomes gathered from the field study and the data collected on aluminium statues and the immortalisation of the Ghanaian sporting legends were founded on the five main research objectives.

An appropriate analysis of the results on the studio-based research was presented using visual analysis and qualitative analysis tools. The work was explained using descriptive method while the researcher was a participant observer. The results included all the data and observations gotten from the field studies through interviews, observation and the practical production of the project. It also included the tools and materials which were used in sculpturing Azumah Nelson who was selected by the respondents for the production of statue in his honour.

Eighteen steps were used with each stage capturing its own data. The production processes saw the statue being done in clay, it went through the wax production and

eventually into the aluminium casting processes. Aluminium was the principal material used where other materials such as clay, iron rods, POP, sand, wax and red oil, P38 car body filler enabled the smooth production of the statue. Electronic machines such as the drilling machine, the welding machine and the sand papering machine all helped the statue from being sculpted.

The results from the review captured excerpts from sports in Ghana, some icons and some sculptures made for some of the icons. The direct method of production was used in most cases with zero adherences to anatomy. The statues from Winneba were rendered with accuracy but had problems with the materials used for the final presentations.

All these were taken into consideration before the 'professor' was sculptured and cast in aluminium. Some lessons of foundry practices were learnt from the foundry and some advice on safety was also given out to the foundry assistants. The sculpture was cast in pieces using the step casting technique and welded together to represent one Azumah Nelson. A well-defined appreciation was written on the statue which embraced the statue from being 'born'.

Lastly, the use of aluminium as a material for producing a life-size casting of Azumah Nelson, proved that the material is effective and sustainable. The use of scrap aluminium distills the environment from filth and the use of cire-perdue hollow method and step casting technique for the production of the statue, encourages other sculptors to emulate in their daily practice which in effect, makes them contributors of history.

CHAPTER SIX

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.1 Overview

This chapter looks at the summary of findings of the research and also draws conclusion on it. Recommendations are outlined for the benefit of sculptors and academics who may find the research useful.

6.2 Summary of findings

As part of the project objectives, the researcher set out to identify Ghana's sporting icons and select one of them for the project. A search of sports personalities was carried out to ascertain if indeed there were sports icons in the country. Modalities for the search of the sports icon were also done; these aided the respondents for a smooth selection. First, scholars who have studied and written on sports were studied. The extant literature proved that almost every nation has what it called sports icon. This knowledge was applied in selecting Azumah Nelson for the project. In addition, sports personalities who have played, managed and engaged in sports were purposely chosen to assist in choosing the sports icon. The result agreed with objective one (1) that there are sports icons in Ghana and that they must be canonised in a form like "statutes" to ginger others to contribute to the state.

The modalities on the selection process centred on the icon's general contribution to the nation in terms of sports wins, national and international acceptance, humble beginnings to refined products, and how the individual or team idealised unity in the country. It was generally believed that a sports icon should be any person who has done sports, done a lot to develop sports and has shown lots of consistency at the top level including being

able to be recognised by many people. People who have exhibited excellence in their areas of sporting activity could be considered, for example, David Kotey Poison, Aggrey Fynn, Abedi Ayew Pele, Alice Anum, Asamoah Gyan, Azumah Nelson, and Rose Hart. In all, Azumah Nelson stood tall among all the sportsmen and women who were mentioned and reviewed. The accolade that solidified Azumah's selection was the fact that he has achieved a certain level of general acceptance and is universally accepted as a total accomplished person in his field.

The second objective was to explore the avenues for sculpturing Azumah Nelson in aluminium, a process which is seldom used in Ghanaian sculpture. To begin with, three sets of babies were cast in aluminium to test the suitability of the material for the main work.

The materials used included, clay, P.O.P, iron rods, sand, wax, red oil and scrap aluminium which were acquired from Kumasi and Takoradi. The researcher used the modelling and casting technique of sculpture where every step of the method was recorded for further studies more especially, the processes (cire-perdue) of aluminium castings for human statues which are new in Ghana. The researcher discovered through this application that sculpturing in aluminium was possible.

