DEVELOPMENT OF A METHODOLOGY IN DRAWING FOR STUDENTS IN THE DEPARTMENT OF PUBLISHING STUDIES

By

Estherlina Asare-Forjour

(BFA Painting)

A Dissertation submitted to the School of Graduate Studies, Kwame Nkrumah University of Science and Technology in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

IN ART EDUCATION

Faculty of Fine Art

College of Art and Social Sciences

December, 2009

DECLARATION

I hereby declare that this submission is my own work towards the award of the Doctor of Philosophy in Art Education and that, 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 acknowledgment has been made in the text.

Estherlina Asare-Forjour PG9137106 ……..…..…….. …...……..

Student's name Index Number Signature Date

Certified by:

Dr. Kodwo Edusei ……..…… ……..…….

(Supervisor) Signature Date

Certified by:

Dr. Joe Adu-Agyem ……..…… ...……..…….

(Head of Department) Signature Date

ACKNOWLEDGEMENTS

I will want to give glory and gratitude to the God Almighty for granting me such a great opportunity to advance in my academic career. The success of this dissertation has been largely due to the priceless contributions made by a number of people. My sincerest gratitude goes to the late Professor Kwesi Andam, former Vice-Chancellor of KNUST who brought a Special Initiative Staff Development Mphil/PhD programme into being for local training of young men and women to take up teaching positions in KNUST. I have benefited immensely from this wonderful idea.

Other persons to whom credit is due are:

Dr. Kodwo Edusei, my research supervisor;

Dr. S. K. Amenuke, my mentor during the write-up;

Nana Afia Amponsaa Opoku-Asare (Mrs.), immediate past Head of Department of General Art Studies who is also my personal mentor, and under whom I have served as Demonstrator these past two years;

All Art Education Lecturers of the Department of General Art Studies;

Mr. Isaac Kofi Appiah of the Department of Publishing Studies, who offered me office space and allowed me free access to observe his drawing lessons;

My colleague PhD Art Education students;

My late father Mr. Baffour Asare-Forjour, who did not live to see me graduate;

My mother Mrs. Mary Asare-Forjour, and all my siblings.

To all of you I can hardly find apt words to describe my sincere gratitude to you: God richly bless you all.

ABSTRACT

"Drawing" is a universal language for self-expression and a means for conveying concealed meanings of an author's intentions to others. Drawing forms an integral aspect of book illustration. Drawing for illustration poses a challenge to students on the Publishing Studies programme in the Kwame Nkrumah University of Science and Technology, Kumasi, Ghana. This is primarily because most of the students who are admitted to the programme have backgrounds in Science, General Arts, Business Studies and other programmes which do not have drawing as part of their studies like those who offer Visual Arts which has drawing as part of each subject.

Because the Publishing Studies programme gives equal opportunity for all Senior High School students to access the programme and drawing is a required course, drawing has been made a compulsory course in the first year. Each student therefore has to learn to draw in the first year before he/she is allowed to choose his /her preferred specialist areas which are Book Design and Illustration, Printing Technology and Management, and Publishing Administration and Management. This makes those students with no art background, specifically in drawing, to face difficulties when they are confronted with drawing in the first year of the programme. Problems with drawing in Year One make Publishing students refrain from choosing Book Design and Illustration when they get to the second year of the programme.

The study therefore adopted the qualitative research method to study the teaching and learning of drawing in the Publishing Studies programme and to explain how a step-by-step teaching methodology can equip students on the Publishing Studies programme with the necessary drawing skills that will encourage more of them to offer Book Design and

Illustration (BDI) to enhance the publishing industry. The study involved pre-testing the new four-year teaching methodology with students in the Department of Publishing Studies to find out its effect on the students' standard of drawing. The research found that art teaching at the Junior and Senior High School level is not done strictly according to the syllabuses provided; and that drawing is also not emphasized in the schools. As a result, many Junior and Senior High School students do not attain the knowledge and skills of drawing necessary for higher education hence the problems faced by students of the Department of Publishing Studies.

Again, the study found that giving admission to a high number of non-art students into the Publishing Studies programme and requiring them to have enough drawing skills to specialize in Book Design and Illustration places more of these students at risk of dropping out or opting for specialist areas other than Book Design and Illustration. This also poses difficulties for the drawing lecturers and the publishing industry. To add to this, the study found that what is taught in drawing does not match the stated course content or syllabus used by the Department of Publishing Studies. Furthermore, the teaching methods used for drawing do not make it easy for non-art students in the Publishing Studies programme.

The study recommends improvements in the teaching methodology and course content for the drawing course. It suggests periodic revision of the drawing syllabus for the four-year programme to reflect changing trends in the publishing industry; teachers adhering to the prescribed syllabuses set by the Ghana Education Service to guide the teaching and learning of drawing at all levels; providing opportunity for art teachers to be more creative in the teaching of art, to enable them to be more innovative in catering for

diversity in the art classroom; adoption of the step-by-step method of teaching specified in this report to help achieve efficiency in the teaching of drawing in the Department of Publishing Studies in particular; and, further research into how creativity in the teaching and learning of drawing can be fostered in the various departments of the Faculty of Art in KNUST.

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INTRODUCTION

1.0 Overview

This chapter explains the background of the study, statement of the problem, objectives of the study, research questions, assumptions, limitations and the geographical and content delimitations of the study. Other relevant issues discussed are definition of terms, abbreviations, and importance of the study.

1.1 Background to the Study

Publishing is as important as any other occupation in the world. This is because publishing generates books, articles, journals, magazines, and periodicals for a wide audience. Publishing is a means for educating, communicating, enlightening and providing information for citizens of countries. A nation's values, traditions, norms and customs are portrayed in books, articles, and other printed materials which help to instill a sense of identity, belongingness and patriotism.

In Africa, only three universities offer studies in Publishing Studies; these are the Kwame Nkrumah University of Science and Technology in Ghana, Moi University in Kenya and Wittswatersrand University in South Africa. Some African countries send their students and staff to KNUST (Department of Publishing Studies) for training. It therefore brings to the fore the importance of giving the best knowledge and skills through effective and efficient methodologies in the various courses outlined in the programme which includes drawing for Design and Illustration. This is in line with the suggestion by the World Encyclopedia

(2000) that publishing "is making the words and pictures that creative minds have produced, that editors have selected and prepared for the printers, and that printers have reproduced".

According to Rao (2003), publishing can be seen from the point of view of an organized and arguable approach of preparing a work of an author in the most suitable form by engaging the services of an editor for authenticity and accuracy of facts, a designer to cater for aesthetics and clear cut explanations of text, as well as a printer for typography and a presentable form. This means that when the cover of a book is designed to incorporate appropriate drawings, it becomes more appealing to the reading public. Drawings then enhance books and these show through the artist's draftsmanship, ability and skills and the impact they make on readers. The idea is that the book designer or illustrator is a very necessary aspect of the business of publishing. The impact of drawings composed as illustrations in children's books for example, can summarize very long stories into compact pictures and thereby reducing ambiguity in the story line in addition to clarifying complex words and sentences to make stories meaningful.

1.2 Statement of the Problem

Drawing is one of many ways of creating images. As the process of making marks on a surface by applying pressure from a moving tool on a surface, drawing may represent what an artist sees, remembers of something that has been seen, or an imagined scene or abstract concept. Common tools for drawing include graphite pencils, pen and ink, inked brushes, wax colour pencils, crayons, charcoal, pastels and markers. Common supports for drawing include paper, sketchbooks, digital tablets and computers.

The publishing industry requires professionals who can effectively handle the tools, materials and equipment that makes the production of good quality books available to the reading public. Training in the art of publishing at the tertiary education level is very critical for a developing nation such as Ghana. The Publishing Studies programme in the then University of Science and Technology (now Kwame Nkrumah university of science and technology) in Kumasi was instituted in 1983 within the then College of Art (now College of Art and Social Sciences) as the Book Industry Section of the Department of Design and General Art Studies (DGAS). Today, the Book Industry Section has grown into what is now known as the Department of Publishing Studies in the Faculty of Industrial Art, College of Art and Social Sciences (CASS).

Since its incorporation in 1984, this four-year Bachelor of Arts degree programme has produced several graduates with art and non-art backgrounds for employment in Book Design and Illustration, Printing Technology, and Publishing Administration. Preliminary investigation of student distribution on the major course specializations in the Department of Publishing Studies indicated that only 35% of students in the Department had ever studied art while about 65% of them had no background knowledge in art although all students are expected to meet the same academic requirements for graduation. With or without art background, Publishing Studies students are obliged to study "drawing" as a compulsory course. That is, because drawing is essential to the publishing industry, all first year students must register, follow the course and pass all examinations before they are allowed to choose their major course specialization.

The drawing component of the Publishing Studies programme serves as a means of helping the students to acquire basic skills to help them in book design and illustration which are critical to effective communication of authors' ideas and also making this vivid, interesting and meaningful to readers. Under illustration, which may be termed a universal language, Publishing Studies students are expected to acquire, understand, criticize and appreciate the fundamentals of drawing as it relates to publishing, printing, advertising, and other related jobs. This level of understanding of drawing directly affects the performance of students and in particular, those with non-art backgrounds. Since drawing is a skill that one can lose without practice, students who studied drawing before enrolling on the programme, including mature students from industry whose occupations are not art-oriented, have more difficulty dealing with the course. What they require to bring them up to the expected level to conveniently tackle drawing projects is effective tuition from lecturers who are capable of delivering the right information based on a syllabus that suits the educational levels of all the students.

It is assumed that lecturers in this Department use teaching approaches and methods that are appropriate for the different categories of students. The preliminary study further disclosed that besides the special classes that the Department organizes for the students, most of them move to their second year to follow Printing Technology and Management or Publishing Administration, with hardly anyone choosing to study Book Design and Illustration. The study also confirmed that the Department had 555 students in the 2007/2008 academic year but of this number of second, third and final year students, 285 or 51% of them were specializing in Publishing Administration, 223 or 40% were offering Printing Technology and Management, with only 47 or 9% of them in the Book Design and Illustration section of

the Department of Publishing Studies. It was also learned that the number of Book Design and Illustration students fell from 16 in 2004/05 and 2005/06 respectively to 13 in 2006/07, 15 in 2007/08 academic years. Besides, out of 47 Book Design and Illustration students in the 2008/09 academic year, 11 were in the fourth year, 26 in third year and 10 in the second year.

Interviews conducted with randomly selected students of the Department as part of the preliminary study also revealed that of the 20 publishing related establishments in Accra and Kumasi who employ Publishing Studies graduates with specialization in Book Design and Illustration, 15 (75%) of them do not assign drawing or illustration tasks to these graduates because they lack the kind of drawing skills required for specific tasks although they produce good design works. Due to this, employers prefer contracting individual professional artists, some street artists and talented art students and graduates to Publishing Studies graduates to provide their illustration needs. The results of this study attest to weaknesses in the teaching of "drawing" courses within the Publishing Studies programme.

Besides these challenges, the study also revealed weaknesses in the Publishing Studies programme which include the following:

- The objectives and rationale for learning drawing as part of the programme have not been spelt out so students who are not aware of what is expected of them.
- The course content does not outline the study of the range of tools, materials and equipment required for drawing to enable drawing students appreciate the characteristics, advantages and disadvantages associated with each one. This limits the students' ability to

explore and experiment with the relevant media to find out the different marks that 6B or HB pencils make and how these affect drawing.

- The course does not include preliminary exercises in drawing. This means that drawing students lack the skill of loosening up the wrist muscles to enable them make the right moves with the various drawing tools.

- The course lacks the skill of critical observation required for drawing. Consequently, students cannot register details correctly because they lack the critical way of looking at what is being drawn by using their sensory organs.

- The skill of coordinating one's hand and eyes which is a vital component of drawing is not taught. This results in students having difficulty achieving the resemblance (in case of realistic drawings) of objects on drawing supports. Training in how to look at an object being drawn and how to take away one's gaze or eyes from the object to the support which thus breaks the looking and drawing (hand and eye) link at the same time, is not provided as part of the drawing course. This makes students miss aspects of what they have to draw and they turn to drawing from memory. Evidently, this makes the drawing process incomplete.

- With regards to drawing techniques, drawing students at the Department of Publishing Studies are made to draw without first being taught how to draw. Teaching also begins with the students drawing objects. This method of teaching creates problems for students who do not have adequate drawing skills.

- The drawing students have limited knowledge about shading techniques so introducing them to a variety of techniques is the best way to help them build confidence in using other techniques other than mass and dot shading, which are mostly utilized.

- Besides, the course does not formally introduce drawing students to the application of more than three planes or tones when shading.

The issues listed above point to the essence of identifying more effective approaches to teaching drawing in the Department of Publishing Studies to encourage more students to specialize in Book Design and Illustration. This study therefore proposes a well structured methodology for teaching drawing to cater for the educational needs of all categories of students admitted to read Publishing Studies in the College of Art and Social Sciences.

1.3 Research Questions

1. What are the existing methods adopted for teaching drawing in the Department of Publishing Studies?
2. How do the students on the Publishing Studies programme cope with the teaching of drawing by the existing method(s)?
3. Are students in the Department of Publishing Studies attaining the maximum knowledge of and skills in drawing through the existing method(s)?
4. Is there the need to introduce a different methodology for teaching drawing in the Publishing Studies Department?
5. Will pretesting the new proposal improve the teaching of drawing?

1.4 Objectives of the Study

1. To identify and describe drawing at the pre-university level.
2. To evaluate the existing method(s) used in teaching drawing from Junior High School, Senior High School and the Department of Publishing Studies of Kwame Nkrumah University of Science and Technology.
3. To develop an alternative methodology for teaching drawing based on the outcome of the evaluation of existing method(s) in use.
4. To pretest the methodology for teaching drawing in the Department of Publishing Studies.

1.5 Delimitation

The study is limited to the teaching and learning of drawing in the Department of Publishing Studies, KNUST, and the content focuses only on drawing courses taught to students on the Publishing Studies programme.

1.7 Definition of Terms

For the purpose of this study, technical and operational terms used in the report are explained as:

Drawing: A process of making marks to create two dimensional images on a surface by applying pressure from a moving tool on a surface.

Draftsman: An artist who excels in drawing.

Tools for Drawing:	The pencils, pens, brushes, silver, inks and pieces of metals that draftsmen use in drawing and they do not get finished.
Materials for Drawing:	The acrylics, dyes, poster colours, water colour, charcoals, and pastels that draftsmen use; these do get finished with time.
Publishing:	A profession of editing, producing, and marketing books, newspapers, magazines, printed music and audio books.

1.8 Abbreviations

DPS	Department of Publishing Studies
BDI	Book Design and Illustration
PA	Publishing Administration
PTM	Printing Technology and Management
SHS	Senior High School
JHS	Junior High School
DGAS	Department of Design and General Art Studies
UNESCO	United Nations Education Scientific and Cultural Organization

1.9 Assumptions

It was assumed that:

1. Drawing is essential to the Publishing Studies programme.
2. Appropriate methods are not used in teaching drawing to Publishing Studies students.
3. There are inadequacies in the teaching of drawing in the department.

4. Students in the Department of Publishing Studies are not acquiring enough basic information and skills in drawing.
5. A suitable teaching methodology will help improve the quality of drawing.
6. The researcher will have access to evaluate the teaching and learning of drawing in the department.
7. The Department of Publishing Studies will accept to implement the research findings.

1.10 Importance of the Study

The Ministry of Education can use the findings of this study to re-design the drawing aspects of the Visual Arts programme followed in Senior High Schools in Ghana. This will enhance acquisition of drawing skills; promote quality teaching and learning of drawing and its application to Picture making, Textiles, Graphic design, Sculpture and the other subjects. The findings can be adopted to promote creativity in the teaching and learning of Visual Arts and Science subjects which require skills in drawing. This can also be used to develop the skills of young people for self-employment in drawing, design and painting.

The ideas are relevant to the education of students in tertiary art institutions in Ghana and in particular, for developing the Visual Arts programme offered in the Faculty of Art in KNUST. The study provides opportunity for lecturers and teachers of drawing to make their lessons easy and understandable for their students. This way, students in the Department can learn to draw to illustrate basic reading books to help the national literacy development programme. It makes drawing easy to learn for self tuition.

The study serves as reference material for education and research students, lecturers, artists, art historians and anyone interested in drawing. Artists and other people who are interested in drawing either as a hobby or profession can use this document to obtain accurate information on drawing and to develop their skills in drawing for portraiture, landscape, and illustration for medical, crime detection and investigation, legal and other occupational purposes.

1.11 Arrangement of the Rest of Text

Chapter one deals with the problem and its setting and gives a background history of the Publishing Studies programme and the relevance of drawing to book designing and illustration.

Chapter two gives the theoretical and empirical framework of the thesis and sets out the direction of the research.

Chapter three describes the research design and methodology for data collection, the nature of teaching drawing from Junior and Senior High Schools to the University level as well as the evaluation of teaching at the different levels of education. This chapter again provides the instrumentation and discussion of the major research findings and their implications for drawing in the Department of Publishing Studies in KNUST. Tables and figures are adopted to summarize data.

Chapter four outlines the new methodology proposed by the researcher and pretest of the recommended drawing methodology.

Chapter five deals with the summary, conclusions and recommendations for resolving the challenges students face on the drawing course on the Publishing Studies programme at KNUST.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.0 Overview

This chapter provides the theoretical and conceptual framework of this research and presents a review of literature on such topics as concepts of drawing, conflicting thoughts of the meaning of drawing, reasons as well as the functional importance of drawing; curriculum design and models; teaching methodologies applicable for teaching drawing and technological influences on teaching and learning drawing. This chapter sets out the direction of the research.

2.1 Theories or Concepts of Drawing

Drawing and the existence of mankind can be put almost at the same level with each other. It is more or less as old as mankind, dating back from the Prehistoric Era through to the Middle Ages to today. Drawing has as a result been defined and discussed in many ways and some are listed below.

According to the Longman Dictionary of Contemporary English (2007), drawing is "the art or skill of making pictures, plans etc. with a pen or pencil/ a picture that you draw with a pencil, pen, etc." The New Encyclopedia Britannica Macropedia (2003) articulates that drawing is a formal artistic creation which serves as a means of visualizing ideas, a production of a successful planning as well as an interactive tool between draftsmen and their environment. Drawing is also described as a picture drawn by hand and printed in books or magazines or using lines to represent forms on a surface to create images (Wikipedia, the free encyclopedia, 2007).

This study supports the view that in drawing, a draftsman generates ideas and produces impressions on a support to depict what is seen in the environment using a variety of tools and techniques. Relating what has been discussed so far, the Department of Publishing Studies drawing programme amounts to the same thing, except that students have limited knowledge as to the various drawing tools, materials and supports that are available for exploring, so they are stuck to the same way of drawing with pencils, inks and colour pencils as drawing tools with cartridge and eggshell as their main supports for drawing and no use of any other drawing materials. Meanwhile, students can choose from drawing tools such as stylus, silver/gold points, brushes, metals, glass, sticks, to mention a few.

Again, they can make use of drawing materials such as crayons, water colour and chalks plus drawing supports like metals, glass, gourds and canvases.

Drawing students from first to fourth year as well find it difficult to draw taking into consideration accuracy, precision and details when drawing. This makes the level of students' drawing in the department under study very low. When drawing students fail to acquire the skills, they are not attractive to employers in the rather limited jobs available for Design & Illustration graduates where employers instead seek others to provide services for which they have employed Book Design and Illustration specialists outside of their establishments or student artists who are not illustration professionals, implies the need for assessing the quality of teaching that Book Design and Illustration graduates receive in the Department of Publishing Studies.

2.2 Conflicting Thoughts on What Drawing Is

Drawing experts, theorists and authorities have been engaged in a never ending argument on whether drawings form the basis for furthering all other works of art; drawings are the foundation of all kinds of works of art; or they are complete works of their own. Other authors also presuppose that drawing starts with the construction of outlines whiles other authorities are of the view that drawing should start with the values or tones of the object being drawn.

The first opinion of drawings forming the basis of all art works is that of Brommer (1999) who emphasizes that from history, visual art started with drawings of preliminary sketches which are mostly outlines of the objects drawn. He therefore portrays the importance of drawing as the root of all the visual arts. Similarly, Mitter and Howze (2007) see drawings as a basis for furthering other works of art. They explain that when drawing reached its peak between 1525 and 1600 BC, it was mandatory for artists under training in Bologna schools to first draw before they could proceed to paint, etch, sculpt and do many other art works.

The second authority believes that drawings are the foundations for other works of art and at the same time as complete works of art. Examples can be cited from the New Encyclopedia Britannica Micropedia (2003) which describes drawings as the basis of all visual arts and at the same time as complete works of art. Microsoft Encarta (2007) also holds the same position and explains that drawings are exercises or preparations for other practices and concurrently they are an end in their own way. In the same way, The World Book Encyclopedia (2001) expresses that drawings are meant for a multiplicity of purposes, some of which are the beginnings of further works and others as finished works of art. Finally, Wilson, Wilson and Hurwitz (1999) write that all artists rely on drawings to pursue and

complete their works. They again acknowledge that drawings are autonomous and hence drawing as complete works of art are obtained from drawings.

It is clear from the discussion above that drawing experts do not agree on the issue of drawings serving the double function as the first step for other art forms and simultaneously being complete works of art. It can be deduced here that the disagreement stems from the fact that the assertion depends on an individual's intentions for drawing. Where artists do not need drawings as the foundations in their desired area of work, drawing can still serve as finished art works if the due principles of accuracy, detailing and precision are adhered to. This position in the debate is in line with the Encyclopedia and Irish World Art's (2008) assertion that drawings can be casual, preparatory or finished depending on the purpose for which they are made. This means casual drawings may refer to unrefined works while preparatory drawings may stand as the fundamentals for other art forms, and finished drawings, simply being seen as complete works of art.

To add to the above statements, there are other authors who propose that drawing must begin with the construction of "lines" or "outlines". Mitter & Howze (1999) explain this view with reference to the works of Vincent van Gogh who regarded line as the foundation of drawing. They are also of the opinion that during the late 18th and early 19th Centuries, artists such as Toulouse-Lautrec, Edgar Degas and Paul Cezanne used lines to draw although the introduction of George Seurat's technique of pointillism took away line drawing. Secondly, Ruskin (2009) claims that beginners in drawing must begin by drawing an even line slowly and in any direction until the whole out of the object or subject is achieved. To add to this contention, Drawing Made Easy: A Complete Online Drawing

Course for Beginners (2006) recommends that “a teacher place the object selected in a convenient spot near the blackboard and then point out the outlines”.

Conversely, ARTISTS, International Dictionary of Art and Artists (1990) indicates that artists of Venetian Rococo style across the centuries, including Jean Antoine Watteau, Paolo Veronese, Giovanni Battista Tiepolo and Francesco Guardi, did not believe in drawing lines or outlines before drawing or proceeding to do any others. This idea stems from anthropological reports on cave art which states that the prehistoric man drew hard and linear lines before filling them with colour. From these submissions from both sides, it can be said that some draftsmen draw by beginning with lines or outlines of what is being drawn, and also by not strictly beginning with lines or outlines but in other ways such as the use of tones or values as suggested by South (2009) who indicates that lines or outlines as beginning of drawings “only define visible edges and don't tell us anything about light and dark”. This technique, South believes look at areas of light and dark and in-between tones instead of looking at the edges of objects or subjects.

2.3 Reasons for Drawing

Brooke (2002) claims that dreams, sentiments, apprehensions as well as ones sense of beauty and quality come to the fore as far as drawings are concerned. Drawing seems to be a wide opening through which a draftsman becomes conscious about him or herself and the environment in order to create visions about the world as a whole. Draftsmen draw for varied reasons best known to them. Some artists see drawing as superfluous ways to articulate their inert thoughts and emotions while others have the compassion to draw on their own merit or get infected when others are drawing. Again, people make drawings as

relief from dullness by telling stories about themselves or society. In opposition, some develop expressive skill to negatively influence the world. Some drawings are made for economic gains while others see as a form of employment or a means to educate, impress or make something beautiful. The implication is that draftsmen draw to express views, feelings, liven up their spirits or as a source of livelihood.

Contrary to these views, Brooke (2002) believes that drawings create an avenue for people to build up negative skills to corrupt the societies they live in and the world at large. The value of art in society is further enhanced by Bates (2000) assertion that art was incorporated into the United States of America's general curriculum in the 1800s to help them build a strong, economically and independent revolutionary society. This led to art as mechanical drawing was being taught in schools and promoted in the United States of America as useful means of developing drawing skills needed to build ultramodern infrastructure as well as services to cater and support the society.

2.4 Functions of Drawing

The principal understanding of drawing as a way of recording what artists or draftsmen see about them and their environment is widely held. Wilson, Howitz & Wilson (1987) explain that drawings serve many natural purposes such as teaching aids to intercede between "apprentices" or "students" conceptions and a master's finished works and as a means to probe the realization of creative ideas. The authors also perceive drawing as a vital part of the total creative processes. Miller (2008), on his part, thinks that drawing is meant to achieve an imitation of existing references in nature, to track down the illusion of visual experience of the material world and as communication of multifaceted intellectual and

spiritual significance. In this context, the teaching of drawing should provide opportunity for students to see demonstrations of good drawing and have their individual artistic potentials nurtured through experimentation and independent self expression during drawing lessons. This implies the freedom for students to explore drawing using various techniques, tools and materials. Only a clearly defined curriculum and systematic approach to teaching drawing will help the students to gain such skills.

2.5 Teaching

Education, which is a means of producing desired changes in the behaviour of people primarily, involves the process of teaching people to learn what is designed for them. Education occurs in the formal system of schools, colleges or universities where knowledge and understanding of particular subjects are provided (Cambridge International Dictionary of English, 1996). This means that 'teaching' is one of the most essential facets of formal education. Teaching therefore plays an indispensable role in education because it serves as a medium for transferring knowledge from generation to generation.

Teaching is described by the World Book Encyclopedia (2001) as "helping other people learn" while the Cambridge International Dictionary of English (2003) states that "teaching" is a practice of giving knowledge, to instruct or to train people. Teaching is therefore discussed by two sources as a way of establishing by allowing people to relate to one another to the extent that knowledge and skills are shared to enable them live useful and worthy lives as well as make them responsible citizens. According to Kochhar (1985), teaching is an art whereby teachers deal with children as raw materials. Kochhar further explains that as children are assigned to teachers, they unconsciously design the children on

purpose and transform them accordingly. Curzon (1996:18) also says that teaching is "causing a person to learn or acquire knowledge or skill". What this means is very difficult to separate the teacher from teaching, therefore, the teachers see themselves in the children as they grow their plastic minds for children to take after the teachers.

As said by Agun and Imogie (1988), teaching is an ability of somebody to exert interpersonal influences on people which changes the ways and behaviour of the said individuals. Brunner (1994) also propounds teaching as the skill to transfer knowledge onto a group of people. That is to say that, teaching deals with the activity of facilitating learning, therefore, quality of learning is triggered by the importance of unquestionable knowledge that is transferred.

2.6 Maxims of Teaching

There are some recognized brief statements of general truth that any good teacher should be familiar to help them become effective teachers. A number of these maxims are discussed below:

a) Teaching must advance from the known to the unknown

Teachers must identify and know some past experiences of learners so that fresh knowledge can be comprehended and understood. It is said by Kochhar (1985:32) that "old knowledge serves as a hook from which the new can be hanged so that the new knowledge may be acceptable. In this case, teachers should be able to remind learners make out what they already know so that new ideas can be imparted to learners. However, teachers must be able to search the most relevant past experiences.

b) Teaching must progress from analysis to synthesis

This wise saying as explained by Kochhar (1985) is that knowledge of children is incomplete, indefinite and imperfect whenever they come to the classroom, thus teachers are suppose to start learning from analyzing thinks by making right and organize the undeveloped teachings of everyday experience to synthesis. Kochhar agrees that analysis makes things easy to understand.

c) Teaching must progress from the simple to the complex

Teachers should be able to understand simplicity and complexities from learner's point of view. In this case, teachers should begin to teach simpler materials and advance to complex and more complex substance. This will attract the learner's interest to make teaching and learning effective.

d) Teaching must progress from concrete to abstract

Teachers should have the ability to use concrete things, activities as well as examples to reach out to students as imaginations are significantly aided by concrete items, hence; it is very important for learners to be able to abstract things.

e) Teaching must progress from the particular to the general

Learners should know the general rules and principles after they have understood specific facts since it makes it easier and simpler for them to follow. Therefore, teachers should understand that children are able to easily follow by understanding the process of introduction to the process of conclusion. In reality, the children should be able to arrive at general rules and principles when they have been started from exact facts.

f) Teaching should start from psychological to logical

Teachers should ensure to start effective teaching by taking into consideration learners interests, desires, reaction and mental make-up. This will allow teachers to present substances in a coherent manner by picking on a matter, followed by logical approach to organize substances in the right order.

The above discussion suggests a basis of effectiveness and so teachers who wish to attain this height ought to identify, understand as well as use the maxims to guide them so that learners will be able to understand what teachers teach. Farrant (1996) claims teachers have to adopt and guide their teachings with the above maxims of teaching to ensure effective teaching at all the levels of education.

2.7 Effective Teaching

It does not matter the level of formal education (from pre-school to university), effective teaching is expected to be carried out so that effective learning can also occur.

Kyriacou (1995) specifies that effective teaching has to do with the ability of teachers to bring about learners learning by some educational activity. He again stated that during 1960's, what characterized effective teaching in the classroom centered particular on the interaction between teachers and pupils. Teaching starts from the fundamental variables involved in teaching which is from very discrete observable behaviours to more global and more subjectively assessed qualities. Example of the very discrete observable behaviours and global and more subjectively assessed qualities are the rate of eye contact between teachers and pupils and the amount of time spent by teachers talking to the class as a whole as well as teacher clarity and classroom ethos. Hence, the author propounds those teachers

who can modify the level of difficulty of learning tasks for particular students by giving particular challenges to brilliant students and providing special interest, support and assistance for students with more difficult tasks effective. Chapman (cited in Kyriacou, 1995) states that weaker learners achieve much success when teachers give out dictated notes whiles time on private study contributes to the accomplishment of more able students.

Effective teaching as also articulated by Kochhar (1985) is the art of causing, facilitating and promoting learning in order to enable learners understand what is being taught. Teaching builds an atmosphere and opportunities which make teachers creative for molding learners' persona and minds. He stipulates that for teachers to ensure effective teaching, they should be able to distinguish between individual indifference among pupils and recognize that teaching is need-centered. Moreover, teaching should improve the quality of living of every child. Teachers should make teaching interesting, kind, sympathetic as well as challenging to learners. The author believes the outlined points mentioned when accepted and practiced by teachers will aid learners to easily comprehend what is taught them.

