

**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND
TECHNOLOGY KUMASI, GHANA**

**PERCEPTIONS OF GHANAIAN DIGITAL ARTISTS REGARDING THE UTILIZATION
OF DIGITAL TECHNOLOGIES IN PAINTING: A CASE STUDY IN KWAME
NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY**

BY

SALIFU OSMAN

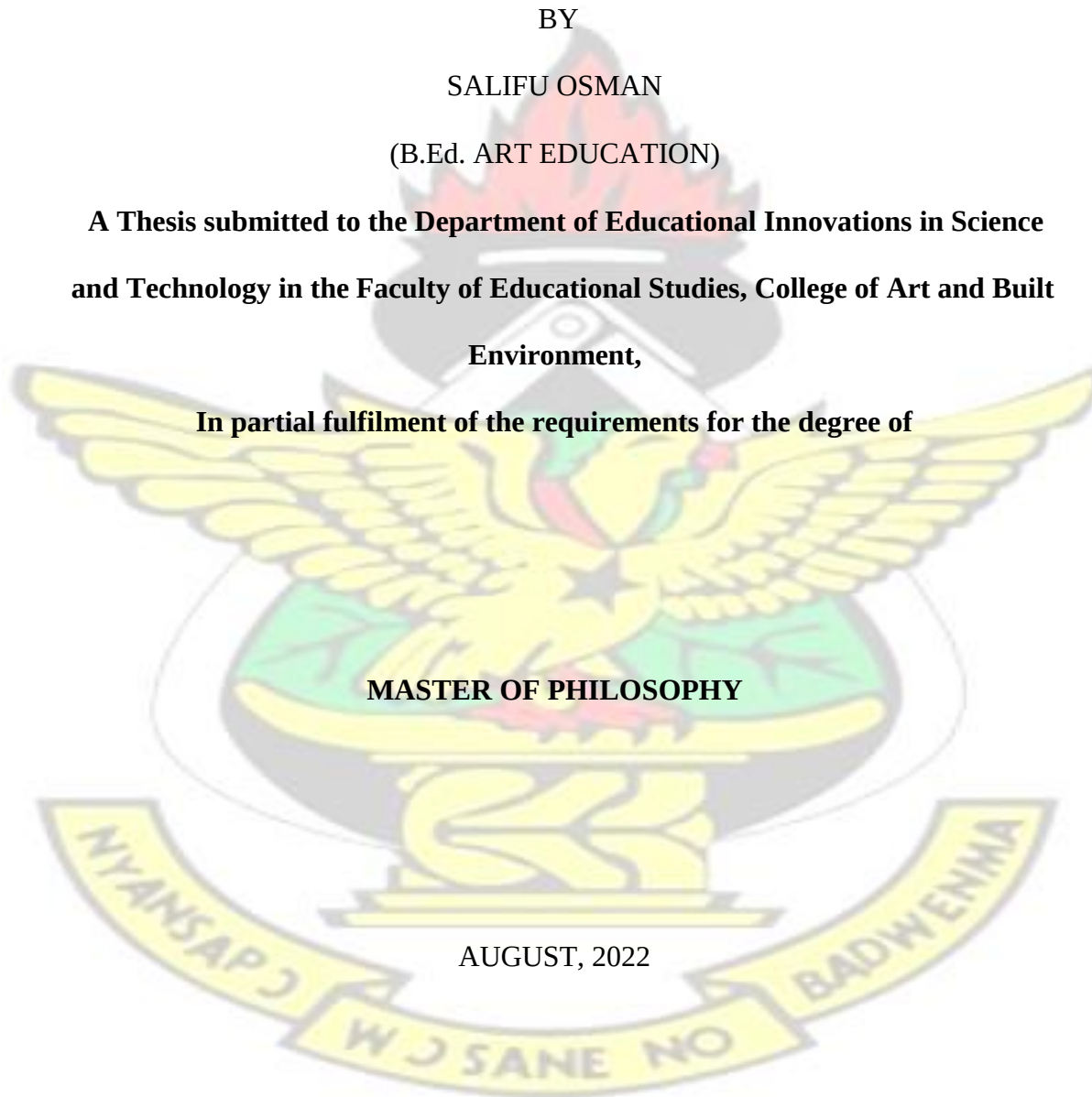
(B.Ed. ART EDUCATION)

**A Thesis submitted to the Department of Educational Innovations in Science
and Technology in the Faculty of Educational Studies, College of Art and Built
Environment,**

In partial fulfilment of the requirements for the degree of

MASTER OF PHILOSOPHY

AUGUST, 2022



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DECLARATION

I hereby declare that this submission is my own work towards the Master of Philosophy in Art Education and that to the best of my knowledge, it contains no material previously published by another person nor material which has been accepted for the award of any other degree of the University, except where due acknowledgement has been made in the text.

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ABSTRACT

Painting has been in existence for over decades and new styles, theories have been developed and digital technologies have been explored. And every time there is new changes in a particular innovation it suffers rejection and later accepted. Digital technologies like photography had been in existence since decades. Like all the painting mediums, it was rejected. It has been over 50 years since digital art introduction and yet, it has not been fully accepted as an art form (Miller, 2007). This qualitative study seeks to understand the digital artists' perceptions on the use of digital technologies as an art tools and its benefit to the artists and art education.

Grounded theory was used as a methodological guide for the study. Respondents for the study were drawn from Eleven (11) digital art instructors, digital art students (131) and practicing digital artists 30. The research elicited the perception of artists on the use of digital technologies, otherwise known as digital mediums in painting. The study relied on interviewing as a method of data collection, which was triangulated with reviewed literature relating to the research.

ACKNOWLEDGEMENTS

Through this process, I have gained so much which will guide and, ultimately, build my future regardless of directions chosen and paths taken.

Initially, I want to acknowledge and thank my caring and knowledgeable supervisors. Without them, I would never have been able to finalize my study. So, thank you, Dr. Harry Barton Essel for your guidance, support and encouragement throughout these years. Thank you for all the time that you invested in me and all the knowledge that you gave me. You have challenged my thinking and helped me become stronger and better. Thank you for always believing in me and supporting me in every step ensuring my success.

Secondly, I feel extreme gratitude for all the lecturers of the Department of Educational Innovations in Science and Technology for their inspiring, knowledgeable and experiences that they have imparted to me.

DEDICATION

With much thanks to the Almighty Allah, I dedicate this work to my dear parents, to my Mother Salifu Mariama and to my mentors Mr. Seini Mohammed and Dr. Fuseini.

KNUST



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CHAPTER ONE

INTRODUCTION

1.0 Overview

This section contains the background to thesis, statement of the problem, study goal, research questions, definition of terms, abbreviation/acronyms, significance of the study and structure of the rest of the document.

1.1 Background to the study

Traditional art and craft is practiced by various craft-guilds and are said to be the bases for most cultural heritage. Though the narratives are depicted in the form of painted façade are the genesis of traditional visual language. The lack of public awareness and seclusion now a day from the mass is becoming a threat to economic sustainability of those craft guilds as well as cultural sustainability of our heritage is concern. Virtual heritage propagated through new medium have strong potentiality to turn people culturally aware about our hidden cultural heritage (Kenderdine, 2008) and eventually bring traditional art and craft into the domain of public knowledge.

Ghanaian traditional art and craft are old and is practice by the different craft guild (Artisans, craft people) all over Ghana. Though they are expressions of cultural heritage of this country, gradual seclusion from the larger population and craft guilds affect the cultural sustainability of most tribes. Many traditional painters' themes and focused areas are associated on social ceremony and practices, daily activities such as fetching of water from the river, worship or rituals, festivals, passing knowledge to the community and our cultural heritage. This art works was painted on the facade of village houses or on scrolls and later on canvases as part of traditional gesture of a cultural significance (Ranjan 2007).

Though with the advent of technology there is evident view that social behavior, the themes and focus areas of these works are changing among tribes, and then again becoming separated from day to day social activities of larger population.

Technological interventions have the potentiality to rejuvenate our cultural heritage and connect the craft guilds of rural areas with the larger population. New media technologies can help to disseminate cultural heritage between people making them uniformly available irrespective of spatial locations (Benjamin, 2010). But a meaningful application of new technologies into virtual heritage should retain the cultural presence to fulfil the pedagogic aim of conserving knowledge, dissemination and awareness generation (Pujol & Champion, 2001). Humans are constantly shaping and participating in digital culture, foreshadowing the continues use of digital mediums into the future.

1.2 Statement of the problem

The trend of today's world bevels more to digital or artificial intelligence than before and the is expected to have the right condition for all students to give off their best. Despite the fact that some higher institutions have adopted and started utilizing digital technologies with full acceptance as the mediums for producing art works and mounting exhibitions about its works.

Unfortunately, in other institutions it is not yet fully accepted and students cannot produce digital art works for assessment in senior high schools. Ghanaian society made up of academicians, technocrats and teachers do not regard works that are produced using computers or digital mediums as true artworks compared with the works produced with traditional medium using brushes, oil paint and acrylics.

Furthermore, Ghana Education Service has not yet accepted digital painting as a technological tool in the art educational curriculum. The Ghanaian curriculum accepts students learning Corel

Draw as Software in the General Knowledge in Art course outline, which is a digital method of executing artworks. However, students are prevented expressing themselves during their final year projects using this software's. So why then Corel Draw being captured in the course outline for students to study. The Ghana Examination Body placed emphasis on the use of pencils and brushes loaded with colours and applied directly on cardboards or on canvas to produce artworks for examination.

It is still not clear why G.E.S does not regard the computer as a tool, when students' are apportioned with Corel Draw to learn in the G.K.A course outline. To add to the above, society place value and put their love on wedding cards, brochures, post cards, obituaries and Christmas cards, but to accept these digital art as real art products is still a problem.

The researcher experience again shows client refusal of a portrait drawing when it was printed on flexy banner and neatly framed. The client complained that, she needed the traditional medium where she sees brush and paints spread on a cloth like material. This coincide with a gallery attendant in KNUST campus when she expressed her view that she loves digital canvas works well framed, but just that these mediums do not meet the criterion upon which the definitions of art were based. So if these art products are regarded as art why is Ghana Education Service takes so long to accepts and allow students to express themselves using these digital technologies as mediums and start to examine students base on the work produced.

1.3 Objectives of the Study

1. To elicit the views of digital art instructors, digital art students and practicing digital artists' regarding the use of digital technologies in the production of painting in KNUST.
2. To find out the ways in which the views of these respondents influence the attitude of the general public towards digital painting.

3. To examine the views of the respondents in defining the aesthetic values placed on artworks produced using digital technologies.

1.4 Purpose of the Study

The overall aim of this study was to elicit the views of Digital Art Instructors, Digital Art Students and Practicing Artist. Also the research study was to elicit the erroneous impressions the society have about works like brochures, obituaries, post cards even though they place value and accept their beauty. Then again, Ghana Education Service to accept digital technologies as mode of artistic expression for students to be examined in that field.

The aim was also for GES to be certain on their curriculum for S.H.S students then fusing digital art software such as Corel Draw for students to learn when their emphasis is in tradition method of examining students.

1.5 Research Questions

1. What are the views of digital art instructors, digital art students and practicing artists regarding the use of digital technologies in the production of art?
2. How might the views of these respondents influence the attitude of general public towards digital painting?
3. How might the views of these respondents in defining the aesthetic values placed on art pieces produced using digital technologies?

1.6 Significance of the Study

- The study will benefit the society regarding art pieces that are produced using digital technologies.
- The study will also be beneficial to the Ghana Education Service to regard digital medium as a tool and with full acceptance to assess students when their works passed through the computer.

- The study will also help both the digital art students and practicing artist to have confidence that their works would stand a test by an accredited examining bodies in Ghana or international standards.

1.7 Delimitation of the Study

The study was limited to Digital Art Instructors, Digital Art Students and Practicing Digital Artists' in Kwame Nkrumah University of Science and Technology, who offer a course in the Department of Painting and Sculpture, and Communication Design Department. The study was also focused on the digital technologies usage and its acceptance to the fullest among the society and the Ghana Education Service. The research was focused on specific topics under Art namely, digital painting, traditional art digital mediums.

1.8 Definition of terms

Art Instructors: This is an individual who helps students to understand, describe and create art works.

Digital Technology: Computerized instruments, equipment and services that display or to perform a task.

Traditional Medium: Refers to the art material or artist supply use to make mark on a surface to create a work of art

Digital / Computer Art: Is an innovation skills or activity that incorporates emerging technologies as part of a dynamic or display method.

Perception: The purpose of art is to establish emotions in the audience and to convey the thought of the painter.

1.9 Abbreviations/Acronyms

CRDD: Curriculum Research and Development Division

GES: Ghana Education Service

MOE: Ministry of Education

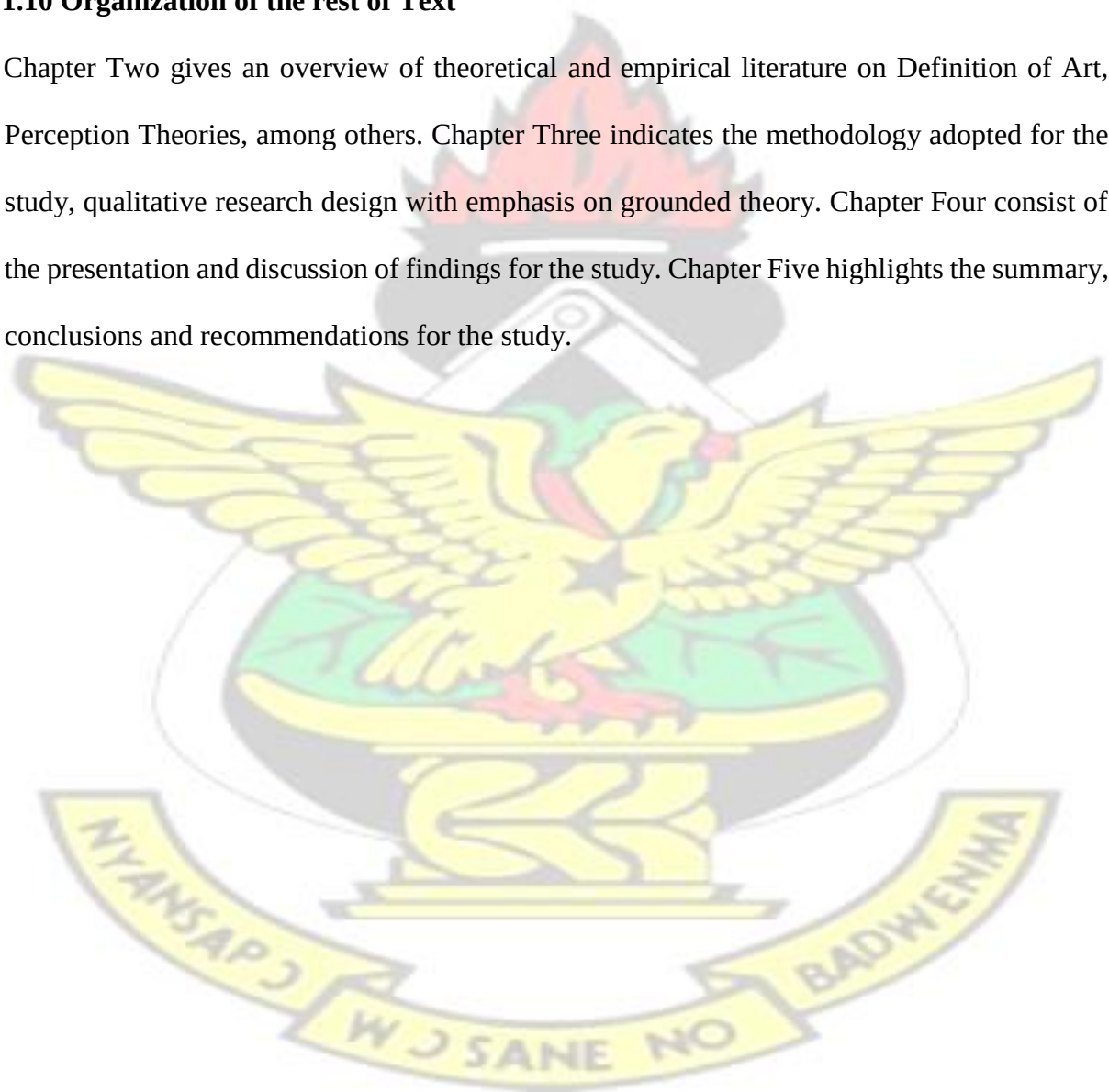
S.H.S: Senior High School

KNUST: Kwame Nkrumah University of Science and Technology **SPSS:**

Statistical package for social sciences

1.10 Organization of the rest of Text

Chapter Two gives an overview of theoretical and empirical literature on Definition of Art, Perception Theories, among others. Chapter Three indicates the methodology adopted for the study, qualitative research design with emphasis on grounded theory. Chapter Four consist of the presentation and discussion of findings for the study. Chapter Five highlights the summary, conclusions and recommendations for the study.



CHAPTER TWO

REVIEW OF RELATED LITERATURE

1.0 Introduction

This chapter entails reviews of related literature on definition of art, perception, what is painting, significance of painting. Definition of digital painting, early strategies of digital painting, prehistoric tools and materials for art. Lastly, literature review looked at the connection between traditional art and digital painting. To gain an in-depth understanding of how the two forms of art are differentiated, it is important to know what art is.

2.1 Definition of Art

Tait (1998) has given a universal description that could apply to all or some art form. He described art as the product of the artist's thought and imagination. Per Tait, since the visions and expressions of artists may vary, particularly with the widespread introduction of recent art forms that comprise a variety of art forms, basic principles may not be sufficient to define all aspects of art. Whenever one form is mentioned, more than one description must be taken into account. W. Levinson (1979) acknowledged that, since the explanations of art provided by philosophers such as Plato (429 BC – 347 BC) were not versatile wide enough to incorporate all kinds of art, George Dickie emerged up with a replacement theory in 1969, known as the Institutional Art Theory, to solve the issue. This theory is indeed reinforced by Danto's (1964) theory of art, which suggests that it is important to judge an artwork. “To see something as art requires something the eye cannot descry- an atmosphere of artistic theory, a knowledge of the history of art: an art world” (p. 580). The theory of Dickie revealed all wide spread of work of art that can be depicted as craftsmanship since every one of them fall under a specific administrative framework. One shared characteristic among Dickie's Institutional Art Theory and the indication of traditional art is the understanding that all fine arts are art forms (Dickie, 1969). In view of Kennick (1993, p.134.) the question, "What is

Art?" could not be answered straight forward as one might ask, "What is Helium?" Kennick examined the justification for traditional philosophical development, inferring also that art could be summarized up in terms such as "Art is Expression".