The researcher through experiments discovered it was possible to sculpt and cast in aluminium even with limited equipment. It was also discovered that the locally made foundry could cast not only aluminium pots but statues as well. All the equipment found at the foundry such as the fire place where the aluminium was melted, the crucible and the tongs were all made locally.

The researcher also discovered during the work that combining sand and P.O.P produced better results than combining grog and P.O.P. Combining sand and P.O.P were easier to

break off after the aluminium cast, compared with the grog and P.O.P which proved harder to break especially when the work involved undercuts. However, grog and P.O.P combination gave a better smooth finish compared to that of sand and P.O.P combination.

Another thing the researcher found was that using the gas kiln in de-waxing produces better results than the open firing system which tends to leave most of the wax inside the moulds.

It was found out that people cherish seeing statues of great people especially those who have made enormous contributions to the country like Azumah Nelson. Again, sculptors who create sculptural images of important personalities are considered to be history makers.

Objective three was to use the *cire-perdue* hollow method to cast the life-size figure of the sports icon.

The sculpturing process involved making moulds. However, during the process of casting, it was realised that some of the moulds had smoked. This indicated to the researcher that the de-waxing did not go well to produce an exact replica of the mould, and it showed in the final presentation when blow-holes were noticed in the cast. On the other hand, the smaller moulds which appeared to have received the molten materials well produced fine parts after the cast. This informed the researcher to use smaller mother moulds portions so that the wax could be properly de-waxed.

Though red oil is normally used to remove wax from moulds, in this particular instance, the process failed; some of the wax did not come out easily. The researcher observed that the moulds that had little undercuts were the most difficult to come off.

Filing and filling were done at this stage to remove overcast and to cover holes respectively. Pieces of aluminium plates were welded into the spaces to make the statue stand on its own.

It was observed that spraying of liquid aluminium on the filed portions ensured good finish and precision matching of the seams.

Objective four was to use the step-casting technique to cast the life-size figure of the sports icon. The technique that involved welding together of cast pieces finally produced in-the-round statue of the life-size figure. It was observed that the step-casting technique employed was successful for the hollow casing of the statue. It was also observed that the aluminium welding of the cast pieces aided the production of the full piece.

Objective five was to aesthetically appreciate the cast sports icon. According to Prinz (2007, p. 1), "Aesthetics is a normative domain. We evaluate artworks as better or worse, good or bad, great or grim". The nature of examination or appreciation may bear on what things are worthy of that reaction, or at least on what things are likely to cause it.

In this project, the imposing statue of Azumah Nelson represents the struggle he had to go through in order to achieve his aim. From humble no-body, Azumah was able to rise above all odds to become somebody. This is an inspiration for the youth.

Aesthetically, the sculpture piece (the professor) advocates strength, patience, hard work and the fortitude to achieve greatness. Strength as seen from the ambience knot encased in the world class gloves, ready to punch and fight till victory becomes his.

The philosophy that sets this scrap aluminium sculpture was the brilliant simplicity of the cast sculpture (Professor) and its astonishing sophistication of delivery. The mark of expertise and the skill that engulfed the welcoming of a new 'birth' was amazing.

Writing in the “professor” the life story of Azumah Nelson, Morrison (2014) described Azumah as ‘very few Champions have carried such a burden of expectation, and Azumah delivered success at a time when his country needed a hero. He never faltered and won the respect across the world’. When he fought, the country of Ghana fought, he was so admired by his people and they would keep wake just to watch the champion deliver, the promises he often made to Ghana.

It is well known how Professors struggle to attain the feat of becoming Professors. Buying books, reading and writing without sleep sometimes, so is Azumah Nelson, an almost uneducated who has achieved such a great laurel in boxing is some great feat to celebrate.

It was found out that the sculpture piece made from scrap aluminium advocates strength, hard work, and the fortitude to achieve greatness.