2.8 Curriculum Design

"Curriculum" is a term that originated from Greek chariot racing and it literally means "a course". The Latin root of the word, also associated with chariot racing, implies "to run". Like drawing, the concept of curriculum is also associated with many schools of thought, some of which are outlined in the following sections.

In the view of Mednick (2007), curriculum encompasses all the learning which is designed and guided by the school, whether it is carried out in groups or individually, inside or

outside the school. Posner (1992) expounds that curriculum can be seen as comprising six common concepts: the scope and sequence of a documented projected learning outcome at each level in a school**;** syllabus or the planned rationale of the course, the courses tackled, the resources used, the work given to students to do; the evaluation strategy used and content outline or topics that are listed as the essential components of the curriculum. Posner further cites instructional materials (including textbooks) that a teacher uses to teach in the classroom, the series of courses that students are compulsorily obliged to complete, and all experiences that are systematically planned by the school for students to acquire as being very important aspects of curriculum. Likewise, Grundy (1987:11) describes curriculum as "a programme of activities designed (by teachers and pupils) so that pupils can attain certain educational and schooling ends or objectives".

Mednick, Posner and Grundy agree on what the curriculum for the school system entails and describes them as the school plans and guides that stipulate what should be done by teachers and students to finally achieve results which commensurate with the school's goals. Besides these similarities, Posner deals with curriculum as comprising six common concepts: which identifies the range and progression in all the different levels of education, identifying the goals and plan the entire syllabus, to what should go into the contents of the syllabus and the kind of textbook as instructional materials to be used by the teacher in the classroom.

However, the process is not complete until the outline of courses that students are to complete are made known and most of all, all the experiences planned by the school for students to attain like the educational, physical, psychological, social and other experiences are given and received by students in the school. Further the researcher believes that in order to start and successfully complete effective and efficient teaching and learning, the

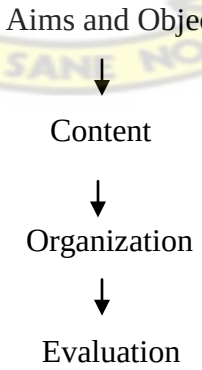
aspirations plus the needs of both the learner and the society as a whole have to be inculcated into the learning experience which is curriculum but will not hesitate to add that all planning in curriculum should be systematically and sequentially developed experiences within every field. This process is also applicable to the teaching of drawing.

2.9 Curriculum Design Models

Curriculum models provide a general framework on which important set of categories meant for making curriculum decisions and assumptions are made. Posner (1992:13) points out Ralph Tyler's curriculum model - Tyler Rational for Curriculum Planning - as one that has made so much impact since 1949. This model is based on four questions that should be asked when planning a curriculum:

1. What educational purposes should the school seek to attain?
2. What educational experiences can be provided that is likely to attain these purposes?
3. How can these experiences be effectively organized?
4. How can we determine whether these purposes are being attained?

Yakubu (2000) sums Tyler's model of constructing a curriculum in the flow diagram shown in Fig 1.



Tyler's model is based on the premise that a curriculum should stand on what teaching and learning is and identify what the characteristic needs of a particular group of learners are. It should also be able to list strategies and methods for implementing the curriculum. Other curriculum models are Hallowell's Traditional, Kerr's, Lawton's, System and Classical Curriculum Models. The classical model of curriculum development which is much used assigns important roles to teachers and students. It also allows comments and feedback as a means of cross-checking the designing process. The model is shown in Fig. 2.

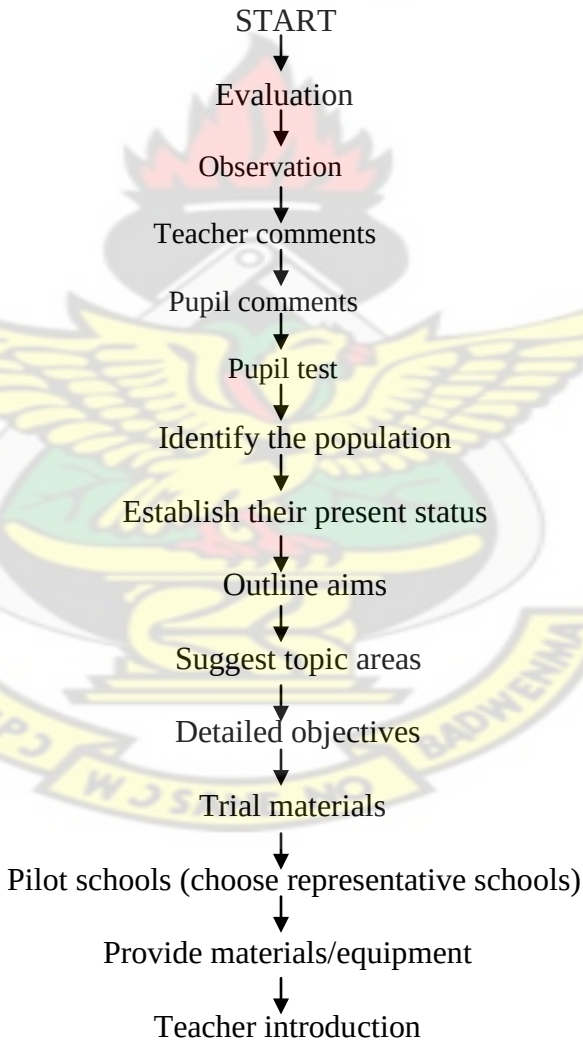


Fig. 2: Linear model of classical curriculum model

Source: Yakubu (2000)

On the other hand, Hallowell's model (Fig. 3) dwells on the principle of interaction and cross-checking and includes what should happen in the classroom and the ability of the child to achieve marks. The model includes a feedback mechanism that is built-in to make adjustments while assessment can be adjusted on methods as well as goals. These make the Hallowell model more pragmatic than Tyler's in particular.

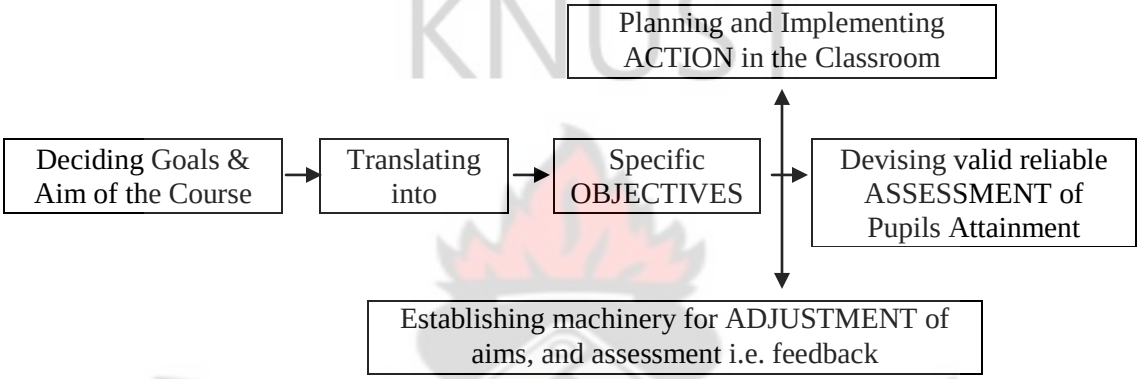


Fig. 3: Hallowell's Model of Constructing a Curriculum

Source: Yakubu (2000)

The traditional curriculum model (Fig. 4) represents curriculum as a content and method. There is no relationship between the teacher, student and content. This means that there is always an imposition of concepts on the learner.

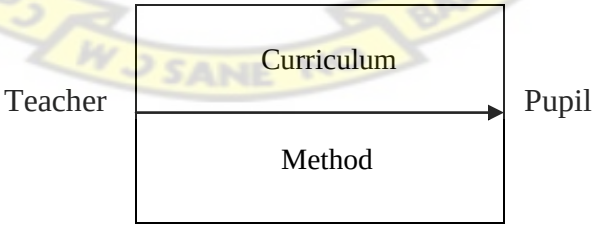


Fig. 4: The traditional model of constructing a curriculum

Source: (Lawton, 1973 In Yakubu, 2000)

Studying critically the different models propounded by the different curriculum authorities, the researcher has observed that Tyler's model means that in developing a curriculum, a planner must necessarily take a linear route. This process makes it very simple to plan a curriculum because no evaluation is done until the whole process is completed. With regards to the classical model, the researcher's view is appropriate for this study as teachers and students play vital roles in the teaching and learning experience as well as assessing by cross-checking comments and feedback in the course of designing the curriculum. Since the focus of this research is to review the teaching of drawing in the Department of Publishing Studies and then develop a systematic and sequential method of teaching drawing, this model is right to adopt.

Further, even though, the Hallowell's model is pragmatic, it does not suit the objectives of the researcher as far as this study is concerned although the student is at the center of all the happenings in the classroom. The researcher, however, sees this model as not suitable for this research. Lastly, it must be said that the traditional classical model is as linear as the Tyler model which burdens the student with too many theories and therefore, as a static activity.

2.10 Methods of Teaching Drawing

Teaching can happen at all places and at any time with anybody, irrespective of age, social class, religion or gender. One must be prepared for lifelong learning. There are different types of teaching methods that one can use to teach. Hall (2007) says that there are different ways from which people learn. Hall refers to Edgar Dale's Cone of Experience which states that about 10% of learners preserve information from what they read, 20% from what they

hear and read, 30% from what they see only and 50% from what is seen and heard. It goes further to say that learners who read, hear or gain practical skills have higher chances of retaining information than otherwise. Hall, therefore, proposes the lecture, demonstration, discussion, role playing and hands on (experiential) methods as appropriate method of teaching but also suggests that the lecture method is more convenient for listening learners (auditory learners) since it grants a two way communication for both learners and teachers. The demonstration method is recommended for practical courses such as drawing. This means that, the demonstration method suits students who wish to acquire skills, because learners are able to see the tools, materials, supports, equipment that are needed for the task as well as observe their use and partake in doing the tasks associated with them. All in all, the demonstration method allows learners to be creative and grow at their own pace given that they will be assigned works to do on their own after being shown how to do them.

The skill lesson deals with the coordination of perceptual and motor processes through activities that are directed at motor skills acquisition. This focuses on effective coordination of mind and muscle, which culminates in the production of swift and meaningful patterns of movement. Kochhar (85:200) buttresses this point about the skills lesson by stating that "No impression without expression clearly speaks of the value of skills.

Grover (1995) also stipulates that one effective method of teaching drawing is the employment of "Dictation Drawing". He explains it as a process whereby students are made to listen to a verbal description of an object or a situation and then asked to create an image to that effect. For instance, when a teacher asks students to draw a pig wearing sunglasses, shoes, smokes cigarette and reads newspapers, the students will put the spoken description of the pig into creative rendering on a surface. In Dictation Drawing, the author argues that

when the verbal speech is made once, and it will make the students listen well and it also brings out a competitive spirit in students to be the best among his/her group and creates fun and motivation for students to take up drawing.

The researcher believes that even though there are a lot of teaching methods available such as lecture, field trip or discussion and projects that teachers can adopt. The demonstration or hands on approach is the most suitable means for teaching drawing as it involves the act of doing. The direct demonstration method, in this instance, is a step-by-step procedure for a job task with the purpose strengthening the teaching and learning process and helping students to become imaginative, inventive, innovative and creative. It also grants learners the opportunity to repeat a procedure. It is a good means to assist slow and average learners to achieve a measure of success while also enabling them to capture to acquire the skill of drawing.

2.11 Sequential Teaching and Learning of Drawing

Learning to draw depends greatly on a gradual laid down process of teaching (Lee, 2000). He explains that with the absence of a procedural method, students' futures are not bright; therefore, it is very important to make students acquire the basic foundation before learners slowly and consciously build on them to acquire the necessary skills and knowledge to draw accurately. Conversely, Markus (undated) says that she teaches art (drawing inclusive) but does not follow any laid down formula. She promulgates that she learns to teach what she believes students ought to know at a given time and does this because she has no formal certification for teaching. The implication is that Markus lacks pedagogical skills and learning principles underlie her style of teaching. From what has been articulated above the

researcher agrees with Lee but disagrees totally with Markus. This is because students go through formal education in school which has a sequential progression of teaching that ultimately leads to their mastery of the knowledge and skills that are taught. They acquire higher levels of skills as they move through the grades. It is therefore, to be expected that learning to like other subjects, show proceed through stages until the student is able to render images accurately. Teachers must therefore, adopt content suitable to the caliber of learners they teach and also use student-centered lesson presentation methods that are in agreement with the aims of the lesson. Above all, teaching and learning of drawing should be activity oriented. By implication, the teaching of drawing should follow the different levels of students. Teaching should necessarily follow a logical sequence to enable all students learn the designed knowledge and skill for drawing very well.

2.12 The Impact of Technology on Drawing

Drawing has been done with the hands from time immemorial but now gadgets such as computers and robots are being adopted to render images that artists and draftsmen have done for centuries. Walsh (2008) says drawing is no longer just pencil and paper. Digital media has energized the visual art, since the 1980's and 1990's and opened drawing up drawing and art is general to include software art and animation. Currently, there are more computer application software on the market that aid drawing, some of which are Adobe Illustrator, Corel Draw, Photoshop, Real Draw and Adobe Flash. "Drawing on Air" has only recently been introduced onto the market. This works when an artist wears a virtual reality mask, holds a stylus in one hand and a tracking device in the other and draws three dimensional objects in the air. The precision achieved with this software is intended to make

it easier for artists to illustrate complicated artistic, scientific and medical subjects (Zyga, 2007).

Priest (undated) describes digital drawing as a tool that allows people with limited techniques in drawing to explore by creating fun making images directly into a computer within a few minutes. However, citing the advantages that digital drawing can bring to draftsmen, Dogbe (2004) indicates that a draftsman can save time, become versatile, flexible, and creative enough to make complex forms simple, give special glossy effect, change colours and as fast as possible, reduce or enlarge a drawing surface. However, Lovejoy (1991) holds the view that the very foundation of art/drawing will be compromised in the nearest future by computer software programmes which authors see as a threat to the original drawing skills of draftsmen. Sterling (1997) also adds that using computer to aid drawing is not good for the sustainability of any culture and society. One good question to ask is "what is the future of drawing in this in this age of computers? Presently, digital art is gradually replacing draftsman. Although, the computer offers advantages, its use as a drawing tool is likely to take away the traditional method of using pen and paper to draw and create images that can be appreciated as drawings. Artists (draftsmen) can however take this challenge to acquire computer skills adopt this knowledge to move drawing to a different level in view of the many advantages quoted by Dogbe (2004) enable drawing students fit into the job market which requires computer skills. Students can learn to produce digital art works but they should not lose sight of the tradition of hand rendition of drawings, they can blend skills to create new art forms and images.

2.13 Drawing in the Department of Publishing Studies

At the beginning of the programme, the intake of students was that one had to have a good background in drawing since the whole publishing studies programme was fundamentally art. This is because the history of writing started as pictographic representations of ideas that people wanted to communicate across to others. It did not need to be interpreted into different languages or cultures. It was, and in fact still is, a universal language in the sense that when a tree for example is drawn, it does not matter who is appreciating it, it will still remain a tree, though in terms of species, it may be different depending on the climatic zone it is found.

One other reason for entrants to have art was that students had to do bookwork, comprising design and illustrations to feed the publishing industry. It was the philosophy of the department that drawing students must do their best to capture the characters and images of drawn objects. In this light, very talented and capable personalities such as Dr. Kodwo Edusei, Professor H. B. Ato Delaquis, Mr. Benjamin Offei-Nyako and others were assigned to teach the various aspects of drawing in the department under discussion. The first few batches of students all entered the department with art background. After some time, students with no art background were also admitted into the programme and this has continued to his present day. From the Department of Publishing Studies syllabus, drawing and for that matter illustration are included. The syllabus spells out what should be taught and learned by drawing students from semester one to eight. The researcher has noticed that most ideas in the syllabus are very vital to developing students' knowledge and skills in drawing except that the methods used in teaching are not sequentially done in the opinion of the researcher. They are seen as jammed up and therefore make it difficult for drawing

students to follow to acquire the requisite knowledge. For instance, the objectives meaning and rational associated with drawing are not clearly defined to drawing students by lecturers. Students are not made to identify the various tools, materials, supports and equipment through exploration and experimenting. Elements and principles used in drawing are not adequately taught, nor teaching the different ways of holding drawing tools and their associated advantages and disadvantages and the skills of exercising the wrist, critical observation, the hand and eye coordination to say the least. These are important because in modern publishing the target is usually universal; therefore, it is important to explain some parts of a text through the use of appropriate and effective illustrations to make easy understanding.

2.14 The Introduction of Hand and Eye Coordination into the Formal School System in Ghana

Edusei (2004) writes that poetry and music surfaced in the formal school curriculum as Arts. With the appointment of Mr. D. F. Oman as the Director of Education in the then Gold Coast, the arts were expanded. Mr. D. F. Oman brought into the education system, an expatriate Art Master and Artist known as Mclaren in 1908 to revamp the art by incorporating visual arts into the curriculum of the Gold Coast formal schools as "art and handicraft". The "art and handicraft" was then replaced with the "hand and eye" on school timetables. The "hand and eye" was made up of mainly drawing, painting and European History. To add to this, Antubam (1963) claims that art was introduced into the schools' curriculum in 1919 after the Christian Missionaries had persistently resisted the inclusion of art into the Curriculum of the Gold Coast formal schools because of the fear of bringing in

the culture and traditions into the schools will be influenced by the pagan and fetishistic nature of the indigenous people. According to Edusei (2004), the school curriculum was too bookish; hence, the urgent desire to infuse into the bookish nature of the syllabus, practical aspects which will as a result help students to have an effective education. He insists that the bookish structure prevented students from acquiring critical, intuitive as well as subjective thinking and creativity so when these skills are attained, they will enhance students' creativity to enable them solve national problems for the development of the country.

Drawing as in "hand and eye" from the accounts of Edusei (2004) again states that it was basically geared towards the advancement of skills between the "hands" and "eyes" of students. This in his opinion was achieved by students replicating various shapes and lines of different objects and images. This process was the case whereby students were required to look and draw at the same time. Since then the art (hand and eye) grew swiftly to meet the establishment of an Art Department at Achimota in 1927. In Ghana today, drawing has now been incorporated into all the levels of formal education after periods of inconsistencies. At the basic level, the arts, particularly drawing is termed as "creative art". Currently, it is implemented in all classes (from the Kindergarten to the Junior High School). Senior High School has drawing in "Picture Making", "Graphic Design" and a few more subjects. At the tertiary institutions such as the Teacher Training College, art is known as the "Pre-vocational skills. Universities have it as "Fine Art" which is offered at the Undergraduate, the Masters/Mphil as well as the Doctorate levels. That is when the utmost implementation of art is religiously followed to the letter, students will be in a better position to drive the country Ghana forward as it has evidently happened in the some Asian nations such as China and Japan. Again, the design of the drawing syllabus at the

Department of Publishing Studies must integrate with the nation's cultural heritage so that knowledge outside the formal school system from the indigenous craftsmen who started practicing craft from a long time ago will inculcate into the syllabus the traditional apparatus or tools, materials and the methods of production.

2.15 Observation in Drawing

Observation is essential in drawing as it implies watching carefully the way something happens or someone does something in order to learn more about it. It also involves the act of noticing, or seeing something carefully (Encarta World English Dictionary, 2002). To the Free Dictionary (2007), observation is the urgency or need to train a draftsman's eyes to observe detail in order to produce something that is honest or compelling for the viewer. According to Murphy (2007), critical observation is highly needed to be able to draw accurate realistic and abstract drawings. This description of observation however, does not explain the connection of observation with the six human senses. In this context, observation can be explained because the same principles are used as painstakingly paying attention and critically scrutinizing an object, event or phenomenon in order to record what is happening accurately.

In drawing, whether realistic or abstract, critical observation is vital to enable a draftsman capture in total precision, all the details on an object in order to produce an accurate work. It is essential to state that the act of observation must involve all the six human senses of sight, touch, taste, hearing, smell and kinesthesis. Draftsmen observe an object through the eye to register the size, shape, colour, lines and texture. DrawingCoach.com. (2008) confirms this by stating that in times of drawing, the function of a draftsman's eyes is more critical than

what one's hand does on the paper with the drawing tool. While the ear records sound and rhythm (arrangement of pattern on objects), smells are recorded via the nose to indicate the strong, mild scent or good/bad odour of an object(s). The sense of taste enables recording of bitter/sweet sensation via the tongue or perceive the bitterness or sweetness of an object(s) if edible. The hand to touch or feel texture; that is feel the smoothness/roughness or hotness or coldness or the hardness or softness of object(s) and lastly, the sense of kinesthesis which involves perceiving with the muscles to understand and register the heaviness or lightness of objects. What this means is that understanding of objects before and during drawing. in this regard, any course in drawing must train students' eyes to observe in much detail to enable them produce drawings that are honest or compelling as representation of what was to be drawn. Students should not be made to sit outside the drawing studios and expected to observe intensely and draw without first being taught how to see and what to see.

2.16 Drawing Techniques

To draw well, it is important to understand the existing drawing techniques, and what constitutes drawing techniques.

> *"Drawing techniques include an awareness of the proportion of objects in relation to each other, and the shape of the 'negative space', the area between objects. Full use should be made of the area of paper being worked on. Liveliness, depth, and interest can be created with the use of a range of contour lines, both in width and density; different grades of pencil give a variety of line. Unless making a contour drawing, the use of shading techniques, such as hatching, will add form and texture. To give instant depth to the drawing, the darkest tones visible should be blocked in*

first. The tones should then be built up, and finally the extreme highlights added to bring the drawing to life" (the free Dictionary, 2007).

Kimon (2001) says drawing techniques comprise blind contour, gesture, grisaille, mass as well as scribble drawing. The researcher agrees that the elements mentioned by both authors play significant roles in different drawing techniques, but finds these inadequate they because there are a lot simple and straight forward drawing techniques that students can learn to use. Examples of the drawing techniques are outline, outline to suggest light and shade, value drawing and then negative drawing. Mitter & Howze (2007) mention outline drawing whiles suggesting light and shade in relation to Vincent van Gogh who regarded line as the underlying factor in drawing. They claim that Vincent adopted contrasting lines to balance light and dark values to produce unified and appealing drawings that showed a wide variety of textures, defined space and identified shapes. Other elements can be explored if desired and as DrawingCoach (2008) states artists should use what works best for them. The source cautions that this may differ from the way other individuals will use the techniques but one should not think that there is something wrong with a chosen method. The choice of one technique over another depends on what is being drawn and how the artist wants the rendition.

2.17 Elements and Principles of Design in Drawing

Mitter and Howze (2007) have argued that artists use the elements of design to express ideas and concepts, and cite such examples of elements as line, shape, form, value, texture, colour and space, and the principles as balance, proportion, gradation, variety, harmony, movement, rhythm, space as well as emphasis. They indicate that the absence of these

elements and principles in drawings or the complete misunderstanding of the various ways that these elements and principles can be used in creating drawing leads to "few good drawings to enrich our lives". What this means is that drawing students must have enough knowledge of the various elements and principles of design to be able to define and differentiate between them and also apply this knowledge to create drawings. In line with Mitter and Howze, the researcher shared ideas, drawing students should also be taught how to determine and differentiate the elements and principles in terms of man-made and natural objects, explore how they can be created, applied and used in experimental situations.

2.18 Composition in Drawing

According to the Otis College of Art and Design (undated), composition in drawings refers to the basis of drawing which involves the process of representing three-dimensional form relative to the picture plane and its boundaries. According to an unknown author (2009), the organizing, arranging to agree and combining objects within the boundaries of a drawing space is termed as "composition". It further states that a strong composition naturally engages onlooker's attention. The source mentions focal point, overlapping, negative space, balance, lines, contrasts as well as proportion as the principles of a good composition. The researcher agrees with the second author's assertion but has reservations with the OCAD statement mainly because the explanation is not broad enough to include what goes into a good composition. In drawing, both elements (dot, line, shape, texture, space, plane and colour) and principles (unity, variety, balance, rhythm, contrast, repetition, proportion, scale, harmony opposition plus forms, patterns) are all needed to create drawings that appeal to the eye.

These rules when used should make drawings interesting, refreshing and pleasing to the viewer. The considerations should be at peace with each other and their usage should be varied to eliminate boredom. This assertion is made with the idea that viewers will enjoy looking and appreciating artists who have talent in coming out with good compositions in their drawings (Engels, undated). Drawing lessons should therefore teach students the need to create good composition in their drawings.

2.17 Placement of Images in Drawing

Drawing Secrets (2007) indicates that drawing is a complex activity and one of the first tasks for a draftsman to tackle is how to fill a blank space with images until the drawing exercise is over. Drawing Secrets thinks that draftsmen should understand and study the different scene and objects and establish their positions relative to one another. Engels (undated) on his part expresses the view that placement of objects on a drawing support plays an important role in attaining a good composition. In this case, there should be an accurate relationship between the heights of the objects and the place for the objects on the drawing surface. The researcher shares the views of both authors that the size (length and breadth) of objects should be keenly identified whiles considering the size of the drawing surface, placements and the values of the objects being drawn in order to create the balance needed to make drawings aesthetically pleasing and harmonious.

Additionally, the researcher trusts that draftsmen should regard the point of entry and exit as an important component of drawing that must be considered when objects are being placed in a picture plane. The idea is to leave appreciable space around the boundaries of a drawing support and that placement of objects should neither be too high nor too low relative to the

horizon. In relation to the point raised in the discussion, the target of the draftsman is about achieving accuracy in the drawings made. This goal is also necessary as far as the teaching and learning of drawing are concerned. Placement of images in drawings should be a prominent feature of the syllabus for drawing in order to help drawing students to establish these skills when they draw.

The division of a drawing support into foreground, mid-ground and background then become a very necessary means of placing objects in the drawing exercises. Foreground may be identified as the space in front of the objects placed on a drawing surface or the nearest space accessible to the viewer; the background is the space from the back of the object towards the end of the drawing surface; with the mid-ground falling between where the foreground ends on the objects to where the background begins from the object.

2.18 Perspective in Drawing

Wikipedia, the free Encyclopedia (2009) identifies perspective as an approximate demonstration of a representation perceived by the eye and represented on a two dimensional support such as paper. According to Wikipedia, there are some fundamental principles that draftsmen need to be aware of so as to express good perspectives on drawing supports. These include the fact that objects become smaller as their distance from the observer increases, whereas the size of an object's dimensions along the line of sight are relatively shorter than dimensions across the line of sight. Additionally, Encyclopedia and Irish World Art (2008) insists that perspective makes all realistic drawings have depth because backgrounds appear far-away as compared to foregrounds. It propounds that to get a correct proportion, objects must have correct proportions and sizes and objects must

correlate correctly to each other. The principal rule therefore is that images grow smaller the farther they are seen.

On the other hand, Smith (1995: pp: 6) says perspective "provides us with a means of arriving at a convincing two-dimensional visual picture of a complex three dimensional world we perceive and inhabit". Smith also points out there are three types of perspective as one, two and three-point perspective and asserts that if these rules are not adhered to by applying them correctly, drawings appear distorted and clumsy. The researcher simply describes perspective as seeing images in a distance such that the images closer to the viewer look big while those faraway look small. The principle of perspective in drawing therefore allows draftsmen to depict images that closely look like what is seen in the real world. The researcher believes that the teaching of drawing should include the one, two and three-point perspective so that students would understand how to represent objects correctly in all types of drawing.

2.19 Shading in Drawing

The Encarta, World English Dictionary (2002) defines "shading" as an area of a picture with relatively dark tones which produce darkness or shadows in a drawing but with slight variation. Mattia (2009) describes shading as critical art work, except abstract art because it is shading which establishes value (lights and darks) in drawings. Shading techniques are the best way to introduce dimensions into drawing. Adding to this, Wikipedia, the free Encyclopedia (2009) says shading is the act of illustrating levels of darkness and lightness on a drawing support by the application of any drawing tool or material. The researcher is of the same opinion with the three sources as to what shading means.

There are different types of shading which range from dots, mass, hatching and cross-hatching shadings to techniques such as vertical, horizontal and diagonal shading. It is necessary that drawing students are taught to look out for the proper tones and shades on objects they draw and depict them as from darkest to lightest tones especially in realistic drawings because correct rendition of shadings bring drawings to life. It is a fact that a good light source on an object defines contrasts of shades which make up the tones on the object very clearly. Therefore, the drawing area should have good lighting system to prevent distortions that occur in drawings shading mainly because tones on objects were not created well.

With respect to the teaching of drawing in the formal school system in Ghana, the researcher believes that drawing should be taught in a sequential orderly manner to enable all students to grasp the fundamental skills and build up from primary school through to the tertiary level. The content of lessons should increase in levels of difficulty as pupils move up the educational ladder. In particular, teachers should be trained to facilitate effective learning of drawing skills to help their students to develop their creative potentials.

CHAPTER THREE

METHODOLOGY

3.0 Overview

This chapter presents the methodology that was adopted in conducting the research. The design is based on the qualitative research method with emphasis on the description of sampled drawings of students of the Department of Publishing Studies at KNUST. The chapter also provides information on libraries consulted and the research instruments employed for gathering the data needed to answer the research questions; the population studied, sampling design and data processing methods, and a discussion of the strengths and weaknesses of the drawing course in the case study department.

3.1 Research Design

The qualitative research design was employed for this study. Qualitative inquiry seeks to understand human and social behaviour from the "insider's" perspective – that is, as life is lived by participants in a particular social setting such a school, community, group or institution. It is an intensely personal kind of research, one that freely acknowledges and admits "the subjective perception and biases of both participants and researcher into the research frame (Goetz and Lecompte, 1993). As Ary, Jacobs and Razavieh (2002) indicate, qualitative inquiry seeks to interpret human actions, institutions, events, customs and the like, and in so doing construct a "reading" or portrayal of what is being studied. The ultimate goal of this kind of inquiry is to portray the complex pattern of what is being studied in sufficient depth and detail so that someone who has not experienced it can understand it.

Lincoln and Guba (1985:107) believe that "it is impossible to develop a meaningful understanding of human experience without taking into account the interplay of both the inquirer and participant's values and beliefs". They argue that human inquiry requires frequent, continuing, and meaningful interaction between inquirers and their respondents (subjects) and that inquiry must maximize rather than minimize this kind of contact. A researcher might wish to know more than just "to what extent" or "how well" something is done or wish to obtain a more complete picture of what goes on in a particular classroom or school for example. According to Fraenkel and Wallen (2000), research studies that investigate the quality of relationships, activities, situations or materials are frequently referred to as qualitative research.