Kennick (1993) argued that the findings of an investigation procedure would clearly not be adequate if the same descriptions proposed are really the necessary answers to this question. He discussed how the meanings of the standard philosophical order for the explanation of art are a 'mistake.' The key misunderstanding was the assumption that, in every event, artistic creation should have a universal feature that helps to distinguish 'art' from others, regardless of the fact that they have differences. He argued that the reason that the word 'art' was used as a parable to mean different pieces of Art, such as music, sculpture, poetry and photography, was natural. It can also be noticed that, placing all into consideration, every art framework has some fundamental characteristics. Anderson (1993) attested that it would be important to recognize their artistic appeal only if they saw inspirations. It is difficult to give a description to art since many art forms have different roles and are generated from several centuries of theory. For one thing, the term "art" refers to different forms of art such as painting, books, sewing etc. It also applies to works of art such as liberal art and computer art. It is also difficult to establish a concept that embraces all types of art. Second, art study is believed to go beyond the domain of creativity without a specific reference to most creations. Since the various artistic concepts vary, specific works of art may be used as a key assumption for the study of art. He proposed, Art fundamentally evolves over time as the sophisticated value in a particular era of progression (Anderson, 1993).

2.2 Definition of Perception.

As Tolstoy (1995) has shown, art is about generating emotions in its audience and sharing the artist's thinking. Although art was used originally to refer to works of art, such as painting, music, design and figure, Dissanayake (1990) noted that the meaning of the word now expanded to include

a number of groups of art that counts on specialized works of art, such as digital painting. After an interaction with Robert Russett tried to give his thoughts on the historical backdrop of creativity and art to an artist and an influential technology client (Piene and Russett, 2008). Piene thought that, because of his superior attitudes, the popularity of art is an indication of objects such as painting, architecture, performance, visual expressions and satisfying artwork. He proclaimed that the hierarchy of the media chain of command (where one artistic expression has its advantages over another) represents Plato's similar views as well as the Renaissance.

2.3 What is painting?

Painting is a fine art discipline, a hue that includes other fine arts, architecture and sculpture. Fine art is used to denote the connections among these types of art and the associations with the traditional production of traditional artistic expression. Gian Paolo Lomazzo (1538-1600) from Milan claimed in his works that, art works would rise up if an artist imagines and creates abstract thoughts rather than real items (as referred to in Ackerman, 1967). Lomazzo argued that the action of painting is merely the technical application of the cognitive thinking (as referred to in Ackerman, 1967). Yablonsky (2005) spoke about the difficulties associated with the execution of the painting. Analyzing the object of study by some specialists and the curator during an interview, Yablonsky examined the advancement of painting and the complexity of describing painting. Her respondents included an artist who works with paint only to individuals who have combined themes in one's work. The descriptions of the participants derived from individual experiences with the types of styles they use and materials they utilize.

As per the main respondent, Pat Steir's concept of 'painting is whatever the artist does with paints'. It refuted this concept by saying that the pencil can also be used for drawing. She went on to say that Andy Warhol's (1928-1987) works finished with urine was painting. Obviously, the

description provided by the respondents to Pat Steir's was a detailed one of the works finished with pencil and other modern color forms, such as urine. Another participant, Robert Storr, curator and instructor at the New York University Institute of Fine Art, gave a description that omitted a few types of works of art, but afterwards incorporated them. To begin with, he described painting as something created by paint or paint-like materials. He later recorded that Jeff Wall (1946-present) images are works of art because they give the impression that they are like unforgettable works. He spoke about Sigmar Polke's (1941-2010) use of additives to create art piece which imitate works of art.

The respondents summarize that, "It's a pictorial appearance and also the material characteristics make it a painting". Robert Rauschenberg (1925-2008) was known as a craftsman who discovered how to extend the importance of paintings through putting together artifacts such as images and electrical lighting in his masterpiece. The genuine case of his job is the West Rooster (2004). Throughout this canvas, Rauschenberg's and other participant, Joe Amrhein, who is the painter, artist, and author of Brooklyn's Pierogi Gallery, clarified that the manner in which the artworks of this time "borrow from all sources" energizes the creative expression (Yablonsky, 2005, p. 2). He considered the art forms to be an imaginative method to attract thoughts in contrast to several other artifacts, the thoughts are generated from the hand to the canvas and persist artist to create without lay down plans. In comparison to the contrary respondents, Joe Amrhein claimed that paintings exhibit certain features that enable audiences to "re-experience the views of the painter". He claimed that this side of painting gives it a bonus across alternative media and art styles. As a consequence, the method used to produce a painting today is linked to paintings made thousands of years ago. Many creators (Michael Bevilacqua, Jeremy Painter, and Joan Wallace) use instruments that are very trendy, as well as computers and flat screen displays in the work.

One respondent, Joan Wallace, turned 2-D drawings into a 3-D world (2004).

2.3.1 Significance of painting.

Fine art is the expression of the thoughts and feelings of the artist and encounters to a crowd of people who can comprehend the work of art the craftsman shares (Iseminger, 2004; Tolstoy 1995). All things considered; craftsmanship is not constrained to a specific culture. This stresses on the important to incorporate traditional art and computer skills in order that fine art does not lose its thoughtful and understandable character. Tolstoy (1995) argued that good art communicates its meaning to most people, because it expresses its meaning in a way, which can be understood by everyone. For thousands of years, drawing has been an imaginative tradition. As expressed by Bolton (2013), the art world is identical to the development of religion, science and philosophy throughout challenging times. He concluded that large art doesn't concern with just beauty, the experiences of man and how these valuable experiences belong to history, irrespective of changes in time and context. In comparison, painting may be a remarkable kind that goes back over twenty thousand (20,000) years ago.

2.3.2 Definition of Digital painting.

Digital painting includes different works of art that utilizes computerized innovations as an apparatus for making art works (Smith, 1995). The utilization of computerized Media as a method requires a mechanism that can be executed, stored and showed in advanced structure, in an intelligent establishment or on the Internet (Manovich, 2001). Teichert et al., (2010) propounded that the digital painting is collaborative and therefore enables the artist to work together with others and offers a versatile, predictive framework that permits easy adjustments to be made at once. The interactive platform can be adjusted to many or individual requirements. (Teichert et al., 2010).

Such qualities in advanced art question the traditional thought of painting and thus represent a requirement for a shift from the previous format of executing arts to an alternative production that allows the creation of diverse concepts (Paul, 2002). Wands (2007) defined computerized painting as an intelligent sort of art that can be imparted by visual senses and emotions. He argued that, the showcasing of virtual artwork is of interest to the public, not as is the case in traditional centers and displays where visitors are warned against touching the art works. In line with Miller (2007), “art is art” irrespective of the method utilized. He maintained that the digital tool only simplifies the procedure. He agreed that the artist is the creator of the concept, not the tool. The processes of interacting with a device are the outcome of imaginative thinking, concept, expertise and structure which forms the principles of art.

2.3.3 Early stages of Digital Painting

Consideration of the periods when computers were not ubiquitous and costing a lot of money, until around the 1970s they were not easy to get and use. Later, craftsmen and researchers worked together to generate art objects by manipulating and blending textures. Goodman (1987) found how craftsmen were quiet and more eager about the process of making images with fashionable computers than the results of the operation. The way it was conceivable to be able to process an image using a computerized gadget was a serious achievement in itself. He portrayed opposing problems that occurred through the use of a machine to create artistic drawings. Noll noted that their analyses motivated the computerized painting network by making open approaches to support the advantages of the use of modern digital computers in the field of art. The unfortunate part of it all is that Noll and a few other researchers were upset by the fact that researchers were able to analyze their current task as meaningless and irrelevant. They anticipated that it would lead to the withdrawal of the suggested awards (Noll, 1994). Combined with the responses of profound advocates of traditional art to computer inclusion, the lack of security and the lack of confidence

in the supporters of digital painting, the development of the new art seemed impossible at this era. Noll (1994) noticed that thirty years after the introduction of advanced works of art, terminology for digital media art, for example, software art, computer graphics, and virtual environments, were not part of the day-to-day book of the art world. In addition, only a few exhibition halls have taken an interest in computer art. To add to this, the galleries that provided the public with virtual shows of traditional works of art still do not exhibit digital paintings.

Noll (1994) argued that studies on computer art throughout that time set the standard for the successful foundation of the computer art and animation field until this day. Bijvoet (1997) demonstrated that the sudden flood of creative integration in the 1960s and 1970s was due to the need for innovative ways for specialists to represent oneself. Prior to the development of innovation, experts attempted multiple activities with normal materials, such as dirt, plants and different materials, which were likely to break down or rot away. Fluxus, Process Art, and Arte Povera were part of the innovative art strategies being used. The flood of these modern approaches and practices, equipped for creativity, has been recognized as a medium by some artists. Bijvoet (1997) named “video, laser, holography, and computers as part of the innovation methods used by artists in the 1960s”. The growth of computer art has allowed artists to cooperate with each other and with other specialists, such as programmers and mathematicians. Although the advancement of creativity has given rise to curiosity and increased some recognition, its estimation for fine arts was considered to have decreased due to the simplicity of advanced masterpieces from digital media (Bijvoet, 1997).

2.4 Prehistoric tools and materials used for art

In ancient times, the artist were more hunters than painters and stone carvers. Although their inventions with respect to the creation of tools and materials used during that age were limited.

Individuals artist used their fingertips to paint on the walls of rocks, caves, and even charcoal Twigs, animal feathers used (Valladas et al., 2001). It is possible that colors were obtained by adding animal fat with natural materials, such as blood to represent red, brown from clay, may have been used. Alternative products that could have been included were bone and charcoal (Finlay, 2014). Their work is connected to spiritual and hunting concerns. The tactics used in Lascaux's work of art set forth several animals of varying sizes using shaded, painted outlines or blueprints or silhouettes. The drawings on walls and caves have shown that prehistoric painters were not distracted by the idea of perspective; rather eager to create their images (Ayers, 1985; Gardner and Kleiner, 2013).

2.5 Role of Technology in Education

The name Technology is gotten from the Greek word Techné. Techné refers to the method of generating art and enhancing creative skills. Learning policies focuses on creating technological evaluation instruments for analyzing data for learners (Bechard et al. 2010), and educational reform shows that there is a link among fundamental thought and expertise (Garrison, 2003; West, Toplak, and Stanovich, 2008). Technological development has shifted from the use of technology as standard resources in a lecture hall to the use of this as devices to upgrade student thinking and to deeper understanding. Although teachers understand how important the integration of advanced devices in the classroom are, research indicates that some teachers are not bold to work with technology. Prensky (2001) referenced that not only on the part of most students, a number of instructors have much zero foundation encounters with technology. Current study reflects the general contribution of this condition on teachers' responses to digital technology in art education and computer-aided art (Sontag, 1987; Spalter 1999). Many teachers raised concerns that technology would threaten the creativity of students (Sabieh, 2002). Sabieh believed that art

teachers have the role to play in educating students about the technical benefit. He focused on the purpose of helping students to get knowledge by integrating technology into education. Technology helps them to examine and lay the groundwork (Sabieh, 2002).

Technology enhances the capability of students to identify and interpret the importance of art and design. Technology facilitates good learning at the moment when applied effectively. As such, students are gradually constructive and thoughtful (Dana, 1993). Technological resources permit students to progress psychologically and in technological skills. Building technology will allow students to protect their knowledge through existing resources, tools and the expertise they need to fit in their area of profession. Digital technology will help the students create basic experiences on the activities they need to discover and the ideal kind of resources, according to Coppola (2004).

2.5.1 Technology Integration in Art

Technology plays a major role in the field of education. Technology could also be employed to evaluate student academic progress and results as well as to connect with instructors. The integration of technology involves functionality and new methods rather than technology which focuses on curriculum and learning. The specialty in learning activities and goals based on students ends up effectively incorporating technology according to Earle (2002). Earle (2002) indicated that teacher preparation and expertise can indeed be linked to the effective inclusion of technology in classrooms. He said that the priority should not be on the construction quality of technology, but on the progress of student action. Earle (2002) noted that technology cannot replace the requisite characteristics of man, such as vision, imagination, ingenuity and judgment. In the field of art, technology is quickly becoming a major component. Gregory (1996) said, as a consequence of the teachers' inborn innovative thinkers and problems solvers can achieve success by effectively incorporating technology into academic programmes. Individuals therefore require the capacity to

respond to the modern digital painting methods. Conversely, Sabieh (2002) found that some art teachers do not seem to be digitally literates, as compared to the students, and therefore have issues with creative connectivity.

2.5.2 Computers and other Forms of Technology usage

Since the 1940s, machine acknowledgement and different forms of technology have grown as instruments in art. Roland (1990) studied the zeal of computers produced in the 1980s. Software usage in art fortified students who were not sure in the use of traditional ways or techniques of executing painting to use a device that does not necessitate much creative skills (Roland) (1990).

Rush (2005) stressed that computerized methods have entered each section of the art that even some computerize artists have engaged in computers usage as tools for drawing concepts and imaginations until they represent the actual work on their easels. Rush postulated also how the concept of technology-based art cannot be categorized as art is ridiculous because art technology has made tremendous progress and provides artists and creators with infinite opportunities. Today, craftsmen can interact through their digital instruments, allowing them to collaborate with their viewers who really can look forward to the artwork and take part in various ways in the world. Rush stressed the use of digital methods in the method of manipulating photography, such as Jeff Wall (present in 1946) He battled that the craftsman's device should decide to capture the artisan's view. Critics who did not advocate advanced media use in the workforce finding it to be ridiculous, unbelievable and joyless, according to Rush (2005). Candy and Edmonds (2002a) analyzed specific progress made explicitly for craftsmen. Interrogations they dissected included how computerized advancements are made accessible to craftsman? How are innovative thoughts sent through Technology? Where precisely is the imaginative finished result found? And what is the crowd-and-market connection? 'Also, as Leavitt and Candy and Edmonds (2002) analyzed, they

underline at the numerous conceivable outcomes that creativity gives experts accessibility; they emphasize that a few artisans use instantaneous devices and programming, while others prefer creative designs.

In the improvement of intelligent masterpieces, the production has taken on a crucial portion. Since the 1960s, craftsmen have been interested in creativity and intuitive fine arts. Smart fine arts motivate the viewer to become a participant. The fact that computer media is now accessible to everyone by and by the conceivable outcomes for observers to engage in intelligent artwork (Candy and Edmonds, 2002a). The two key pieces of knowledge in convincing artwork Hubbard and Greh (1991), agreed on research interpretations and consider that Computer and various forms of creativity should be added in order to contribute to the artisanal process. They concentrated on the value of PC in supporting artisans to demonstrate their work prior to setting them up as a regular event with real support. The producers noticed that with the support of computers, students would generate images of their fills as they assemble 3D representations, record thought, draw and dissimulate control lines to the corresponding masking or shading plans they intended. They proposed the use of PCs for work supportability before Hubbard and Greh (1991) identified the influence of PCs on the fine arts assistant and regarded them as vital devices for the improvement of fine arts. As suggested by Hubbard and Greh (1991) for art instructors to utilize computers in the execution of art forms just as in their lessons. Wood (2004) examined the influence of creativity on workmanship. It analyzed 200 PC specialists. The search zeroed onto the use of (ICT) in twelve different program disciplines. The findings of the report showed that crafts teachers were eager to merge creativity into their insightful plans. One of the results that showed up was the cost issue.

2.6 Applications of Computer.

The integration of PCs into art is increasing more crucial inside the realistic painting field.

Persuaded by Piet Mondrian (1872 – 1944), Michael Noll indicated a tad bit of his craftsmanship's made using PC, which he named as Computer Generated Pictures. He moved further with his revelation of PC produced fine arts by making 3-D activities.

2.6.1 The benefit of using computers

The teaching of students is important, Hubbard and Greh (1991) argue, since machine images are different from those addressed. The basic importance of using computers is essential. Undoubtedly, the widespread use of computer applications such as Paintshop® and Photoshop® has provided numerous ways of executing art forms. Ettinger (1988) centered on the importance of looking at the essential estimations of computer use. He analyzes ways in which the computer has an effect in the art world. He identified computers as content, as associate devices for experimentation. It is the responsibility of art teachers, as suggested by the author, to look at and to assist changed perspective of computers within the art field.

Ettinger argued that while computers support artists in art forms such as painting and drawing, only a few artists go further to explore the other advantages of the machine to the fullest. A few artists have neglected to look at the possibility of including various characteristics such as sensation that can appear to draw the audience to their work. Ettinger urged that instructors structure program that facilitate the “use of computers to” empower the advancement of the talent of Contemporary Art learners. Having done so, students would be urged on the far side on the approval connected to computer usage. Also, rather than focusing their insight on the normal estimations of art, he forewarned craftsmen to be mindful of the feeling for people to turn out to be excessively passionate about computers. He expressed that art instructors must make it a point to instruct student creation of critical thought that are beneficial to them.

2.7 Aesthetic Value and Art Criticism

The basis for art review is generally aesthetic qualities rather than theory of performance (Lopes, 2004). The material of an artwork is the aspect which we find to be an aesthetic originality. Lopes asserts that advanced artwork works, which are not actual ancient rarities like customary works, are hindered. Digital works of art are a blend of abstract numbers and algorithms. The composition and input used do not have physical aspects, although some physical evidence is present in digital painting development. In other words, digital paintings have no physical forms appropriate for aesthetic assessment. He claimed that it is an inaccurate idea to pass judgment on quality of work based on its physical content alone. He addressed Binkley 's claim by using music and literature as instances of art forms with a specific degree of complex traits. When hooked in to exhibitions, these highlights can be heard but then these literature and music are classified as art. The aesthetic value of both types of art is not focused on the physical dimension.