Location is important in the things we do as humans. In choosing the location for the statue, some factors were considered. Among these factors were accessibility, prominence and durability.

The Sekondi Sports Stadium presents a platform for large visits during football games, athletics and other sporting activities. Because of this, road infrastructure and other amenities are available. Visitors who will visit the statute will find no problem accessing the place.

Again, because the stadium sits high in the scheme of valuable places in the Western Region, mounting the statute there will give the statute the needed exposure it needs for the right impact. The large number of people who visit the stadium as game enthusiasts, tourists and sportspersons will have opportunity to admire and appreciate the work better than to leave it in a place where the sentimental value the statute provides will be less

appreciated. The statue was mounted at the Sekondi sports stadium to elevate the standard of the stadium in terms of statues.

Again, boxing in the Sekondi metropolis has dwindled; no activity of boxing takes place even after great boxers like Konkranani have featured in the region. The researcher believed that the statue of the professor will rekindle the spirit of boxing among the youths and the authorities.

Lastly, because there are workers who are permanently stationed at the stadium, it is envisaged that these same workers will attend to the statute to provide the needed care it deserves.

The link between personal effectiveness, enhanced performance and sports is well documented. In the view of Bandura (1977), individuals are motivated by “self-believe” and “self-efficacy”. To him, people who show higher self-efficacy are more likely to take part in activities easily, work harder, persevere more and can develop more resistance to emotional difficulties than people who have no or less self-efficacy. Self- efficacy has the ability to limit one’s self-doubt.

Self-efficacy is also recognised as a key factor in performance achievement. For instance, Hodge (2004) believes that premium athletes are successful because they have self-belief. Very often, athletes who are confident always produce better performances in most situations.

The researcher was able to discover that Azumah Nelson embodies confidence and efficiency both in personal life and in his professional activities. In sculpturing him, the researcher is confident that the statue will exude confidence in the youth not only in

sports, but in their personal lives as they persevere in their chosen fields and life endeavours.

Though the benefits as described above exist, less of the statues were available. For instance, Takoradi where the studies were done does not have a single sport statue to display. This statue will therefore bridge the link for more to be done.

6.3 Conclusions

The research identified that though there are many sports icons in Ghana, the state does not have a reward system for them. What is existing is sporadic and uncoordinated. Therefore, it would be appropriate if the state initiates or establishes a system with a mandate to objectively select and reward its sports heroes. This would be a consistent measure where all sportspersons would be chosen and rewarded. This would also inspire them to work hard for themselves and the nation because they would be recognised. As a result, Azumah Nelson was identified and sculpted based on his record as a boxing champion with 39 wins out of which 28 were technical knock-outs, 2 draws and 6 losses in a period of about 29 years.

Doing aluminium casting in Ghana which has less data to show proved quite difficult but through experimentations, the researcher was able to fine-tune the process to produce the final work. While it was difficult to do the casting, it was also interesting discovering the various properties available in using local materials as raw materials for the work.

Being able to use sand and other local materials helped the researcher to reduce cost but produce a good work.

It is possible for a sculptor to create his own foundry made of local equipment. The materials used were basically items that were known to be of no use (scrap); fridge motor

cylinder was used as the crucible and the local electrician manufactured an electric air-blower (bellow) to blow air into the furnace during firing.

Finding alternative material at every point in time is a must for the sculptor. The researcher agrees that had it not been the fibre and the car body filler used to seal the holes that were created in the cast sculpture; it would have been difficult to declare the work finished. The production of the icon's statue in aluminium is, therefore, a great contribution to the history of Ghana.

The observation made concerning the two mould combinations stems from the experimentation of the cast babies in aluminium. While the grog combination proved hard to break, the sand combination was easy. The gas kiln appropriately did a much better job than that of the open firing system. The experimental stages of the babies showed that, the *cire-perdue* casting process for miniature sculpturing has given way to the casting for life-size sculptures.