Qualitative methods provide avenues that can lead to the discovery of deeper levels of meaning into the subject studied as it investigates the quality of relationships, activities, situations or materials. The ultimate goal of this type of enquiry, according to the literature cited, is to portray the complex pattern of what is being studied sufficiently and deeper so that someone who has not experienced it can understand what seems to be happening.

Advantages of Qualitative Research (Osuala, 2005):

a. Qualitative research helps to gain insider's view of the field.
b. Qualitative research method has the advantage of generating awareness in terms of history, capability of understanding trends in development in programmes, and an approach to enquire the course of occurrences.
c. Qualitative research study enables the researcher to gain new insights, develop new concepts and discover problems that exist within the phenomenon.

d. It mostly allows a researcher to view behaviour in a natural setting with influences often associated with experimental or survey research.
e. It offers a unique and rich approach to understanding what, how and why of events in relation to the particular setting.
f. It involves directly observing and notifying as well as the use of video devices to supplement and enhance data collection and analysis.
g. Data is described in narrative form as close as possible to the form in which data is collected.

Although qualitative research is purposeful, genuine, flexible, less time consuming and offers rich data (Wikipedia, the free Encyclopedia), it also has some limitations:

a. Some sample sizes are generally too small to allow the researchers to generalize the data beyond the samples selected for the particular study. Hence, qualitative researchers mostly use the method as a preliminary step to further investigation rather than the final phase of a project.
b. The data collected is often employed to prepare more elaborate qualitative analysis of all the information required for a particular study.
c. Poor planning where it is devoid of key issues may make the project produce nothing of value.
d. It involves extensive periods and it is labour intensive in the collection of data. It also has the probability of involving researcher bias and impression management by subjects.

Reasons for adopting the Qualitative Research Method:

a. To holistically describe the teaching of drawing at the various levels of education in the country, and the views of students and graduate employees on the teaching of drawing in the Department of Publishing Studies, KNUST.
b. It brought utmost precision to the relevance of managing the problem which helped the researcher to write an informed research report on the topic under discussion.
c. It served as a powerful guide in ensuring that a development of a new theory for teaching drawing was built.
d. Since this research does not concern itself with statistical processes of investigation and analysis of social occurrences, it was prudent to adopt it for this study.

Under the umbrella of qualitative research, both descriptive and experimental methods were used to collect data for the study.

3.1.1 Descriptive research method: This involves recounting data and characteristics about the population or phenomenon being studied. Under this method, descriptions of the "who" as in the "categories of students"; the "what", which is "the drawing course along with output of drawing in the local publishing industry", the "when" which refers to the "four year duration of the programme", the "where" as in the Department of Publishing Studies, and the "how" that is the "systematic process of teaching and learning the skill of drawing were documented to portray as factual and accurately as possible what goes on in the Department of Publishing Studies as far as drawing is concerned. A major setback

encountered in the descriptive method was its impossibility in establishing what causes the difficulties of teaching and learning of drawing.

To explain further, the research environment for this study is the Department of Publishing Studies which was established by the United Nations Education Scientific and Cultural Organization (UNESCO) in 1987 as Book Industry in KNUST to train people for the publishing industry. It was located in the mist of other art related departments such as Communication Design, Painting and Sculpture, Metal Products Design, General Art Studies and a lot more. Again, a description and interpretation of the nature of the existing sequential processes of teaching drawing to Book Design & Illustration students and some works of students from years one to four in the Department of Publishing Studies were made.

Additionally, the method provided a means to describe nature of the proposed methodology for teaching drawing and how this is interpreted in the context of this research. The description also covered the recommended drawing tools and materials, shading techniques, the elements and principles of design and general drawing procedures that could be adopted to enrich the Book Design and Illustration option and the drawing course in the Publishing Studies programme. Further, it was utilized to depict the characteristics of an absolute step by step detailed narration and illustration of a sequential procedure required to foster easy learning of drawing. These descriptions will enable stakeholders in this thesis have a clear picture of what is being conveyed to add to the effective teaching of drawing in the department under study.

The description also involved a pretest to validate and verify the assumptions made. The verification made way for evaluation to assess the effectiveness or otherwise of the recommended methodology. The characteristics of selected students who participated in the pretesting of the methodology proposed by the researcher had to be given clear explanations with regards to the proposal developed by the researcher.

3.1.2 Experimental Research: In educational study, experimentation is a way of gaining insight into methods of instruction. It is defined as the "cause and effect" of a given phenomenon because it involves the conscious manipulation of one variable, whiles maintaining all other variables (Leedy & Ormrod, 2005). The experimental research method has advantages as well as disadvantages. Besides its advantages of gaining insight into methods of instruction, what goes into teaching as well as the effectiveness or ineffectiveness of the teaching of drawing to students, others are the benefit of controlling variables. It is also easy to use this type of research along with other methods. Apart from the small sample size of experimental research which may not be representational, it is equally subject to human error. Personal biases of the researcher may interfere with results and make them artificial. There is a greater probability that the results of an experiment in any way may be relevant to only one situation and to no other phenomenon.

The following were experimented:

a. The researcher experimented the new chronological proposal for teaching drawing in the Department of Publishing Studies, KNUST.
b. Learning to use the hand and the eye simultaneously with the eyes constantly observing critically in order to draw objects or subjects accurately.

c. Developing elements and principles of design through different drawing techniques.

This experimental method was chosen because the sequential way of teaching drawing is emerging for the first time, hence, the need to pretest before evaluating the methodology. On this score, a cross section of Publishing Studies with art and non-art backgrounds were selected for the exercise which also involved experimenting with the recommended tools and materials for drawing and a description of the students' drawings during and after the pretest.

3.2 Library Research

Library research was done in the following libraries:

a. KNUST, Main Library, Kumasi.
b. Art Education Library, College of Art and Social Science, KNUST, Kumasi.
c. College of Art Library, College of Art and Social Science, KNUST, Kumasi.
d. Department of Publishing Studies Library, KNUST, Kumasi.
e. Kumasi Polytechnic Library, Kumasi.
f. University of Education Library, Kumasi campus, Kumasi.
g. Wesley College Library, Kumasi.

3.3 Population for the Study

Population in research means the aggregate or totality of objects or individuals regarding which inferences are to be made in a study. It means all those people who are proposed to be covered under the scheme of study. Fraenkel and Wallen (2000) describes population as any group of individuals that have one or more characteristics in common that are of interest to

the researcher. A heterogeneous population with dissimilar attributes was used for this study and was made up of selected Junior and Senior High Schools, Year One to Four male and female students and Lecturers, all in the Department of Publishing Studies, KNUST. It also included graduates of the programme as at May 2008. Table 1 shows the population distribution for the research.

Table 1: Total Population for the Study

Number of the selected Junior and Senior High School students	895
Current batch of the Department of Publishing Studies students	667
Number of Lecturers in the Department of Publishing Studies	14
Total population	1576

3.3.1 Target Population

The total population for the study was however, too large for convenient study and had to be trimmed down. The target population therefore is the part of the population that the researcher bases the study on and collects data from. In this study, the target population was made up of the selected Junior and Senior High School students, total students in the Department of Publishing Studies in 2007/2008 academic year and drawing Lecturers. This is shown in Table 2.

Table 2: Target Population for the Study

Total selected Junior and Senior High School students	895
Total students at the Department of Publishing Studies students	667
Total Lecturers who teach drawing in Book Design & Illustration	2
Total Target Population	1564

From Table 2, only 47 of the current batch of 667 Publishing Studies students are majoring in Book Design and Illustration. The fact that less than a quarter (200 representing 22.3%) of the 895 students who have graduated from the Publishing Studies programme (Table 1) majored in Book Design and Illustration shows that drawing is not the most popular of the three major course areas (Printing Technology and Management, Publishing Administration and Book Design and Illustration) besides only two of the 14 Lecturers teach drawing.

3.3.2 Accessible Population

Accessible population is a group or section of the target population that a researcher can easily reach for data collection. In this study, the target population is shown below.

Table 3: Composition of Accessible Population

ST – 1	Junior and Senior High School students	200
ST – 2	Publishing Studies students who did offer Book Design and Illustration	200
ST - 3	Book Design and Illustration students	47
ST – 4	Lecturers who teach drawing at Department of Publishing Studies	2
	Total	449

Table 3: The stratification and sampling procedure for the study

3.3.3 Sample and Sampling

Due to limiting factors of expenses, time and accessibility, it is not always possible or practical to obtain measures from a population. In this regard, the researcher endeavours to collect information from a smaller group or subset of the population in such a way that the knowledge gained is representative of the total population under study. The smaller group or subset selected for observation and analysis is the sample. By observing the characteristics of the sample, one can make certain inferences about the characteristics of the population from which it is drawn (Fraenkel and Wallen, 1996).

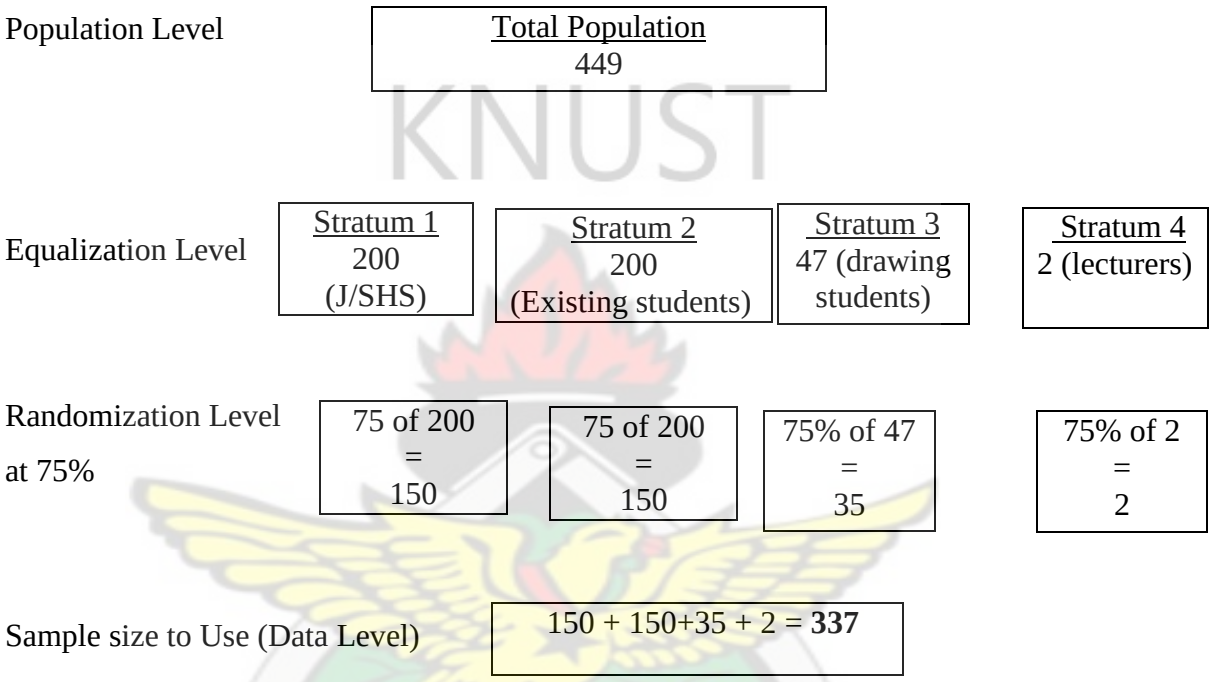
Sampling, according to Osuala (2005), is taking a portion of the population as a representation of the entire population. Sampling may be described as relying on a cross section of a target population to perform an experiment or an observational study. This is because it is usually not possible to study an entire population. Therefore, without bias, there is the need to select a representative for the population. Randomization therefore prevents researcher bias in the sample selection.

3.3.4 Sampling Design

Sampling designs include the simple random, stratified random, multistage random, cluster and quota sampling; spatial, independent, convenient and matched sampling. In this study, the stratified random sampling design was adopted. Stratified sampling techniques are generally used when the population is heterogeneous, and where certain homogeneous or similar sub-populations can be isolated. Stratified sampling is when samples are taken from each stratum or sub-group of the population to represent the entire population (Leedy, 2005). In this study, the sample size was 337, consisting 200 Junior and Senior High

Schools, 200 current students in the Department as at 2007/2008 academic year, 47 second to fourth year Book Design and Illustration students and 2 Drawing Lecturers in the Publishing Studies programme.

Figure 5 is a graphical representation of the sampling design adopted for the study.



3.4 Instrumentation

Three data collection techniques that are commonly used by qualitative researchers are observation, interviews and document analysis. The research instruments employed for gathering primary data for the study were observation and interview. Secondary data were obtained from such sources as art dictionaries, encyclopedias, memos, drawing books, drawing reports, published and unpublished articles.

Data Gathered from Observation

Some of the data gathered came from visits to the drawing studios in selected Junior and Senior High Schools and most importantly the Department of Publishing Studies, College of Art and Social Sciences, KNUST.

Data were also sought from the lesson notes of selected Junior and Senior High Schools drawing teachers; and drawings in the sketchpads of students in Junior and Senior High Schools and the Department of Publishing Studies.

Data Gathered from Interviews

Data from interviews conducted came from:

a. Existing students and graduates of the Department of Publishing Studies, KNUST.
b. Book Design and Illustration second, third and fourth year students of the Department of Publishing Studies, KNUST.

Data Gathered from Documents

Another set of data were collected from the administrative offices of the Department of Publishing Studies, the personal library of Professor Frederick Tetteh Mate, a founding Lecturer of the then Book Industry programme.

3.4.1 Observation

Observation is recognized as the most direct means of studying people when one is interested in their overt behaviour. It is a more natural way of gathering data. Data collection through observation may yield more real and true data than by any other method. As a scientific tool, observation may range from the most casual to the most scientific and

precise, involving modern mechanical and electronic means (Sidhu, 1084:158). The degree of observer participation can however, vary considerably. Direct observation of behaviour is an important means of appraising the work of schools and teachers. In the field of education, observation comes handy to judge a teacher's skill in teaching and assessment of practical skills.

When a researcher takes on the role of a complete participant in a group, his or her identity is not known by any of the individuals being observed. The researcher interacts with members of the group as naturally as possible, as if he or she is one of them. When a researcher chooses the role of participant-as-observer, he or she participates fully in the activity in the group being studied but also makes it clear that he is doing research. When a researcher chooses the role of observer-as-participant, he or she identifies fully and straight off as a researcher but makes no pretense of actually being a researcher of the group being observed.

Some Advantages of Observation as a Research Instrument

a. The researcher had chance to get personal experience of situations under study.
b. The researcher is able to record all true happenings about the event of a study.
c. The problem of validity and bias are conquered with a researcher's physical presence.

Some Disadvantages of Observation as a Research Instrument

a. The researcher can conclude at the end of a research on few observations made.
b. It may be very expensive in terms of time and costs when locations are far away.

c. The selection of models for study may be tricky.

d. Establishing the validity of observation is always difficult. Many of the items of observation cannot be defined with sufficient precision. To attempt to define or isolate these aspects may involve false definitions and thus, invalidity of the data.

e. The problem of subjectivity is also involved. A person tends to see what he or she knows. If a teacher, a doctor and an architect inspects a school building, each will see the things that are especially known to him or her and other things are likely to escape his or her attention.

f. There is the danger of concentrating observation on the aspects of limited significance simply because they can be recorded objectively and accurately.

g. Observation is self-interfering. It introduces in itself a bias, the direction and extent of which is relatively unknown and unknowable. Such distortion is difficult to eliminate, but it can be minimized through the proper choice and location of observers, inconspicuous recording and other attempts such as establishing observer neutrality.

Reasons for Choosing the Observation as Research Tool

The researcher observed students' drawing in the Junior and Senior High Schools the university since aspects of the Visual Arts, including drawing is taught at these levels of Ghanaian education. Besides, the students who gain admission into the university are products of Junior and Senior High Schools. Observation done in the schools focused on the first year of the Junior High School Visual Arts Class. Moreover, this is the stage that prepares pupils to enter into Senior High Schools to study Visual Arts. Since students

admitted into the Publishing Studies programme come from diverse educational backgrounds environments, therefore, there was the need to go down the ladder to find out how much drawing is taught at the various levels as a means to understand their performance in the Department of Publishing Studies drawing course.

An initial enquiry in the Department revealed that 41.6% of the total number of 667 students at Department of Publishing Studies had some education in art at the Senior High School level and 28.5% at both the Junior and Senior High School levels. Moreover, the data revealed that only 1.3% of the students were taught art in the Primary School; 1.3% of them were taught art only at Junior High School while 11.3% were taught art in Primary and at Junior High School. The enquiry also found that 16% of the students had taught themselves art. It became clear that not all the students admitted into the Department of Publishing Studies programme had adequate background knowledge of and skills in drawing which also is an integral part of art. This suggests the need for the Department of Publishing Studies students to be taught basic skills in drawing to enable them gain the required proficiency that will make them want to major in Book Design and Illustration.

Designing an Observation Checklist

The researcher designed a less structured checklist to guide data collection through direct observation. The checklist enabled the researcher to tick the appropriate observed actions by the Lecturers and students of drawing. Questions that guided the checklist were:

a. What information is needed to answer the research questions?
b. Why does the researcher want this information?
c. What purposes will this information serve?

d. How will the researcher use this information?

The observation checklist was made up of 62 questions that sought information on the teaching of drawing at the Department of Publishing Studies. This was given to 10 people to vet for the necessary adjustments to be made before it was submitted to the research supervisor for final vetting and approval. The validation of the observation checklist was made to ensure it would be appropriate for the data being sought. Permission for the observation was sought and approved from the Drawing Lecturers at the Department of Publishing Studies and copies of the checklist were handed over to the teachers and Lecturers involved. This was followed by the researcher appearing on the set dates, day and time for the scheduled observation at the three levels.

Undertaking the Observation

The researcher made personal trips to the selected Junior and Senior High Schools to observe the kind of art activities teachers and their students engage in. The purpose was to collect firsthand data about how students at this level develop their capacity for drawing prior to the pre-university level. The observation in the selected eight Junior High Schools in the Ashanti Region took place every Wednesday of June and July 2007 for two-and-half hours per session (1:00-3:30pm) while lessons in the five selected Senior High Schools also in the Ashanti Region were observed for four hours (8:30-12:30 p.m.) every Monday of August and September 2007. Observation of drawing lessons in the Department of Publishing Studies took place in the mornings of Mondays and Thursdays from September through to November 2008, and then from January to February, 2009.

During the classroom observation, the researcher adopted the participant observation strategy. The different types of observation ranging from external, passive, balanced, active and total participant observer status were used. Of the five types, the balanced participant observation method which enables the researcher to observe both as an insider and outsider at the same time to collect the needed data was employed. In some cases, the researcher got involved in the goings-on in the classrooms and in some instances, placed herself at an observation post as a bystander to watch what was happening. This type of participant observation considerably reduced all kinds of biases from the data, making it neutral and objective.

The observation schedule enabled the researcher to collect data from eight Junior High Schools namely; KNUST, Akorem M. A. Jachie Anglican, Ridge, Asuoyeboah, Ayeduase, Kotei and Abuakwa. The five sampled Senior High Schools were KNUST, St. Monica's, Toase, Seventh Day Adventist-Bekwai and T. I. Ahmadiyya while the Department of Publishing Studies classes involved the first year drawing class and the second, third and fourth year Book Design and Illustration students. The sampled schools were selected using the purposive sampling technique to focus on the schools picked offer drawing as a subject of study.

In the case of the Department of Publishing Studies, the researcher adopted the participant-as-observer role to be close to the drawing lecturers and students while classes were going on. The method offered opportunity for the researcher to directly observe how drawing is taught by the lecturers; how the students perform the drawing tasks assigned them; the kind of interactions that take place between the lecturers and their students during drawing

sessions; the students' attitude towards drawing; and, the kind of exercises that constitute the drawing component of the Book Design and Illustration course.

This provided firsthand information to enable accurate description of teaching and learning of drawing in the Department of Publishing Studies at KNUST.

The observation focused on the following:

a. Goals set by drawing teachers and lecturers especially at the Department in question.
b. The teaching methods employed by drawing teachers and lecturers at Book Design and Illustration places under observation.
c. The content of the syllabus for drawing at the various schools.
d. Drawing students' composure in the studio.
e. Works and assessment of drawing students.

Limitations in Undertaking the Observation

Lack of co-operation from some of the students made it difficult for the researcher to obtain the required data for the study. Some Junior and Senior High School teachers stopped teaching the topics the syllabus required them to teach and taught different topics purposely to impress the researcher. Other teachers did not want their teaching observed because they believed that the data collected would be used against them.

The researcher also faced financial constraints due to the many trips that were required in order to obtain adequate and reliable data from the sampled schools.

These challenges affected the quality of data collected as the researcher could not sample more than thirteen schools stated earlier at the schedule times to observe full lessons of

teachers teaching drawing. Time tabling and travel problems also made it difficult to shuttle between the schools and arrive promptly. Again, inadequate financing made the researcher sometimes delay or postpone the school visits scheduled for the different schools.

3.4.2. Interview

Interviewing is the careful asking of relevant questions of selected individuals. It is an important way for a researcher to check, verify or refute impressions gained through observation. The method provides a means to gain information about things that cannot be observed directly (Fraenkel and Wallen, 1996). Interviews involve the researcher gathering data directly from others through face-to-face or telephone contact. The interview is superior to other methods of data gathering devices because it allows the researcher to gain rapport or establish a friendly relationship with the subject. Researchers may obtain certain types of information an individual might be reluctant to put into writing through this relationship.

The method employed for this study was the face to face interview as it was to ask specific questions relevant to the teaching of drawing in the Department of Publishing Studies and to enable the researcher find answers to the research questions.

Some Advantages of Interview as a Research Instrument

a. It allows a researcher to interact personally with interviewees more than any other tool of research.
b. Misunderstandings are rectified as quickly as possible to eliminate doubts or suspicions and create understanding between the two parties.

c. It provides an even field to both interviewers and interviewees. That is, interviewers can seek clarification and ask follow up questions when answers are ambiguous. Similarly, interviewees can seek for explanation on unclear questions.

d. The researcher is personally present to remove any doubt or suspicion regarding the nature of the enquiry. Hence; answers are not biased because any misunderstanding gets rectified.

e. Interviewers can probe into casual factors, determine attitudes, discover the origin of problems, involve interviewees in an analysis of their own problems and also secure cooperation in the analysis.

f. The respondent's difficulties (like poor expression and bad hand writing) are also avoided as every schedule is filled by the interviewer.

Some Disadvantages of Interview

a. For an adequate coverage, a large number of field workers may have to be engaged and trained in the work of data collection. All this entails a lot of expenditure and a research worker with limited financial means can find himself or herself in a great difficulty in adopting this method.

b. It is a comparatively costly gathering method than other techniques. When the survey covers a wide geographic area, interview becomes expensive and also costly in time and effort since it almost invariably necessitates call-backs, long waits and travels.

c. Since the objectivity, sensitivity and insight of the interviewer is crucial, this procedure requires a level of expertness not ordinarily possessed by an average

research worker. That is why it is considered as one of the most difficult techniques to employ.

Reasons for Choosing the Interview Technique

a. It created a window into the amount of knowledge and skills drawing students have from the teaching of drawing through the existing methods adopted by drawing lecturers. That is, the researcher was able to get access and build understanding of students' experiences in the world of drawing.
b. It gave the researcher the chance to precisely describe the narrations of interviewees.
c. It allowed the researcher establish rapport with interviewees to gain their confidence and support.
d. It assisted the researcher gain firsthand information, hence; have an insight into interviewees' thoughts since this technique encourages storytelling.

Designing Interview Guide

a. Two sets of interview guides were prepared to avoid irrelevant questions. The guide took into account the central issue of assessing the impact of the existing methods of teaching drawing to Book Design and Illustration students at the Department of Publishing Studies, KNUST.
b. This technique was first used for the preliminary study to find out how much students know about drawing. This assisted the researcher to identify the real issues which are associated with the teaching of drawing at the Department of Publishing Studies.

a. The rationale for the preliminary study was to ensure that the questionnaire elicited the right response and gathered valid data for the research. The first interview solicited data from randomly sampled students and graduates of the Department. The guide had seven questions with few follow up questions.

b. The second interview was conducted on randomly sampled 2nd, 3rd and 4th year students who were majoring in Book Design and Illustration in the 2007/08 academic year. The interview guide had 13 questions.

The two interviews involved the face to face approach. The purpose was to capture primary data devoid of misinformation and misinterpretation from interviewees regarding their perspectives about the teaching and learning of drawing in the Department under review. To ensure the validity of the interview guides, copies were given to colleagues to vet before submitting it to the research supervisor for final vetting to make the guides as objective as much as possible. Sufficient time was given to respondents to prepare for the interviews.

This helped in eliminating unnecessary stress on interviewees. The interview was based on the following questions:

a. Interviewees' background information and interest in drawing.

b. Students' level of understanding for learning drawing.

c. Students' idea of teaching and learning of drawing at the Department of Publishing Studies.

d. Improvements students' expected in the teaching of drawing at the Department of Publishing Studies.

Conducting the Interviews

The first formal interview formed part of the preliminary investigation. This was carried out with 150 students past and graduates of the Department of Publishing Studies. The second interview took place between the researcher and 2nd, 3rd and 4th year students specializing in Book Design and Illustration as at 2007/2008 academic year. A total population of 47 Book Design and Illustration students comprising 10 in second year, 26 in third year and 11 in fourth year were available for this second interview. After drafting the interview guide, appointments were booked but at the convenience of the interviewees. The researcher was punctual at almost all the appointed times and recorded the sessions. After the interviews were conducted, the researcher played them back to confirm that the tape recorders used had captured every data that was intended to be gathered.

Difficulties Encountered during the Interviews

A number of difficulties were encountered in locating past students of the Publishing Studies programme as well as securing the funds needed for travel and accommodation expenses while on the field.

Data Gathered from Interviews

Data from interviews conducted came from:

a. Existing students on the programme and graduates of Department of Publishing Studies.
b. 2nd, 3rd and 4th year Book Design and Illustration students of the Department of Publishing Studies.

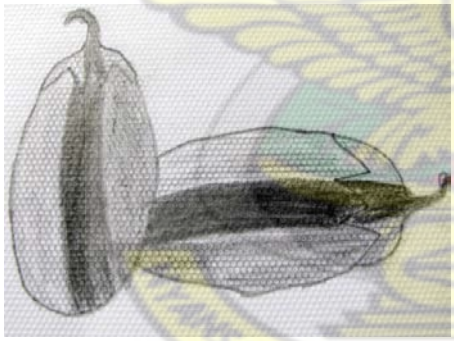
3.5 Results of Observation at Junior High Schools

Evidence of drawing observed at the Junior and Senior High Schools are shown in Fig. 6 which attest to drawing being taught at the pre-university level. Drawing techniques used by pupils at Junior High School One are drawing outline and shading three tones with pencils on white cartridge papers.

Lessons observed were on the following topics:

a. Notes on elements and principles of art.
b. Drawing of shapes, straight lines and objects like fruits and vegetables.
c. Thread and line pulling as well as decorative pieces.

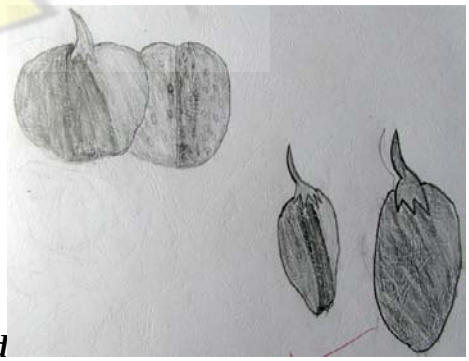
Figures 6a to 6h are examples of drawings by Junior High School One pupils



6a

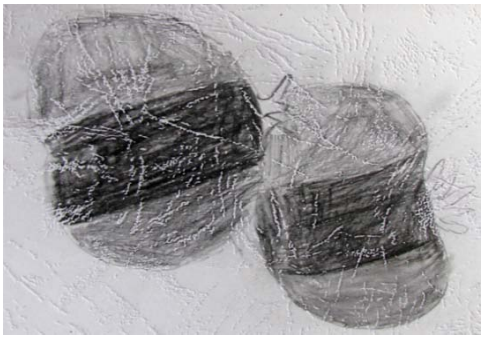
6b

6c

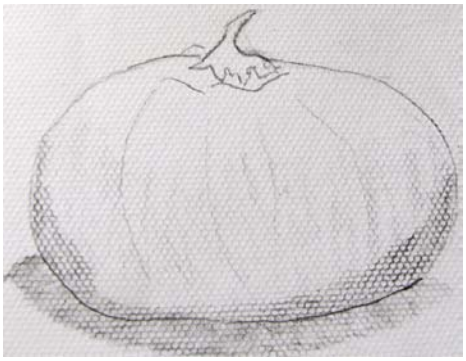


6d

Figs. 6a to 6d: Drawings of two garden-eggs



6e



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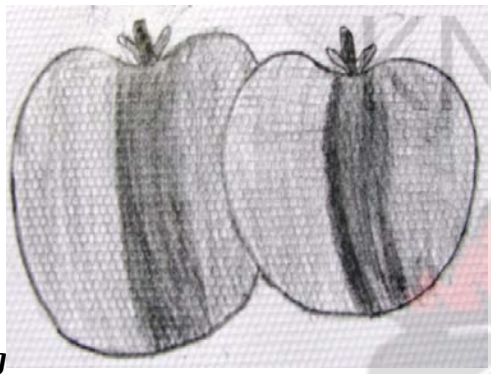
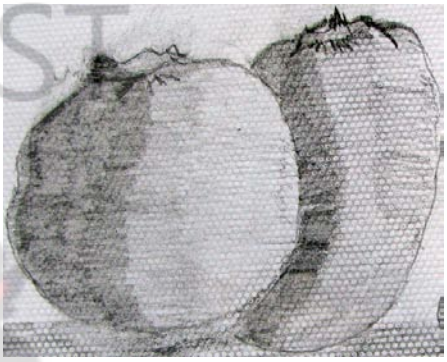


6g



6h

Figs. 6e to 6h: Drawings of tomatoes

Source: KNUST Junior High School, Kumasi

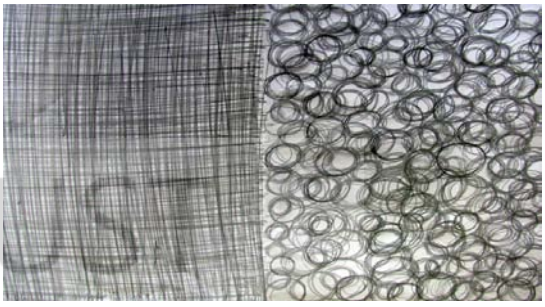
3.6 Observation of Drawing at Senior High Schools

The Senior High School syllabus, 2-4, 2008 specifies the following topics for study by Visual Art students who offer Picture Making: Drawing; Meaning and Purposes of Drawing; Draw from observation; make quick sketches to communicate an idea, draw using lines to express ideas and feelings, create ideas by drawing natural and man-made objects in the environment; Classify tools, materials and equipment for drawing according to their functions.