Computer drawing, like any other piece of art, uses its tools to interact with its media (Lopes, 2004). The historical background of production demonstrates that every new art always connects itself to an already well accepted work of art until it is established. A picture is a case of such a medium. Lopes (2004) argued that, regardless of other art forms, digital painting acquires its own characteristics. Lotito (2001) believed "the most prominent participants in today's art creation are far away," although the computer and other interactive devices are not generally animated" (p. 1). He claimed machinery can now contribute to the art exhibitions because it has some impact in the field of art. He pointed out that digital computers can be used as devices to control and generate knowledge. For example, photo editing and enhancement could be done with computers. Typically, two essential steps are required. The computer will receive the image and prompt in the first step. In the next stage, the machine performs input control settings by the designer or the user's pre - defined instructions. As a technical device, the author compared photo editing software

with the paintbrush. Lotito propounded that “computers are technology that takes images to modify their features and create a new piece of art”. Lotito talked about why the artists cannot be recognized by either the computer or photo editing software. Both the computer and the software for photo editing function as tools, according to Lotito (2001). They only execute certain commands, in addition. According to this, either the program for photo editing or the computer cannot be regarded as the artist.

2.8 The Concept of Originality in Art.

The Merriam Webster online word reference, as cited in Agyeman (2013), depicts originality as one's capacity to reason autonomously and innovatively. This proposes that when a piece of art is alluded as unique, they should not be duplicates of another work. As per Wands (2007), the idea of originality in an art piece is one issue that pundits highlight as missing in computerized painting. He claimed that the value of a piece of art strength depends on the quantity of images offered to be used, as well as the market standard for that planned art.

2.9 Creativity.

Creativity might be utilized as the answer for an issue or show the nature of specialized abilities. Disclosure of new and huge thoughts, procedures, designs, and remarkable instruments is what (Lewis & Zuga, 2005) describe as creativity. Although creativity is difficult to describe, it can be easily be differentiated to standard concepts. It can leave a strong impression through development (Lewis and Zuga, 2005). Five attributes of creativity are represented by Bailin (2005). He claimed that creativity is related to originality. The importance of innovation is hard to measure and, as such, it has no criteria by which it can be measured. It is possible to display creativity in fresh and imaginative directions. Established theories may restrict creative ideas in overall.

2.9.1 Fostering Creativity through Learning.

Although acquiring practical knowledge in art helps to develop one's awareness of aesthetic interpretation, one visual acuity and motivation cannot be entirely extracted from basic courses (Bain, 2005), opined that, students should be engaged in skilled developmental programs such as ceramics, sculpture, leather works, basketry, painting and graphic art.

2.10 Analysis of Digital Art

The development of innovation in the traditional expressions raised doubt about the artistic value of computerized digital expressions (Spalter, 1999). While a few specialists were anxious to acknowledge and explore on the potential outcomes the computer brings to art, others are reluctant to accept the computer as an art medium. This kind of craftsmanship has not been altogether recognized. In photography, craftsmen physically or actually change pictures by using application programming projects. Intellectuals battled that when remarkable works are changed utilizing the PC application the imaginative worth is lost (Spalter, 1999). Digital painting rose many years once the Renaissance time, invoking conclusions from artists and therefore the general population. Some craftsmanship devotees consider computerized to be as mechanical gadgets that will in general miss the mark of feelings once contrasted with traditional art tools. They become partially computer-generated works of art, since digital computers typically come with pre-installed programs which facilitate the production of forms (Edmond & Candy 2002; Piene & Russett 2008).

2.10.1 Computer Digital Artists

According to Wands (2007), some technologies have been designed to help produce artworks. Indeed, even software engineers and specialists coordinate to make fine arts. Digital artists are keen on inventive devices that offer better approaches for accomplishing new thoughts and art making strategies. Wands argued that digital technologies offer artists with ways to manage their work. Because of the flexibility of digital devices, the machine could produce multiple image

variations permitting the creator to settle on what they like best. Despite the fact that this computerized painting highlight is helpful to advanced painting, it is considered one of the undesirable influences that cause pundits to condemn it. The designer of the modern age is not facing the challenges of the early digital painting era. Innovations and different methods for digital painting are made visible in the art by Laptop, by Internet, by cell phones and electronic mail. Wands (2007) claimed that the word 'digital' is fading and that digital art, which transforms technologically-generated forms of art, will soon be seen as modern art. King (2002), as previously noted, argued that computer art was implemented earlier than some proposed. It began in 1956 in Germany in collaboration with artists such as Benn Laposkys and John Whitney Sr. and Herbert Franke's. John Whitney Sr. had a greater description in contemporary art among the three artists. Whitney's research focused on how visual arts, music, and new abstract forms can be created with the quality of motion images. According to Franke, he had another benefit with his experience in mathematics and technology than the artist. It made it feasible for them to make a great deal of shapes, structures, and structures that had never been accomplished. Franke noticed that; each one of those styles have a strong visual attractiveness. We are unable to label them original works of art in reference to the standard requirements. King (2002) indicated that computer design style was characterized by emphasis on mathematics and technology.

2.11 Exploring the Preference of Media for Artists

Berkenwald (2001) has looked into the reasons behind artists' decisions in the choice of their tools and methods in relation to digital painting in the art world. She highlighted two key explanations why new media are being used by artists. First, regarding their current work and the method they are using, artists are not pleased. Secondly, artists are curious about new materials and media. According to the author, it is not easy to understand the reasons underlying the artists' media shift and how they are identified with their tools and materials, since only the end result of their works

is shown and not their method or the adjustment and development. She believed that the ultimate achievement of all artworks is due to the growth of artists who can effectively link artistic and creative ideas to their own. Garvey (1997) noted that artists were able to give their time to create their own identity and proficiency over their mediums selected, which is not the case of the present day, he argued. Artists today have to learn a number of skills, techniques, types of art and media, both conventional and digital.

2.12 Comparing Traditional Painting and Digital Art

Tallamy(n.d.) acknowledged that it is problematic to compare traditional to digital painting techniques. In her view, it is not accurate to compare all art forms. According to her, it is incorrect to say that, because of the simplicity in manipulation, digital painting is not genuine art. After playing with both traditional and modern devices and techniques, she concludes that the digital painting approach is much harder than critics expect. She noted that the methods and tools are different but they are the similar technique.

2.12.1 Digital painting impressions of Bloggers.

Tallamy (n.d.) argued that it is inappropriate to equate traditional and digital techniques of painting. The various categories of art ought not be compared in her view. According to her, digital painting is not true art due to its simple use is misleading. She argued that she found that the modern form of painting is much harder than critics believe after playing with both traditional and digital methods and processes. As propounded by Tallamy (n.d.), she favored the modern digital process, because no messes, harmful oil paint cleaner inhalation, and no damaged to canvas or papers. Digital paintings are also easily saved, edited, backed up and left to work later at any time. Digital paintings, in her view, look stronger, simpler and make it possible to add the least detail. However, it is possible to mass print a single painting with a button press. Therefore, in contrast to traditional

painting, in which an artist stores costly material continuously, the artist requires only to acquire software and technologies like the tablet on an individual basis.

2.12.2 Modern Art and Digital Media Categorization

Although digital can be seen as a modern technological shift in the field of art, Wands (2007) pointed out that its origins could be connected to traditional art. Lopes (2004) says that art is part of a community that includes all works of art as long as it is considered an art piece. Art can be divided into two. The first of these is an evaluative description. The evaluative classification means that art can, irrespective of the medium used to create the artwork, be labeled as fine. The second group, which is descriptive characterization, agrees that although certain works do not have an aesthetic value, they still need to be acknowledged



CHAPTER THREE

METHODOLOGY

3.0 Overview

This chapter discusses the methodology employed in the conducting the research. The principal research design was qualitative research design with emphasis on grounded theory. The research methods used was mixed method, qualitative research method and descriptive research method. It also presents information on the research tools and instruments used in collecting the needed data to give answers to the study. The nature of the population studied, sampling, administration of instruments, steps taken to gather the data and data processing methods are all inclusive.

3.1 Research Design

Sekaran and Bougie (2016) refer to research design as a blue print or plan for the collection, measurement and analysis of data created to answer your research questions. The elements that are under research design include, the research strategies of study setting: contrived and non-contrived unit analysis time horizon. Robson and McCartan (2016) opine that research design is mainly concern with aims, purposes, goals and plans within the concrete controls of location, time and accessibility of staff. It is also very much about style, the architect's own inclinations and ideas (whether innovative or solidly traditional) and the technical preference of those who pay for the research and have to live with the final result.

3.1.1 Qualitative Research Design

The Qualitative research design was employed in collating the data. Qualitative research is based upon the observations and interpretations of people's perception of different events and it takes the snapshot of the people's perception in a natural setting (Guba, 1990; Guba & Lincoln, 1994;

Newman, 1994). The researcher used the research design to determine and describe the perceptions of digital art instructors, digital art students and practicing digital artists of the KNUST Painting Program and Graphic Design Program. The researcher employed this research design to elicit the respondents understanding and also to provide answers to questions, opinions and comments through the use of interviews and questionnaires.

3.1.2 Grounded Theory

Strauss & Corbin, (1990, p. 12) defined ‘grounded theory’ in these words as ‘The theory that was derived from data, systematically gathered and analyzed through the research process’.

Technology is virtually supporting many facets of human endeavor be it in the field of Engineering, Farming, Architecture and in Medicine.

As stated earlier, technology existed a long period before the emergence of digital technologies. For instance, the works of Leonardo da Vinci showed he was interested in mechanics. da Vinci was not only an artist; he was an engineer who was enthralled with designing and creating machines like the Ornithopter (a flying machine), of which he made several designs between 1486 and 1490. In the late 1490s, da Vinci designed a giant catapult, which was then seen as an advanced and improved weapon. Then in 1499, he created a design of the shell of war tank. Critiques saw this design as exceptional as its design made it easy to operate the tank. He designed the scythed car in 1499, which was intended to be used during war times. In 1503, da Vinci designed the water wheel with cups, and the excavating machine (Doeser, 2002).

It appears that while some artists are open to advances in technology and new forms of art it helps create, others are skeptical about the benefits of technology to art. Again, why do society and Ghana Education Service reject technology as a tool when it comes to its application in painting.

The study is qualitative because it is based on grounded theory that technology should help discipline to grow. It is not clear when other artists are making massive progress with the application of technology like Leonardo da Vinci.

3.2 Mixed Method

The term ‘Mixed Methods Research’ is broadly accepted to refer to research that integrates both qualitative and quantitative data within a single study (Wisdom et al., 2012, Creswell and Plano Clark, 2003). The goal of this mixed method was to use it in examining Digital Art Instructors’ perceptions in respect of the application of digital technology in painting.

3.2.1 Qualitative Research Method

Qualitative research methods are especially useful in discovering the meaning that people give to events that they experience (Merriam, 1998). The researcher used the qualitative method to analyze the data and discover the underlying perceptions of Digital Art Instructors, Digital Art Students and Practicing Artists.

3.2.2 Descriptive Research Method

The researcher used the descriptive research method to describe the population of the Digital Art Instructors, Digital Art Students and the Practicing Digital Artists’ that form the respondents for the study and these can be visualized in the form of pie charts and histograms in the study.

3.3 Population of the Study

A populace is the gathering to which the concern of the research is expected to apply. Marshall and Rossman (2014) hold that, it is of great importance to find the right respondents to get the right information for the attainment of research objectives. In this study, the population has been

found to be heterogeneous in nature, due to the multi-sectorial characteristics of the study. A population refers to subjects or an interest group bearing common characteristics that the researcher has an interest in (Mertens 2014). In this study, the population which is the heterogeneous one comprised year three (3) to four (4) Digital undergraduate Art Students; Digital Art Instructors from KNUST Painting Program and Communication Design Program, the Graphic Design Option. The distribution of the population is illustrated in the table 3.1

Year three Digital Art Students in Painting Department	500
Year four digital art students in Graphic Design Department	500
Digital Art Lectures	11
Practicing Digital Artists	30
Total Population	1041

Table 3.1: Population of the study

3.3.1 Target Population

The target populace for an enquiry alludes to the category of elements of which the researcher is interested in and intends to make an inference (Patten and Newhart 2017). A part of the population was selected for the study since the researcher could not have access to all.

3.3.2 Accessible Population

Hayes (2011) as cited in Agudzeamegah (2014) mentions that accessible population is the population of the elements that will be present for a study. It could be a form of a non-random selection from the target population from which the researcher draws their samples. The available populace for year three (3) painting students and year four (4) comprised 230. Also, Communication Design both year three (3) and four (4) sum to 240. Eleven (11) Digital Art

Instructors and Thirty Practicing Digital Artists. The table 3.2 beneath shows the open populace for the study.

Year 3 and 4 Digital Art Students in Painting Department	230
Year 3 and 4 digital art students in Graphic Design Department	240
Digital Art Lectures	11
Practicing Digital Artists	30
Total Population	511

Table 3.2: Accessible Population

It is these populations of students and lecturers who provided the needed information for the research. Questionnaires and interview were planned with the population above.

3.4 Sampling Techniques

The sampling techniques adopted here include purposive and stratified sampling. Purposive sampling was employed since faculty of art in Kwame Nkrumah University of Science and Technology (KNUST) is the only Faculty which runs Communication Design, Painting and Sculpture. As a result, the third and fourth year students in communication design as well as painting sections were the only individuals who possessed the needed information and could provide data the researcher eliciting. Stratified sampling as explain by leedy & Ormrod (2005), is the division of the population into groups and sub-groups. This technique was used to classified the population into strata to reflect the digital art lecturers, undergraduate digital art students, practicing digital artists and post graduate students. The students were also divided into various levels or years three (3) and four (4) as various class levels.

Stratified Population	Population of the study
Digital Art Instructors	11
Digital Art Students	131
Practicing Digital Artists	30
Total population	172

Table 3.3: Classifying the Population into Stratum

3.5 Data Collection Instruments

Interviews and questionnaires were the tools used to collect the data. Questionnaire and interview samples form Appendices A, B, and C.

3.5.1 Questionnaire

The aesthetic Experience Questionnaire form served as the survey questionnaire. This questionnaire was design by Csikszentmihalyi and Robinson in 1990 to investigate digital artists and gallery experts about the aesthetic experience tied to works of art of their time. The survey questionnaire was design to seek information from digital art students from both Department of Communication Design and Department of Painting and Sculpture. The survey was into three section A, B and C. Section A asked questions about the individual gender and age of students. In section B, students were asked to rate their interest, select their favorite digital painting tools. Section C touched on how digital art students' emotions and attitudes regarding digital artworks and how it helps bind one another.

3.5.2 Interview

The interview questions for lecturers in both Painting Sections were categorized which covered questions on definition of art/painting, method employed, factors leading to such choice, importance of traditional art /painting to the society and also in education. Whiles B covered questions on the influence digital technology has on teaching method. Section C tackled questions on teaching methods with digital technologies and their impacts on students. Three (3) lecturers at the Communication Design Department were interviewed representing 100%. Out of 8 lecturers in the Painting Section, 6 were interviewed representing 75%. Those who could not be reached advised that the interview should be developed into questionnaires for effective gathering of data.

3.6 Primary Data

The digital art students from communication design department and the painting and sculpture department, digital art instructor or lecturers and practicing artists were the respondents who addressed the issue directly.

3.7 Data collection Procedure

The preparatory work which commenced the study was the reviewing of the related literature. An introductory letter from the Department of Innovation in Science Technology was personally sent to both Painting and Graphic Sections through their departments for acceptance and full access to the units. Library research was conducted alongside.

3.8 Data Analysis Plan

The gathered data were assembled, findings were analyzed and interpreted, conclusions drawn and recommendations made.

3.8.1 Qualitative Data Analysis

The views of digital art instructors were systematically and simultaneously gathered. the data was read through and qualitative code book developed. The responses of the participants were label as themes. The themes were put into categories and colour coded. These themes or categories were interrelated to smaller set of themes. The researcher then did a detailed line by line analysis from the transcribed interview, then “sentence by sentence”, then to phrase by phrase expressions from respondents as shown below figure 3.1.

Tools and Materials Preferences

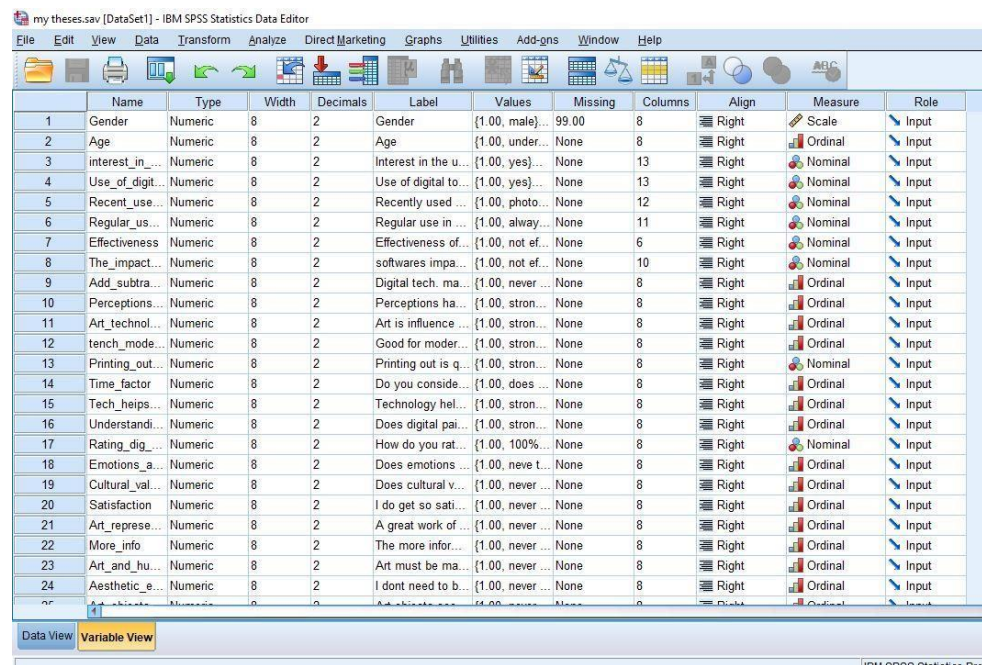
The idea of material selection is attributed to the artist, as same was expressed by Agyemang (2015) that “the nature of a tool, kind or style they used” can be seen “that artist take part in various kinds of art, including figure, painting, sculpture production and computer-generated art” interchangeable. Interviewee IRF 1 prefers to work with anything or material that is tangible such as oil paints, pencils, charcoal and physical paper. Basically, “anything that is real and physical it does move my appetite in the work”. Interviewee IRF 1 “referenced that there is no limitation on how individuals pick their working tools”. You see how all these materials along with the skills and your imaginations as an artist to create digital art requires a computer, a tablet or, meaning all art pieces are created whiles looking on a monitor or a screen rather than paper or canvas. IRM 9, the artist defines the brush stroke, colour down to the last pixel. He stated that, every decision that goes into the drawing is not the computer generating the art. He discussed how digital art media gives artist the freedom to work on limitless thoughts. He mentioned that, one artist can alternate

Figure 3.1: Showing colour coding of respondents

3.8.2 Quantitative analysis

In the quantitative data analysis, the data was visually inspected. The researcher first entered the data with the help of Statistical Package for Social Science (SPSS) software program. This was

analyzed to answer the research questions and then report inferential test, effect size and confidence level. The results were provided in tables and figures as shown below.



	Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure	Role
1	Gender	Numeric	8	2	Gender	{1.00, male}...	99.00	8	Right	Scale	Input
2	Age	Numeric	8	2	Age	{1.00, under...	None	8	Right	Ordinal	Input
3	interest_in...	Numeric	8	2	Interest in the u...	{1.00, yes}...	None	13	Right	Nominal	Input
4	Use_of_digi...	Numeric	8	2	Use of digital to ...	{1.00, yes}...	None	13	Right	Nominal	Input
5	Recent_use...	Numeric	8	2	Recently used ...	{1.00, photo...	None	12	Right	Nominal	Input
6	Regular_us...	Numeric	8	2	Regular use in ...	{1.00, alway...	None	11	Right	Nominal	Input
7	Effectiveness	Numeric	8	2	Effectiveness of...	{1.00, not ef...	None	6	Right	Nominal	Input
8	The_impact...	Numeric	8	2	softwares impa...	{1.00, not ef...	None	10	Right	Nominal	Input
9	Add_subtra...	Numeric	8	2	Digital tech. ma...	{1.00, never...	None	8	Right	Ordinal	Input
10	Perceptions...	Numeric	8	2	Perceptions ha...	{1.00, stron...	None	8	Right	Ordinal	Input
11	Art_technol...	Numeric	8	2	Art is influence ...	{1.00, stron...	None	8	Right	Ordinal	Input
12	tench_mode...	Numeric	8	2	Good for moder...	{1.00, stron...	None	8	Right	Ordinal	Input
13	Printing_out...	Numeric	8	2	Printing out is q...	{1.00, stron...	None	8	Right	Nominal	Input
14	Time_factor	Numeric	8	2	Do you consid...	{1.00, does ...	None	8	Right	Ordinal	Input
15	Tech_heips...	Numeric	8	2	Technology hel...	{1.00, stron...	None	8	Right	Ordinal	Input
16	Understandi...	Numeric	8	2	Does digital pai...	{1.00, stron...	None	8	Right	Ordinal	Input
17	Rating_dig...	Numeric	8	2	How do you rat...	{1.00, 100%...	None	8	Right	Nominal	Input
18	Emotions_a...	Numeric	8	2	Does emotions ...	{1.00, neve t...	None	8	Right	Ordinal	Input
19	Cultural_val...	Numeric	8	2	Does cultural v...	{1.00, never ...	None	8	Right	Ordinal	Input
20	Satisfaction	Numeric	8	2	I do get so sati...	{1.00, never ...	None	8	Right	Ordinal	Input
21	Art_represe...	Numeric	8	2	A great work of ...	{1.00, never ...	None	8	Right	Ordinal	Input
22	More_info	Numeric	8	2	The more infor...	{1.00, never ...	None	8	Right	Ordinal	Input
23	Art_and_hu...	Numeric	8	2	Art must be ma...	{1.00, never ...	None	8	Right	Ordinal	Input
24	Aesthetic_e...	Numeric	8	2	I dont need to b...	{1.00, never ...	None	8	Right	Ordinal	Input

Figure 3.2: Showing data entry and coding in SPSS Software.

3.9 Testing for Validity and Reliability of the Study

To verify credibility of the study, the researcher identified truthfulness as the means of deciding whether the results reflect the theoretical understanding of data elicited from the respondents' experiences and interpretations. The researcher conducted raw data verification from theories to confirm reliability. To strengthened the internal validity, the researcher maintains the instruments contents throughout the course of the study and did not make any further revisions to the instruments during the data collection process.

3.9.1 Triangulation

Triangulation of data is of critical importance to the trustworthiness of qualitative studies. As the study unfolded particular pieces of information became known, steps were taken to validate each information item against at least one other source (e.g., a second interview) and/or a second method

(e.g., a survey in addition to an interview) (Denzin, 1989; Lincoln & Guba, 1985). Using a second source or a second method can produce more accurate, comprehensive, and objective findings (Silverman, 2006). For this study, interviews and quantitative methods were compared to ensure trustworthiness.

3.10 Biographies of the Respondents

These were the variables used to defined the respondents:

The researcher maintained contact with all the participants involved by getting the contact details from their respective websites in KNUST. After which the researcher sent out emails to several respondents through the department of painting and sculpture, reminding them of the study. The aim of the study and the purpose the researcher wants to include them as specialist. Interviewees were given pseudonym names such as IRM 1, IRF 2 to IRM 11, depending on the gender interviewee falls in.

These letters Interview Response (I.R) and M=male or F= female forms the pseudonym name dependent on the gender of the respondent.

CHAPTER FOUR

FINDINGS AND ANALYSIS OF DATA

4.1 Overview

This section includes presentation and discussions of findings of digital art instructors, digital art students and practicing digital artist.

4.2 Interview responses from digital art instructors on the subject of definition of Art & Painting.

Responses were based on interview conducted to Eleven Digital Art Instructors.

On the subject of definition of Art & Painting, the responses are as follows:

4.2.1 Definition of Art & Painting

Arnold (2004) People say every moment has a definition of art, he says art in-cooperate with other kinds of moments, it brings together other kinds of moment. Review literature on the definition of painting emphasizes the in ability to have a general definition of art/painting. As indicated by Kennick (1993) and different creators explored under section two analyzed the meaning of painting and came to a similar end result. At the end of the day, painting can't be defined. Arnold (2004) accused this for the expansion in the quantity of new trends and diverge devices.

4.2.1.1 Interviewee IRF 1

IRF 1 define art and painting as “the outflow of thoughts and feelings through an actual medium like canvas, design, film, dance composing, photography or theater art”. According to him, art and paintings are oldest form of visual art which "incorporates making of pictures or artifacts" in any field be it sculpture, print making, photography and other visual media". She further stressed that art “includes the making of articles where the viable attention of utilizations are central such that they are generally not painting for example Music, film, dance.

4.2.1.2 Interviewee IRM 2

According to IRM2, painting is broader and none has one definition to it, IRM4 define art as any expertise or mastery that is not separated from craft or science. He extends his definition to recent procedure after 17th century, where aesthetics consideration where dominant, he stressed that fine art are separated from attained skill in general such as decorative or applied arts. Painting represents “mimesis” because of its depiction of realism, expression of communication and emotions or other qualities.

4.2.1.3 Interviewee IRF 7

IRF 7 traced the definition of art into 17th century during the Romantic Period where he stressed that art came to be viewed as "interesting workforce of the human mind to be portrayed with religion and science". IRF 7 expressed the view though the definition of what constitute art is unclear and has change over time

4.2.1.4 Interviewee IRM 8

IRM 8, the definition of art or painting is frequently shifting and growing to include different forms of activities, and the request 'what is art or painting' has been for decades of years. A few groups think painting is an endeavor to make wonderful items. Others refer art to mean all works that show up in a gallery" or historical center be it "beautiful or appalling". IRM 8 expressed that "it is a stupid overlap", "nobody comprehends and the lack of general distinction among art and non-fine arts".

4.2.1.5 Interviewee IRM 3

As expressed by IRM 8, painting is seen as "a lovely work", and a "survive mechanism for any culture". He further states that, "art is the most powerful instrument for survival". Art re-engage reality once again. IRM 8 concludes by saying if any object move once attention it is art, but if it does not than it is not art.

4.2.1.6 Interviewee IRM 9

Considering the response of IRM 9, art has no unique definition. IRM 9 traced the definition of art to Ancient Greek and Roman Philosophers and paraphrase art as 'all art is but imitation of nature'.

IRM 9 further states that “art complete what nature cannot bring to a finish”. These further buttresses that “Artist gives us knowledge of natures unrealized ends”. IRM 2 wrap shoulder with what Achebe (1990) defines art as "art is man's consistent action to make for himself an alternative request or reality from that which is offered to him". For this definition IRF 3 stressed on the rendition that "craftsmanship is the best method of communication that exist”. Coupled with this definition IRM 9, propounded that “art is a complete past” thus one does not just throw it into the world, but then someone has to catch.

He further stated that, "where your position in the account isn't dependent upon whether someone prefers you or someone know you or somebody is a friend, or someone is being generous to you" He opined that, “art is the highest form of hope”. Considering IRM2 view about art, "art is basically the certification, the gift, the adoration of presence". IRM 3 explains that art help satisfies people, it actually exists centuries gone by. IRM3 regarding the view of IRM2, paraphrase what Achebe (1990) said about art, “art is a sustenance”. IRM3 also stated that "art has consistently been the platform onto which we move to save our mental stability". Tait, 1998 stated that “art is expression and vision” this connects to IRM3 when he cited the view of (Levinson, 1979) in an interview and paraphrase that “art is visceral and vulgar-it is an eruption”. Kennick (1993) nailed right onto IRM 3 view and describe art as “a scream of freedom”. This idea of Kennick (1993) tied enough on to Dissanayake (1990) and describe art as “something that makes you scratch your head”. Notwithstanding, Marshall M. as cited Adjei (2014) stressed on the view that “anything you can get away with”. Regarding the view of Dissanayake (1990) he said that art is “an essential element made out of risk”. He further goes to expressed that "In the event that you don't face a challenge how are you going to make something wonderful that has not been seen previously". Just recently

Wangenchi (2010) saw a definition to art and he mentioned that “art allows you to inspire, infuse the truth with a sort of magic, so it can infiltrate the psyches of people”.

To IRM 3, he states categorically that art depends on what we call as art, because it keeps on changing. He concludes by giving a lengthy explanation "what art is, in actual sense, is giving missing connection, not the connection which exist, it's not what you see that is art; art is a gap" IRM 3 express that he loves the gap, he further states that, “is where the magic happens”. The gap is the space between the art and the appreciator, the artist and the art. IRM 3 says he does not even need a definition of art, but concludes by asking a rhetorical question what is art or painting to you (Agyeman, 2015).

IRM 4 propounded that if we have no definition, we cannot say something meet a criterion in a better or worse way. IRM 8 sees the problem and stated that art and painting turn to be subjective. He argues that art loses its possible meaning. He stated that nothing good can be considered good or bad art. If, however we agree, IRM4 states that there can be ‘an objectively good art’, and that when something is intended to be art it means there is a definition and an underlying criterion. He concludes that “it is just that philosophers and artist have perhaps not been able to describe it yet” (Agyemang 2015).

4.2.2 Responses from digital art instructors on the subject of Tools and Materials Preferences, the responses are as follows:

4.2.2.1 Tools and Materials Preferences

The idea of material selection is attributed to the artist, as same was expressed by Agyemang (2015) that “the nature of a tool, kind or style they used” can be seen "that artist take part in various kinds of art, including figure, painting, sculpture production and computer-generated art”

interchangeable. Interviewee IRF 1 prefers to work with anything or material that is tangible such as oil paints, pencils, charcoal and physical paper. Basically, “anything that is real and physical it does move my appetite in the work”. Interviewee IRF 1 "referenced that there is no limitation on how individuals pick their working tools”. You see how all these materials along with the skills and your imaginations as an artist to create digital art requires a computer, a tablet or, meaning all art pieces are created whiles looking on a monitor or a screen rather than paper or canvas. IRM 9, the artist defines the brush stroke, colour down to the last pixel. He stated that, every decision that goes into the drawing is not the computer generating the art. He discussed how digital art media gives artist the freedom to work on limitless thoughts. He mentioned that, one artist can alternate between mediums as well, because in digital painting as a medium, one artist scans any image using a scanner and it will show up on the screens of computers as digital file. This way you can send, edit, clean it up with Photoshop software, print it, and this is really cool feelings that traditional art medium is lacking. IRF 1 said that, one artist can combine traditional methods in their artworks. IRF 1 expresses this as “the best of both worlds”. IRM 3 states that both of these “mediums are unique but however require a high-level expertise to achieve a decent result”. He emphasized that one has to be a good artist to create a good art. She further states that irrespective of the medium used, it is the skills and material selection that makes an artist unique. No media is better than the other, both mediums are definitely different, have their pros and cons so for constructing drawing like sketching, and planning process, digital art is probably easier and more difficult in the area of traditional art mediums.

The undo command in digital medium, like when brush stroke is made and does not fit, a button (ctr+z) on a computer is pressed once and it disappear, there is no such command in traditional art medium. Digital medium contains selection tools where you can flip, rotate and erase infinite number of times without your paper completely dissolving. Then again, "craftsman paints the work

on little surfaces and blows them into huge measured size, and that is the means by which he needed it done" Agyemang (2015). IRM 8 states clearly, even though being a traditional artist, it is very hard to move something 1 inch or flip the working in traditional art. He explains the entire work has to be painted off and erased completely before any changes can be done. To IRM4, it is more efficient to create an idea digitally than traditional. This is strengthened when IRF 1 cited a lot of traditional artist who put together their ideas in Photoshop, then use that as a reference to draw traditionally. He thinks that, it is a great method since it saves a lot of time.

IRF 1 made mention of the tools she is comfortable with when she said "for traditional you have acrylics, oil paint, water colours, gouache, pastel, charcoal etc., and you can literally blend them on canvas". She explains artist can blend pencil crayons on paper, paint over them and reprint over certain areas and can obviously blend everything. That is why Agyemang (2015) concludes on this issue that "the more inventive artist become, the more their imaginative abilities can create". She further stated that "in contrast to different types of art, painting devices have not gone through a very outstanding change" yet "rather instruments and materials for the its execution have expanded" as expressed by Jeunesse (1994).

Digital art has a canvas with unlimited colors and painting process once the artist has acquired a painting program. IRF 1 mentioned that these programs have "brush settings that can as well paint over any surface, blend images together, has water colour setting, has opacity, for tinting and adding shades to drawings". She explains "Craftsmen's apparatuses and materials have developed over hundreds of years (Agyemang 2015, Bolton, 2005)". Notwithstanding, Agyemang (2015) she identified that "Today artist have a few alternatives accessible to them with the consistent digital media and styles". She did stop but expressed that "Discussions in connection with artist decision of media portrayed that artist of today don't depend on just one sort of media" Agyemang notified.

IRM4 discussed he used 'blender' to create 3D designs, transfer them into photoshop, add text or words. He explains that, "the fact that these images are pixels does not mean it is forged art or that the computer is making the art". Agyemang (2015) propounded that "The digital interaction includes a similar brush strokes, creative mind, abilities, knowledge and inspiration as traditional art does". She expressed that "This type of art is called contemporary art".

Smith (2009) portrayed contemporary art as a "specialty of the 21st century that incorporates and explores modern societal problems". IRF5 support the fact that "using traditional art medium does not make one better than digital artist and likewise being a digital artist does not also make one artist override the traditional artist. IRM 2 said "they are all equal, the same", "they both create art works to inspire people".

IRM 6, IRM 3, IRM 7 work with mediums like "acrylics and Poska Pens", "they do love to work with pastel or charcoal". IRF1, IRM 6 and IRM 2 state that preference over a particular media is "purely by subjective and asserting that one is overall better than the other is just arrogant". That is why IRM 5 "communicated that a few craftsmen like to have practical experience in one specific device and medium and others decide to work in different media". IRM 8 is a graphic designer, who work with software's like blended media and 3D delivering so their works show ranges as in photography, interior design, sculpture, though they were trained with the traditional method, hence now practicing as a digital artist. He also mentioned that "It does not matter whether one artist work digital or traditional", he argues you should be able to do both. There are some advantages to working digitally and advantages to working traditional. IRM 2, IRM 8, IRM 7 stated that "flexibility", worries about errors or mistakes are eliminated in the case of digital medium. They stated 'nothing is permanent in digital art', IRM 8 mentioned "if you paint a tree

you don't like, it has got special layers if you execute the work on a layer you don't prefer, you simple delete the layer, which is difficult in traditional method".

IRM 3 stated in correcting mistakes in traditional medium it takes longer time to fix that mistake. He explained that, it is important to recognize mistakes, but one artist does not need to spend "illogical amount of time fixing them". He said it should be easy as possible and not to get frustrated, and also to the feelings of getting fed up. Considering these, IRM 3, he said working "digitally could be a lot better and handy than working traditionally".

IRM 7 "It is frustrating to ruin a piece of art just for want of experiment". According to IRM 7, "the present art experts are more exploratory and really intriguing fine arts". One finds in exhibitions and galleries are the contemporary pieces since they "truly stretch the boundary". She further mentioned that, digital art gives the freedom to try an endless supply of approaches to the art pieces, with little to no risk of distorting it. According to IRF 5 "if you compare that to working with traditional art, like you experiment and you try to paint somebody's face green or red or some little glazing and it does not look perfect, you have to spent time, whole lot of time repainting that area"

4.2.3 Responses from digital art instructors on the subject of inspiration and influences, the responses are as follows:

4.2.3.1 Inspiration and Influences.

Tracing the history of painters from the ancient time frame, Religion inspired ancient Egypt, ancient Rome and the Middle Ages, and the Renaissance painters had an effect on the perspective of independence and structuralism (Gardner and Kleiner, 2013; Van Dyke, 1919). This is not new to (Agyeman 2015, Bolton, 2005) when mentioned that "the majority of the members, to build up

a thought, artist go through ritual ceremonies, participating in traditional practices like tuning in to favorite music kind, visits to the gallery and exhibitions (both physical and virtual), visiting the theater, sitting in a distinguish and calm climate. IM4 said, “experience from great artists help upcoming artists to create thoughtful subject concerning their social, political and natural issues relevant to their nearby environmental factors”.