While the *cire-perdue* casting for miniature sculptures has additionally given way to large hollow-casting, using the step-casting technique for large casting is faster and reliable.

The aesthetics of the statue gave some power to the rendered statue to advocate what it stands for. Physically, its appeal is appreciated by the numerous people who may visit the sight. It sums up what the title, the philosophy, description and interpretation meant for the general public.

The aluminium materials used for sculpturing the icon projects durability which would be judged by posterity in the long run. Dealing with it therefore, requires some experience which the researcher advocates that, sculptors who intend to foster such relationships do so with utmost attention. The material is flawless but can be dangerous too.

To document history with sculpture and in this case Azumah Nelson's statue, must be done in a more durable material like aluminium, to sustain the good work and to showcase the true-life story of a great sportsmanship in a statue.

This encourages everyone to work hard since hard work pays. A good life with a focused personal orientation is what makes one great.

Ghana as a country is being encouraged to honour her sports icons now and not wait until they die before they are honoured.

This in the long run will bounce back in a form of multiple glories to the nation since people would be doing more for the recognition.

Mounting of sculpture works have been part of sculpture. It was no wonder therefore, to select a basic location for the newly cast work of Azumah Nelson. The selection was between Accra and Sekondi where the latter was eventually selected. It was not possible to mount the statue in Accra because of the renovation works going on at the Azumah Nelson Sports Complex where the work would fit appropriately.

Work of art beautifies and enhances an ambience in a more dignified manner and that is what the statue of Azumah Nelson was poised to achieve. Bringing it to Sekondi-Takoradi also means that his many fans that cannot travel to Accra will now have the opportunity to enjoy their idol.

The researcher is of the view that the stories embedded in the statue would tell the story of the legend and draw the attention of sports authorities to encourage sponsorship and participation of boxing in the western region.

It was not surprising to see Ghanaians clamour for sports statues. The quest for more statues is understood, looking at the emotions most of the respondents attached to the

subject. It was obvious that the mounting of Azumah Nelson's statue was accepted and embraced in good faith. It indicates therefore, that many of such statues must be built in the stadia across the length and breadth of the nation. Additionally, parks and roundabouts could equally situate some of the statues.

6.4 Recommendations

Based on the findings and conclusions, the researcher recommends that a committee be set up to develop a reward system (a means of immortalising sports heroes) for sports heroes. The committee would search, recommend, and award deserving sports heroes or icons.

While there are many ways to sculpt, the researcher believes future researchers and students can experiment with other materials that could yield better results. However, it is advised that sculptors choose the combination of materials, techniques and style that suit them since every combination has finishing implications. Like the aluminium scraps, there are other materials that pollute the environment because of how they are disposed of but which can be used to produce works of art that have value and at the same time cleans the environment.

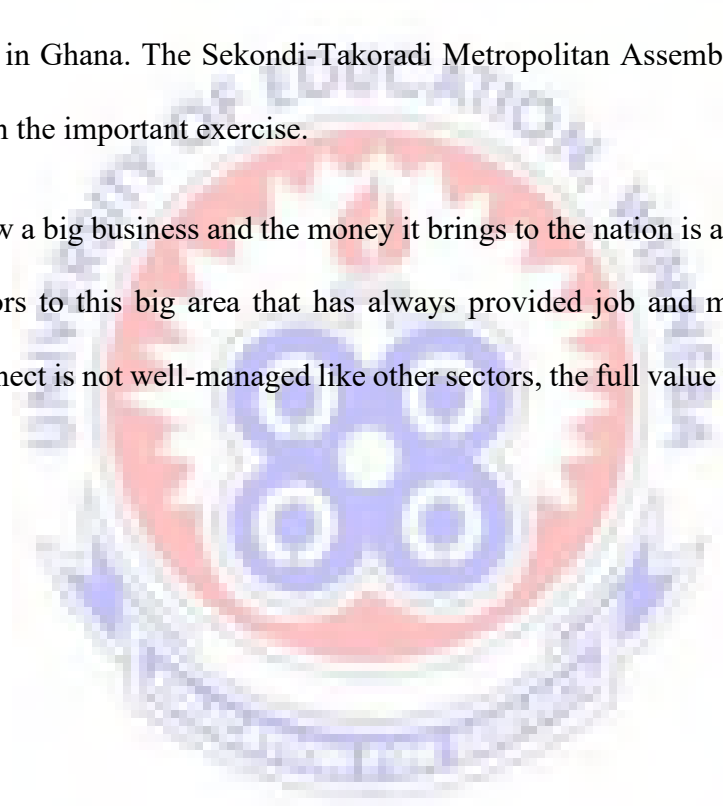
The Sekondi-Takoradi Metropolitan Assembly is advised to provide financial support to scrap aluminium dealers to establish scrap centres. This would enhance removal of waste metals that pollute the environment.