Source: Ghana; Ministry of Education, Science and Sports, Teaching Syllabus for Picture Making (Senior High School 2-4). September, 2008.

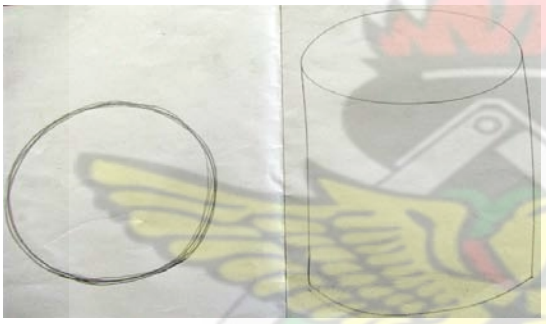
Fig. 7 shows example of drawings by Senior High School students in the sampled schools. Fig. 7 indicates students drawings of circles, vertical and horizontal lines to relax the wrist muscles.

7a

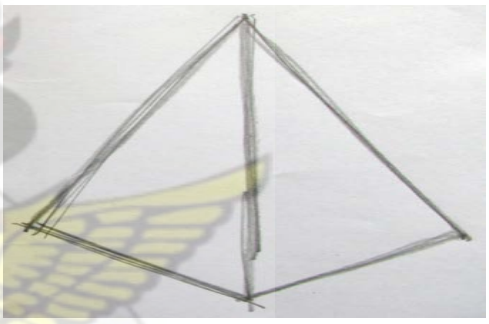


7b

Figures 7c and 7d are drawing of shapes by students

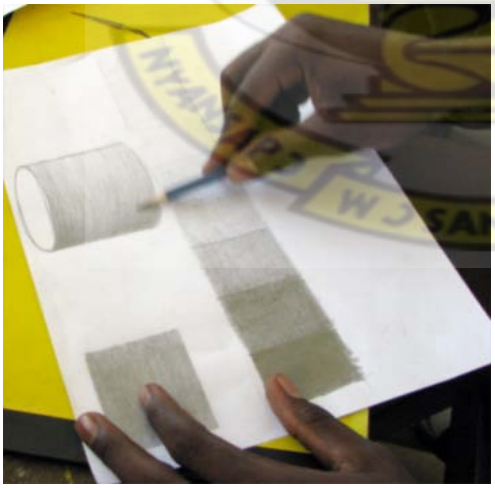


7c

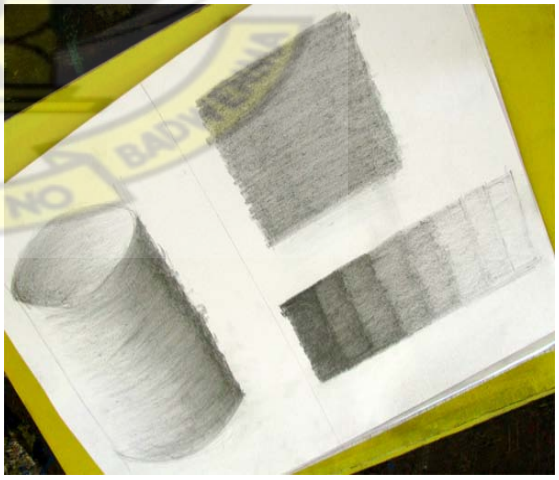


7d

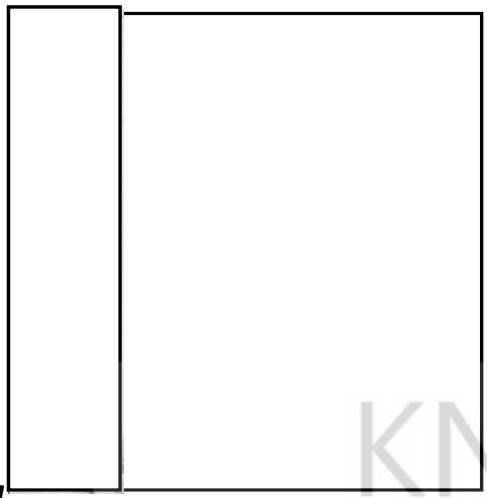
Figures7i to 7j show students practising gradation of mass shading



7e

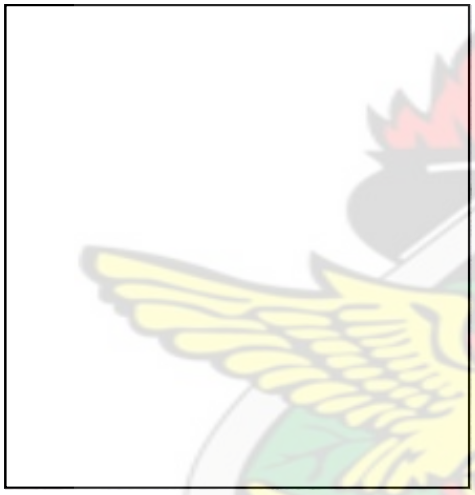


7f

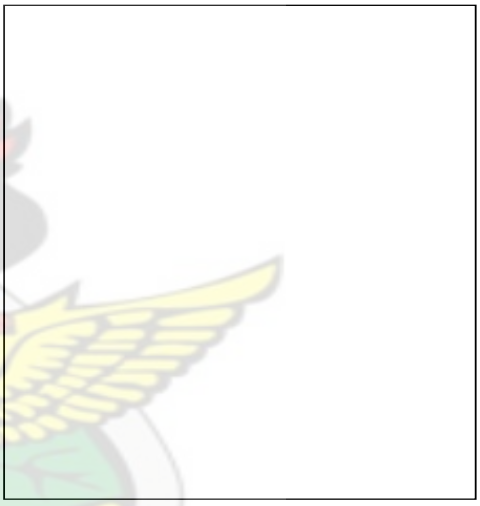


7g

7h



7i



7j

Figures 7k and 7l are self portraits of two students in figure drawing exercise

7k

7l

Compositions set in studio at KNUST Senior High School

Plate 1: Crabs and snails on tray

Plate 2: Fish and tomatoes on tray

Figure 7m is a student work on the crab and snail composition

Figures 7m and 7o are works from crab and snail composition

7n

7o

Figures 7p and 7q show students working on previous assignments instead of the set task

7p

7q

Plate 3

Source: KNUST and Toase Senior High Schools, Kumasi

Plate 3 and Figures 7p and 7q show students blatantly ignoring the importance of the hand and eye coordination and critical observation exercises and instead, working on the previous week's projects. In Plate 3, the student facing the camera had his back towards the composition set for the day, implying that his work will be imaginative rather than the life drawing.

Observation of drawing lessons during the fieldwork revealed the following:

a. All the art teachers saw drawing as the basis of all Visual Art subjects.
b. Drawing teachers played the role of catalysts to motivate and direct their students in the drawing studios. They also gave helped hands to students who needed help during the practical sessions.
c. Drawing students were eager to learn to draw.
d. Practical art works taught at Senior High Schools were hands-on activity oriented (see Figs. 7e and 7m).

Plate 4 shows a teacher assisting students during drawing lesson

Source: *KNUST Senior High School*

e. Other media such as crayon and acrylic paints were employed for drawing exercises beside the commonly used pencils (see Fig. 7o); works are in pencil and crayon.

Weaknesses identified with drawing at Senior High School

a. In most of the schools, course outlines were absent.

b. The first tasks the teachers assigned the students were mostly homework. Teachers confirmed they knew other people would execute such for the students yet they did just that. This made the researcher believe that the Senior High School teachers had difficulties in their judgment of the real performance of students at that level (see Figs. 7i to 7l).

c. Drawing teachers were not creative and resourceful in finding varied ways of teaching.

d. Students did not understand the meaning, reasons and functions of drawing. It was detected that students came to the art class because they had interest in art.

e. Teaching did not follow a logical procedure. That is;

- There were no identification, description and exploration of the different drawing tools, materials, media, supports and equipment.
- Students lacked the experience of creating the elements and principles of design.
- Correct handling of different drawing tools to enable students make the right move with the different tools were not taught. In Figures 7e, 7m, 7p and 7q, it is clear that the drawings were affected by the wrong way the students held the pencils to draw. Yet the students almost used correct grips as shown in Figures 7e and 7q because they were looking for specific marks from the drawing pencil.
- Students were not taught the act of critically observing and drawing by coordinating the hand and eyes (see Plate 3).

- Students had not been taught any other drawing skills except outline drawing. This is clearly seen in all the students' works. Studio works for students exercises were mainly compositions (see Plates 1 and 2).
- Students had not been taught the different shading skills apart from mass shading because no other technique was observed in any the students' sketchpads and work that was done in the drawing studio (see Figs. 7e to 7q).

With regards to the teaching methods employed by the teachers, it was found that:

- Drawing teachers did not vary their methods of teaching. For example, compositions were always set for students to draw for practical works. Thus, it is rational to state that teaching methods were inappropriate for the content and also not student-centered.
- The teaching method employed did not give prominence to details study.

f. Relevant teaching materials were not readily available to teachers and students.

g. Seats in the studios in all the schools were not properly arranged (see Plate 4), leaving some students to sit with their backs to the drawing tasks. Bad seating arrangement led to some students seated too far away from compositions that were to be executed.

h. Objects such as live crawling crabs and snails were composed as still life exercises for students to draw (see Plate 2).

The observation revealed that some physical problems hinder the teaching of drawing at almost all the different levels of education in Ghana. This includes;

a. Lack of infrastructure, especially, drawing studios.

b. Improper ventilation in the drawing studios.

c. Bad seating arrangement in the classrooms and drawing studios.

d. Absence of tools, materials and equipment for drawing.

e. Absence of teaching aids in the drawing classrooms and studios.

3.7 Major Findings from Drawing Observation at Department of Publishing Studies, KNUST

The drawing sessions observed in the department involved the four year groups since all the students are obliged to take drawing in their first year on the Publishing Studies programme before their specialization from among Printing Technology and Management, Publishing Administration and Management, and Book Design and Illustration in the second year. To enable the reader understand the basis of the observation data, the course content for each year has been provided as specified in the Revised Syllabus for BA Publishing Studies (2003: pp.9).

3.7.1 Year One Semester One

This foundation drawing course is a three credit hour course titled Drawing I with course code BI 171. Teaching of this course is designed to last three hours – one hour of theory teaching and two hours of practical work by the students.

Course Description

Introduction to basic elements and principles of drawing; Analytical studies of basic geometric shapes, spheres, cylinders, squares, cones, pyramids; Experimenting with pencil

and other drawing materials; basic shading techniques and identification of tonal values in monochrome.

Source: (Revised Syllabus, 2003: pp. 10)

Observation of drawing lessons during this period revealed the following:

a. Teaching was based on the syllabus and followed the sequence of course components specified for this foundation course. The teaching process did not differentiate between students who had studied art before and therefore had some drawing skills and those who did not have any skills in drawing.
b. Only the definitions and some uses of the Elements and Principles of Design were taught.

Weaknesses observed:

a. Students were asked to draw objects without first teaching them all the basic drawing skills and techniques.
b. Teaching did not follow the drawing sequence, that is, it did not start from the fundamentals of drawing before the intermediate and advanced stages were taught.
c. The correct handling of the different drawing tools to help students understand the advantages and disadvantages of each for specific drawing exercises were not taught.
d. Drawing course content in Book Design and Illustration section of the Publishing Studies programme was not adequate to provide all the needed drawing skills and techniques.

e. Teaching did not involve simultaneous looking and drawing of objects to train students in hand and eye coordination.

f. Students did not exhibit critical observation on objects to register details during drawing exercises.

g. Besides teaching the meaning and purpose of drawing, some information on the appropriate tools and materials for drawing were given to students and they were also allowed to explore how these resources are used in drawing. Identifying and experimenting with various pencils, charcoal and other related drawing materials would have made it possible for all the students and in particular, those who had little or no art background, to understand the characteristics of each drawing medium.

h. Detailed explanation, examples, differentiation, creation and application of the various elements and principles of design were not taught in much detail to encourage the students to experiment with them.

i. Loosening the wrist muscles to make them relaxed and flexible through wrist exercises was not seen in the drawing studios at this level. These exercises are helpful in training beginners to know how to position and keep a pencil or brush between the fingers in order to create smooth lines and shapes. This builds confidence for drawing.

j. The different drawing and shading techniques which should not be taught at this level were taught students. Therefore, drawing students lacked the complete skills and were limited to drawing outlines and mass shading (see Fig 8).

k. Students produced drawings from memory and not from composed objects.

Examples of drawing exercises are shown in Figures 8c to 8f

Figures 8c and 8d are shading of square and rectangular shapes

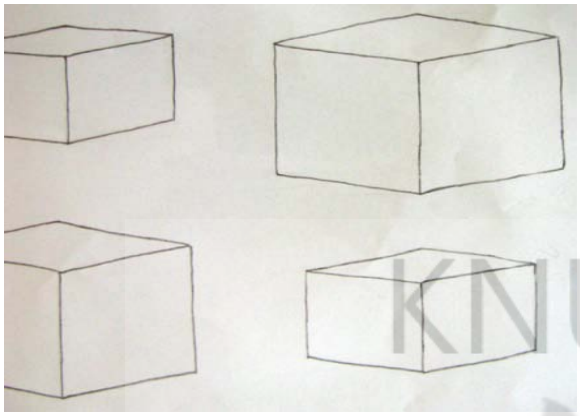


Fig. 8a: Outline drawings of boxes

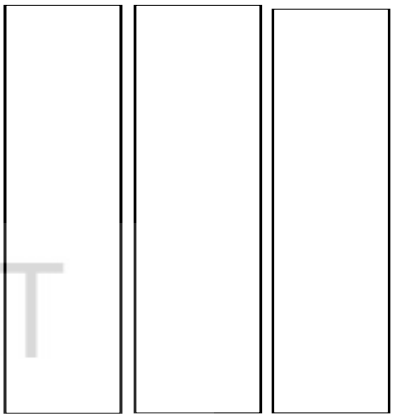
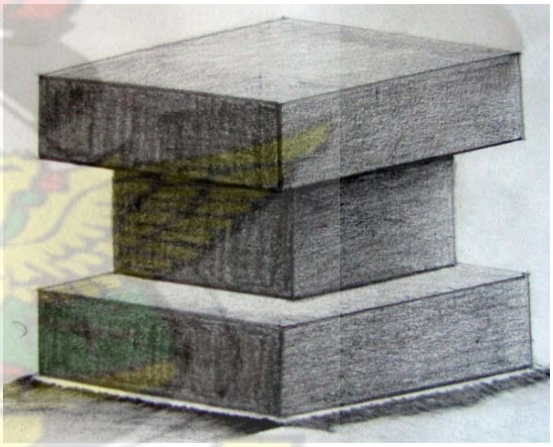


Fig. 8b: Gradation of shading techniques

8c



8d

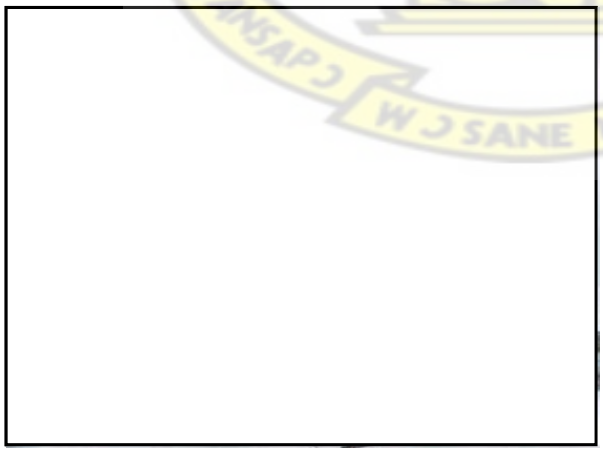


Fig.8e: Shapes in mass shading

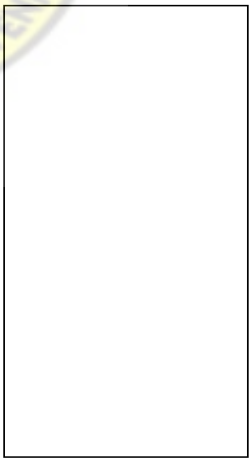


Fig. 8f: Bottle in mass shading

3.7.2 Year One Semester Two

This foundation course is titled Drawing II with course code BI 172. This is a three-hour follow-up course which carries two credit hours.

Course Description

This stage comprises figure and general drawing, the use of different media and kinds of drawing techniques, geometric basic shapes but this time in colour starting from the construction of shapes and continues with gradation in pointillism, hatching, cross hatching and scribbling in colour. The second part deals with the introduction and how to draw the basics of the human head and combining all the features into a complete human head; drawing from nature

Source: (Revised Syllabus, 2003: pp. 10)

Observation of drawing lessons during this period revealed the following:

a. Teaching began by introducing students drawing the various features of the human head to make complete human heads. This process was appropriate since the students had to learn to draw a complete human head starting from learning to draw the different parts.
b. Teaching again dealt with gradation in shading and this helped the students to learn to master how to shade from dark to light.

Weaknesses identified:

a. Since teaching and learning did not include identification and exploration of drawing tools and materials as well as explanation, differentiation, identification and

importance of the elements and principles of design, the limited knowledge the students had showed in the drawings they produced as seen in Figure 9.

b. The lack of mastery of holding drawing tools was seen among the students; they had difficulty handling their pencils in different ways to achieve maximum drawing benefits.

c. Lack of preliminary exercises to relax the wrist muscles led to the students drawing multiple and shaky lines (see Figs. 9a to 9d).

d. Students had not mastered the various drawing and shading techniques but were made to draw and shade human figures. Teaching did not consider the students' lack of knowledge on these techniques as the students were asked to show this. For example, outline drawing and mass shading techniques were still in use.

The fundamentals of drawing were not properly and sequentially taught students at this stage. Figure 9 shows sample of drawings by students in Year One Semester Two

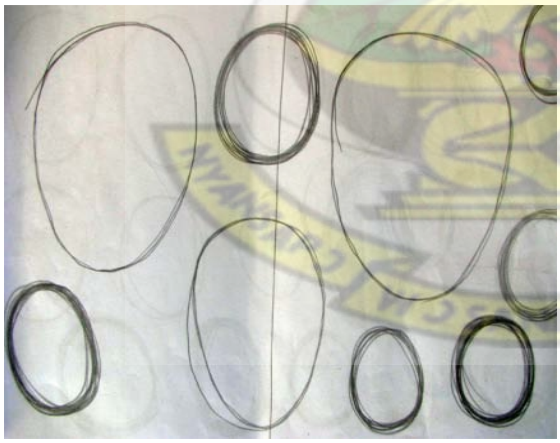


Fig. 9a: Drawing shapes of the human head

Fig. 9b: Draw the outline of human head

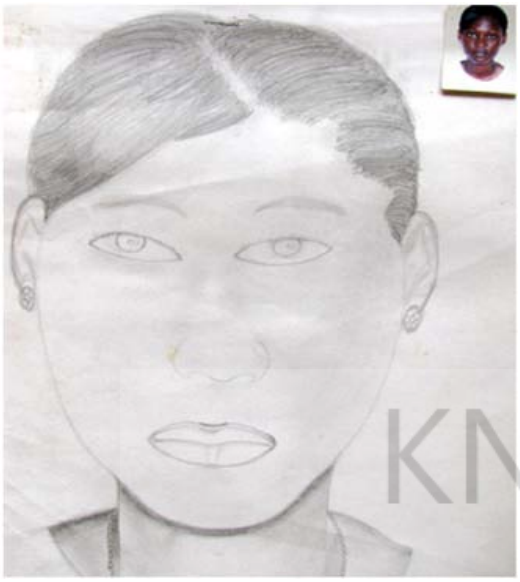


Fig. 9c: Drawing of a student's own self

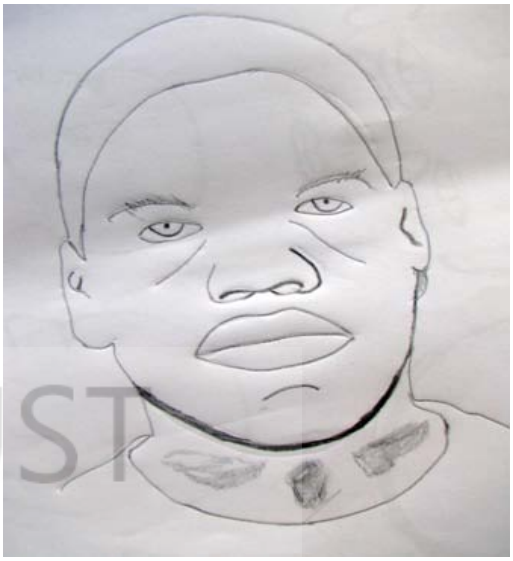


Fig. 9d: Self portrait of a drawing student

Figs. 9e and 9f are drawings of trees from nature.

9e

9f

3.7.3 Year Two Semester One

This is the first year of the Book Design and Illustration specialization course with three credit hours. This course is titled Illustration I with course code BI 271. It consists of one hour teaching and two hours of practical work by students.

Course Description

BDI students are introduced to black and white illustrations, pen and ink, pen and wash; Simple figurative compositions in black-and-white; General Drawing; Projects.

Source: (Revised Syllabus, 2003: pp. 11)

Observation of drawing sessions during this period revealed the following:

a. The students were introduced to still life drawing and drawing from nature. This is seen from Figure 10.

Weaknesses observed

a. Mastery in using the various drawing tools and materials had not been achieved at this level and showed in students' drawings (see Fig. 10). It can be seen that the students made limited use of the different shading styles even though the course description stipulates learning to use pen and ink, pen and wash and other drawing techniques.
b. The strokes of the pencil used for the Figure 10 drawings reveal inexperience and lack of confidence on the part of the students. This has come about because

the students were not taken through preliminary exercises to learn how to relax the wrist muscles to achieve good drawings.

c. Limited use of drawing and shading techniques.

d. Figs. 10e to 10g are tracings from printed materials. Tracing was done due to students' inability to draw well. It can be seen that the works produced from tracing show the lack of original creative and critical thinking. Copying could lead to problems with copyright laws.

e. A study of Figure 10 suggests a lack of skill for critical observation and for looking and drawing at the same time. The students had difficulty coordinating their hands and eyes. None of them had ever heard of the term "hand and eye coordination" before and knew how to do this. Since all the works are rendered realistically, it makes it simpler to compare the two sets of drawings. It can be seen that the students were able to render well when they traced out images from photographs and other materials because most of the details in the originals were captured in the drawing. However, the hand drawn works lack details in the sense of showing proportion in the drawn images in relation to the real subject.

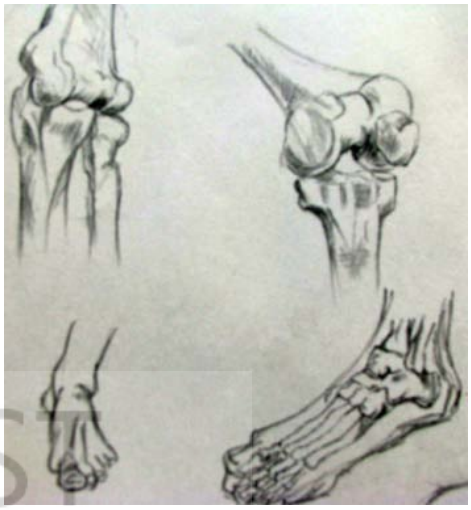
f. The students' works show that they were introduced to "still life" and "drawing from nature" alongside figure drawing.

Drawing students were still not ready for these tasks since the basics had not been covered in teaching.

Fig. 10 shows sample of drawings by Year Two Semester One students.

Figures 10a to 10d are students' simple figurative hand drawn compositions in black-and-white.

10a

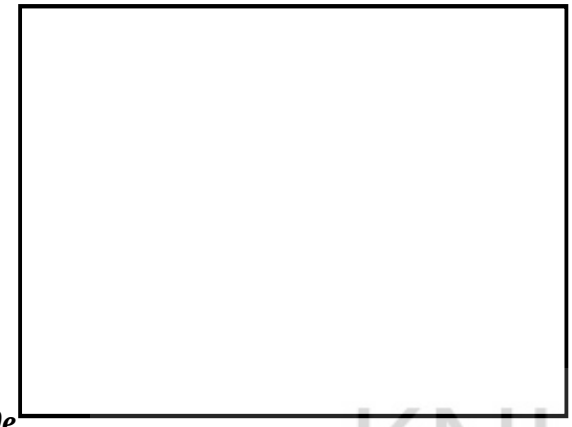


10b

10c

10d

Figs. 10e to 10f are drawings students made by tracing from photographs



10e

10f

Figure 10g is a traced image from Plate 5.

Fig.10g

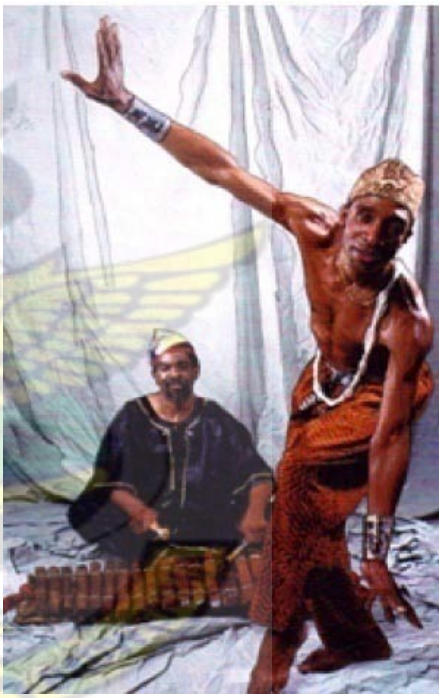


Plate 5

3.7.4 Year Two Semester Two

This course is a three credit hour course, titled Illustration II with course code BI 272. Teaching of this course is designed to last three hours – one hour teaching and two hours practical work by the students.

Course Description

Students are taught the application of black-and-white illustration techniques in complete compositions for children's wordless books as well as full figure drawing.

Source: (Revised Syllabus, 2003: pp. 13)

Observation of drawing sessions during this period revealed the following:

a. Teaching in the class focused on quick sketches. This is good for students since quick sketches express ideas such as happiness, sadness, confusion, flowing and a lot more. This signifies the importance of why students should be taught to have a thorough understanding of the detailed expressive qualities of lines.

Weaknesses identified:

a. Teaching at this stage still did not hammer on the different types of tools and materials that students should know. Students had still not mastered the drawing tools and materials through exploration since most of them were still producing drawing in only one medium, in this case the pencil (see Fig. 11).
b. Students still exhibited the use of mass shading in works and this shows that teaching and instructions given in class did not force students to explore and experiment other techniques (see Figs.11).
c. Since elements and principles of design, critical observation as well as the skill of looking and drawing at the same time were not intensively taught the students continuously got the sizes and proportions in relation to the object/subject inaccurate and continuously made multiple lines.

Figure 11 shows samples of drawings by Year Two Semester Two students

Fig. 11a: Drawing from nature

Fig. 11b: Quick skethes by a student

Figs. 11c and 11d are drawings of human nose and fingers by students

11c

11d

Figures 11a to 11f are drawings of self portraits by two students

11e

11f

3.7.5 Year Three Semester One

This is a third year first semester course titled Illustration III with course code BI 371. It is a three-hour follow-up course which carries two credit hours.

Course Description

Emphasis on various techniques in pictorial composition is taught. Imaginative composition, figurative and non-figurative; Media include poster, water colour, pen and wash; Project.

Source: (Revised Syllabus, 2003: pp. 14)

Observation of drawing sessions during this period revealed the following:

a. Quick sketches were still taught, hence extensive observation was absent. The students therefore still lacked the skill to accurately draw in detail.

b. Teaching was extended on drawing from compositions, photographs and nature. This allowed the students to vary what they drew.

Weaknesses observed

a. Students made quick sketches and drawing from photographs by mostly employing the pencil to draw on the various types of paper. Drawing of outlines and mass shading were the hallmark of this semester (see Fig. 12). Students missed the skill to critically observe and draw concurrently because teaching did not focus on them.

Figure 12 shows samples of drawings by Year Three Semester One students.

Figures 12a to 12d are quick sketches by students at the studio

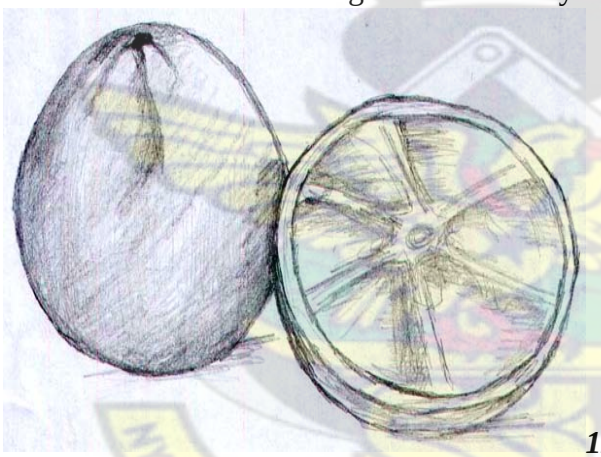
12a

12b

12c

12d

Figures 12e and 12f are drawings from nature by students



12e

12f

3.7.6 Year Three Semester Two

Students pursuing Book Design and Illustration go for Industrial Attachment during this time. Therefore no observation occurred during this period.

3.7.7 Year Four Semester One

Course title for this semester is Illustration IV which carries three credit hours.

Course Description

"This semester deals with the teaching of scientific and technical illustrations, tables, charts, graphs, maps and understanding illustration briefs; Project".

Source: (Revised Syllabus, 2003: pp. 16)

3.7.8 Year Four Semester Two

This final year course is titled Illustration V with course code BI 472. This course is a three-hour follow-up course which carries three credit hours.

Course Description

"Illustrating on the screen; Management of illustration production; Budgeting and costing for book project; Negotiation skills; scheduling and progress chasing; proactive planning; health and safety; professional ethics and project"

Source: (Revised Syllabus, 2003: pp. 18)

Observation of drawing sessions during this period revealed the following:

Through the observation of drawing lessons, it was realized that the fundamental drawing problems identified in the 1st year are the same as those found with the 4th year drawings. This transfer from 1st year through to the 4th year suggests that the skills that should build the foundation for good drawing at this level was not laid to enable the students learn the advanced skills required for still life, drawing from nature, and the human figure.