4.2.4 Responses from digital art instructors on the subject of Artist Emotional Response, the responses are as follows:

4.2.4.1 Artists Emotional Response

As Suri & Hendrix (2010) on their view paraphrase design sensitivity as the approach of utilizing the fitting media and methods to accomplish expected result. Claudia and Kotchka revealed to us that, it requires the capacity to utilize characteristics like joy, and beauty. As expressed by interviewee IRF 1, they make an emotional connection with the artworks at the point when they experience the result of art item. IRM 4 clarified that, combined with the suitable media, artist can make works that is inspiring their crowd. IRM 3 concluded that, the artists should know the target audience whom they exhibit their work to. Martin (1992) focused on that and strengthened, expertise lies in its ability to evoke memories and emotions shorn of requiring any learned interpretation; it should remain "silent and quiet" (p. 89).

4.2.5 Responses from digital art instructors on the subject of Artist Satisfaction, the responses are as follows:

4.2.5.1 Artist Satisfaction

The experts search for assistance and inspiration to execute from different themes in and around them. The artists are stirred by their natural mechanisms be it social. Social ecological variables merely affect the art of the artist's, as they are a piece of their step by step encounters. Social issues

are one of the critical themes for a portion of the artist. In addition, anything that moves the craftsman or offers to their inventive sense equally transforms their inspiration. According to IRM 4, IRM 2, states that digital painting “is like meditation or doing ‘Riyaz’ (practice)”. IRF 5 is of the view that, for satisfaction digital arts are all the mental fulfillment, and acquired by giving this enthusiasm and expression". She further states that “The need to earn a living also at times motivated them to create”. IRM 4 and IRF 1, expressed the same view and admit that "The artist very own encounters throughout everyday life, their disappointments, joy and happiness arouse them to paint with computerized technologies".

4.2.6 Responses from digital art instructors on the subject on the importance of painting to the individual in the society, the responses are as follows:

4.2.6.1 The Importance of Painting to the Individual in The Society

To begin with, environmental factors have more effect on the craft of the artists’, as they are a part of everyday experiences. As referenced effectively, social issues are one of the significant themes of the artwork among numerous artists.

IRM 8 states " art provides assistance to the individual, gatherings and society everywhere to accomplish a more profound abilities and more extensive knowledge on themselves and of reality as a whole". According to IRM 7, "artists can distribute a more prominent attention to the obscurity of people, circumstances, considerations actions in youth”; “feelings, and reality within a work of art". Interviewee IRM 2 says “art is entertainment.” According to Mao’s Tsetung, et el Vol. 3, p. 82, “art is entertainment”, it was said that the very quote by Tsetung, Yenan (2014) “implies that people wish to escape everyday life difficulties and that art is a means of doing so”.

4.2.7 Responses from digital art instructors on the subject on Uses of technology in the painting classroom, the responses are as follows:

4.2.7.1 Uses of technology in the painting classroom

The merger of educational innovation in an educational cycle contains change in an instructive design (NCES, 2002). The report extends further to explain that Internet integration and programming make computerized classroom practicable and provide change to various systems of learning. IRF 4 states that “the digital painting classroom in an art school is beneficial for all students by going up the teaching space outside the four walls into a community”. IRM 2 categorized digital classroom to two parts. Synchronous digital classroom and Asynchronous digital classroom. Firstly, “Synchronous digital education provides an advanced technology computing machine for each student who can join in school via internet and a teacher using the computer.” Secondly, the “Asynchronous digital classroom makes each student partakes at all times and from every location through the cloud-based systems”. To borrow Anderson and Krathwohl's (1993), “this cycle includes moving from lower-request manners of thinking (for example, remembering, understanding, and application) to higher-order ones (for example, analyzing, evaluating, and creating). Agyeman (2015). IRF 1 clearly mentioned “how interactive it is when he uses Photoshop to explain and demonstrates graphic works to students”. IRM 2, “uses Corel Draw, Gimp, Rhinoceros and Photoshop to execute her art piece”.

4.2.8 Responses from digital art instructors on the subject on the Differences between Traditional and Digital Media, the responses are as follows:

4.2.8.1 Differences between Traditional and Digital Media

Shepherd (2011) contended that choices given by the advanced strategies prepare the artist with substitute way to manipulate painting. He alluded to digital art as an augmentation of traditional

craftsmanship and as a genuine work of art. To interviewee IRM 2, 'Aesthetics does not rely on the medium the artist uses.

4.2.9 Responses from digital art instructors on the subject on the Reactions to digital media, the responses are as follows:

4.2.9.1 Reactions to Digital Media

According to Knapp (1996), Innovative ways of blending digital technologies in art education adds flexibility and make digital users technologically gymnastic. The artist become more exposed to numerous perceptions, complications and be in position to explore (Knapp & Glenn, 1996).

Interviewee IRM 2 uses Corel Draw, Gimp, Rhinoceros and Photoshop stated that, "Words generally can't do a picture justice". IRM 3 reported that "digital exploration such as Animation adds excitements, instructing and form pleasant environment in learning".

4.3 Interview responses from Digital Art Students and Practicing Digital Artists

Responses were based on the questionnaire administered to One Hundred and Sixty-one (161) students. The responses are as follows:

4.3.1 Gender

The table 4.1 shows that the majority of participants were male (92.4%) representing 121 respondents while the remaining were female (7.6%) representing 10 respondents.

		Frequency	Percent Valid	Percent	Cumulative Percent
Valid	Male	121	92.4	92.4	92.4

Female	10	7.6	7.6	100.0
Total	131	100.0	100.0	

Table 4.1: showing Gender representation of participants

Here we can see that male members are somewhat higher than female members. Nonetheless, there is a huge contrast: young men invest more energy on computers than young ladies do (Haugland, 2000). However, young ladies begin to stay away from the computers when they arrive at the centre of school, and the gender gap increases as students go to high school and graduate schools (Gehring, 2001).

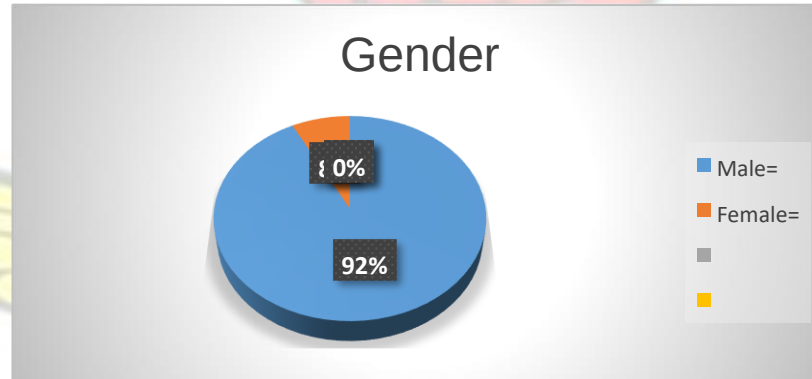


Figure 4.1: Pie chart showing Gender representation of participants

As per a report of sexual orientation disparity by the American Association of University Women (AAUW) Educational Foundation (2000), young ladies are fundamentally reduced in their numbers in software engineering and innovation fields. Because of this it is not surprising low representation of female respondents in the research.

4.3.2 Age

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid under 18	1	.8	.8	.8

18-24yrs	85	64.9	64.9	65.6
25-34yrs	39	29.8	29.8	95.4
35-44 & above	6	4.6	4.6	100.0
Total	131	100.0	100.0	

Table 4.2: Showing Age representation of participants

The table 4.2 shows that the highest participants were 18-24years old with 85 respondents (64.9%). Followed by category 25-34years old with 39 respondents (29.8%). Only one (1) responded Under 18 (0.8%). The 35-44 years old category had 6 respondents (4.6%).

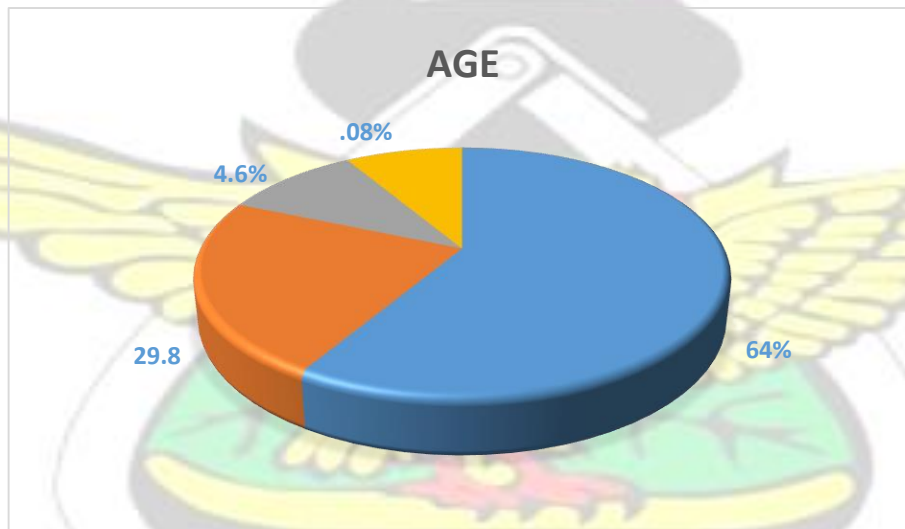


Figure 4.2: Pie chart showing Age representation of participants

4.4 Interest in the Use of Digital Technology in Painting or Graphic Work

In response to questions one, the majority of students, 84.7% selected 'yes' to when asked if they are interested in the use of digital technology usage in painting or graphics (see figure 4.3)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	111	84.7	84.7	84.7
	No	19	14.5	14.5	99.2
Total		131	100.0	100.0	

Table 4.3: showing Interest in the use of digital technology in painting or graphic work

It is exciting to note that 14.5% of students did not agree or disagree to this question. This data coincided with the flipped learning network (2013) report stating that teachers or instructors reported better attitudes towards learning from digital means from their students when they are engaged in a flipped learning classroom.

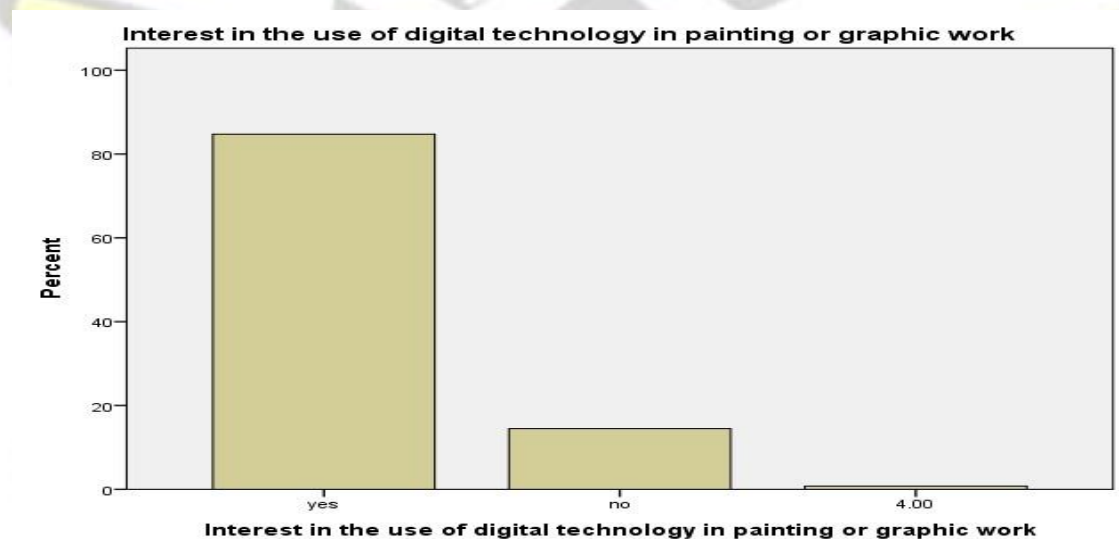


Figure 4.3: Interest in the use of digital technology in painting or graphic works

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	70	53.4	53.4	53.4
	No	57	43.5	43.5	96.9
Total		131	100.0	100.0	

Table 4.4: Showing Use of digital tools in your graphics design or paintings works

4.5 The use of Digital Tools in Graphics Design or Painting

70 students responded 'yes' to their use of digital tools, represented 53%, and expressed the fact that they do receive some basic introductions from instructors on the use of some of the software's early but neglected in the 1st year level. Because of this they learn from the traditional method and means and are pick up with this method. Hence lovers of the traditional art find the digital tools in their painting or graphics difficult to integrate/use in the early times. Furthermore, these digital tools are often challenging, since it conflicts with the courses offered.

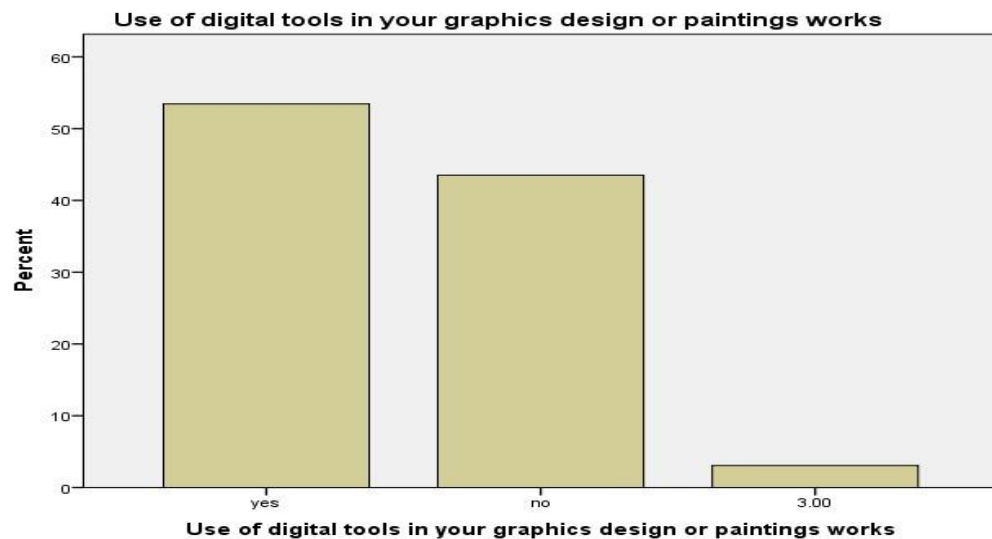


Figure 4.4: Use of digital tools in your graphics design or paintings works

Gregory's observations (2010) is tied to this assertion that the key components adding to art educators' unwillingness to apply digital ideal notion incorporates complications in coding computer instruction, expanding pressures, heavyweight in teaching, time limitations, deficiency of equipment and software packages, and absence of instructor backing and training (Browning,

2006; Gregory, 2009). Research shown that when teachers integrate technology into their classroom, student's achievement will be increased (Kissane & Kemp, 2008).

4.6 Recently used Digital Tools

Figure 3 shows student's responses to the statement "Recently used digital tools". From this, it is clear that majority of the student artist are conversant with Corel Draw Software. 77 respondents selected Corel Draw Software representing 58.8%, 37 chose Photo Shop Software, representing 28.8%, 16 chose sketch pro software (12.2%), one responded to

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Photoshop	37	28.2	28.2	28.2
	Corel Draw	77	58.8	58.8	87.0
	Sketch Pro	16	12.2	12.2	99.2
	Photo Paint	1	.8	.8	100.0
	Total	131	100.0	100.0	

Table 4.5: Showing recently used digital tools

photo paint, representing 0.8%. from this response it is clear that majority of students are not introduced to Photo Paint as software used for digital painting.

Fundamentally, although the present understudies are inundated and familiar with computerized media, this ability may not really move to capability in the utilization of instructional innovation. This is steady with Robinson (2006), who revealed that not all research studies have a similar degree of capacity and certainty with regards to innovation. In this manner, a student may comprehend that a specific instructional innovation would be helpful, but will require nurturing and backing as made available by the art teacher/educator.