Sculpture is one the ways through which history is documented. But for a statue to be made, the sculptor must set objectives to create that statue that truly communicates those objectives. This is so because works of art like the Azumah Nelson statue could be interpreted severally outside what the sculptor first dreamed of but if those objectives are

clearly stated before those statues are created, the objectives will stand out through the different perspectives that admirers, curators and patrons will arrive at during their appreciation of the work.

The research discovered that the Western Region, especially Sekondi-Takoradi, has no sports statues notwithstanding the fact that the Region has produced notable sportsmen and women. It would therefore, become an achievement to have more statues of sports icons from the Western Region erected at vantage locations as a step of immortalising sports icons in Ghana. The Sekondi-Takoradi Metropolitan Assembly is encouraged to participate in the important exercise.

Sports is now a big business and the money it brings to the nation is also huge. However, if contributors to this big area that has always provided job and means for people to socially connect is not well-managed like other sectors, the full value will not be realised.



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Appendix A

An interview guide for Sports Icons, Sports Managers, Sports Administrators and Sports Enthusiast

1. Have you ever in your life done any sporting activity?
 - a. Which one – Football, athletics, basketball, boxing and any other?
 - b. To what level - District, regional, national, international and professional?
 - c. Name the competition and the award you won as well as the number of times
 - d. Were you rewarded in any of the following – Cash, medal, statue or monument?
 - e. If you answered No, would you do sports if you are given the opportunity?
2. Who in your opinion is a sports icon?
 - a. Name any two sports icons you know in Ghana and state their disciplines
 - b. Which of the following would you recommend to honour a sports icon with – Cash, medal, statue, monument and any other?
3. Have you seen any of Ghana's sports icon in a form of Statue?
 - a. If you answered yes, please tell the personality and location
4. What is your view on sculptors honouring sports Icons with their works?

Appendix B

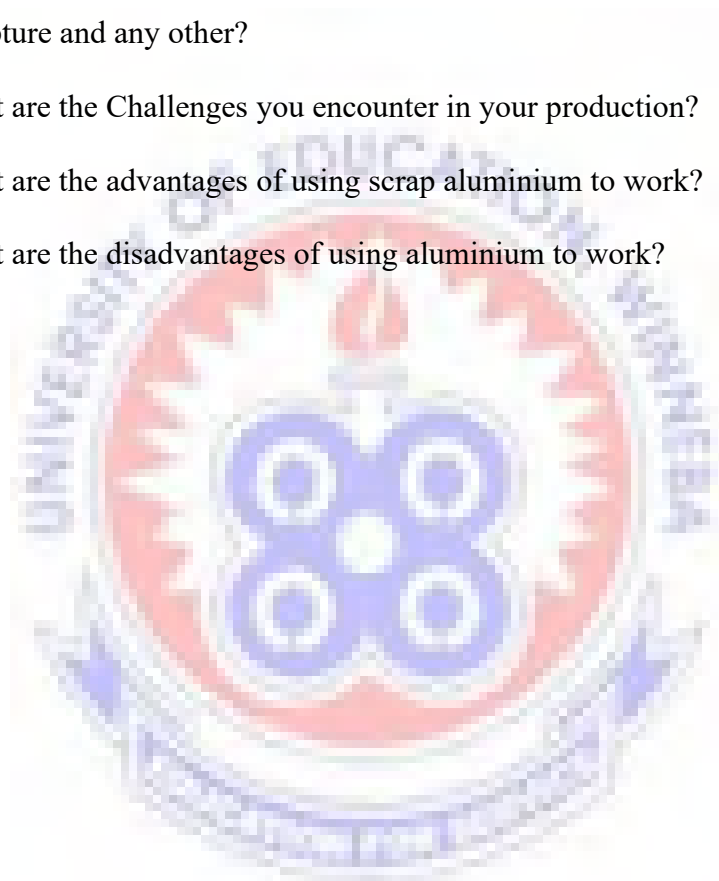
An interview guide for sculptors and sculpture Lecturers