The implication is that after teaching the necessary knowledge and skills in drawing, the students should practice continuous drawing to be good at drawing. It also means that if they are not taught through a systematic procedure from the basic to the intermediate and then to the advanced level, it will be difficult for the students who possess weak skills and inadequate knowledge in drawing to become interested in learning to draw well.

Figure 13 illustrates drawings by 4th year Book Design and Illustration students

Figures 13a and 13b are outline drawings by students

13a

13b

Figures 13c, 13d and 13e are pen drawings by students

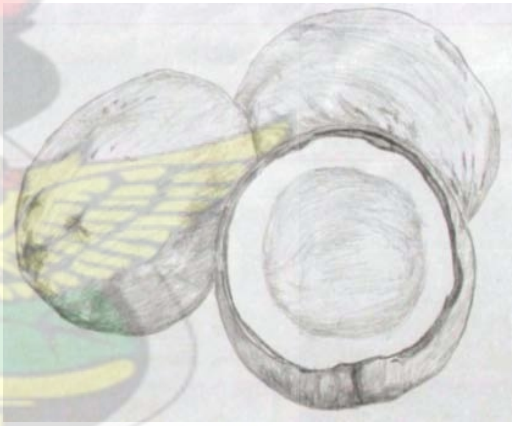
13c

13d

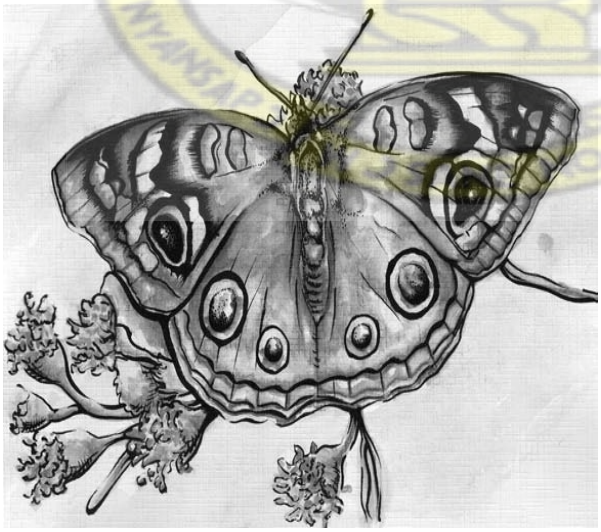
13e

Figures 13f to 13i show students drawings using the different types of shading

13f



13g



13h

13i

Figures 13j and 13k show students using the colour pencil to draw and shade

13j

13k

It can be seen from the drawings that students who had little or no knowledge from the junior levels of education enter into the Book Design and Illustration course with little or no experience and go out with little knowledge on drawing. This can be clearly seen in the works produced by drawing student from 1st year through to 4th year.

3.7.9 General View of Drawing by Year One – Four Students at the Department of Publishing Studies

a. On the goals stated in the Department of Publishing Studies syllabus for drawing;

- Drawing Lecturers ensured that the students understood their lessons by making them work in class and also giving them assignments.
- Drawing Lecturers helped the students by giving encouraging directions and serving as a source of motivation for the drawing students.

b. In both 3rd and 4th year drawing, teaching and learning was primarily hands on and much appreciation and criticism.
c. The course content for each year is adequate and not overloaded.
d. Most drawing students were eager to learn the drawing skills designed for them.

Weaknesses of drawing:

a. The Book Design and Illustration syllabus for Year 1–4 is not consistent with the amount of teaching done as this does not equip the students fully with the knowledge, skills and competencies needed for book design and illustration.
b. The drawing Lecturers have to enhance the students' creativity and resourcefulness in terms of the application of the elements and principles of design.
c. The students are not taught how to evaluate their own drawings. That is, most students could not interpret and analyze their own works.
d. The course content and requirements for drawing seem not too clear to the students and the content is not sequentially organized. The result is that teaching of drawing did not follow a logical procedure as drawing students were not taught the systematic way of learning how to draw accurately.
e. Most students had not attained the knowledge and skills commensurate with their maturity level; hence they were not able to create ideas that were relevant to their works.
f. Relevant drawing tools, materials and equipment are not available to ensure effective teaching of drawing in the Department.
g. Detailed marking scheme to guide assessment of students' drawings were not used.

These findings suggest that there is more to be done to enhance the teaching of drawing in Department of Publishing Studies so that lecturers and students will find fulfillment in what they do as book designers and illustrators.

3.8 Interviews Conducted by the Researcher

Table 4 shows the number of students interviewed for the study. As shown by data in the table, 2nd and 3rd year Book Design and Illustration students formed the bulk of those interviewed while 4th year provided the least number. Thirteen students were not interviewed because they were not available at the time.

Table 4: Number of students interviewed

Year Group	**Population of Students**	**Number of Interviews Conducted**	**Favourable Response % of Total Population**
Year 2	10	10	**100%**
Year 3	26	16	**62%**
Year 4	11	8	**73%**
Total	47	34	**73%**

The interview included all students in the second year, 62% of the 26 third year students and eight of the 11 fourth year students. This shows a fair representation of students of the various Book Design and Illustration year groups.

Table 5: Gender of respondents

Gender of respondents	Frequency	%	Valid %	Cumulative %
Male	19	55.9	**55.9**	55.9
Female	15	44.1	**44.1**	100.0
Total	34	100.0	**100.0**	100.0

In terms of gender, there were more male students than females in the population. Table 5 establishes that 55% or 19 of the 34 students interviewed were males whereas 44% or 15 of them were females. This clearly shows that the drawing section has nearly as many females pursuing the course as males. This signifies that both male and female students have equal opportunities in choosing drawing as a profession.

From the responses gathered, 67% of the 34 interviewees who are specializing in Book Design and Illustration at the time of study had done art prior to being admitted into Publishing Studies while 32% had never done art, yet are deemed appropriate to opt for Book Design and Illustration as their specialization. This indicates that there are students who have the interest and passion to draw except that they did not have the opportunity to follow this path. Book Design and Illustration can therefore be seen as a means for such students to fulfill their dreams on the Publishing Studies programme.

With regards to where the students who said they had art background had learned to draw, Table 6 shows that 16 of them (representing 47%) had the experience at Senior High Schools while five (representing 15%) had taught themselves to draw without going through any formal education. Overall, it can be seen that only eight (or 24%) of students had no art background before they entered into Book Design and Illustration.

Table 6: Sources of experience in drawing

	Frequency	%	Valid %	Cumulative %
1) Junior High School	1	2.9	**3**	2.9
2) Senior High School	16	47.1	**47**	50.0
3) Junior and Senior High School	2	5.9	**6**	55.9
4) Self Tutelage	5	14.7	**15**	70.6
5) Since infancy	2	5.9	**6**	76.5
6) Not Applicable	8	23.5	**23**	100.0
Total	34	100.0	**100.0**	100.0

Looking at the table, it is evident that majority of Book Design and Illustration students have an idea and some skills in drawing. The fact that some of the students entered the programme with no formal training in drawing is enough reason for all students on the programme to be taught to draw using a step-by-step method that starts probably from the level of Junior High School drawing requirements to bring them up to the level of drawing required for the book publishing industry. The major test here is bridging the gap between art and non-art students specializing in Book Design and Illustration at the Department of Publishing Studies.

In assessing the extent to which the students' background in drawing has helped in any to bring them up to the level of drawing skills required for the Publishing programme. Table 7 indicates interviewees (32% of total) explained that they had been affected positively by the basic drawing skills they learned at the lower levels of their education. This, they said had enabled them to understand some of the things that were required of them. Conversely, 44 % explained that they did not understand what was taught them in drawing mainly because

they had learned to the latter at lower levels of formal education. Reasons these drawing students assigned to answer include being taught drawing in a logical and sequential order of teaching drawing at both Junior and Senior High Schools. Other drawing students confessed that they offered art without learning about drawing.

Table 7: Students experience at Junior and Senior High Schools

	Frequency	**%**	**Valid %**	**Cumulative %**
1) Drawing was not part of my study	4	11.8	**12**	11.8
2) I did not understand much of what was taught	5	14.7	**5**	26.5
3) Missed out on the formal training	10	29.4	**29**	55.9
Not Applicable	15	44.1	**44**	100.0
Total	34	100.0	**100.0**	100.0

Table 8 established the fact that 56% of the drawing students saw themselves as performing better in Design than Illustration which has 35% of them showing interest while 9% liked both Design and Illustration. It is clear from this data that more than half of the Book Design and Illustration students like the design aspects which involves more of the application of computer software than students practically using their skills and hands to manually execute works.

Table 8: Students' preference (Design and Illustration)

	Frequency	%	Valid %	Cumulative %
1) Design	19	55.9	**56**	55.9
2) Illustration	12	35.3	**35**	91.2
3) All of the above	3	8.8	**9**	100.0
Total	34	100.0	**100.0**	100.0

When asked to rate the teaching of drawing in the Department, 56% of the students interviewed described the level of teaching drawing as good whiles only 9% rated it very high. This shows that more than half the total number of interviewees rated the teaching of drawing average or less implying that the existing methods of teaching drawing at the Department of Publishing Studies has to be reviewed to enable students improve upon their drawings. This is long overdue to enable the students to accomplish their aspirations of becoming excellent draftsmen.

Students who rated the standard of teaching drawing as average or below average attest to the fact that they have only improved moderately on their drawing skills on the Book Design and Illustration course of the Department. While only 18% indicated that they had improved upon their drawing skills with what they had been taught.

With regards to what discourages students from attaining good drawing skills on the Book Design and Illustration course, Table 9 shows that half of the students interviewed blamed it on the fact that the teaching of drawing is not clear to them while 23.5% saw drawing as a

difficult skill to acquire. Other factors cited were bad comments as discouragement from both lecturers and colleagues students and intense competition among students in the drawing class. This shows that drawing students benefit more if teaching of drawing is based on a sequential methodology.

Table 9: Sources of discouragement to students

	Frequency	**%**	**Valid %**	**Cumulative %**
1) Marks/bad comments	6	17.6	**17.6**	
2) Competition in the class	3	8.8	**8.8**	26.5
3) Drawing is difficult	8	23.5	**23.5**	50.0
4) Teaching is not clear	17	50.0	**50.0**	100.0
Total	34	100.0	**100.0**	100.0

From the discussion made so far, it is obvious that 74% of the Book Design and Illustration students cannot refer to themselves as Illustrators after the four-year study at the Department of Publishing Studies. This is because they believed that they had not yet attained the needed level of knowledge and skills for good drawing since the teaching of drawing is unclear and they have little interest in drawing. The students insisted that if they want to attain high skills in drawing then would need to work on their drawing skills after graduation. However, students who thought that they had gained all the knowledge and skills in drawing and therefore, considered themselves as Illustrators said so because they agreed that the teaching of drawing in the department of Publishing Studies is student-centered and adequate.

Table 10: Reasons for being an Illustrator or otherwise

	Frequency	%	Valid %	Cumulative %
1) No, I have not yet attained the needed knowledge and skills for drawing	13	38.2	**38.2**	38.2
2) No, I need to do more after school	7	20.6	**20.6**	58.8
3) No, I prefer designing on computer than drawing	2	5.9	**5.9**	64.7
4) Yes, I have the knowledge and skills	4	11.8	**11.8**	76.5
5) Yes, student-centered approach is used in teaching drawing,	5	14.7	**14.7**	91.2
6) Hope to be one when schooling ends	3	8.8	**8.8**	100.0
Total	34	00.0	**100.0**	100.0

The fact that Book Design and Illustration students could not refer to themselves as Illustrators imply the lack of adequate skills to function as such in the publishing industry. The drawing course is therefore not providing as much skills as it is supposed to be but this should not be so since the industry cannot always contract others to provide their drawing needs. This gap created from the discussion so far attests to the urgent need for Drawing Lecturers in the Department of Publishing Studies to adopt a step-by-step method of teaching drawing so that all the students would acquire enough skills for specialisation in Book Design and Illustration. It is just as important for teaching to be student-centered and Book design and Illustration graduates to have adequate drawing skills for the job market.

CHAPTER FOUR

THE PROPOSED DRAWING METHODOLOGY

4.0 Overview

This chapter discusses a suggested a method of teaching drawing which will assist both drawing Lecturers and students in Department of Publishing Studies to gain more knowledge and skills from the Book Design and Illustration course. It also provides the results of pre-testing undertaken with a sample of 1st to 4th year drawing students to ascertain the effectiveness of the proposed drawing methodology.

4.1 The Content of the Proposed Drawing Methodology

This section provides the details of the range of topics designed to enrich the content of the Book Design and Illustration Drawing course to enable lecturers and students of drawing achieve better results than is currently the case. The proposal deals with the general ideas or procedures required for effective teaching and learning of drawing. However, course descriptions proposed for Book Design and Illustration drawing courses of the Publishing Studies programme should be added to the existing method.

a) Preamble for the Proposed Drawing Methodology
b) Rationale for the Proposed Drawing Methodology
c) General Aims for the Proposed Drawing Methodology
d) Course Descriptions for 1st to 4th Year Department of Publishing Studies, Book Design and Illustration Drawing

Course Description for the Department of Publishing Studies Year One Semester One

- Tools, Materials, Supports and Equipment for Drawing
- Exploration of Tools and Materials

Analytical studies of the features of the various drawing tools (pencils, pens, brushes, etc.), materials (water colour, poster colour, oil and acrylic paints, etc.), equipment (easels, pins, donkeys, etc.) and supports (paper, leather, calabash, etc.); exploration by experimenting with the drawing tools, materials and equipment.

Course Description for Department of Publishing Studies Year One Semester Two

- Elements and Principles of Design

Introduction to basic elements and principles of drawing; exercises to depict by creating the elements and principles of design from nature and man-made objects

Course Description for Department of Publishing Studies, Book Design and Illustration Year Two Semester One

- Holding the Drawing Tool
- Preliminary Exercises in Drawing

Learning the different ways of holding drawing tools and materials, execution of exercises for drawing outline and shading geometric shapes (spheres, cylinders, squares and cones); flexing the wrist muscles to construct free-hand drawing of vertical, horizontal, diagonal and concentric lines; application of drawing from nature, still life, imagination, etc.

Course Description for Department of Publishing Studies, Book Design and Illustration Year Two Semester Two

- Observation in Drawing
- Hand and Eye Coordination

Training in using the sensory organs in seeing, touching, smelling, tasting, hearing, feeling objects, etc. to perceive and better understand objects/subjects and representations on drawing supports; looking and drawing simultaneously with a continuous line.

Course Description for Department of Publishing Studies, Book Design and Illustration Year Three Semester One

- Drawing Techniques
- Shading Techniques

Introduction and exercises in the various drawing techniques (outline, outline to suggest light and shade, value, negative and negative space drawing, etc.); introduction, identification of tonal values in monochrome and exercises on mass, dot, vertical, hatching, horizontal shading, etc.

Course Description for Department of Publishing Studies, Book Design and Illustration Year Three Semester Two

- Object Drawing
- Object Drawing and Shading

Application of what is learned from first to third year semester two in still life, nature, imaginative drawings; object shading from flat to seven tones.

Course Description for Department of Publishing Studies, Book Design and Illustration Year Four Semesters One & Two

- Drawing for illustration. Application to book design and illustration.

Methodology in Drawing

There is a basic need for a drawing teacher who has the responsibility to impart knowledge and skills in drawing to have a workable and well planned curriculum that has a sequential process in place to help achieve the desired goals. This is particularly important to the Publishing Studies programme which admits quite a number of students who have either never learnt to draw or have inadequate drawing skills but who are required to study drawing in the first year and may choose to pursue the Book Design and Illustration option in the second year.

In explaining the term "methodology", the researcher is referring to a way of doing things through clearly defined, distinctive and well planned strategy that could be used as the guiding principle for effective handling of drawing or some other subject matter. The methodology proposed in this report is a student-centered, experiential or activity approach which the pragmatist and constructivist philosophies emphasize as the best means of teaching and learning drawing. The strategy outlines a step-by-step procedure that guides first year students to acquire the basic drawing skills and enable Book Design and Illustration students to work well through their 2nd, 3rd and 4th years and eventually graduate with adequate skills to impact positively on the publishing industry.

The premise of the proposed methodology is that learning drawing can be made easy and simple for students at all educational levels if this approach is adopted. The idea is that if the

Publishing Studies programme is suitable for all students, regardless of their programme of study at the SHS, and some can offer drawing as a specialized area of this undergraduate programme, then the teaching methodology should help all the students, particularly those who have little or no drawing skills, to acquire the requisite ability to expertly and skillfully create outstanding drawings to illustrate books produced in Ghana and elsewhere. The proposal is therefore a step-by-step procedure to guide the teaching and learning of drawing on the Publishing Studies programme in KNUST.

4.2 Preamble for the Proposed Drawing Methodology

The Publishing Studies programme is designed to produce the needed skilled manpower for publishing and its related industry. Since illustration constitutes a major component of book publishing, it is imperative that students being trained for the specialized field of publishing be adequately grounded in drawing skills so that they can cope with the drawing requirements of the industry. It is equally important that the drawing component of the programme be designed to serve as a medium through which the publishing student is equipped with the relevant drawing skills that will strengthen him or her to cope with the challenges of drawing to illustrate different types of books.

4.3 Rationale for the Proposed Drawing Methodology

Reasons for proposing this methodology in drawing for Department of Publishing Studies are:

a) Drawing embraces all the domains of knowledge: cognitive or intellectual, social, psychological, spiritual, artistic or aesthetic, and physical knowledge that holistic education aims to achieve.

b) The proposed drawing programme will produce well balanced individuals who have sound intellectual, psychomotor or manipulative, and affective skills.

c) Drawing provides opportunities for creative self-expression.

d) Drawing provides avenues for critical and imaginative thinking.

e) The new drawing programme will prepare students for their roles as Book Illustrators.

f) Through drawing, students are able to think, feel and act creatively.

g) Ghana's aspiration for national development can only succeed with people who are creative and resourceful; drawing is one of the means by which this can be achieved.

4.4 General Objectives for the Proposed Drawing Methodology

The proposed methodology for teaching drawing is designed to help Department of Publishing Studies, Book Design and Illustration students to:

a) Think critically or imaginatively.

b) Create, recreate, discover knowledge and meaning through drawing.

c) Develop skills or self-expression and recognize personal aesthetic taste.

d) Acquire the skill of critical observation.

4.5 Identifying Drawing Tools, Materials, Supports and Equipment

4.5.1 Tools for Drawing

Students need to understand that drawing tools and equipment are designed to be used specifically to execute particular tasks and that an accurate description of any of these resources is an asset. Knowledge of drawing tools is a necessity for all engaged in drawing, whether at the beginning, intermediate or professional draftsman level. Students need to know that a variety of tools can be used in drawing. For instance, pencils, pens, inks (Indian, rotring and suede dyes) and silver or gold stylus, brushes, pieces of metals, glass, sticks, bamboo, brooms, chewed sticks, cotton wool tied on a stick and fingers are all tools for drawing.

a) Pencils

They are wood cased writing tools containing pigment which could be colour, pastel, charcoal or graphite. Pencils come in different brands, types, shapes, sizes, colours, darkness or lightness and vary in the marks each generates.

- Graphite pencils seem to be the cheapest, simplest and most popular drawing tools that can easily be bought from bookshops if one shops around for it. This type of drawing tool comes in grades depending on the mixture of clay and graphite to indicate the lightness/hardest from 9H to the softness/darkness from B to 9B. F pencils are suitable for fine pointed works. The soft type has less clay and is darker than the H range. Conversely, hard graphite pencils have more clay and are lighter than B pencils (see Plate 6).

Plate 6: Different shades of graphite pencils

- Charcoal pencils are compressed charcoal cores encased in pencil holders or vine and willow (see Plate 7).

Plate 7: Two sticks of charcoal pencils

- Colour pencils as the name suggests, come in different colours. Children tend to work with these pencils often. They are more transparent than graphite and charcoal pencils (see Plate 8).

Plate 8: Set of colour pencils

- Water colour may be in tubes or encased in wood as pencils but they all give the same water colour effect when spread over with brush and water (see Plate 9).

Plate 9: Set of water colour pencils

- Grease pencil is encased in wood or paper which constructs marks on surfaces such as glass, metal, plastic, photograph and a lot of other supports.

b) Pens

These are among the easiest and simplest drawing tools and materials one can think of. Examples of pens are ballpoint, marker, fountain, roller ball, felt tip, Rapidograph, calligraphy, dip, and pens with self contained reservoirs. Reed and feather quills work by dipping them into inks (see Plates 10 to 18).

- Inks

Ink is any liquid pigment or substance used for writing, printing or drawing and contained in certain types of pens. The composition and consistency of an ink vary according to the purpose for which it is used. The two fundamental components of inks are a pigment and dye or colourant (see Plate 10).

Plate 10: Black and brown pen inks

- Fiber tip pens

Felt-tip pens and markers are made of dense natural or artificial fibers filled with dyes. These markers are of different shapes, sizes as well as colours (see Plate 11 and 12).

Plate 11: Different colours of felt pens

Plate 12: Different colours of markers

- These are pens with small rolling ball tip that transfers ink from the inner tube onto a writing surface. It is also called “biro” because they were invented by two Hungarian brothers named Ladislao and Georg Biro (see Plate 13).

Plate 13: Types of ballpoint pens

- This is from the outer wing primary feathers of any bird such as goose, swan, crow or turkey. The wing is cut and re-cut to broaden the edge with a special penknife or it maintains edge. The feather is first hardened by heating or letting it dry out gradually before cutting (see Plate 14).

Plate 14: Quill pen from feather

- Other examples of pens are as follows shown in Plates 15 to 18.

Plate 15: Two rapidograph pens

Plate 16: Set of calligraphy pens

Plate 17: Set of rotring pens

Plate 18: Different sizes of drawing pens

c) Brushes

Brushes come in sable or bristle with dissimilar sizes. Physical appearances as well as tips also vary (see Plate 19).

Plate 19: Different sizes of sable brushes

d) Digital drawing tablet

This is used in conjunction with a cord or cordless computer. They are touching devices used with graphic tablets. Drawing is done when the pen tip touches the surface of the tablet. Buttons are pressed to select and issue commands (see Plate 20).

Plate 20: Digital drawing tablet

4.5.2 Materials for Drawing

The delivering of medium such as inks, pigments or colours on drawing surfaces are the materials needed for drawing. Examples of materials include dyes, acrylics, water and oil based colours, colour inks and poster colours. Crayon, powdered and stick chalk, water colour, poster colour, vine and compressed charcoal, chalk pastel and pastel pencil are all examples of drawing materials (see Plates 21 to 30).

Plate 21: Different colours of crayon pencils

Plate 22: Colours of oil crayon

Plate 23: Acrylic paint in tubes

Plate 24: Acrylic paints in containers

Plate 25: Oil paints in containers

Plate 26: Set of 12 poster colours

Plate 27: Set of 12 water colours

Plate 28a: Powdered chalk

Plate 28b: A box of chalk sticks

Plate 29: Different colours of chalk pastel

Plate 30: Bunch of charcoal sticks

a) Crayon

Crayon is a mixture of chalk and binding medium such as wax or oil. Crayons come in different colours and are in the form of either pencils or sticks with different degrees of hardness or softness. Crayons are similar to oil pastel. Crayon sticks are waxy in nature and therefore resistant to water. Brand names such as Crayola, Prang, Norris and Cheap are the crayons children recognize since they are rich in bright colours (see Plates 21 and 22).

b) Chalk pastel

Chalk pastel is a light, subdued, neutral, flexible, tender, pale and wishy-washy substance made from the paste of powdered pigment and gum. It comes as chalk, oil and pencil.

4.5.3 Supports or Surfaces for Drawing

Almost any surface can be used for drawing but the most common support for drawing is paper or boards which come in all forms, colour, size, acidity, strength, weight, texture, and absorbent quality. The texture may vary from crinkled to glossy as well as high or low absorbent nature. Popular paper colours are white, ivory, cream, gold, blue, buff, grey, pink, yellow and green. Papers are either coated or uncoated, be white or bond, hot or cold pressed, rough, smooth or rag, machine or man-made.

Examples of paper are offset, vellum, bristle, cover, newsprint, bond and watermarked and they come in different sizes such as 50, 60, 70, 80 or 100 grammage for offset, 60 or 80 for cover with 57, 67, 100 or 120 for vellum bristle and 30 and 33 for Newsprint. Other kinds of paper used for drawing are cartridge, rice, water colour, charcoal, tracing, eggshell mat, coquille and pastel papers.

From these types of paper, learners must pick the quality of paper which best suits the medium they intend to employ on it. There are also special papers for particular types of medium. For instance, water colour paper is specifically made for water colour works, and pastel paper for pastel works. These specialized papers must be understood to have exclusive features which enable the particular medium to best work on them. For instance, it is known that rougher textured papers are good for water colour and charcoal works than smoother surfaces. Notwithstanding this, learners are encouraged to explore and experiment different mediums on different papers to help widen their scope.

Canvases, plastics, leathers, woody surfaces, panels, wall surfaces, floors and leaves are examples of supports for drawing. In addition, metals, cloths, metal plates, skins, clay, stones, glass, gourds and calabashes are also available as surfaces for drawings. Chalkboards, blackboards, human bodies, whiteboards and digital tablet serve as such (see Plates 31 to 38).

Plate 31: Wooden surface

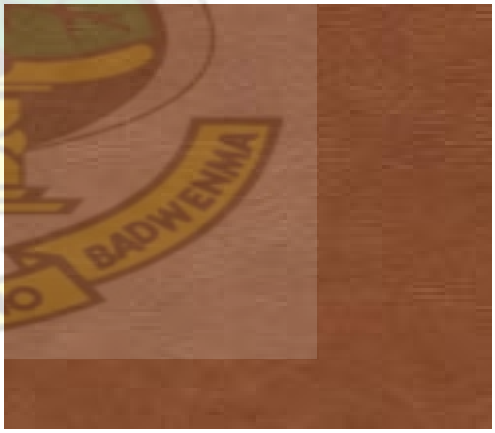


Plate 32: Piece of leather

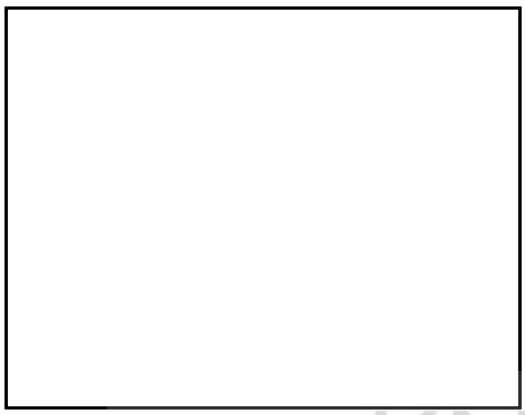


Plate 33: Wooden panel

Plate 34: Different types of paper

Plate 35: Piece of strawboard

Plate 36: Piece of canvas

Plate 37: Piece of calabash

Plate 38: Metal sheet

4.5.4 Drawing Equipment

Studios, easels, drawing pins/clips, donkeys, drawing boards, palettes, sketchbooks and erasers are examples of drawing equipment and they come in different sizes. Others are drafting brush, pencil sharpeners, fixatives and sketching chairs. A well ventilated room is important for drawing. Tools, materials and work areas should be well washed, wiped and kept to maintain them from damaging to prolong their lifespan (see Plates 39 to 46).

Plate 39: Palette

Plate 40: Utility knife

Plate 41: Pencil sharpener

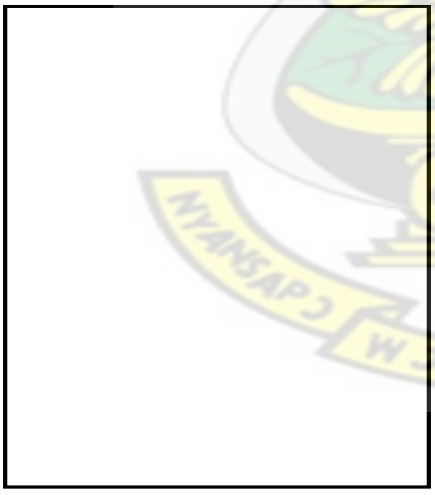


Plate 42: Standing metal easel

Plate 43: Tin of fixative

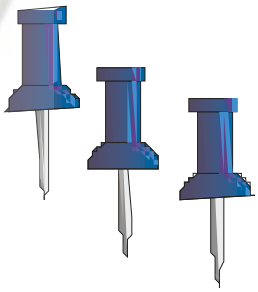


Plate 44: Drawing pins

Plate 45: Drawing donkey

Plate 46: Two pieces of erasers

4.5.5 Availability of Drawing Tools, Materials, Supports and Equipment

The variety of tools, materials and equipment mentioned earlier are available in art shops. Drawing students therefore have to examine and sample them to help them produce good quality drawings and as any good draftsman, they should have a small collection of equally high quality tools and materials.

4.6 Exploration of Drawing Tools

Exploring different drawing tools and materials is intended to help teachers and students to determine the quality, range of marks and tones that each tool or material makes. Exploration of drawing tools and materials can be used as a warming up exercise before lessons begin. The exercise allows students to experience the handling of the various drawing tools and also find out the particular qualities or properties of each one before usage. Students gain experience in a stress free manner as they playfully make “aimless” marks and lines before they employ the different tools (Brooke, 1997). The differences in character or properties will be made known to students.