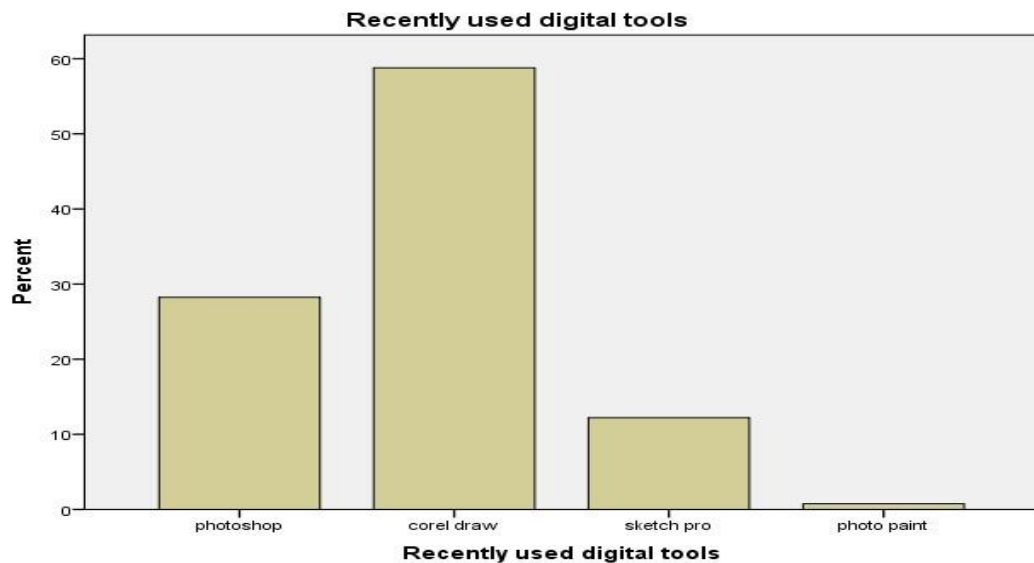


Figure 4.5: Recently used digital tools

4.7 Regular Use in Painting

Figure 4.6 shows students' engagement with the digital tools' usage in their respective fields, it was reported 43 respondents use it once in a semester, representing 32.8%. 16.0% of the respondents don't use it at all in their works. 28 respondents interact with the tools once a week for their semester works, representing 21.4%. 38 respondents use it on regular bases but find it challenging, representing 29.0%.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	always	38	29.0	29.0	29.0
	once a week	28	21.4	21.4	50.4
	once a semester	43	32.8	32.8	83.2
	not at all	21	16.0	16.0	99.2

13.00	1	.8	.8	100.0
Total	131	100.0	100.0	

Table 4.6: Showing Regular use in painting

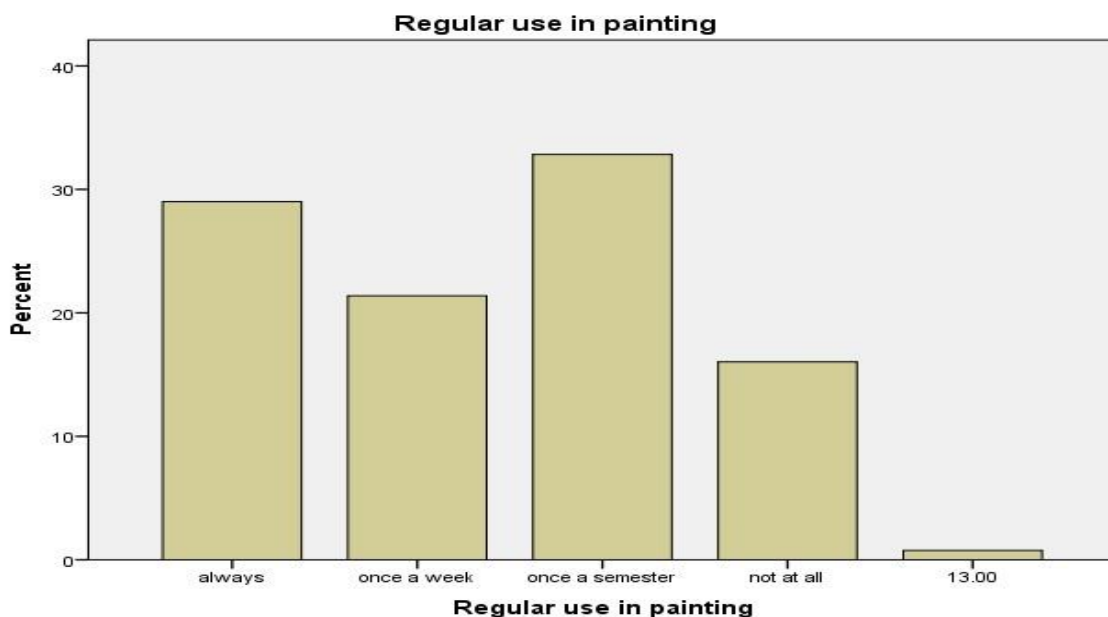


Figure 4.6: Regular use in painting

4.8 Effectiveness of software on paintings

Figure 7 shows the effectiveness of software on paintings tied to Stamats, (2008)., which report on college students as he described art instructors as technically knowledgeable and most creatively advanced of any age, he states that, technology that can be recognized as a blade and a fork in the local areas, this study found 73 (55.7%) responded “somehow effective” to statement 7. 41 responded “highly effective”, representing 31.0%. 16 selected “not effective” representing 12.2%.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Effective	16	12.2	12.2	12.2
	Somehow Effective	73	55.7	55.7	67.9
	Highly Effective	41	31.3	31.3	99.2
	Total	131	100.0	100.0	

Table 4.7: Showing Effectiveness of the software on your painting out put

This result confirms the information D' Aloisio (2006) stated that students realize the direct relationship between their skills in the classroom and their enforceability, the importance to economic environments would be strong, and thus encouraged to engage them fully in their area of study.

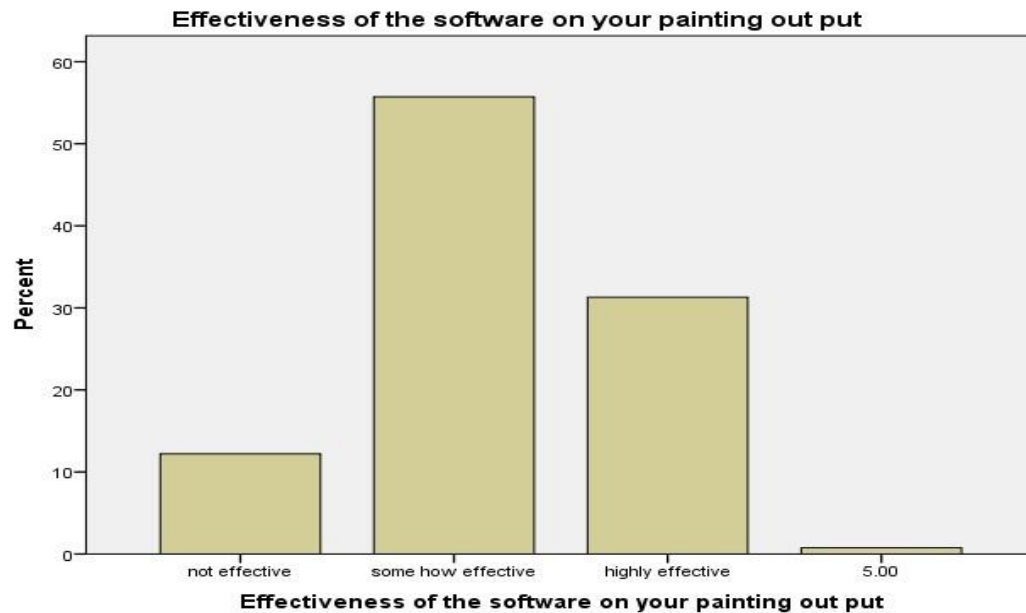


Figure 4.7: Effectiveness of Software on paintings

4.9 Perceptions have an influence among artist about digital art

In response to questions eight (8) majority of respondents, constituting 54.2% when asked if their perception have an influence about digital art (see figure 8). It is interesting to note that 13.7% strongly disagree with this assertion, 14.5% strongly disagree with this view.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	12	15.6	15.8	15.8
Disagree	11	14.3	14.5	30.3
Agree	37	48.1	48.7	78.9
Strongly Agree	13	16.9	17.1	96.1
Total	76	98.7	100.0	

Table 4.8: Showing Perceptions and influence on among artist about digital art

Technology perceptions may have a beneficial impact in developing a new movement in science. The learners can understand to use educational technologies as skills to develop rather than using technology for their social and recreation purposes only, and therefore learn more effectively.

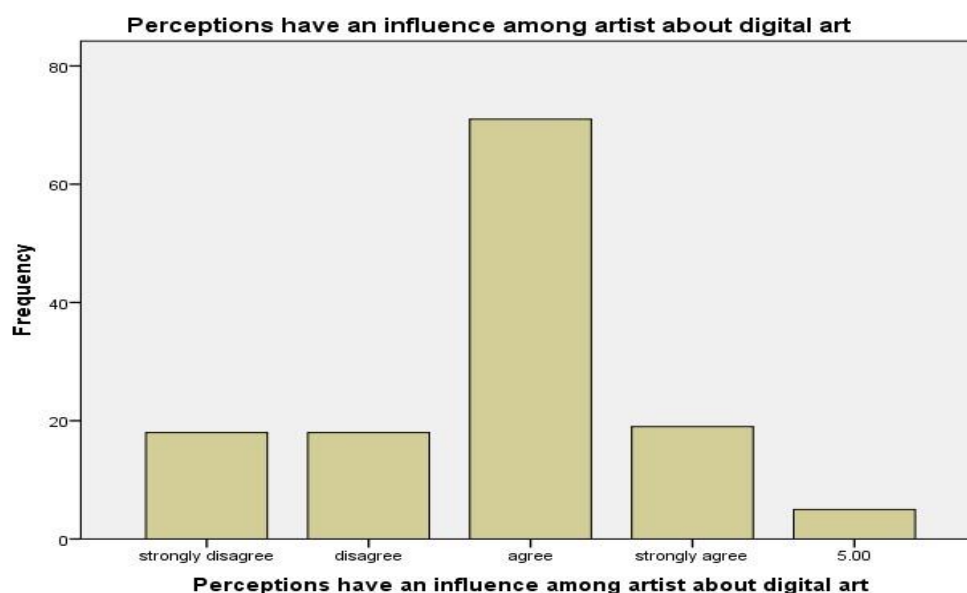


Figure 4.8: Perceptions have an influence among artist about digital art

Strauss and Hill (2007) have discovered online instructive assets to bring to the table individual acknowledgment. The greater part of the art educator didn't have electronic training developments for traditional educational nurturing but rather are strengthened with the traditional method of execution, in the area of painting.

4.10 Art is influence by technology today

Figure 4.9. shows that, Art is influence by technology today tied to 48.9% response agreed to this assertion. 30.5% strongly agreed to this, 14.6% strongly disagree with this assertion.

7 respondents disagree to this statement, representing 5.3%. Eshet-Alkalai, 2004 in his study reported that "today is completely clear that students are living in an inexorably advanced world, where authority of computerized devices and abilities is not just a luxury, but however a need".

Frequency	Percent	Valid Percent	Cumulative Percent
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Valid	Strongly Disagree	19	14.5	14.6	14.6
	Disagree	7	5.3	5.4	20.0
	Agree	64	48.9	49.2	69.2
	Strongly Agree	40	30.5	30.8	100.0
	Total	130	99.2	100.0	
KNUST					
Total					
		130	100.0		

Table 4.9: showing Art is influence by technology today

Lankshear and Knobel, 2008; among others, can't disclose to us that students can't utilize this innovation every day, due to genuine and critical advancement.

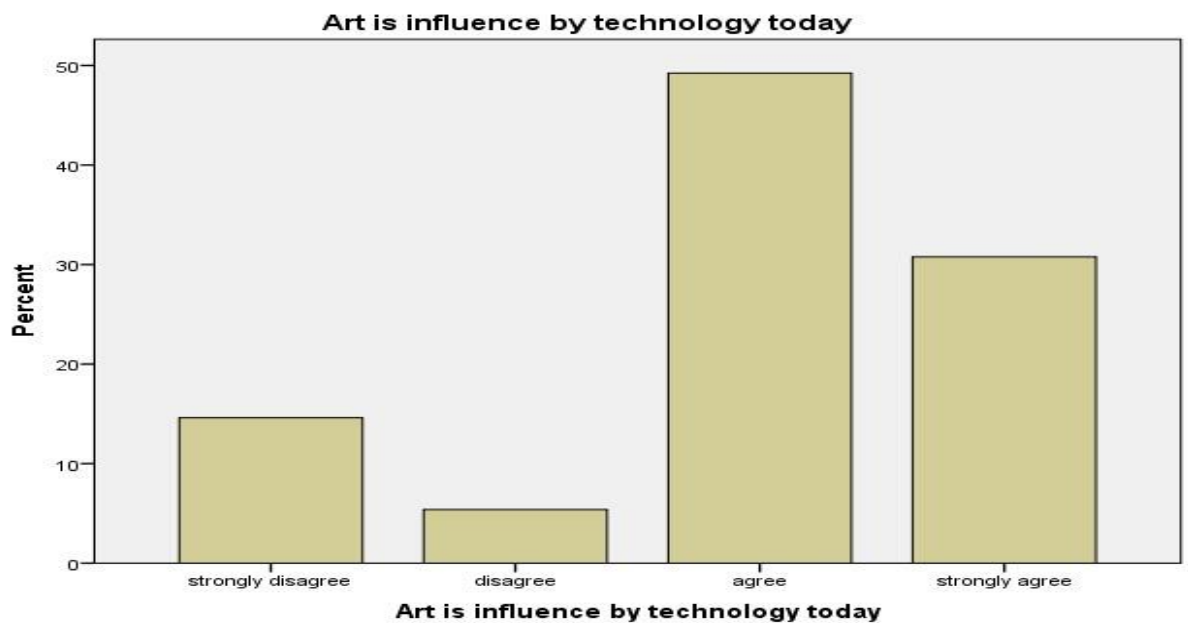


Figure 4.9: Art is influence by technology today

In his capacity, he gave the following three metaphors or filters: practical, essential and rhetorical literacy. In general, he asserted that: "Students when not properly introduced to all three types of

literacy would find it hard to completely and concretely engage in technological activities and thereby see technology as unsatisfactory in the field of painting when use to execute art digitally".

4.11 Good for modern artist to use the tools of technology to execute

Figure 4.10. reports that, 46.6% agree to the statement “technology is good for modern artist to use when executing digital art. 16.0% respondents strongly agree to this fact. 13.0% are neutral to this assertion. 6.9% disagree, 23.0% strongly disagree to this fact.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	23	17.6	17.6	17.6
	Disagree	9	6.9	6.9	24.4
	Neither Agree	17	13.0	13.0	37.4
	Agree	61	46.6	46.6	84.0
	Strongly Agree	21	16.0	16.0	100.0
	Total	131	100.0	100.0	

Table 4.10: showing Good for modern artist to use the tools of technology to execute

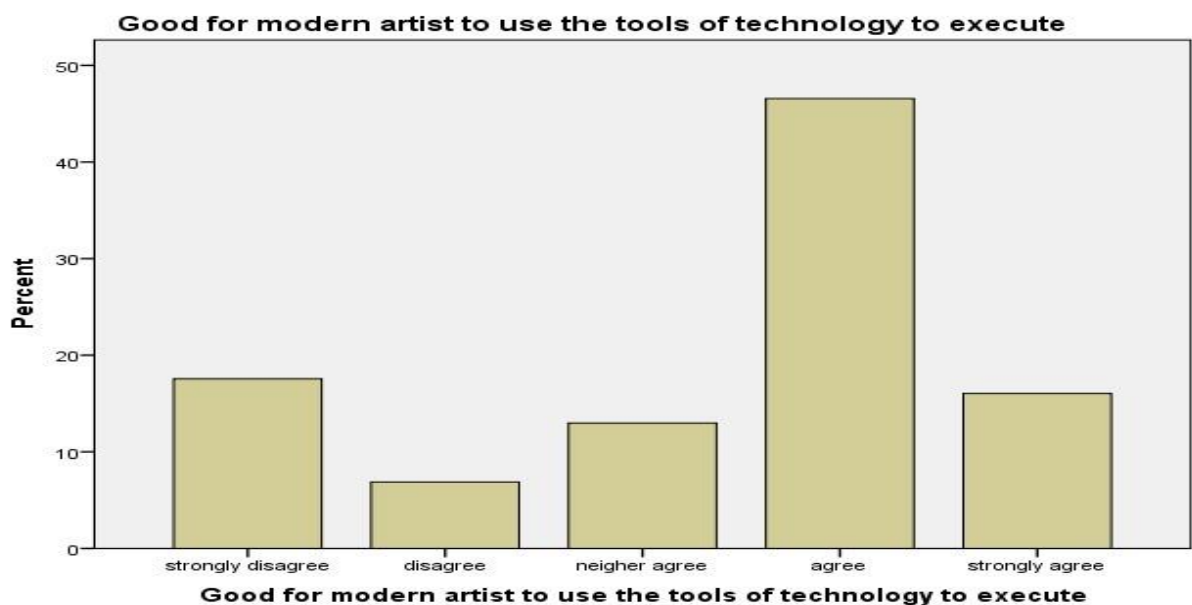


Figure 4.10: Good for modern artist to use the tools of technology to execute

According to (Lewis, 1984). "Digital painting is processed electronically using paint software". Lewis 1984 identified that "Computer display represents a content that artisans interact with," which shows the finished results on diverse outcomes, for instance on paper (Aloisio, 2006). Report from (Kissane, 2015) shows that "The digital artist attaches equal importance to bitmap and vector device applications. Awareness of the process as well as the integration and adaptation of current methods enables digital invention to be used in its fullest."

4.12 Printing out is quick with varied materials using digital technology

In response to figure 4.12, 48.1% agree that print out is quick in the case of digital arts, this was supported by the 35.1% strongly agreeing to the assertion, 11.5% disagree with this fact, and 4.6% completely disagree strongly to this statement. (Kissane, 2015) is of the view that "Human discernment helps in assembling quality work". Computerized art is indistinguishable from the fundamental key, which fortified on aesthetic worth and design sensibility.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	4.6	4.6	4.6
	Disagree	15	11.5	11.5	16.0
	Agree	63	48.1	48.1	64.1
	Strongly Agree	46	35.1	35.1	99.2
	Total	131	100.0	100.0	

Table 4.12: Showing printing out using digital technology

It is basic, appealing and reasonable, simple to reach and use complex inventive medium, controlled through motivation and creative mind. This doesn't mean traditional work of art is replaced by computerized craftsmanship but instead something contemporary will be made highlighting the most recent designs.

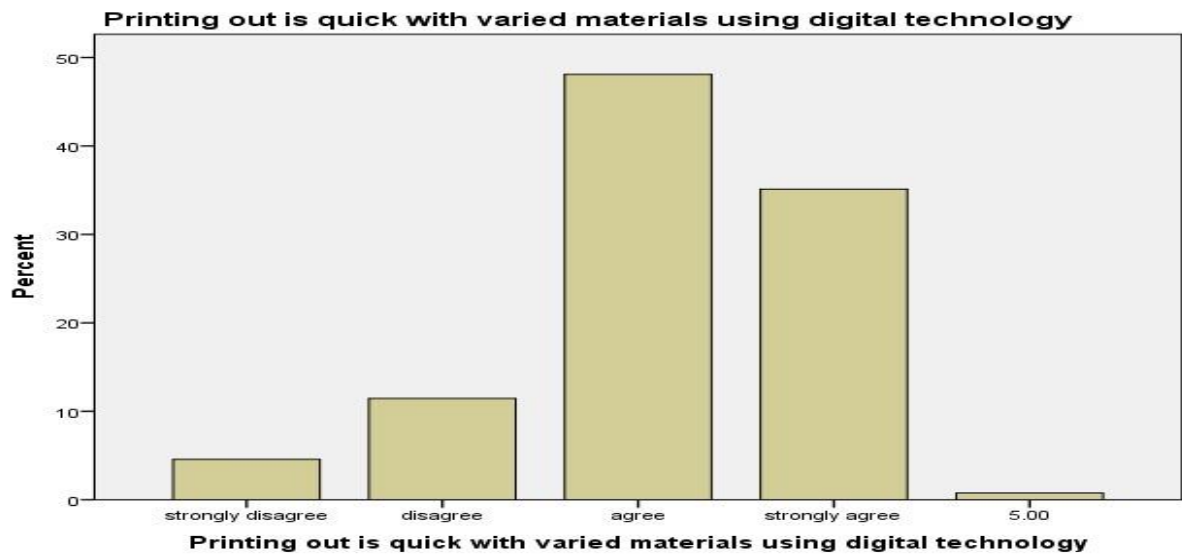


Figure 4.12: Printing out using digital technology

4.13 Does digital painting output promote Understanding

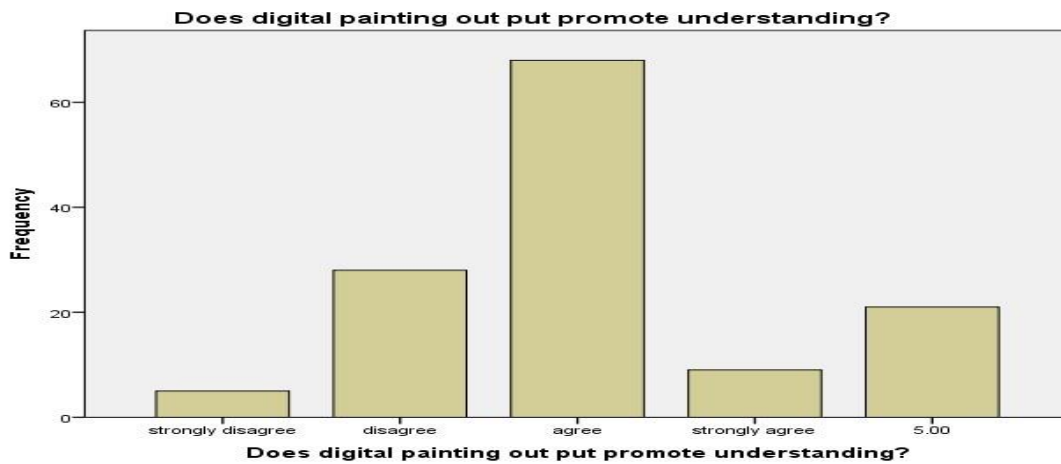
Regarding figure 4.13, response showed that the digital painting output, 51.9% agree about understanding its output, 21.4% disagree to its output, 9.9% strongly agree, 16.0% respondents are neutral to this assertion, and 3.8% strongly disagree about it output.