1. What type of sculpture do you produce – Carving, modelling and casting, assemblage and construction, Any other?
 - a. What material do you work with?
 - b. What medium do you work with if you selected metal – Brass, aluminium, bronze, copper and any others?
 - c. If you selected aluminium, please tell where you obtain your source from – Shops, recycle dealers or scrap yards?
2. Would you consider using scrap aluminium as a working material - Can you please give reasons?
 - a. In your view, is scrap aluminium a sustainable material for sculpture – Can you please give reasons?
 - b. Which of these would be a preferred working choice when recycling aluminium into sculpture – Assemblage and construction, casting and any other?
3. Please mention any challenges you face in the production of aluminium sculpture
 - a. Does working in aluminium require time, labour and money – give reasons?
 - b. What do you think is the most significant advantage with scrap aluminium?
 - c. What do you think is the most significant disadvantage with scrap aluminium?

Appendix C

An interview guide for Casting Artisans and Scrap Dealers

1. From where do you obtain your scrap aluminium – Mechanic shops, factory, dealers and Any other?
2. What do you Produce from the Scrap aluminium – Cookware, vehicle parts, sculpture and any other?
3. What are the Challenges you encounter in your production?
4. What are the advantages of using scrap aluminium to work?
5. What are the disadvantages of using aluminium to work?



Appendix D

An interview guide for Environmental Protection Agency

1. Do you consider scrap aluminium as untidy in our communities in relation to our environment?
2. Does Scrap aluminium threaten environmental sanitation?
3. Would the recycling of scrap aluminium into sculpture become a means of promoting environmental sanitation – give reasons?



Appendix E

Appreciation interview guide for sculptors

Meaning:

- a. How would you describe the work?
- b. How do you understand the work?
- c. How are you inspired by the work?

Relevance:

- a. In your opinion, what do you see to be the purpose of this work?
- b. What economic value do you see in the work?
- c. What educational value do you see in the work?
- d. What social values do you see in the work?

Aesthetics:

- a. How do you describe the beauty and attractiveness of the work?
- b. How do you describe what the work stands for?

Any other information on appreciation of the work?

Appendix F

Letter sent to the Sports Authority

30/05/2018

Faculty of Applied Arts
Takoradi Technical University
Takoradi

The Regional Sports Development Officer
Ghana Sports Authority
Takoradi

Dear Sir,

REQUEST FOR SPACE TO MOUNT A SCULPTURE PIECE

I, the undersigned, write to seek permission for space to mount a sculpture piece in your establishment at the Sekondi Sports Stadium.

The said statue forms part of my academic work at the university of education, Winneba. My research area is '**Aluminium statues and the immortalization of Ghanaian sporting legend**'. In this wise, Azumah Nelson was chosen for the project and has been sculpted accordingly.

As part of my objectives, I am to select a location for my work where it would be mounted and displayed for the general public.

It is against this background that I seek your permission for space to mount the work.

I pray this letter finds you in good health.

Thank You.

Yours Sincerely,

Owusu-Ansah Ankrah

Appendix G

Some photos of the awards the 'Professor' has received