Again, Sullivan (1997) advocates that drawing students learn and explore the unique features of each tool since using the right tools, equipment and materials will inspire them. The excellence and character of one's drawings are dictated and measured by the chosen tool, equipment and material used since they produce unique impressions. Besides, exploration exercises also challenge learners to use freehand for drawing. Exploring by creating meaningless marks and lines should lead learners to establish the ones that suit their individual personalities as well as instill the habit of experimenting in them. It is recommended that the various tools are explored on 80 grammage white cartridge paper.

a) Exploration exercises with graphite pencils

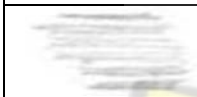
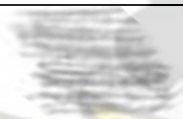
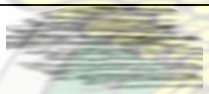
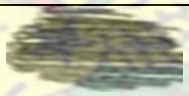
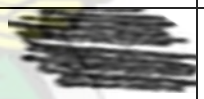
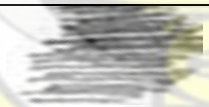
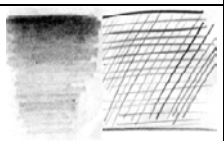
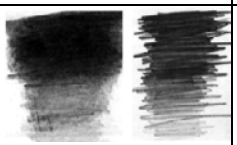
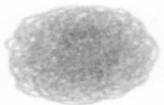
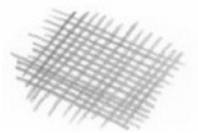
Marks Created with tips of different Pencils				
 9H is the lightest and hardest of all	 5H is darker than 6H	 H is darker than 2H	 2B is darker than B	 6B is darker than 5B
 8H is darker than 9H	 4H is darker than 5H	 F makes the finest lines	 3B is darker than 2B	 7B is darker than 6B
 7H is darker than 8H	 3H is darker than 4H	 HB is darker than H	 4B is darker than 3B	 8B is darker than 7B
 6H is darker than 7H	 2H is darker than 3H	 B is darker than HB	 5B is darker than 4B	 9B is the darkest shade of all
 Side and tip of 3H	 Side and tip of B	 Side and tip of 5B	 3H scribbled and blended	 Cross-hatching with 2H

Fig. 14: Marks created by the different range of pencils

Results of exploring with different types of pencils

From the exploration of the different pencils as shown in Figure 14, broad and lean line marks were created using the tip of the pencils, in the 9B to H range to show the intensity of the different shades obtained black. The letters on the pencils tells hard nature or soft nature of each pencil. Softer pencils make darker, broader lines that reduce in strengths of black as they turn into harder pencils range such as 2H and H. The B pencils have lots of oil in them and they become very soft and break easily. The 6B to 9B pencils are successful for extreme shadings, making darker lines and bold strokes and they break off more easily because they contain more oil which makes the lead of the pencils darker and thicker. The H pencils have harder graphite and they draw thin as well as lighter grayish lines. Draftsmen can use them best for light drawing and outlining to start a drawing.

It was from the exploration exercise observed that the different tips of the tools produced different marks depending of the angle in which a tool was held. Again, the side of the lead of the soft pencils such as 6B and 5B produced very dark to darker shades, glossy or shiny, expressive drawings and smooth impressions whereas the H range made the lightest shades and further created rough marks. The H graphite pencils beyond 2H most likely dent a drawing paper and hence ruin their fiber. Over all, the use of the side of the lead covered broad areas and this makes the pencil flexible to use. That means light or hard pressure applied explains the intensity of black that is produced. The creation of lines with the pencil can produce composition, shape, tone and shadow. Kneaded rubber erases unwanted marks (see Fig. 14).

b) Exploration exercises with the different types of pens

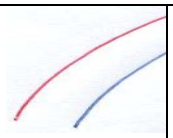
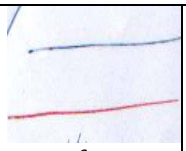
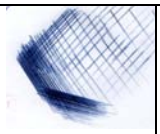
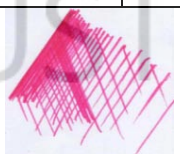
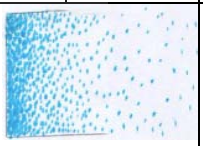
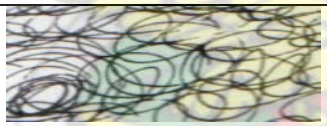
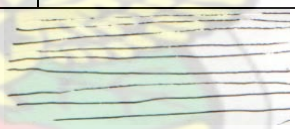
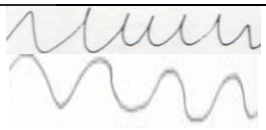
Pens	Marks Created					
Ballpoint	 Tip of pen with hard pressure	 Tip of pen with light pressure	 Mass shading with the tip	 Shading with cross hatching	Dots with tip of pen	 Shading from dark to light
Felt tip	 Felt tip with hard pressure	 Felt tip with light pressure	 Mass shading with the tip	 Shading with cross hatching	 Felt tip to create dots	 Leaving space to create tones
Markers	 Marks from the tip of a marker				 Few strokes covers a wide area of space and hard pressed gives darker tones and vice versa	
Rapidograph	 Using the tip of the pen to scribble		 Tip to draw straight lines		 Tip to draw curvy lines	

Fig. 15: Marks created with ballpoints, felt tips, markers and rapidograph

Results of exploring with different types of pens

From what is shown in Fig. 15, the basic similarity shared by almost all the types of pens was their rigidity at the tip. The types of pens available are ballpoint, fountain, felt tip, rapidograph, calligraphic and marker. They have the quality of being firm and they do not trickle out when being used therefore they are reliable to work with. From the second

impression made from the marker column, it is obvious that markers have broad tips which come either in squares or circular shapes and covers broader areas than even felt pens.

Similarly, felt tip pens also made broad marks than the ballpoint, fountain, rapidograph and calligraphic pens. The ballpoint and rapidograph pens are linear tools hence they are stiff to work with. The rapidograph comes thinner than the ballpoint pen. The tip of rapidograph runs dry within a short time and when this happens, the flow ceases to be consistent and breaks intermittently when using. Additionally, large surfaces were difficult to cover because of their narrow tips and they work best in pointillism and outlined shading techniques but not with mass shading. Apart from the outline shading, spacing in terms of the intervals generated determined the tonal effects of the dotted, hatching, cross hatching and scribbling methods of shading. The side of the tip of ballpoint, rapidograph and calligraphic pens are not workable.

The pen is the most exacting of the tools as it makes a definite mark that is hard to alter once the ink has dried. If mistakes are made they are difficult to erase. Varying pressures (such as hard and light pressures) of the hand on the tools do not result in much significant differences in shade like pencils, especially, the soft ones. It is important that masters of pen drawing must be masters of pure line (see Fig. 15).

c) Exploration exercises with graphite pencils

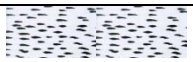
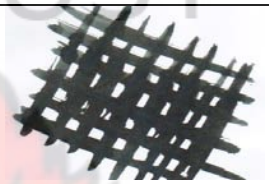
Sizes of Brushes	Impressions/Marks Made		
Small	Stroke of small sable brush	 Tip of small brush to create cross-hatching	 Tip of small brush to create dots
Medium	 Stroke of a medium sable brush	 Tip of the tool to create cross-hatching	 Tip of medium brush to create dots
Large	 Stroke of a big sable brush	 Tip of the tool to create cross-hatching	 Tip of large brush to create dots

Fig. 16: Marks created with small, medium and large brushes

Results of exploring with different sizes of brushes

Brushes are different in sizes and tips. The larger brushes make broader strokes, smaller brushes make smaller strokes whereas medium brushes cover not less than the smaller brush and not more than the bigger brush. The intensity of colour depends on the amount of pigment taken by a brush. Details are done with small brushes because of the narrow and pointed tips and not with bigger ones (see Fig. 16).

d) Exploration exercises with crayons

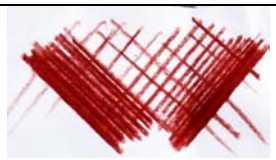
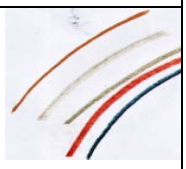
Crayon	Impressions/Marks Made			
Crayon Pencil	 pencil crayon cross-hatching; the closer the interval, the darker it becomes	 light pressure put on tool to create marks	 light and dark pressure on the crayon pencil to show light and dark	 hard pressed crayon pencil
Oil/Wax crayon	 tool becomes gritty especially on dry surfaces when pressed too hard	 slightly hard pressure on the tool	 tip of wax crayon and water	

Fig. 17: Marks created with crayons

Results of exploring with pencil crayon and wax crayon

Crayons produce virtually no dust when used because they are soft and harder than charcoal. It makes heavier or lighter marks depending on the amount of pressure put on the tool by the hand. It is obvious to state that the harder a crayon is pressed, the intense the stroke seems; the reverse is true. Two separate colours blend with fewer difficulties. Crayons come out lighter and grittier on especially dry surfaces. A beginning draftsman can sharpen the tip of a stick of crayon to make it pointed to make details in drawings. It must be noted that the side of a sharpened crayon covers wider area surfaces (see Fig 17).

e) Exploration exercises with charcoal

Charcoal	Impressions/Marks Created	
Willow charcoal stick	 Making marks with the tip of the tool	 Covering wider area with the side of the tool
Charcoal pencil	 Creation of lines with the tool	 Mass shading with tool

Fig. 18: Exploring the different types of charcoal

Results of exploring with willow charcoal and charcoal pencil

Charcoal comes in either sticks (willow) or pencils (compressed) and they are available in a variety of thickness. They both give full black and shiny outcomes but the stick gives more than the pencil. This is because charcoal produces coarse carbon particles which give deeper intensity of black than what are produced by graphite pencils. The lightest and hardest charcoal pencil is still darker than most of the B range graphite pencils. Their flat edges can be used for broad strokes, or they can be sanded to a fine point for detailed work. Depending on the softness or hardness and the amount of pressure put on a charcoal, a darker or lighter mark is produced. Charcoal stick can be smudged or erased with a kneaded eraser, fingers or cloth.

Drawing with the tip makes thin lines whereas drawing with the side makes thick and broader strokes of lines depending on the size of the tool. This tool, like pastel, generates powdery substances and can be fixed with a fixative. Furthermore, corrections are easily effected most significantly with the sticks than with pencils. The stick charcoal is mostly

best for mass shaded drawings, hence most suitable for large drawings. Charcoal, on the other hand, when employed in smaller works may present rich and subtle tones. This means that charcoal may offer equivalent level of detail as graphite pencils but it is very effective where precision is not needed (see Fig. 18).

f) Exploration exercises with colour pencils

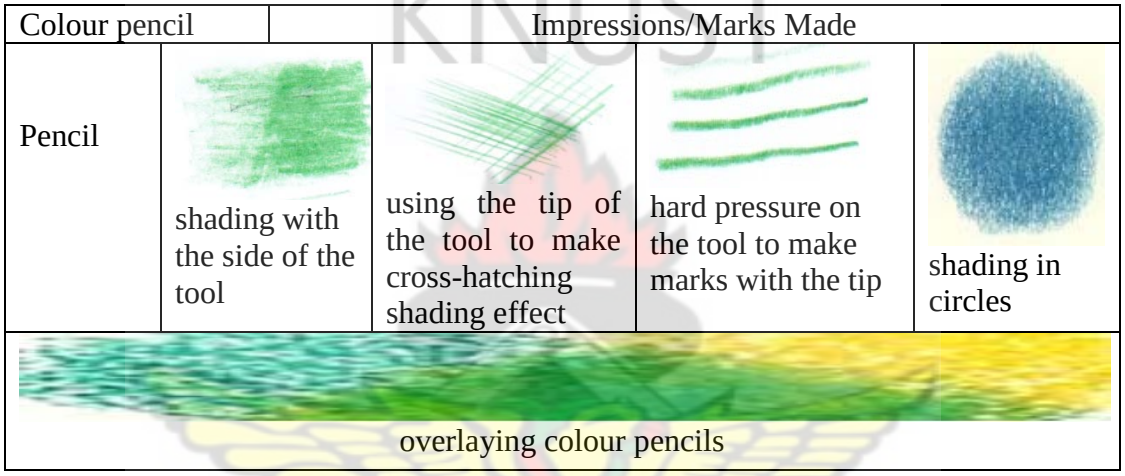


Fig. 19: Marks created with colour pencils

Results of exploring with colour pencils

Colour pencils have similar qualities like pencils, except they are not ranged from the softest to the hardest. Instead, there are different colours. The dark and light shade of a colour pencil depends on the amount of pressure put on them. They appear to be more transparent than graphite and charcoal pencils and they are much popular with children. The tip of the lead makes thinner marks whereas the side of the lead produces broader impressions but not as broad as crayons, brushes or charcoals (see Fig. 19).

g) Exploration exercises with water colour

Water colour	Impressions/Marks Made		
Water colour Pencil	 blue and red water colour pencils, then applied brush with water	 only blue water colour pencil and water	 hard pressure on tip of water colour pencil to create marks

Fig. 20: Marks created with water colour pencils

Outcome of exploring with water colour pencils

Water colour creates unique transparencies. Watercolours have fluidity as one of its main features as it is applied very watery, hence washes appear fresh and brilliant in water colour works. Surfaces of worked water colour are visible through the thin water colour pigments. There is soft harmony in water colour works. Since the colour white is absent, the colour of the surface of the work serves as the highlight. Accidentals are naturally created to cause interest and beauty in water colour works (see Fig 20).

h) Exploration exercises with pastels

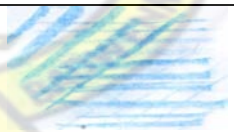
Pastels	Impression/Marks Made			
Chalk pastel	 Used a q-tip of pastel to mark	 Mass shading with chalk pastel	 Crosshatching with tip of tool	 tip of chalk pastel to create dots
Pastel pencil	 side of a pastel pencil for scribbling	 hard pressured marks of the tool	 tool on its side to create reasonable wide strokes	

Fig. 21: Marks created with chalk pastel

Results of exploring with chalk pastel and pastel pencil

Shading is reasonably easy with both the chalk and oil pastels since they are soft medium. Blending, however, is not a problem at all. There are the soft and hard pastel pencils. The chalk is the type that smudges to produce too much powder but it can be easily blended. The smudgy nature of the tool can be put right by a fixative. The hard pastels and pastel pencil make fine details and outlines. The tip of a pastel makes thin strokes especially, the pencil pastels and the side of a pastel conversely produces much broader bold strokes. There are also available different colours with white and black inclusive.

The thickness and thinness or the richness and paleness of a pastel solely depends on the amount of pressure put on it when drawing. When too much pressure is applied, the strokes become rich. Detailed drawings can again be rendered highly with pastels. Pastel reduces the rigidity of edges of objects or subjects being drawn and they can make distinct outlines.

Fingers of draftsmen can be used to blend with ease different colours to achieve a gentle gradation. Conversely, there are oil pastels which are soft and oily in character but are a little more difficult to blend.

It is worth noting that, there are excess dust emanates from the use of charcoal, chalk, sanguine and sepia pencils, conté crayons and pastels, specifically, chalk pastels. There are however, some types of chalks in stores which claim to be dust free, example of which is 'Omega Dustless Chalk'. These excess powdery deposits emanating from charcoal drawings can be fixed and be preserved with a fixative. The fixative settles down the powdery substance from pastels to protect it from smearing (see Fig 21).

4.7 Elements and Principles of Design as Used in Drawing

Elements as described by the researcher are separate identifiable parts of something or basic units of a whole or distinct group within a larger group. In this study, elements of design may be defined as basic separate components which form the composition of the work and they carry a wide range of ideas. In addition, principles may be defined as an important underlying law required in a system of thought or a basic way in which something works. Principles of art organize and pull elements of design together in a work of art. When students learn the creation of both the elements and principles of design, they will better understand art to help come out with accurate and realistic drawings. This is because each element or principle serves unique roles. They all serve as pieces of puzzle. A piece means nothing, therefore, when a piece gets lost, the whole picture is damaged because it is not complete. But when all pieces are gathered and put together, the picture is seen clearly and it again makes sense because the puzzle is complete (Amenuke, 1995).

4.7.1 Elements of Design are dot, line, shape, texture, space, plane and colour.

The structure of the discussion of each element will proceed as follows;

- Definition or Explanation of each element
- Examples of each element
- Differentiation of each element
- Creation of each element
- Application/uses of each element in drawing

a. Dot

- Identification of a Dot: A point, small round mark that has position but no extension can be termed as a dot. A dot is the most basic element of design and it leads the mind to movement. Clearly, the human eyes connect two points to form a line.

- Differentiation of Dots: Dots can be differentiated from man-made/artificial and natural sources. As the names suggest, artificial dots are created by man whereas natural dots are seen in nature or the environment in which man lives.

Examples of natural dots are stones, round fruits, fruit seeds, the scene of human heads in a crowd, palm kernels, rounded sand grains to mention a few.

Artificial dots on the other hand, may be achieved by drawing, printing, spraying, splashing, sprinkling and stenciling. This means that when students are drawing, they can collect or adapt ideas from nature.

- Drawing to Create Dots: In order to draw dots, the researcher placed some pebbles on a white sheet of paper. Light was casted on the pebbles to assist in throwing their shadows on the white paper. They were then traced with an HB pencil before they were shaded. Different sizes and shapes were used in this exercise therefore, the shaded dots created show small, medium and big sizes of dots. Different shapes also emerged although the pebbles were similar.

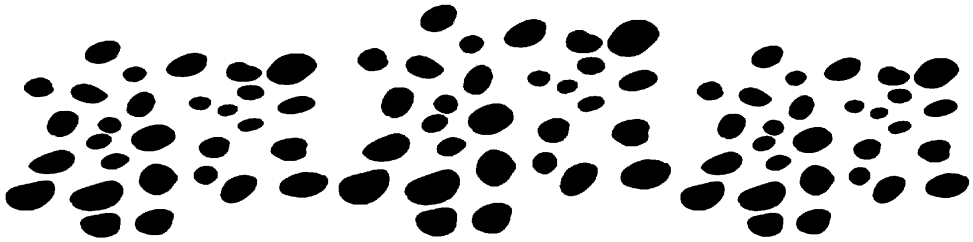


Fig.22: Dots created from traced and shaded pebbles on a white paper

- Creating Dots by Printing: Dots can also be gotten through printing. This the researcher achieved by picking up an object with a flat surface. The flat surface was then dipped into ink and series of prints were stumped onto white paper. The hallmark for excellent printed dot is the ability to select an object with very flat surface which when printed covers the very printed area with solid ink and not leaving patches of the paper uncovered.

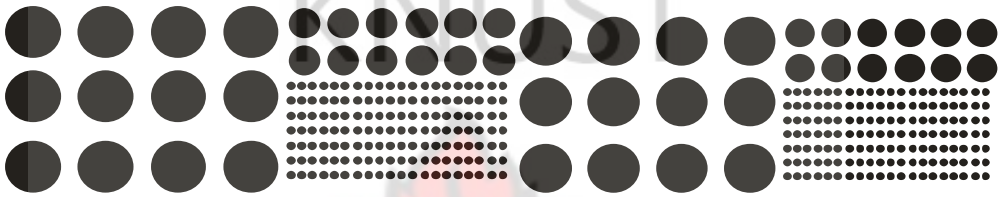


Fig. 23: A variety of printed dots

- Creating Dots by Spraying: This is a process of adopting a spray diffuser which has a container attached containing ink/paint for releasing the liquefied fine particles. This is gotten by applying pressure on the spray gun mechanically by means of a trigger or manually by blowing air with the mouth.

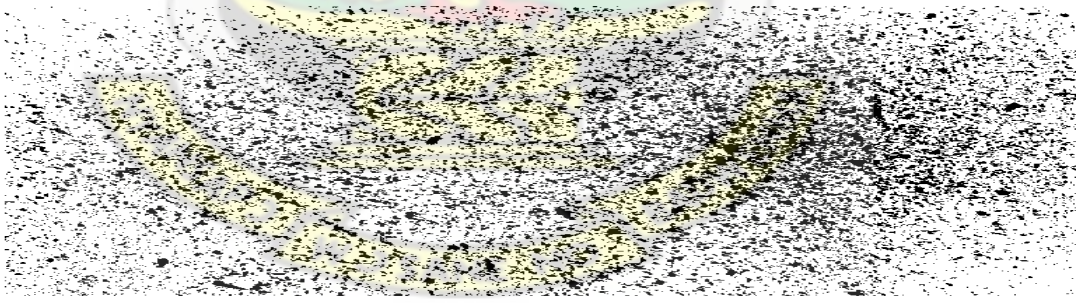


Fig. 24: Dots achieved from spraying

- Creating Dots by Sprinkling: This was achieved by sprinkling ink/paint on a sheet of paper placed on a table. This practice can be done in two ways;
  - Placing ink/paint in a brush to distribute small drops of liquid on the surface of the paper, or

— Using a sprinkler (a device/apparatus with ink in the container) to distribute small particles of the liquid onto the surface.

Fig. 25: Dots created from sprinkling

- Creating Dots by Splashing: Dots from splashing were done by dipping a brush in ink/paint and allowing the ink to fall and crash in small, smaller or even large amounts. Splashing can be employed by students to create textures in drawing.

Fig. 26: Dots achieved from splashing

- Creating Dots by Stenciling: Stenciling is a plate with cut out material. It is a process of applying ink/paint to cut out shapes of varied sizes placed on a surface.

Fig. 27: Dots achieved from stenciling

The processes of **spraying, sprinkling** and **splashing** all come with accidentals hence the sizes of the dots created cannot be controlled.

Uses of Dots in Drawing

- It marks the beginning of designs irrespective of the tool(s), medium or support that is used.
- The eyes see dots and the mind supplies the connections to form a line for an outline of an object and subject ready to be drawn.
- Repetition of varied dots will create textures as well as patterns in designs.
- Dots can be used to draw outlines of objects or subjects.
- Depending on the size and intensity of dots, they can be employed to demonstrate the tonal value which is the light and shade of an object.

b. Line

- Identification of Line*:* line is considered as a path left behind by a moving point.
- Differentiation of Line: Lines are also differentiated by artificial/man-made or natural characteristics. Lines are seen in the natural environment in the form of horizon, footpaths, streams, electric grid, stripping on a tiger, veins of leaves, tree branches, rivers, streams and a whole lot.

Conversely, man-made or artificial lines created by man include telephone lines, electric grid, roads and also through drawing, printing, stenciling and splashing.

- Creating Lines by Drawing: The movement of different tool(s) such as rule, straight edge, compass or any mechanical tool on surface(s) to make outlines of different types, weights, values, sizes and thickness on surface(s) creates lines. Lines can be manually or mechanically drawn.

Examples are shown below;

Fig. 28a is a line drawn with a rule and compass and ***Fig. 28b*** is drawn with free hand

- Creating Lines by Printing: Lines were printed with the use of a thread and broom. A thread was dipped into ink/paint to soak and then stretched onto a surface to create linear impressions. Likewise, the broom was put into an ink and then put on a support to create linear impressions. The size in addition to thickness of the threads and sticks determine the size of impressions created. Repeat the process severally to achieve as many lines desired.

Fig. 29: Impressions from thread to create lines

Fig. 30: Impressions from broom to create lines

- *Creating Lines by Stenciling:* This process involves cutting lines out of materials and applying ink/paint on them. Cut out material is known as “hole” and “edge stenciling” is

the process of rubbing ink from the edge of a support to create a linear impression. The other edge becomes rough as a result of rubbing to draw ink or paint from the surface.

Fig. 31a

Fig. 31b

Figures 31a and 31b are lines from edge and hole-stenciling respectively

- Creating Lines by Splashing: This is where a brush is soaked in ink/paint and allowed to fall in small, medium or large drops onto a surface.

Fig. 32: Lines achieved from splashing

- Creating Lines by Dripping: This is done by placing a drop of ink/paint on a surface of a support, tilting the support slightly and to allow the ink flow or drip. The picture below is the outcome of such activity.

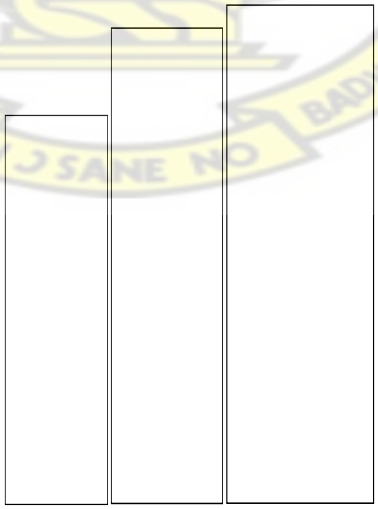


Fig. 33: Lines achieved from dripping

- Types of Lines and their Significance: There are differences in lines as in width, length weight, size, angle placement and even colour. Lines can be thin, thick, wide, short, long, narrow, dark and solid. In drawing, there are portions which will have the above mentioned attributes of lines, therefore it is important for learners to understand and apply them when needed. Examples are seen below;

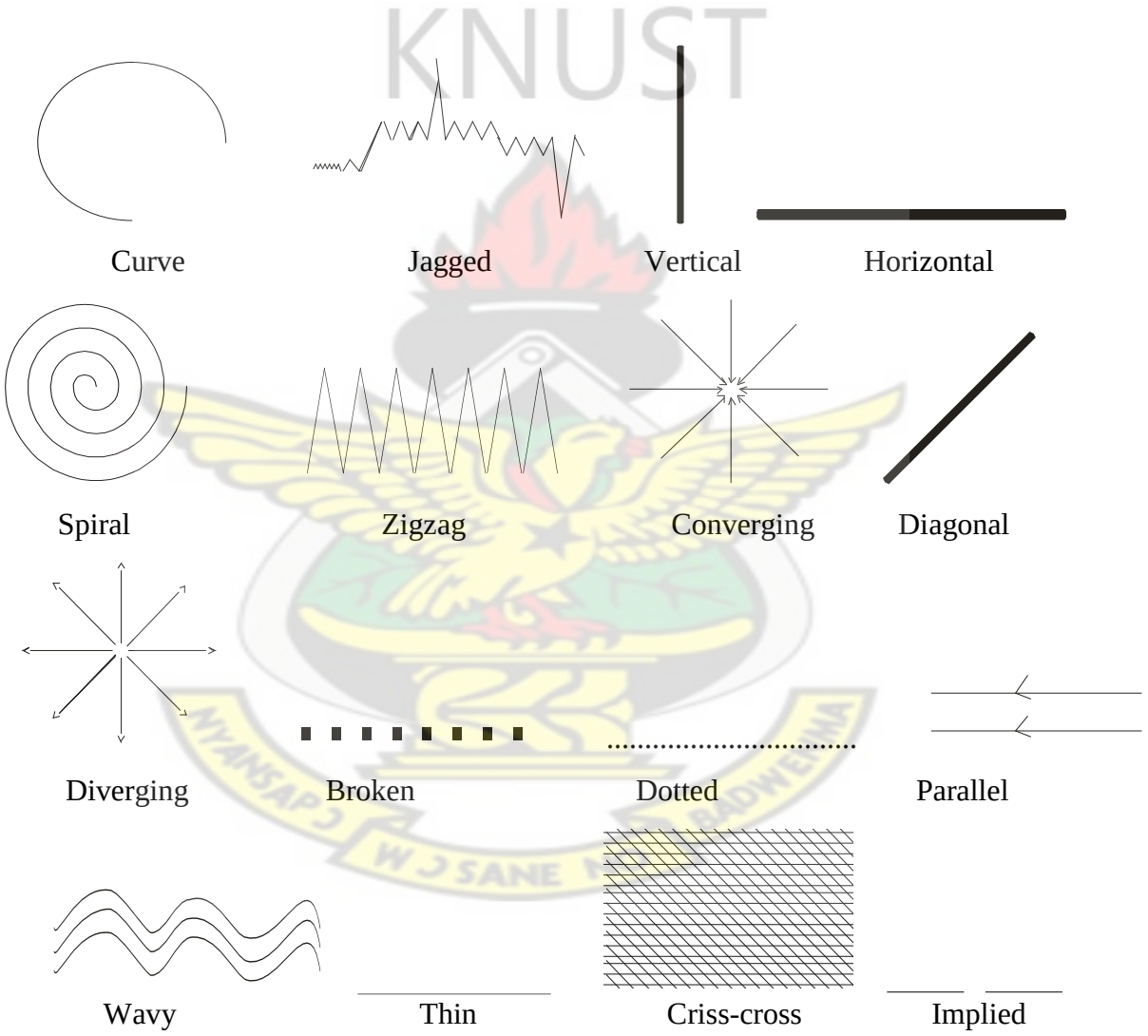


Fig. 34: The different types of lines

Further, artists for that matter draftsmen use lines to express different ideas and looking at all the line types, movement is suggested by all. For instance, lines may be in grids, pattern, bouncy, jumpy or depict lightening, sadness, laughing, crying and other emotions. Drawings to show the effects are shown below.

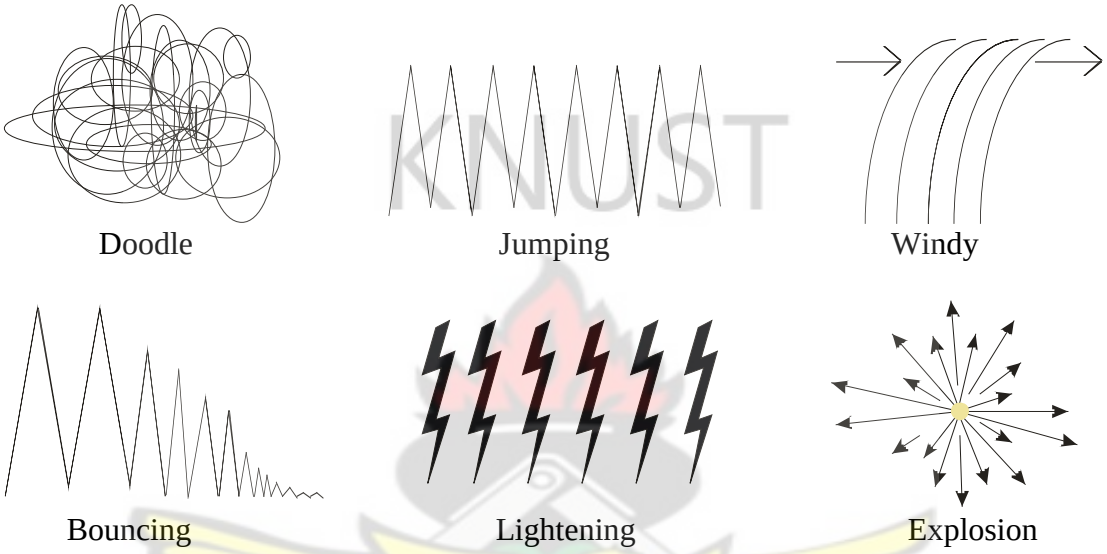


Fig. 35: Types of suggested lines

There are relationships between lines, thoughts and meanings as stated by South (2008) whose studies show that certain lines have specific meanings as an image". This, South argues has been tested many times with consistent results. South again opines that when artists create lines, it means they are giving out information with all sorts of lines. Hence the creations of lines show a person's state of mind. It is evident from the preceding discussion that there are intrinsic meanings to every line and that they tell stories. A line may serve as a dividing rule, measuring tape or a binding instrument. In other words, the different sections of drawings such as forms, shapes, and patterns are visually separated and/or defined by lines. It is further the view of the researcher that understanding the various types of lines is

basic for beginners and learners because lines are used by artists for different reasons which may be motion, mood or emphasis.

- Vertical lines - prominent vertical lines are the most powerful lines in visual art because they attract attention. They give the impression of integrity, strength, height, stillness, dominance, solidity and support. This can well be experienced when looking at a tree, a flagpole or anything standing tall. Often it deceives the eyes by portraying a tall and slimming effect because the eyes are led up and down hence the side to side distance is lessened. This type of line is perceived with greater strain.