					Cumulative
					Percent
	Frequency	Percent	Valid Percent		
Valid Strongly Disagree	5	3.8	3.8	3.8	

Disagree	28	21.4	21.4	25.2
Agree	68	51.9	51.9	77.1
Strongly Agree	9	6.9	6.9	84.0

Total	131	100.0	100.0
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Table 4.13: Does digital printing output promote understanding?



According to Motomura (2003), It is important that technological innovations should be applied in addition to updating and getting students to get familiar to use information systems.

4.14 The works of art by computers don't boost an emotional reaction in me automatically

In response to figure 14, 29.8% sometimes agree that computer output do not boost an emotional reaction in them automatically, this was supported by 24.4 % respondents never agree to the assertion, 17.6% occasionally agree with this fact, and 16.0% often see this assertion true. 12.2% completely agree to this statement.

Valid

	Never	Occasionally	Sometimes	Often	Always	
	True	True	True	True	True	Total
Frequency	32	23	39	21	16	131
Percent	24.4	17.6	29.8	16.0	12.2	100.0
Valid Percent	24.4	17.6	29.8	16.0	12.2	100.0
Cumulative Percent	24.4	42.0	71.8	87.8	100.0	

Table 4.14: shows works of art by computers do not necessarily stimulate an emotional response.

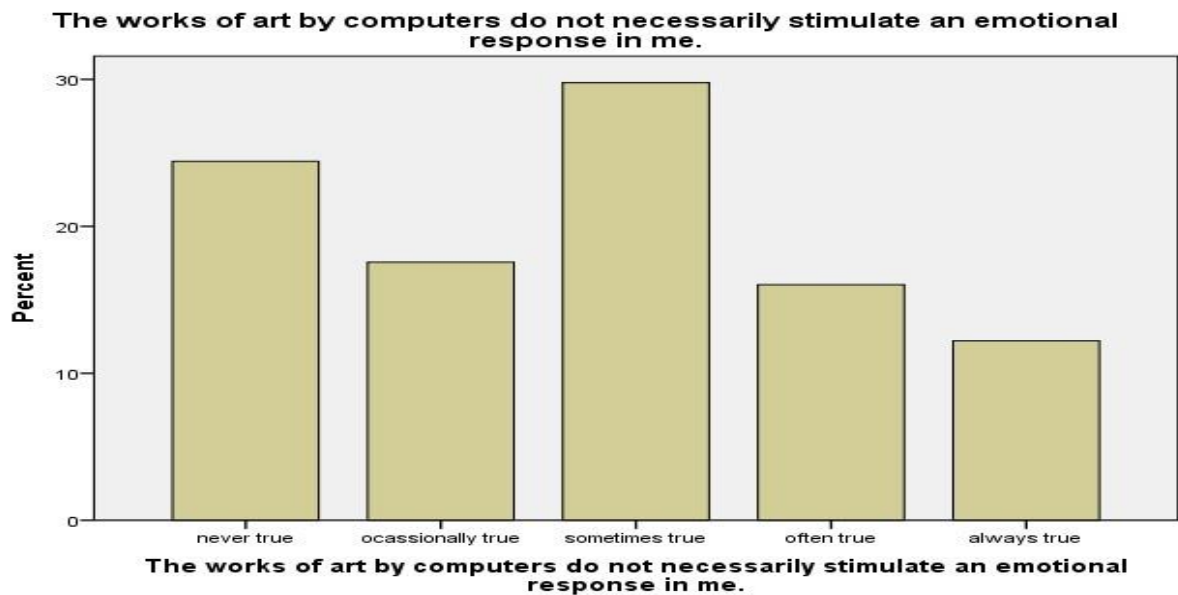


Figure 4.14: shows works of art by computers do not necessarily stimulate an emotional response.

4.15 Objects seem to reach out and grab me: the aesthetic experience Sometimes take my breath away

In response to figure 15, 32.1% respondents sometimes agree that, object seem to reach and grab their aesthetic experience away. This was supported by the 9.2 % respondents never agree to the assertion, 16.0 % occasionally agree with this fact, and 15.3 % often see this assertion true. 27.5 % completely agree to this statement.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never True	12	9.2	9.2	9.2
	Occ. True	21	16.0	16.0	25.2
	Sometimes True	42	32.1	32.1	57.3
	Often True	36	27.5	27.5	84.7
	Always True	20	15.3	15.3	100.0
Total		131	100.0	100.0	

Table 4.15: shows Art objects seem to reach out and grab me: the aesthetic experience sometimes takes my breath away

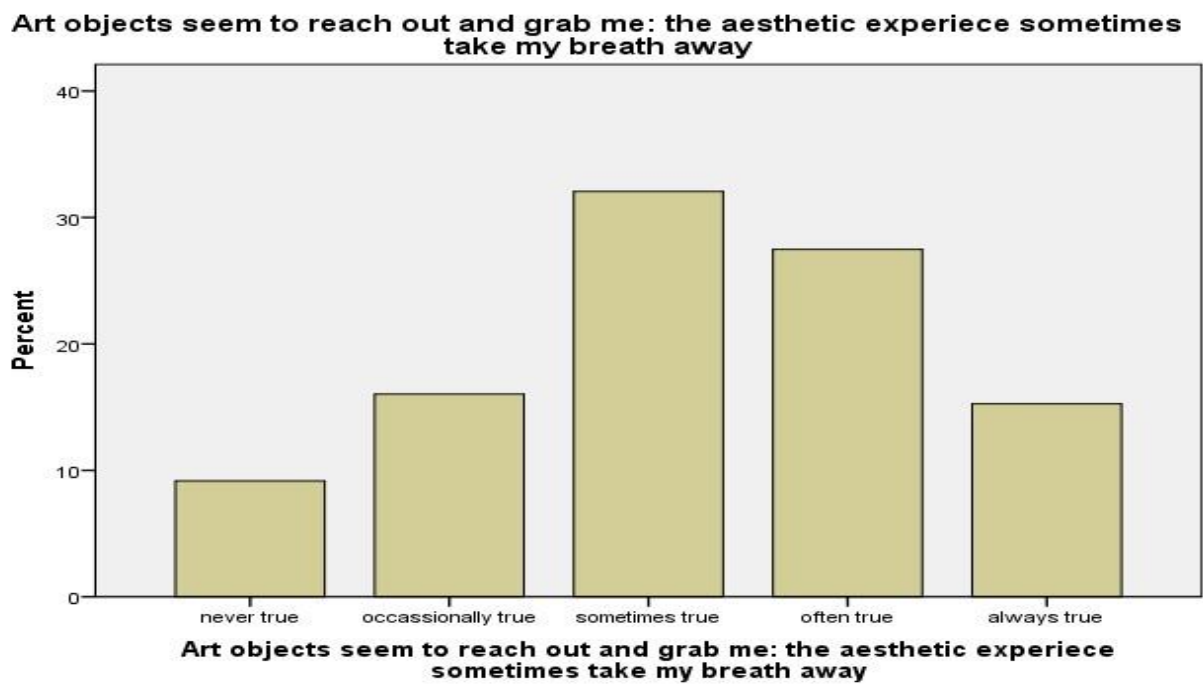


Figure 4.15: Art objects seem to reach out and grab me: the aesthetic experience
sometimes take my breath away.

4.16 Integrating Qualitative Results and Quantitative Results

The quantitative part of this section examined the results of data, which brought about two fundamental classifications including gender, age, interest in the use of digital technology in painting or graphic work, the use of digital tools in painting or graphics design, regular usage in painting, effectiveness of digital media software's on paintings, how perceptions influence artist about digital art, is art been influence by technology today?, artist usage of technology to execute works, printing out with varied materials using digital technology, discuss digital painting output if it does promote understanding, and finally the aesthetic feelings and interest among the populace.

(Kissane, 2015) is of the view that, " Computer Advanced art learning is firmly tied and similar with traditional artistic style ". Computerized art is indistinguishable from the basic art, is reinforced on principle and design elements, aesthetic worth and design sensibility. It is straightforward, appealing, pragmatic, simple to arrive at with a complex inventive medium and

controlled through innovative inspiration using creative mind. "This doesn't mean traditional artwork is succeeded by advanced craftsmanship. Indeed, with time, "work and artistic expression are constantly developing" (Wands, 2001).

Strauss and Hill (2007) have discovered online instructive assets to bring to the table individual acknowledgment. The greater part of the art educator didn't have electronic training developments for traditional educational nurturing (Lankshear and Knobel, 2008) among others, can't disclose to us that students can't utilize this innovation every day, due to genuine and critical advancement.

(Lankshear & Knobel, 2008) added that the full realization of digital technologies will include students. Selber (2004) argued "three topics are related to literacy: students as technology consumers, students as technology questioners and students as technology creators" (p. 25). EshetAlkalai, 2004 in his study reported that "it is completely clear that researchers today are living in an undeniably advanced world, where authority of computerized instructions and abilities is not just a luxury, however a need". Insights about perceptions may really have a positive impact in creating new knowledge, rather than utilizing technology for just its socialization purposes.

Tied to the qualitative analysis provided, the explanations for painting, Definition of painting discussed how painting is characterized by individual artists and its advancement to art professionals. Also, in the context of artistic feelings, public acceptance and artist desire, Agyemang (2012) has established theories linked with these two groups. The importance of painting and combining traditional and digital media is incorporated in the different styles discussed.

Interviewee IRM 8 found that "expertise made with computerized technologies do not have a feel of texture and physicality". Interviewee IRM 9 then again thinks; " aesthetic feel is not attached to a medium". He stretched further to mention that, "It relies totally upon the project the artist is working with and what you are attempting to convey by the close of the day". Basically, the delayed consequences of the meaning of painting is unknown. This is on account of the continuous deviations in the styles and tools of the artists. The results sum it up that artistic tools do not affect the results of original art, and should therefore not affect how painting is described. In the emerging theory this concept was clearly visible. The emerged theory highlighted the links between the main theories and ideas which arosed from the responds.

4.16.1 Analysis of interview responses from Digital Art Instructors' regarding the use of digital technologies in the production of painting in KNUST campus.

Objective ONE: To elicit the views of Digital Art Instructors, Digital Art Students and Practicing Digital Artists' regarding the use of digital technologies in the production of painting in KNUST campus.

1. Wacom tablets as Computerized method has brush strokes and inspirations, flexibility, worries and mistakes are eliminated.
2. Corel Painter has presets water colour effects to be applied on digital painting.
3. Digital technology software such as Adobe Photoshop gives oil paint effect feelings. 4. Digital art leaves nothing permanent and is free from stains of colours when in used.
5. Magic Bullets can also add texture to designs to give nice looking.

4.16.2 Analysis of interview responses from Digital Art Instructors’ regarding the attitude of the general public.

Objective TWO: *To find out the ways in which the views of these respondents influence the attitude of the general public towards digital painting.*

Findings from interview with Digital Art Instructors (N = 11)

- Three (3) Digital Art Instructors expressed that, “traditional artists execute their works in Photoshop and used it as a reference to produce good art digitally and conventionally”.
- Two (2) Digital Art Instructors said “digital painting is flat but gives a preview or thumb nail designs prior to the final work which is sometimes difficult to achieve”.
- Four (4) Digital Art Instructors expressed that digital art has a canvas with unlimited colours and can be used for designing art works.
- 9 out of 11 said, “Traditional art brings emotions and feelings but digital art creates more samples with preset designs”.

4.16.3 Analysis of these respondents in influencing the attitude of the general public towards digital painting.

1. All Digital Art Instructors (100%) said the artworks and the artists should not be exclusively exhibited in the conventional galleries but should be available online (Digital galleries).
2. Art professionals should not see digital art pieces as inferior just because of the medium used.
3. Eight (8) out of 11 digital art instructors said, digital art students lack confidence in submitting their digital works to galleries; hence, they show little interests in digital art.

Meanwhile, all Digital Art Instructors (N=11) 100% said that:

- There are diverse theories on painting as an art form which had evolved greatly and bears different styles and meanings.
- Criteria for judging traditional art should be the same for digital method.
- Both traditional and digital art are executed with the same approaches; hence, they should be given unbiased chances.

4.16.4 Analysis of interview responses from Digital art instructors on the aesthetic values.

Objective THREE which states: *To examine the views of the respondents in defining the aesthetic values placed on artworks produced using digital technologies.*

- Digital technologies allow the younger generation to communicate innovatively with few thought to get a range of effects.
- Digital creative process makes it possible to change something from known to the unknown.
- Digital technologies can also allow for the application of textures to create a feeling of realism and differentiation that evoke aesthetic appreciation.
- Understanding the artist should begin at looking into the different media including the use of digital technologies.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Overview

This chapter entails brief statement of the problem, restatement of the aim and the objectives. The summary of methodology used, summary of the major findings, conclusion and some recommendations.

5.1 Introduction

Despite the fact that some higher institutions have adopted and started utilizing digital technologies with full acceptance as the mediums for producing art, in other institutions it is not yet fully accepted and students cannot produce digital art works for assessment in senior high schools.

It is not surprising in the Ghanaian society both in the academia do not regard works that are produced using computers or digital mediums as true artworks. With the major problem being the Ghana Education Service, which is an examination body has not yet accepted digital painting as a technological tool in the art education curriculum. But this examination body curriculum accepts students learning Corel Draw as Software in the General Knowledge in Art course outline. However, students are prevented expressing themselves during their final year projects using this software's. So why then Corel Draw being captured in the course outline for students to study.

The overall aim of this study was to elicit the views of Digital Art Instructors, Digital Art Students and Practicing Artists. Then again, Ghana Education Service to accept digital technologies as mode of artistic expression for students to be examined in that field.

The aim was also for GES to be certain on their curriculum for S.H.S students then fusing digital art software such as Corel Draw for students to learn when their emphasis is in traditional method of examining students.

The principal research design was qualitative research design with emphasis on grounded theory or constant comparatives of theories. The research method used was mixed method, qualitative research method and descriptive research method. It also presents information on the research tools and instruments used in collecting the needed data to give answers to the study. The nature of the

population studied, sampling, administration of instruments, steps taken to gather the data and data processing methods are all inclusive.

The objectives of the study were:

1. To elicit the views of Digital Art Instructors, Digital Art Students and Practicing Digital Artists' regarding the use of digital technologies in the production of painting in KNUST.
2. To find out the ways in which the views of these respondents influence the attitude of the general public towards digital painting.
3. To examine the views of the respondents in defining the aesthetic values placed on artworks produced using digital technologies.

5.2 Summary of Main Findings

5.2.1 On the view of Digital Art Instructors, Digital Art Students and Practicing Digital Artist' in the use of digital technologies.

In line with the objective one for the study it was found out that Wacom tablets as Computerized method has brush strokes and inspirations, flexibility, worries and mistakes are eliminated in these mediums. Corel Painter, which is digital art software: has design presets, water colour effects to be applied on digital paintings. Digital technology software such as Adobe Photoshop gives oil paint effects to work of art. Digital art leaves nothing permanent and it is free from stains of colours. Magic Bullets can also add textures to designs to give nice looking.

According to Doonan, (1992), the impact of picking the correct device is essential to the artist's style of work and the type of artwork the craftsman adjusts him/herself at. At the point when a craftsman intends to deliver a computerized piece, the achievement of that orders they know their crowd; a group of people who acknowledge that the utilization of advanced gadgets to make fine arts can't hurt the quality of the art. Moreover, audience expect fine arts can arouse, draw on their

feelings and can pass on the craftsman's message. IRF 1 made mention of the tools she is comfortable with when she said “for traditional medium, you have acrylics, oil paint, water colors, gouache, pastel, posca paints, charcoal etc., and you can accurately blend them on canvas”.

Since digital artist can replicate his artwork for multiple times and still have the original make it lacks aesthetic value (Candy & Edmonds, 2002). It is a general fact that, traditional artist, museum professionals are afraid of losing their jobs, in the galleries. This fact has made the digital painting to be condemned by many as lacking physicality, been flat and lacking depth. The result of the study revealed that some people have the feelings of rejecting digital artworks due to the fact that, museum professionals, critics and aestheticians need to preserve tradition, by keeping old aged art pieces, with the view of communicating message about the way of life of a particular society, within a particular period. Though the modern innovation swerves from the methods of the old art forms; they place such restrictions as building barriers to being emphasizing on the originality, authenticity and the artist's emotions and satisfaction in connection to their work. According to the respondents these art forms are believed to be new to them and has just come up suddenly.

5.2.2 On the view to find out the ways in which the opinions of these respondents influence the attitude of the general public towards digital painting.