- Horizontal lines - propose laziness, quietness, calmness, lightness and movement. They bring out the feeling of lying down to relax. They sometimes suggest an illusion of motion because the eyes travel within a composition but do not jump from one part of the image to another. At the same time, they put the eyes at rest. This causes the feeling of contentment and fulfillment. The human eyes perceive it to be shorter and broader as it leads the eyes along. It is rather the opposite of vertical. These lines portray a peaceful frame of mind, the serene line of an ocean horizon and long rising and falling waves on a shoreline.

- Diagonal lines - when a beginner wants to show vigour, activity, energy, movement or motion (speed) and above all dynamism, these lines are appropriate. For instance, an artist can gaze from corner to corner in any direction of an object being drawn. This causes the dynamism that the diagonal line possesses. Again, they promote movement/motion by directing the viewer round with main points, lines, and visual paths. They again cause tension as well as acts as frames or boundaries to direct the eye like both the horizontal and the vertical lines. Depth in the form of foreshortening is highly expressed.

- Curvy lines - restfulness, graceful, playful, growth, rate of progress, comfort, safety, familiarity and relaxation are what curvy lines bring out. Curvy lines are used to draw circular shapes. They make objects or subjects look beautiful, graceful, charismatic and gorgeous. In addition, feeling of gratification is assured since the eye gets ready to the expected change especially in the case of regular curved lines. Further, the eyes explore curvy images in a smooth, free-flowing manner and forces the eyes to look within an enclosed spot.

- Wavy lines - symbolize continuity and a flowing nature and they are used to indicate ripples, water, ocean or river. That is wavy lines are. Again, they evoke peace in addition to beauty and femininity and especially, these lines craft the impression of rippling water.

- Zigzag lines - drunkenness and resistance are mostly linked to zigzag. It represents excitement, conceptuality, understanding of harsh truth and a subsequent need for comfort.

- Jagged lines - portray the feelings of activity, movement and confusion.

- Broken lines - bring uncertainty, not continuous and further cause maximum strain and painful feelings in the eyes. These happen because the eye muscles are made to change direction suddenly, without any prior notice or preparation.

- Thick lines - suggest stability and reliability. They moreover, show masculinity and strength. Darker shades are again represented by thick lines.

- Thin lines – characterizes weak, instability, volatility and unsteadiness are some of the attributes of thin lines. They are again seen as sexy, attractive, sweet, pretty, beautiful and vulnerable. In drawing, thin lines can be adopted to stand for light shades.

- Spiral lines - represent something which is delicate, peaceful, merciful and continuity of growth. Rhythm is created with spiral lines.

- Dashed/Dotted lines - create uncompleted pathway and directions in addition to the fact that they are special marking used to extend other lines.

- Converging lines - add interest and lead the eyes to a common direction. It portrays joining, unity and oneness. That is, as they move away from the viewer, two parallel lines seem to merge together at some point. A classic example can be said to be railway tracks.

- Diverging lines - propose deviation, digression, disunity in addition to departing from a central thing. This contradicts the symbolism of coming together.

Uses of Lines in Drawing

- Line is used to draw outlines of objects.
- Lines can be used to create tonal values (light and shade).
- Lines enhance visual appearance of the form by making it appealing to the eye.
- They attract attention to the image.
- Lines give directions; create distance, recession and perspective in compositions.
- Lines speak ideas in a simple and concise manner because they express and generate a variety of messages and emotions.
- They give the illusion of transparency and translucency.
- A collection of lines create textures in designs.
- Combinations of lines create patterns in a composition.
- A number of lines joined together form empty or filled shapes of images in drawing.
- Lines lead the eyes through the directional movement of images.

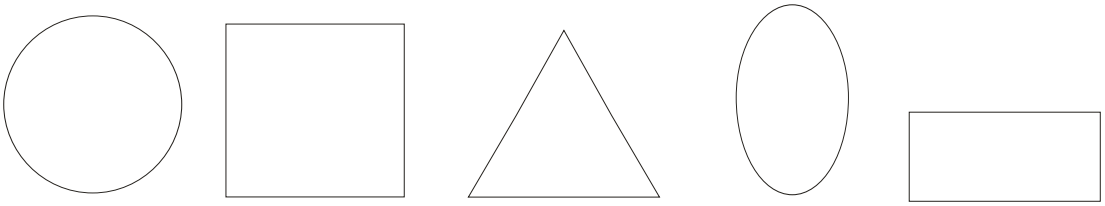
- Lines make clear the edges of an object which is termed as an outline.

c. Shape

- Identification of Shapes: An enclosed area making the outline of something represents a shape. It is also a defined area of either geometric or organic form on any surface. Shapes are formed when continuous end of lines meet. Tightened lines make the construction of shapes. Wikipedia, the free encyclopedia (2008) sees "the shape of an object located in some space as the part of space occupied by the object as determined by its external boundary".

- Differentiation of Shapes: Shapes can be found in both the environment and among creations by man as well. There are the regular as well as the irregular shapes. Therefore, every object seen in the environment or imagined has structure. Examples of natural shapes can be seen in animate and inanimate things such as animals, human beings, cups, flowers, leaves, fruits and many other objects. However, artificial shapes are ovals, circles, cones, rectangles, squares, triangles created through drawing, stenciling, printing and spraying.

- Creating Shapes by Drawing: This is done by using any drawing tool to draw any shape be it regular or irregular with the help of the hand, rule, compass or any other equipment on any surface. Figures 36a to 36e show two-dimensional forms of a circle, square, triangle, oval and rectangle respectively. Figures 36f and 36g show three-dimensional forms of triangle into cone and rectangle into cylinder



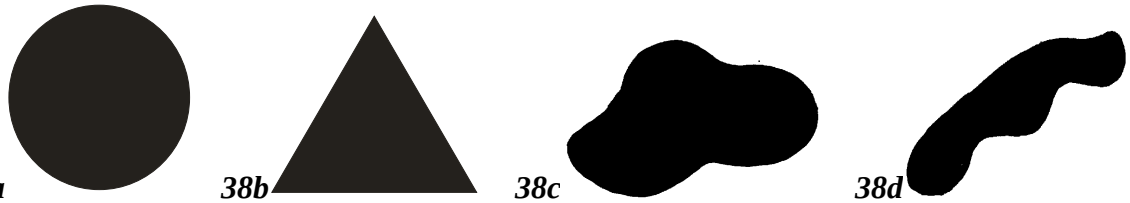
36a *36b* *36c* *36d* *36e*

36f *36g*

Many different shapes can be drawn from one regular shape and this is termed as irregular shapes. Figures 37a to 37c are the different types of irregular lines

37a *37b* *37c*

- Creation of Shape by Stenciling: This process involves cutting out shapes (regular or irregular) on a sheet of paper or plate and then applying ink/paint to the surfaces of the cuts. When the plate is removed afterwards, the desired shapes are created on a surface. Figures 38a to 38d Regular and irregular shapes created by stenciling



38a *38b* *38c* *38d*

- Creation of Shape by Printing: This activity incorporated the use of any flat bottom object dipped into ink/paint and then stumped onto any flat surface to show shapes. The object may be of any shape. To attain best printing, the area for printing must be flat so that the ink will cover the printed area without leaving spaces in between. Figures 39a to 39d Shapes created by printing

39a ***39b*** ***39c*** ***39d***

- Creation of Shape by Spraying: This is done by putting objects on a support and mechanically or manually blowing air through a spray diffuser containing ink onto a surface where the objects are placed. After spraying, the objects are removed to reveal the impressions created on the surface of the support. Fig. 40 is example of shapes created by spraying.

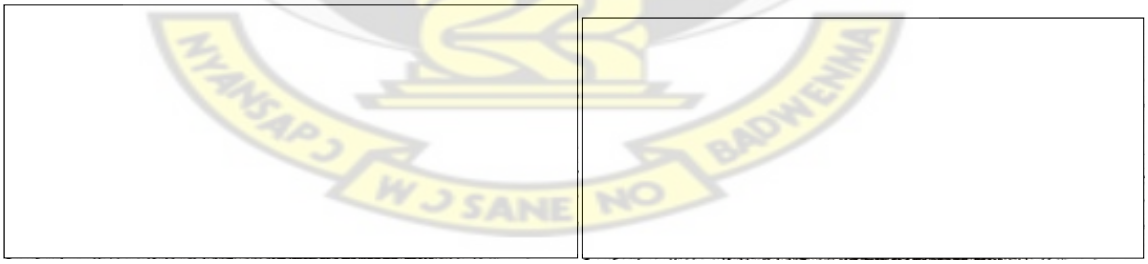


Fig. 40

Types and Symbolism of Shapes

From the discussions, it is clear that lines along with shapes have symbolic significance, as a result, they tell stories. The qualities and meanings of lines and basic shapes must be evident in drawings. Learners must be attentive to understand and explore in conjunction with the eyes, the various "songs" each of them sing in order to appropriately represent them efficiently and effectively when drawing.

- Circle represents holiness, purity, existence and superiority of God, oval indicates beauty and feminity, square establishes strength, masculinity, power and influence, rectangle creates strength, masculinity, power and influence and triangle signifies feminity, attraction as well as warmth.

Uses of Shapes

- Shapes may serve as outlines in drawing.
- A variety of shapes compose pictures.
- They may as well create patterns in drawing.
- Shapes also bring attention to images or design when drawing.
- Shapes form textures in drawing.
- Well organized varieties of shapes convey interest in pictures.
- They can create an illusion of mass, volume and distance of pictures in compositions.
- Shapes can stand as complete works of art.

d. Texture

- Identification of Texture: In simplest form, texture is the nature of a surface. Texture in this sense may be smooth, rough, hard or soft/malleable, warm or cool, glossy or matt, transparent or opaque, porous or compact and fibrous or non-fibrous. Textures on surfaces are either tactile or simulated. Tactile surfaces are those that are seen, touched and real. Typical examples are leaves stones and pineapples (Plate 47). On the contrary, simulated surfaces are those that deceive the eye. The surfaces are seen as rough or coarse but when touched they are rather smooth. Typical examples include terrazzo and pictures of rocks (Plate 48) or stones which have been snapped or shown on television or computer.

Plate 47: A real pineapple

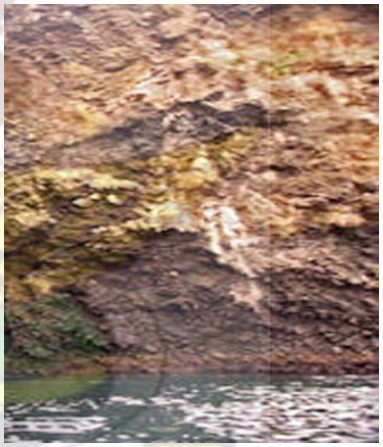


Plate 48: A picture of a rocky mountain on TV or computer

When objects such as pineapples and rocks are touched in their natural states, they are tactile but when the same pineapples and rocks felt in pictures, on television or computers, they become smooth even though, they are realistically rough.

- Differentiation of Textures: There are differences in texture in the sense of being natural and artificial. Surfaces of rocks, stones, fruits, tree barks and leaves, to mention a few are all textures seen and touched in the environment. Conversely, man-made textures

are made from prints of coins, cedi notes, tree barks, and any other object in the environment. Textures can be created by the patterning of dots, lines, tonal values, shapes and colours and also through drawing, printing, spraying, rubbing, and dabbing.

- Creating Textures by Drawing: This is created using drawing tools to draw on drawing surfaces. The drawings that make up textures may be in the form of hatching, cross-hatching, pointillism, overlapping or otherwise of alphabets and numbers in addition to shapes or forms as shown in Fig. 41.

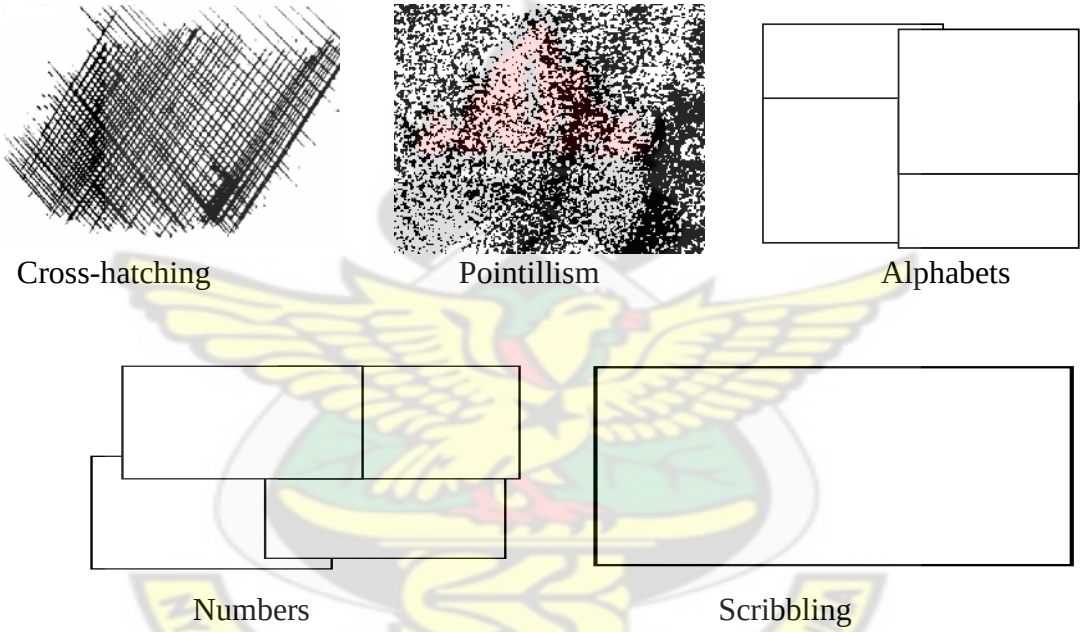


Fig. 41: Texture created from by drawing

- Creating Textures by Spraying: This is done using a spray diffuser containing ink as shown in Fig. 42.

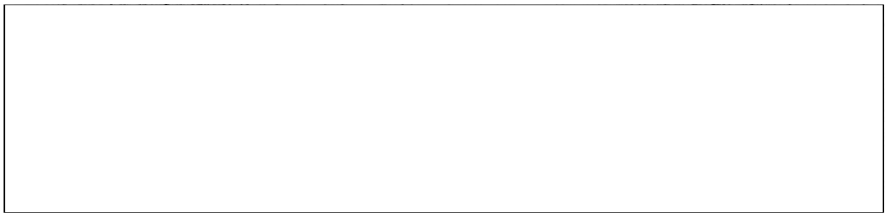


Fig. 42: Texture created from of spraying

- Creating Textures by Printing: That is putting any object in ink or paint and stamping them on drawing surface(s). In Figures 43 and 44, a dried leaf was picked up, cleaned and then dipped into the ink or applied onto it with brush before stamping them on supports. For instance, when a student is drawing a tree, he or she can draw the outline of the free, cut a portion of the tree bark and apply ink or paint on it and press it onto the outline to print as the texture of the tree trunk. This will be useful because the details on the tree bark may not be achieved when drawing. Examples are shown in ***Figures 43 and 44***.

Fig. 43: A print from a tree bark

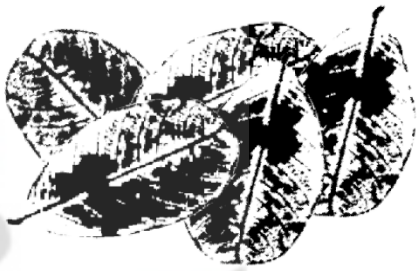


Fig. 44: Prints of leaves with ink

- Creating Textures by Dabbing: Dabbing to create texture is achieved when a soft material is dipped into a container of ink and a light gentle pressure is applied on the soaked material pressed into any drawing surface such as a white cloth as in Fig. 45.

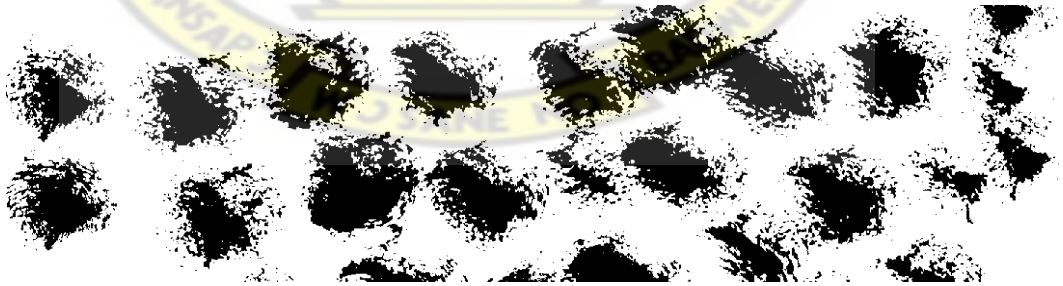


Fig. 45: Texture created from dabbing

- Creating Textures by Rubbing: To rub is to repeatedly press and move a tool over a surface of an object in a circular, upward or downward motion. This activity is achieved

when a coin was put under a sheet of paper. Colour pencils are used to rub the surface over the coins to arrive at the outcome or design of the coins appearing on the surface of the drawing support as shown in Fig. 46. Any appropriate object can be used for this exercise. This is also known as “frottage printing”.

Fig. 46: Textures made from coins

Uses of Texture in Drawing

- Textures create design on a drawing surface.
- Textures bring about light and shades in a picture.
- They bring about variety to break monotony.
- Visual texture can add a great deal of interest and dynamic energy to images.
- Textures may be used to create surface appearance.

e. Space

- Identification of Shapes: A space is conceived in an unbounded two or three dimensional stretch of an area occupied by substances. In simple words, it is an area with no boundary at least in one direction or areas created in between things or an area within or around shapes. The element of space cannot be wished away. The space that an object occupies can be seen and described as empty or filled, big or small. Shape and space go along with each other.

- Differentiation of Shapes: First and foremost, space may be differentiated in terms of its negative as well as positive areas of a surface(s). Again, it can be distinguished in the area of the sizes, which is the ratio of the size of an object to be drawn as against the size of the surface or the support. Last but not the least, the intervals left between objects also distinct one type of space from the other. Depth and shallowness of tones equally set apart the various types of spaces available.

- Creating Space with Negative and Positive Areas

Positive spaces are filled by positive shapes and vice versa. That is, the positive and negative spaces refer to the juxtaposition of figure and ground in a composition. Backgrounds are negative spaces whereas working areas with shapes, textures, colour, value, line or dots are considered as positive spaces. In Fig. 47, the shaded area is a positive and the negative is the white area/background

Fig. 47

- Creating Space with Respect to the Scale or Sizes of Objects and the Surface for Drawing. Fig. 48 shows relationship of the ratio of occupied space as against unoccupied space.

Fig. 48

In this instance, the size of the dot on the surface occupies a small portion of the surface and this leaves a large area of space.

- Creating Space with Foreground, Mid-ground and Background on a Support: This process identifies the space on which the object or subject which is drawn resides on a surface. In Fig. 49, this composition, 1 suggests the foreground, 2 represents the mid-ground and 3 marks the background.

Fig. 49: A depiction of foreground, mid-ground and background in a composition

Creating Space with Intervals: Intervals which are the distance between one thing and another are all ways of creating spaces in compositions. In drawing, spaces are created in between objects. In compositional drawing, spaces around the object are the foreground, mid-ground and background. In Fig. 50, point 1 shows two objects which are widely apart.

Point 2, however, has space but it is not as quite wide as point 1 whereas point 3 has two objects touching each other, hence; there is no space created. However, point four also does not have space in between the two objects because, they overlap each other.

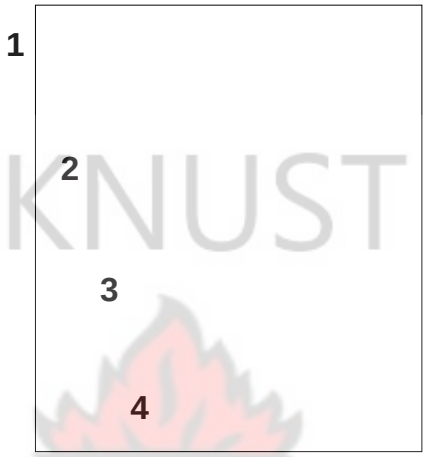


Fig. 50: Intervals to create space

Creating Space with Height and Width of Object(s) or Subject(s): Height refers to the distance between the lowest and the highest point of an object or subject whiles width refers to the distance from one edge of an object to the other. This is to say that, creating space with height and width of what is to be drawn occupies an area whereas the unused area also forms another space. Fig. 51 shows different heights to occupy space in a drawing surface.

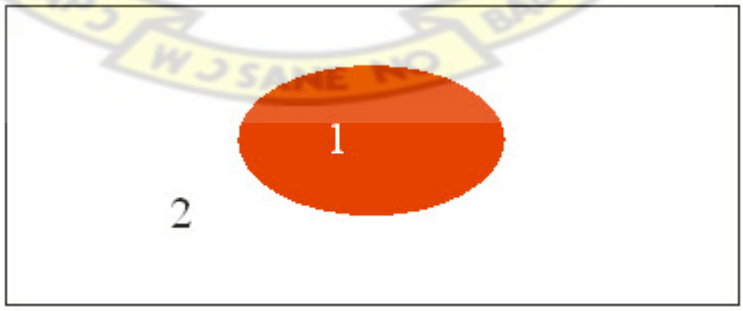


Fig. 51: Different heights to occupy space in a drawing surface

Uses of Space in Drawing

- Space builds distance in a picture.
- It assists in composing a picture.
- It makes identification of objects clear, distinct and easy.
- It is used to create balance in a composition.

f. Colour

- Identification of Colour: Colours are seen in and around the environment we live in hence, colour dominates our lives. All objects in the environment have colour, which is seen from the clothes we wear, food we eat and even the medicine we take in when we are sick. Colour may be defined as what the brain and the eyes see in response to light. The eyes see for the brain to interpret. Is colour just light or is it what we see when our brain and eyes respond to light? Without our eyes to see and our brains to interpret, would there be colour? Colour is the interaction and distribution of light energy verses wavelength that the human eyes actually see. These colours are called the colour spectrum. Each colour in the spectrum bends at a different angle as it passes through the prism. As a result, colours are separated from each other.

The Effect of Space and Distance on Colour and Tone

- The colour of objects in a picture becomes pale as it recedes into the distance and the ones closer to the viewer are intense. This comes about when an artist use colours which are near the horizon. Background colours must be pale whereas foreground colours must be more intense.
- Tones on objects become blurred as they recede into the distance.

- Colours of objects are stronger and more intense as they appear closer to the viewer.

Uses of Colour in Drawing

- Adequate rendition of colours eliminates boredom and creates beauty.
- Colours are powerful, useful and attractive tools to differentiate between objects in a design.
- Regular and balanced colour scheme gives visually appealing designs to view.
- Colour can communicate meaning, express personality, make a distinction or give emphasis on content.
- Distance is developed by the use of appropriate colours.
- Colours give tonal effects of objects/subjects in a design.
- Erratic colour creates confusion in a composition.
- The use of lots of colour may cause agitation.
- Colour is a good way of identifying, grouping or differentiating elements.

g. Plane

- It is an even leveled surface material that is most important in drawing. The Ghana Examination Council (WEAC) expects not less than three tones (light, mid tone and dark tone) from drawings made at the second circle level. At least, from first to third year in the tertiary institution, drawing students ought to have graduated from four to about seven planes. Below is an example of a four sided objects with obviously, four planes. When one changes direction from “1” to “2”, then he/she has moved from plane “1” to “2”. All elements and principles in art can be used to achieve this.

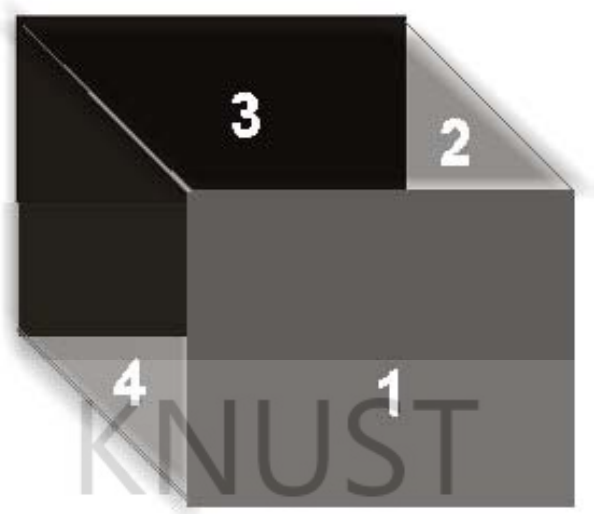


Fig. 52: An illustration of planes or sides of an object

Uses of Planes in Drawing

- Planes identify, group and differentiate elements in a composition.
- Planes create illusion of depth and distance in a composition.

4.7.2 The Principles of Design are unity, variety, balance, rhythm, contrast, repetition, proportion, scale, harmony and opposition.

a. Unity: It is the combination of several separate entities to form one or a number of some entities put together to make one, hence; it suggests closeness. Examples in the environment can be said to be real palm leaves, the human head and human figure. In the case of the palm leaves, different parts of each leaf unite to form a palm frond and with the human head, the different parts comprising the eyes, nose, mouth as well as the ears form a complete human head. Man can also create unity through drawing on support the human

head as well as the palm leaves. In composition drawing, the entities in a drawing must be united to portray the idea that a story is carrying.

b. Harmony: This refers to the pleasing effect derived from accurate arrangement of the elements (such as line, dot, space, colour, shape and texture) of design in a composition. This means arranging individual items to be at peace with each other. When different parts are at peace, it suggests that harmony comes along with pleasantness. Typical examples are again human head and palm leaves. A critical point is that, there is harmony on the human head because the various parts agree and are at peace with each other. One can see that the nose is not fighting with the eye so is the eye not fighting with the mouth.

c. Rhythm: In this context, rhythm means the arrangement of images to encourage a sense of movement. Rhythm in drawing suggests movement or arrangement of items in a picture. In other words, it is the repetition or alternation of objects. Intervals are almost well defined. Regular (alike in size or length and the intervals between the elements), progressive (a development of steps through a sequence of forms) and flowing (a flowing rhythm resulting in the illusion of movement) are the different types of rhythm associated with the principles of design. Rhythm seen in the environment are leaflets in the palm tree, date palm, royal palm, raffia, spikes on pineapples, bunch of banana and bunch of plantain to mention a few. On the other hand, man-made rhythm can result from drawing and a systematic arrangement of dots, lines, shapes, colour, space, texture and size. When drawing, variety must be taken into consideration in terms of the employment of varied

heights, sizes, colours, textures or dots to avoid monotony. Rhythm seen in nature may be palm fronds.

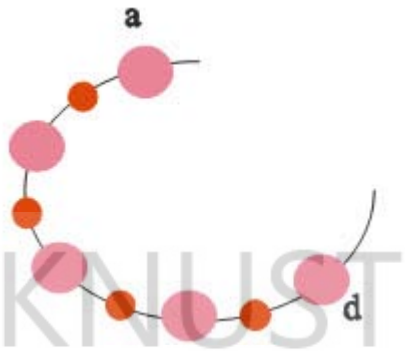


Fig. 53: The movement from point (a) through (d) is a man-made creation of rhythm

d. Dominance: This deals with identifying more of an entity than others in a same composition. One distinct characteristic of dominance is the fact that the eye is first led to it/them when gazing at a design; therefore, it/they serve(s) as an area of interest. Frequently, perspective results from the principle of dominance. Dominance is discovered in nature everywhere one looks. A classic case in point is brown mostly dominating in the soil, blue predominantly dominating in the sky, white frequently seen at ceremonies associated with birth and black, red and brown mainly seen at funerals in Ghana. Dominance can again be achieved artificially through drawing pattern and repeating one element of design like dots, lines, shapes, colours and so on and so forth (see Fig. 54).

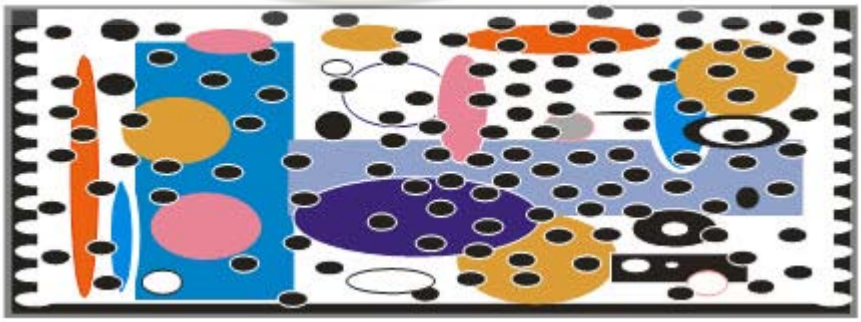


Fig. 54: Domination of dots in the composition

e. Variety: Being consistent with a particular element of design in a work of art without adding other elements of design makes a composition boring but it becomes interesting, appealing and refreshing to view when a mixture of elements are introduced. In the same vein, variety is explained as the quality of being diversified to eliminate boredom. In composing a picture for a work of art, variety can be captured by employing two or more elements such as dots, lines, shapes, texture and colour. Variety of the different elements of design are abundant in the environment we live in, created by man to spice up mankind's stay on earth and eliminate boredom among men.

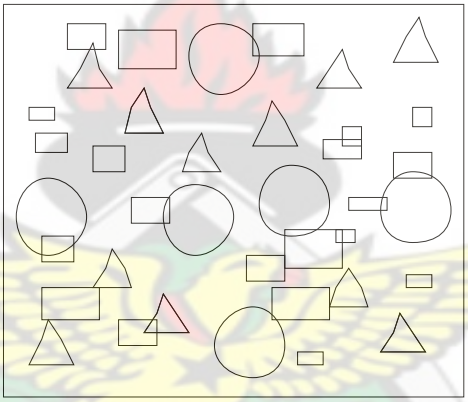


Fig. 55: Creating variety with different types and sizes of shapes

f. Balance: This deals with the arrangement and distribution of items in a particular design and their relationship to the visual weight within a composition. This signifies the technique of weighing against the right and left side of a composition. The two types of balance are in the form of symmetrical and asymmetrical balance. Symmetrical balance, also known as a formal balance, is a situation where there is equal distribution of objects with varied sizes arranged in a composition so that both halves are equal in weight. Examples of symmetrical balance include radial symmetry, horizontal and approximate horizontal symmetry. On the other hand, asymmetrical balance occurs when the weight of a

composition is not evenly distributed within a work of art and hence shows an inequality between the two halves. Looking around the environment, it is observed that nearly all things are equally divided into two. Examples of a symmetrical balance found in the environment are butterflies, earth, leaves and human form. Symmetrical balance can be created through drawing, printing and stenciling.