5.2.2.1 Opinions of respondents in giving explanations to painting

Three (3) digital art instructors expressed that, “Traditional artists execute their works in Photoshop and used it as a reference to produce good art digitally and conventionally”. Two (2) digital art instructors said “Digital Painting is flat but gives a preview or thumb nails designs prior to the final work which is sometimes difficult to achieve”. Four (4) Digital art instructors expressed that digital art has a canvas with unlimited colours and can be used for designing art works. 9 out of 11 said, “Traditional art brings emotions and feelings but digital art creates more samples with

presets designs”. All digital art instructors (100%) said the artworks and the artist should not be exclusively exhibited in the conventional galleries but should be available online (Digital Galleries). Art professionals should not see digital art pieces as inferior just because of the media used. Eight (8) out of 11 digital art instructors said, digital art students lack confidence in submitting their digital works to galleries; hence, they show little interests in digital art.

5.2.3 On the objective three: To examine the views of the respondents in defining the aesthetic values placed on artworks produced using digital technologies.

5.2.3.1 Opinions of respondents on the aesthetic values on art pieces

Firstly, Digital technologies allow the younger generation to communicate innovatively with few thought to get a range of effects. Second was, digital creative process makes it possible to change something from known to the unknown. Furthermore, digital technologies can also allow for the application of texture to create a feeling of realism and differentiation that evoke aesthetic appreciation. Finally, Understanding the artist should begin at looking into the different mediums including the use of digital technologies.

5.3 Conclusions

There still exist negative perceptions about the role of digital technology in the production of art works. This is because, majority of traditional artists believe traditional art is more tangible but digital art is flat and lack physicality. Also, advancements in digital technologies are changing to wear away the true meaning of art created with the traditionally known methods. Again, with appropriate interventions put in place, some biased perceptions identified by this study can be solved.

5.4 Recommendations

First of all, to completely erase the negative thought of some artists; the definition of art should be reframed by the Ghana Curriculum Research and Development Division to include digital art in the curriculum of schools at all levels and not to confine it to the tertiary levels only. Such that these educational bodies can fully accept and assess students using these digital technological mediums.

To add to the above, all digital art instructors and artists should give equal preference to art works, irrespective of the medium used. This would make artists gather courage to build on the digital mediums right from scratch as their talent and develop more to become professionals in this fields. The Ghana Art Associations' through the Ministry of Education should collaborate with the Ministry of Art, Tourism and Culture to organize national art programs to motivate digital artists and promote the aesthetic value and meaning tied to digital works of art.

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APPENDICES

APPENDIX A

My name is Salifu Osman and I am an MPhil student in the Department of Educational Innovation in Science and Technology Department, KNUST.

I am conducting research under the supervision of Dr. Harry Batson Essel on Artists' Perception of the Use of Digital technology in Painting. As an art instructor, your thought and knowledge on artists' Perception on digital technology will be important to this study.

I would appreciate the opportunity to speak with you about your experience on this topic

Appendix A: Semi-Structured In-Depth Interview Questions

1. In your opinion what is art/painting?
2. What media do you primarily prefer to work with?
 - a. Why do you prefer that media?

- b. Tell me about some of the factors that led to that choice?
3. What is your opinion about the importance of traditional art/painting in
- a. Society? b. Education?
4. How has digital technology influenced your teaching method?
5. How has art/painting influenced your teaching?
6. Have you ever experimented with any digital tool? What kind?
7. What was that experience like?
8. Is there opposition to the integration and the use digital media in painting/art?
- a. From the public b. From other artists
9. Do you believe technology offers a greater opportunity for artists?
10. What are some digital media that you have employed in your work?
11. What are some of the obstacles you have faced working with digital media?
12. Which do you see has more aesthetic value? Traditional or digital media art?
13. Should traditional art and digital art be compared?
14. Where is the place traditional art ten years from now?
- a. Education b. Society c. In the lives of individuals
15. Would digital art ever be fully accepted?

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APPENDIX B

PERCEPTION OF GHANAIAN DIGITAL ARTISTS' REGARDING THE UTILIZATION OF DIGITAL TECHNOLOGY IN PAINTING.

This questionnaire is to elicit information on your views and opinions as **Digital Art students**, your thought and knowledge on Artists' Perception in the Use of Digital technology in Painting. You are therefore kindly requested to be objective in providing this information. The information provided will be kept strictly confidential.

Section A: Please tick [✓] in the appropriate box provided

1. Gender Male [☐] or Female [☐]

2. What is your Age range?
(a) Under 18 [☐] (b) 18-24yrs [☐] (c) 25-34yrs [☐] (d) 35-44yrs and above [☐]

Section B

1. Are you interested in the use of digital technology in painting or graphic work? (a) Yes []
(b) No []
2. Do you use digital tools in your graphic design or painting work?
(a) Yes [] (b) No []
3. Which of the following digital tools do you use recently?
(a) Photoshop [] (b) Corel draw [] (c) Sketch pro [] (d) Photo paint []
4. How often do you use it for your painting works?
(a) Always [] (b) once a week [] (c) once a semester [] (d) Not at all []
5. How effective is this software's impact on your painting output?
(a) Not effective [] (b) Somehow effective [] (c) Highly effective []
6. Does this software's play a role and have an impact on your graphic output?
(a) Not effective [] (b) Somehow effective [] (c) Highly effective []
7. Digital technology makes it easy to add and subtract details which is not easily doable in traditional painting
(a) Never (b) Occasionally (c) Sometimes (d) Often (e) Always
True [] True [] True [] True [] True []
8. Perceptions have an influence on the thought among artist about digital art as art forms considering a composition (a) Strongly Disagree [] (b) Disagree [] (c) Agree []
(d) Strongly Agree []

9. Art is influenced by technology today
(a) Strongly Disagree [] (b) Disagree [] (c) Agree [] (d) Strongly Agree []
10. It is good for modern artist to use the tools of technology when creating a work of art
(a) Strongly Disagree [] (b) Disagree [] (c) Neither agree [] (d) Agree [] (e) Strongly Agree []
11. Printing out is quick with varied materials using digital technologies
(a) Strongly Disagree [] (b) Disagree [] (c) Agree [] (d) Strongly Agree []
12. How do you consider time factor in digital painting?
(a) Does not require much time [] (b) Less time is needed []
(b) More time is needed [] (d) Much time is needed []
13. Technology help in the creation of new ideas in art
(a) Strongly Disagree [] (b) Disagree [] (c) Agree [] (d) Strongly Agree []
14. Does Digital art painting output promote understanding?
(a) Strongly Disagree [] (b) Disagree [] (c) Agree [] (e) Strongly Agree []
15. How do you rate the use of digital tools to the non-digital method?
(a) 100% - 75% [] (b) 75% - 45% [] (c) 45% - 0% []

Section C: This section elicits respondents' emotions and attitudes towards art produced digitally.

Never Occasionally Sometimes Often Always

True

True

True

True

True

1. Does your emotions and thought have an influence on your view of digital ☐
☐ ☐ ☐ ☐ paintings

2. Does cultural values affect your ☐ ☐ ☐ ☐ ☐ view on digital
paintings

3. I do get so satisfied with
knowledge that I don't have ☐ ☐ ☐ ☐ ☐ when exposed to
digital painting software

4. A great work of art represents the ☐ ☐ ☐ ☐ ☐ ferment and energy of a whole age.

5. The more information you introduced in to a work of art, ☐ ☐ ☐
☐ the more interesting it will appear. ☐

6. Art must be made by people, because the communication of human experience is an
essential aspect of ☐ ☐ ☐ ☐ ☐ the works aesthetic encounter.

Never

Occasionally

Sometimes

Often

Always

True

True

True

True

True

7. I don't need to be confronted with a new way of seeing or of understanding the world in
order to have an ☐ ☐ ☐ ☐ ☐ aesthetic experience.

8. Art objects seem to reach out and ☐ ☐ ☐ ☐ ☐ grab me; the
aesthetic experience sometimes takes my breath away.

☐ ☐ ☐ ☐

9. The quality of execution, the look and finish of the materials, are ☐ ☐ ☐ ☐ ☐ extremely important in determining my response to the work.

10. The works of art by computer ☐ ☐ ☐ ☐ ☐ do not necessarily stimulate an emotional response in me.

11. Dealing with art is no different ☐ ☐ ☐ ☐ ☐ than dealing with any other commodity.

12. Formal qualities, like balance or ☐ ☐ ☐ ☐ ☐ harmony, are often irrelevant to the quality of the work of art.

13. Knowledge of the historical and biographical background of a painting, generally enhances the quality ☐ ☐ ☐ ☐ ☐ of the aesthetic experience of art

14. Art works help one to connect different ideas, different feelings, that hadn't been brought together before. ☐ ☐ ☐ ☐ ☐

APPENDIX C

PERCEPTION OF GHANAIAAN DIGITAL ARTISTS' REGARDING THE UTILIZATION OF DIGITAL TECHNOLOGY IN PAINTING.

This questionnaire is to elicit information on your views and opinions as **Practicing digital artists**, your thought and knowledge on Artists' Perception in the Use of Digital technology in Painting.

You are therefore kindly requested to be objective in providing this information. The information provided will be kept strictly confidential.

Section A: Please tick [√] in the appropriate box provided

3. Gender Male ☐ or Female ☐

4. What is your Age range?

(b) Under 18 ☐ (b) 18-24yrs ☐ (c) 25-34yrs ☐ (d) 35-44yrs and above ☐

Section B

16. Are you interested in the use of digital technology in painting or graphic work? (b) Yes ☐
] (b) No ☐

17. Do you use digital tools in your graphic design or painting work?

(b) Yes ☐ (b) No ☐

18. Which of the following digital tools do you use recently?

(b) Photoshop ☐ (b) Corel draw ☐ (c) Sketch pro ☐ (d) Photo paint ☐

19. How often do you use it for your painting works?

(b) Always ☐ (b) once a week ☐ (c) once a semester ☐ (d) Not at all ☐

20. How effective is this software's impact on your painting output?
- (c) Not effective [] (b) Somehow effective [] (c) Highly effective[]
21. Does this software's play a role and have an impact on your graphic output?
- (d) Not effective [] (b) Somehow effective [] (c) Highly effective[]
22. Digital technology makes it easy to add and subtract details which is not easily doable in traditional painting
- (b) Never (b) Occasionally (c) Sometimes (d) Often (e) Always
- True [] True[] True [] True[] True[]
23. Perceptions have an influence on the thought among artist about digital art as art forms considering a composition (a) Strongly Disagree [] (b) Disagree [] (c) Agree [] (d) Strongly Agree []
24. Art is influenced by technology today
- (b) Strongly Disagree [] (b) Disagree [] (c) Agree[] (d) Strongly Agree []
25. It is good for modern artist to use the tools of technology when creating a work of art
- (b) Strongly Disagree [] (b) Disagree [] (c) Neither agree [] (d) Agree [] (e) Strongly Agree []
26. Printing out is quick with varied materials using digital technologies
- |(a) Strongly Disagree [] (b) Disagree [] (c) Agree [] (d) Strongly Agree []
27. How do you consider time factor in digital painting?

(b) Does not require much time [] (b) Less time is needed []

(b) More time is needed [] (d) Much time is needed []

28. Technology help in the creation of new ideas in art

(b) Strongly Disagree [] (b) Disagree[] (c) Agree [] (d) Strongly Agree[]

29. Does Digital art painting output promote understanding?

(b) Strongly Disagree [] (b) Disagree[] (c) Agree [] (e) Strongly Agree []

30. How do you rate the use of digital tools to the non-digital method?

(b) 100% - 75% [] (b) 75% - 45% [] (c) 45% - 0% []

Section C: This section elicits respondents' emotions and attitudes towards art produced digitally.

Never Occasionally Sometimes Often Always
True True True True True

15. Does your emotions and thought have an influence on your view of digital ☐

☐ ☐ ☐ ☐ paintings

16. Does cultural values affect your ☐ ☐ ☐ ☐ ☐ view on digital
paintings

17. I do get so satisfied with knowledge that I don't have ☐ ☐

☐ ☐ ☐ when exposed to digital painting software

☐ ☐ ☐ ☐ ☐
18. A great work of art represents the ferment and energy of a whole age.

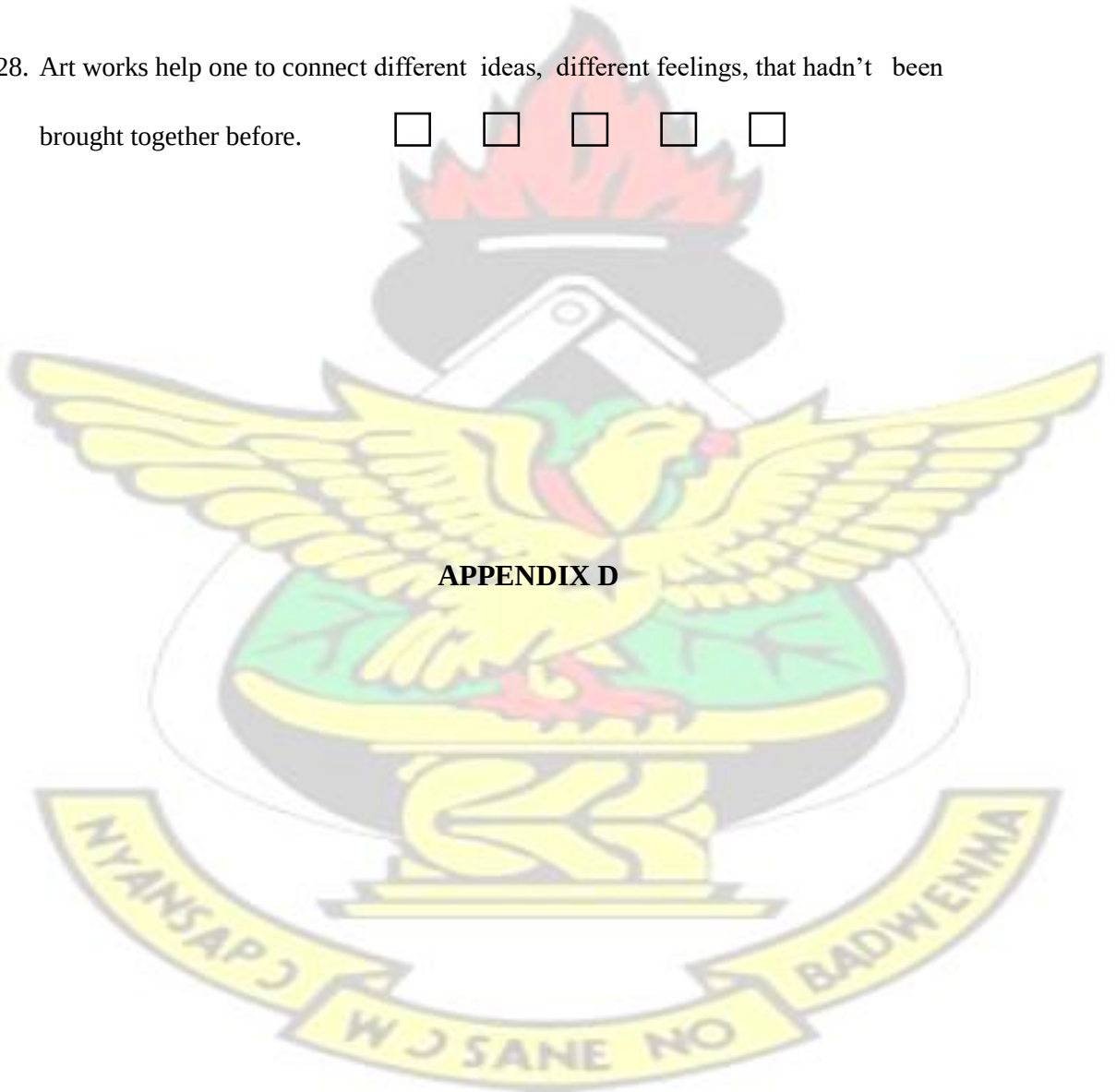
19. The more information you introduced in to a work of art, ☐ ☐ ☐
☐ the more interesting it will appear. ☐
20. Art must be made by people, because the communication of human experience is an
essential aspect of ☐ ☐ ☐ ☐ ☐ the works aesthetic encounter.
Never Occasionally Sometimes Often Always
True True True True True
21. I don't need to be confronted with a new way of seeing or of understanding the world in
order to have an ☐ ☐ ☐ ☐ ☐ aesthetic experience.
22. Art objects seem to reach out and ☐ ☐ ☐ ☐ ☐ grab me; the
aesthetic experience sometimes takes my breath away.
☐ ☐ ☐ ☐
23. The quality of execution, the look ☐ ☐ ☐ ☐ ☐
and finish of the materials, are ☐ ☐ ☐ ☐ ☐
extremely important in determining my response to the work.
24. The works of art by computer ☐ ☐ ☐ ☐ ☐ do not necessarily
stimulate an emotional response in me.
25. Dealing with art is no different ☐ ☐ ☐ ☐ ☐
than dealing with any other commodity.

26. Formal qualities, like balance or ☐ ☐ ☐ ☐ ☐ harmony, are often irrelevant to the quality of the work of art.

27. Knowledge of the historical and biographical background of a painting, generally enhances the quality ☐ ☐ ☐ ☐ ☐ of the aesthetic experience of art

28. Art works help one to connect different ideas, different feelings, that hadn't been brought together before. ☐ ☐ ☐ ☐ ☐

APPENDIX D





**Kwame Nkrumah
University of Science
and Technology, Kumasi**

**College of Art and Built Environment
FACULTY OF EDUCATIONAL STUDIES**

DEPARTMENT OF EDUCATIONAL INNOVATIONS IN SCIENCE AND TECHNOLOGY

Ref: DEIST/S/3

26th June, 2020

The Head
Department of Painting & Sculpture
Faculty of Art
KNUST

LETTER OF INTRODUCTION – MR. SALIFU OSMAN

Mr. Salifu Osman is an MPhil Art Education student in the above Department of KNUST, with the Student No. 20602430 and PG 5010818.

He is conducting a research titled *“Perceptions of Ghanaian Artist regarding the Utilization of Digital Technologies in Painting”*.

I would be very grateful if you could provide him with any information he may need.

Yours faithfully,

Dr. (Mrs) Mavis Osei
HEAD OF DEPARTMENT

PERCEPTIONS OF GHANAIAN DIGITAL ARTISTS REGARDING THE UTILIZATION OF DIGITAL TECHNOLOGIES IN PAINTING

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