Fig. 56a: An illustration of a symmetrical balance ***Fig. 56b:*** Asymmetrical balance

Asymmetrical balance (Fig. 56b) is popularly made by man through drawing, printing, splashing, stenciling as well as spraying. It is clearly established that symmetrical balance (Fig. 56a) has the design equally divided into two halves and the asymmetrical one has one side heavy in terms of the colours and shapes than the second half. In asymmetrical balanced design, the half with fewer objects appears more empty, spacious and bigger than the half with more objects.

g. Proportion: This is the relationship of size among objects in a design. It deals with comparison between items that is the length, breath, height or width of one item in relation with another. Larger objects come to the fore whiles smaller objects move away into the background and hence appear far away. In drawing, the size of one image must be in correct proportion to the size of the other in terms of the height, width, length and breath. The most

effective way of achieving this is through hand and eye coordination in drawing. If one's observation is done right, proportion will also be correct.

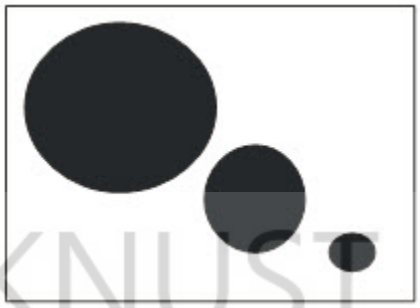
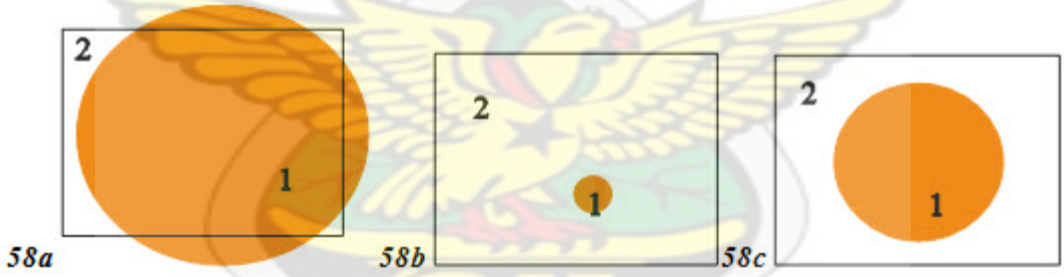


Fig. 57: A ratio between the different sizes, weight and height of circles

h. Scale: In terms of drawing, scale is the size of one thing compared to the size of another. It also deals with placements of the size of an image to the size of the background. Examples are shown in Fig. 58.



Figs. ***58a, b*** and ***c*** are different scales between the sizes of images compared to the background

- In Figure 58a (1) stands for the image and (2) for the background. Obviously, the scale of the image (1) is bigger than the size of the surface on which the image is drawn or the background. In drawing, this approach is wrong.

- In Figure 58b, the illustration shows that the scale of the image (dot) is too small for the size of the drawing surface as compared to the background. This is also not good in drawing.

- Figure 58c has an image (1) which is proportionate to the size of the drawing surface which is the background.

i. Opposition: Opposition in relation to drawing involves drawing of opposite or unrelated items such as shapes, lines, dots, texture as well as colour. It is the responsibility of the drawer to unite the represented elements to agree and co-exist to make the finished work pleasant.

j. Contrast: In drawing, contrast is used to describe two dissimilar entities. In other words, it is an obvious difference between two items. Example is the contrast of colour, for instance, the use of dark blue as against the use of light blue that is the contrast of light and dark tones. There is again the contrast of shapes such as circles contrasting with ovals. Instances are shown in Fig. 59.

Fig. 59: The contrast between light and dark blue

4.8 Holding the Drawing Tool

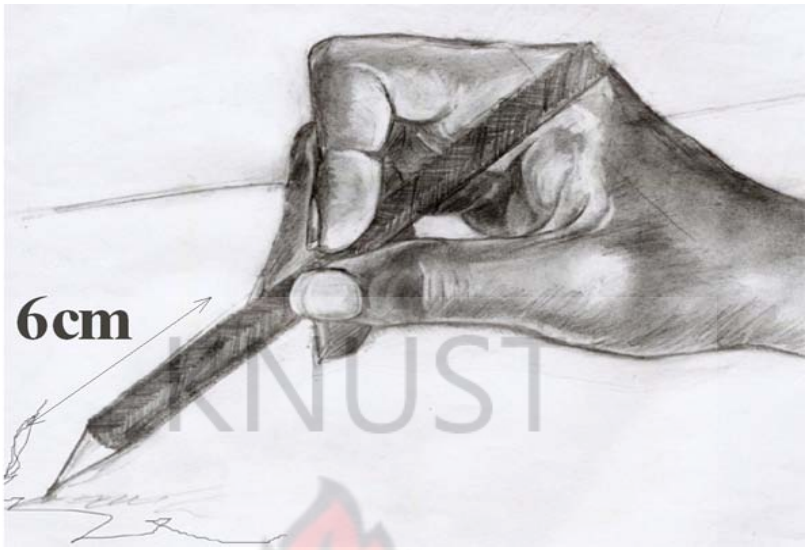
There are many tools that can be used for drawing but the “pencil” was chosen to in this case. A pencil is the basic tool to start drawing as Sullivan 1997 argues. Holding the pencil the right way is another very important skill to acquire. The underneath ways suggested will bring out some advantages and disadvantages of some grips.

There are many ways of holding a pencil to draw. Examples are illustrated in Fig. 60. Learners are however advised to explore with the different grips demonstrated below and elsewhere to select a position which best suit one’s temperament.

Learners must consider these when holding a pencil.

- “Learn to see the drawing tool (pencil) as connected to your eye, hand and mind and it can be a pathway to freedom and handle with care and not like a hammer” (Sullivan, 1997).
- Grip with ease and naturally.
- Grip lightly and loosen up for free movement.
- Hands moved up on the drawing surface produce free flowing lines whiles resting on drawing surface inhibit free movement of hand as a result, creates multiple and crooked lines.
- Representing single lines shows one is confident.
- Making multiple outlines is considered incompetence on the part of a student.
- The grip in Fig. 60 is very appropriate for outline drawing.

Fig. 60 is a hold comparable to the normal way of holding a pen to write



60a

60b

Figs. 60a* and *60b: The same hold from the tip but from a different angle

As seen in Fig. 60, the hold appears to be a tripod with the distance from the tip of the pencil to the hold of the pencil. The distance can be about five to six centimeters. Nevertheless, artists can hold to ensure comfortability. A loosened up extended grip leaves space between the wrist and the paper, in this case, the hand avoids unnecessary friction with the support. When this hold is utilized, the fingers delicately control the pencil. A great deal of movement from the pencil-tip occurs as a result of a small movement of the fingers. This

hold is right for fine and small detailed drawings. This grip comes naturally with ease. Grip lightly and loosen up for free movement. As a result of the free movement of the wrist on the support, draftsmen are able to produce single lines to build their confidence. Finally, accurate shading mostly in the cases of hatching, cross-hatching and pointillism is assured where necessary. Mass shading in particular especially will not work right with this grip.

Fig. 61 is another style where a pencil is held close to the tip. The tripod shaped grip takes about two to three centimeters away from the tip of the pencil. Beginners must be aware that this position hinders the hand from moving freely. This means there is always friction between the draftsman's wrist and the surface on which drawings are done. This comes about from the fact that the hand holds the tool too rigidly making it impossible to give the hand free movement. This hold is appropriate for fine detailed, tip shading and minute drawings but disastrous for mass shading.

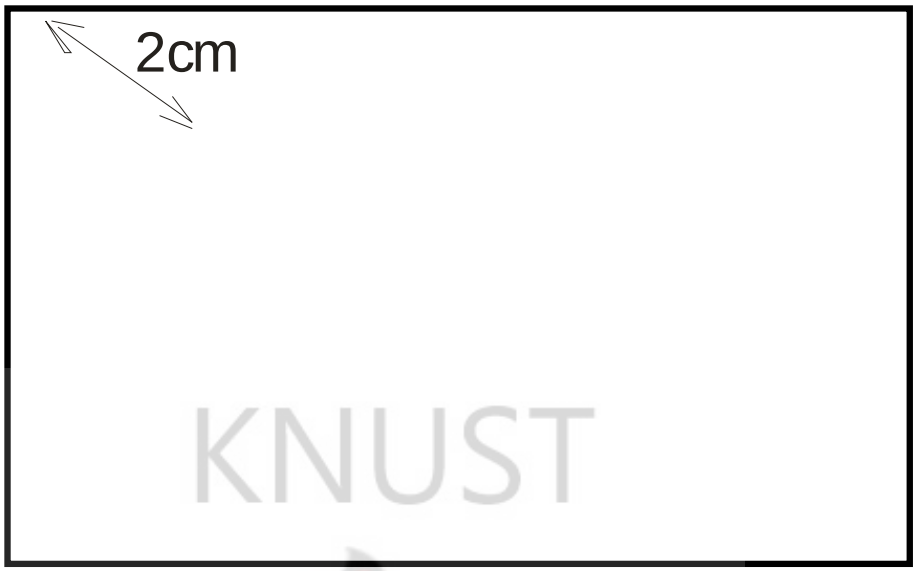
61a

61b

Figs. 61a* and *61b: The same hold close from the tip but from a different angle

Fig. 62 is a third style of holding a pencil. This approach of holding places the tool under the palm of a draftsman. By placing and closing the hand around the tool, the tool fits loosely in between the thumb and the index finger as in Fig. 62. In this case, the tool is positioned diagonally across the open palm and snugly closing the hand around the tool, conveniently pointing the thumb towards the sharpened end of the pencil where the lead is. This hold is very convenient for mass shading and but for details as a single stroke will cover a large area because the side of the pencil is normally used.

62a



62b

Figs.62a* and *62b: The same hold of a pencil under the palm but from a different angle

4.9 Preliminary Exercises/Wrist Exercises in Drawing

According to Wikiversity (2009), artists before drawing require more flexibility of finger joints and also the palm. Exercising the wrist intended for drawing is physically keeping a draftsman healthy and fit to begin a drawing exercise.

Sullivan (1997) describes wrist exercise as a self-stretch passive movement for activating trigger points and relieving tension in the hand and finger muscles. Any practice to guarantee fitness and good health is important to humans but what is clearly evident is the fact that most humans have put aside these healthy practices and left them to dancers and gymnasts. It is therefore important for draftsmen to undertake wrist exercises in order to achieve enormous benefits, some of which are improving blood circulation, tissue flexibility, elasticity as well as good posture. Other advantages are assisting draftsmen to get ready by loosening the wrist muscle to shape and tone the wrist muscles to draw comfortably, conveniently, easily, and effectively. These exercises can be performed

personally or with the assistance of efficient machines such as hand master plus and ultimate hand helper. Students should be encouraged to constantly practice the exercise to build their confidence for drawing. This is a warm up exercise which gives students the opportunity to experiment with tools as each tool is handled, tried and tested. The whole activity should be stress-free.

To enable learners make the hand flexible and produce good freehand drawing without using drawing scale or any other equipment, the manual wrist exercises described here must be performed thoroughly:

Procedure:

Hold a drawing tool, then use your relaxed arm including the wrist to first draw a long straight line, then attempt to draw parallel lines of the same length until you are able and confident to draw series of long parallel, vertical, horizontal, diagonal and concentric lines on the support using random strokes without releasing the drawing tool from the paper while gradually keeping the spaces between them as even as possible and at the same time, increasing the speed or frequency of the lines and freeing the arm to make it loose. Initial free hand exercises will produce crooked and uneven lines but beginners will get them straight after repeated exercises. These movements will help you to maintain flexible fingers and above all, improve your sketching skills. Fig. 63 is an example.

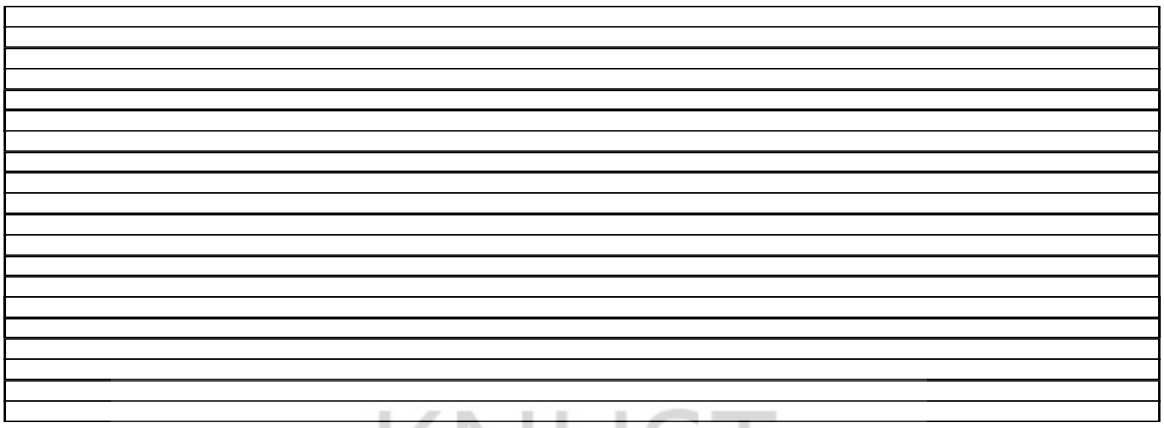


Fig. 63

After several attempts on the same practice of drawing series of long horizontal parallel lines and keeping the spaces between them as even as possible and at the same time increasing the speed or frequency of drawing the lines will result in Fig. 63.

Drawing of concentric lines as shown in Fig. 64 by keeping the spaces between them as even as possible and increasing the speed or frequency drawing the lines.

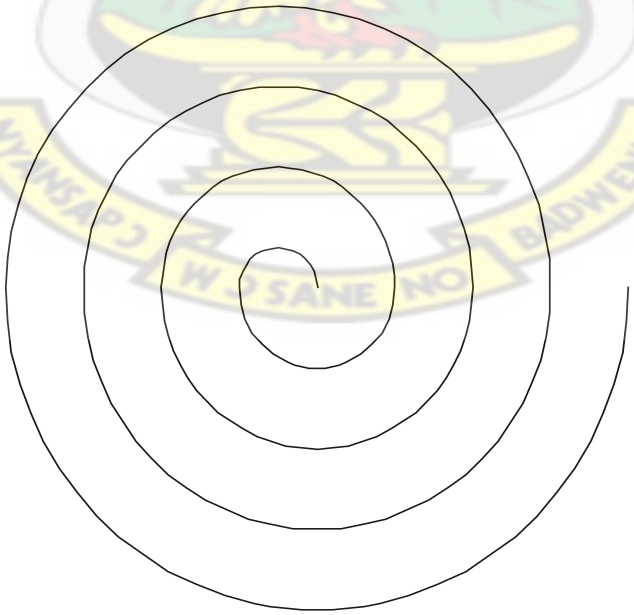


Fig. 64

Continue freehand drawing with series of long diagonal lines keeping the spaces between them as even as possible and increasing the speed/frequency drawing the lines as in Fig. 65.

Fig. 65

Figure 66 shows series of long vertical parallel lines which will result from the drawing exercise while keeping the spaces between them as even as possible and increasing the speed/frequency drawing the lines.

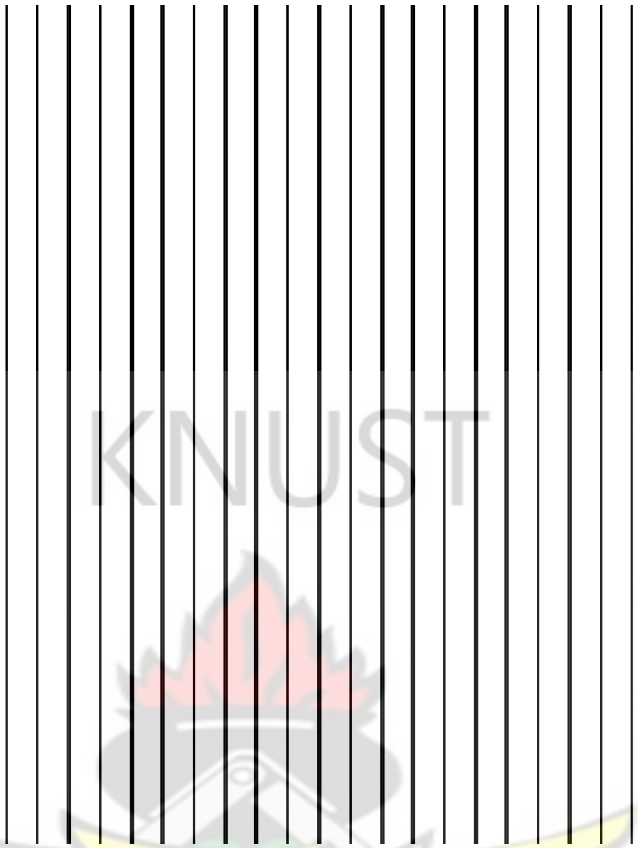


Fig. 66

This training exercise has the basic aim of helping to control the artist's hand. Practicing this often and regularly can help the artist to achieve straighter lines and maintain the spaces between them as even as possible. As the adage goes, practice makes man perfect. Continuous practice will develop confidence as well as relax the wrist of the draftsman.

4.10 Observation

This is one of the central skills that every draftsman must possess. Wikipedia, the free Encyclopaedia (2009) postulates that drawing is often seen as exploratory and it has considerable emphasis on observation, problem solving and composition. That is, gaining a greater knowledge and understanding of objects or subjects ready to be drawn is a great skill that is required to assertively put on any support, an accurate drawing that any realistic

draftsman hopes to achieve. Observing an object with eagle eyes and representing it on a support is the most important aspect of drawing. This means that, to be able to draw realistically, one has to perceive and understand the details of an object. When detailed observation is achieved, learners can properly depict semblance appreciably. In other words, observing critically reveals the understanding of natural forms.

Bartel (2002) confirms that a draftsman has a choice when he or she pursues observation drawing, though there are many forms considered as good drawing practices, it is most of the times taken as the best way to develop drawing skills. Detailed observation of objects or subjects should be the starting point of drawing. This assertion is shared by (Murphy 2007) who argues that most appreciably; intense observation is the key to drawing both realistic and abstract and fantasy drawings. This in no doubt develops confidence in addition to encouraging creative work habits. Observation is undertaken with specific results in mind, that is, to be able to capture the basic composition of objects or subjects with all their complexities alongside the obscured and minute details. Hence, making realistic drawings require that one actually learns to draw what is seen and not what one thinks should be seen.

Observation, Human Senses, Aesthetics, Elements and Principles of Design at Work

An individual draftsman's vision along with his or her philosophy, intelligent perception, interest, observation and a host of other traits work in conjunction with the brain to put something on a support to serve as a drawing. It is prudent that a student seeking to acquire knowledge and drawing skills sharpens all their senses to help them draw accurately. The senses enable draftsmen to understand the immediate surroundings and all that happens in them. The senses of sight, taste, hearing, smell, touch and kinesthesis do not work in

isolation but rather come together to work in unity and harmony (Amenuke, 1995). It is worthy to note that all human senses appreciate what are termed as the visual elements and principles. In this connection, the preceding discussion shows that when drawing, observation must be done by means of the human senses because it is the interconnection of perception (via senses) and skilful control of drawing tools that make it possible to compose good drawings.

Combining these factors appropriately, a learner can source creative information to assist in capturing what is there to be seen as a reproduction of objects or subjects from their bigger characteristics to their minute details. The human senses however, have qualities which range from good to worse. These qualities could be noticed through critical observation and show through drawing. Learners should be able to draw what is seen and therefore applies observing, perceiving, philosophizing, interest and character to make a learner achieve a realistic drawing. Similarly, aesthetics, which deals with the study of the theory of beauty and involves seeing, tasting, hearing, smelling, touching and motion also play a part. Other qualities worthy of mention are anxiety, love, hate, fear, hope, joy.

- How to Observe Oranges Using the Six Senses to Describe the Relationship between them:

Fig. 67: Ripe oranges to demonstrate the relationship between the six human senses

a. Sense of Sight: As far as perceiving with the eyes is concerned, the following features are clearly identified and distinguished. The (round) shape of the oranges, the (medium) size, and the shades of orange colour (orange and white) is dominant. They have smooth texture which can be felt as well as seen with the eye. The arrangements of white lines seen within the cut orange are seen as a pattern. All these features must be seen during and after the drawing is finished.

b. Sense of Hearing: The ears perceive sound and rhythm in the almost perfect arrangement of the white lines within the half orange. Therefore, if each line is represented by one beat, then when one touches every line, it will create rhythm and this is what the ear hears. The researcher believes that repetition of regular beat at a specific interval produces rhythm.

c. Sense of Smell: The human nose perceives smell. Objects or subjects to be drawn always have smell. Learners however, must smell the objects to understand them. With regards to the nose and the oranges, the draftsman can extensively look at them or go nearer to the oranges and smell either the strong or mild scent or the good or bad odour. In this instance, the nose will smell it as sweet-scented and not bad-scented because a look at the oranges does not suggest that they are rotten but rather look sweet to attract anybody to want to eat them. Another example can be cited of the fact that when one draws a rotten object; the rottenness must show in the drawing. When anybody sees it, that person must be able to see the rotten nature characterizing the object and also be able to perceive the bad smell of the rotten nature of the object.

Fig. 68: A rotten orange to demonstrate the relationship it has with the human senses

d. Sense of Taste: This deals with perceiving with the tongue. If an object ready to be drawn is clean and not toxic as it is in the case of oranges, then, a draftsman can use the tongue to taste it because it has a taste and the taste should definitely be seen in the drawn orange. Looking at the oranges in Fig. 67, it can be perceived if not actually tasted that the oranges are sweet because they are not rotten but rather ripe. What this means is that when

students draw rotten oranges for example, the observer must be able to look at the drawn rotten orange and feel that when it is eaten it will taste sour or bitter. Hence, a draftsman must be able to differentiate by perceiving or actually tasting an object which is sweet, sour, bitter, hot, warm or cold and depict this in the drawing.

e. Sense of Touch: This deals with perceiving with the skin. One can use the skin to feel the smooth nature of the oranges. In other words, the skins of the oranges under study are seen as rough so it must be registered when drawing. Again, the skin can establish the hotness, warmness or coldness, or the hardness or softness of the oranges.

f. Sense of Kinesthesis: Perceiving with the muscle is what the sense of kinesthesis or movement is all about. The arm can lift the orange to feel its heaviness or lightness. Hence, when the drawn oranges are shaded, the drawing must suggest the light or heavy weight of the oranges. In this case, the softest pencils must be used to suggest the dark shades and hard pencils to shade light tones to suggest the real nature of the oranges.

4.11 Hand and Eye Coordination

After a careful observation with all six senses, the "hand and eye coordination" comes into play. This is a historical age long practice. Simply put, all draftsmen must not only train the hands but the eyes as well. Hand and eye coordination in the researcher's opinion is "looking and drawing simultaneously with a continuous line". Drawing of observable objects is basically the graphic recording of impressions received through the eye using the

six human senses. Acquiring this all important skill is one of the most important steps to becoming a skilful draftsman. It is necessary when drawing to become aware of the relationship between the hand and eye to help direct the actions or inactions of a draftsman. This can be achieved when the hands and eyes of the student draftsman are well developed. Bartel (2002) believes that artists learn to draw by doing observation-drawing practice. At the same time, Norman (2006) suggests that

> *"Coordinating both the hand and eye is not necessarily important for only realistic drawings but also very necessary for abstractions or other art/design areas and even on the job as well. Observational drawing, a measure of eye-hand coordination helps the student to develop the skills to look, translate, and express one's observations through representational work, abstraction, or other styles and techniques. Observational drawing goes beyond talent or technique and demonstrates the student's ability to observe, communicate, and focus on a task for an extended period of time; all necessary skills to succeed in a rigorous art and design program and later in a career.*

Brooke (2002) has written that Rembrandt also accepted as true the need to have a strong linkage between hands and eyes. Brooke testifies that he is able to make known the inventiveness of his mind in drawings through training his eyes and at the same time keeping his hands in practice. It can be deduced from this that there is the urgency to look and draw at the same time if one desires to achieve a good drawing.

The above mentioned issues discussed constitute the basic knowledge that is needed to begin a drawing. Experiencing and getting the skill of coordinating the hand and eyes simultaneously is required to start the actual drawing process.

Methodology

As one begins to draw, it is important to observe carefully and sketch the structural lines, contours and masses that mark the outline of the object to register the shape. Trace the outline of the object with the eyes following slowly along the edges of the object, with the eyes and hand moving at the same time until the eye reaches the last spot. This means the movement of the gaze and the drawing hand must be synchronized. Speed should be kept at snail pace. In order to get the proportions correct. When this is wrong, the drawing will not be accurate. The drawing tool should be held with the eye and mind leading it. In other words, the tool should not move without a thought. The eyes must focus on the objects or subjects (not the support) and the tool for drawing must be constantly kept on the support to avoid making multiple and unbroken lines. You should lift the drawing tool only to a point where you need to move it to a another section of the drawing. This is where one can briefly look at the drawing support to ensure that the tool is put at the right place and hence; starting at the right spot. Capture the key details first and leave the small details to the last, taking into consideration the lightness and darkness of the various points. When this is done, a beginner will acquire confidence.

A continuous exercise of the “hand and eye coordination” skill will permit the student to improve significantly and also draw realistically. Smith (1994) states that drawing something without looking at the paper is the best way to train one’s eyes and hands. He believes that the only time that an artist is allowed to lift the drawing tool and steal a glance

at the support is when an artist is moving to a new part of the drawing and sees whether the tool is put at the right place on the support. Therefore, the eyes should be focused on only the object while tracing the outline *(*see Fig. 69).

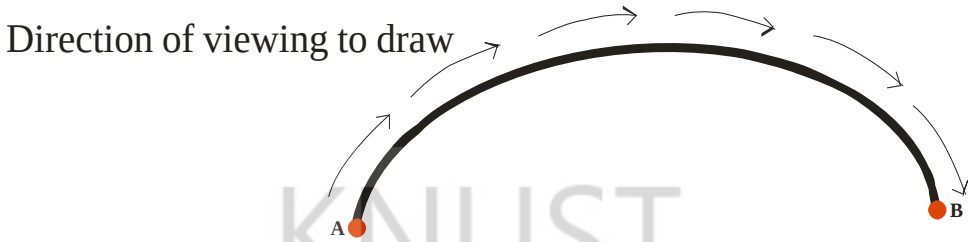


Fig. 69a: The real object to be drawn

Fig. 69b: The outcome of looking and drawing at the same time

A gaze from the (Fig. 69a) eye will start from point "A" and move along the line (in the direction of the arrows) at a snail pace towards point "B". When the eye is gazing from point "A" to "B", the hand is slowly moving on the drawing sheet from "C" to "D" at the same time without looking at the paper but occasionally; looking briefly at the drawing to see if the drawing of the shape is being done correctly.

4.12 Drawing Techniques

Drawing techniques indicate the different methods that can be adopted when drawing. The different techniques to be discussed as far as this thesis is concerned are outline drawing, outline drawing to suggest light and shade, value drawing, negative drawing and negative space drawing techniques. Each technique has its own unique features.

- **Outline Drawing**

This type of drawing defines only the edges or shapes of images with the help of straight or curved lines. This technique is seen as drawing visible outlines without shading them. It is also termed as line drawing since the same intensity of line is used for drawing the form and shape of objects. Lines used in drawing have the same thickness, value and speed; hence it becomes two dimensional or flat drawing. Outline drawing is flat because the same pressure is applied on the drawing tool throughout the whole exercise. Using critical observational skills and the hand and eye coordination skill will enable a draftsman to get an outline drawing right. A draftsman should go slowly along the outside of the shape of objects until drawings are complete. Almost all drawing tools and materials are right for this technique (see Fig. 70).

Fig. 70a: An outline drawing of a circle

Fig. 70b: An outline drawing of a pawpaw tree

- **Outline Drawing suggesting Light and Shade:** This implies that in the course of drawing an outline of any object, the skill to create a three-dimensional form is taken into consideration. In this technique, a draftsman has to identify the edges of objects as in the case of “outline drawing” but values seen on them, with the help of light, are differentiated.

This means that parts of the objects drawn are deepened to display dark shades suggesting that more pressure is exerted on the drawing tool and also that part did not receive much light. The middle tone is drawn with a slightly dark tone, denoting a slightly hard pressure was put on the drawing tool and light and highlights drawn with faint to very faint lines signifying that light to very light pressure was applied on the drawing tool. It is important not to miss the minute details on the objects. Therefore, if parts are jagged, smooth, straight or curved, delicate or robust, sharp or blunt, the line should suggest all to make the drawing feel solid and alive. Nearly all drawing tools and materials are best for rendering this technique. Tones suggested by the pressure on tools depend on the number of tones identified on the object. An example is Fig. 71.

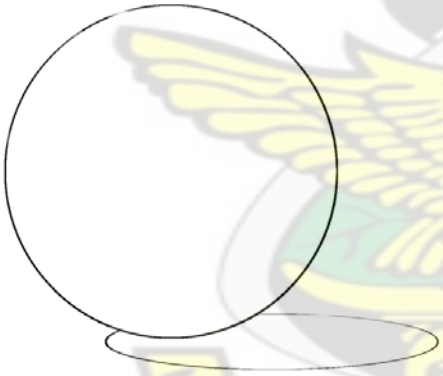


Fig. 71a: An outline drawing suggesting light and shade of a circle

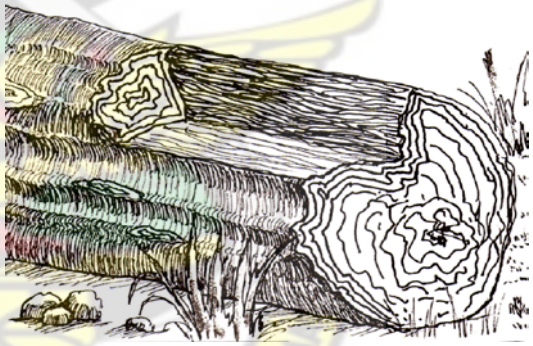


Fig. 71b: Lines drawn along the contours of a tree trunk to show light and shade

- **Value Drawing**

The main idea of value drawing is to indicate light and shade to create a three dimensional object without the use of lines to differentiate the different tones. There is a major difference between outline and value drawings. Whereas outline drawing defines noticeable edges

using lines, value drawing employs changing tones to create edges of objects, hence the contrast between light and dark tones construct the outlines of the object themselves and these changes in tone bring out details on objects. Natural examples are clouds in the sky, mountains and sea waves. Tones make up the distinctions and not lines with hard pressure to create dark shades and vice-versa. Drawing tools and materials need to be explored before they are used in value drawing. Soft materials such as the B range of pencils, crayons, pastels and charcoals are appropriate (see Fig. 72).

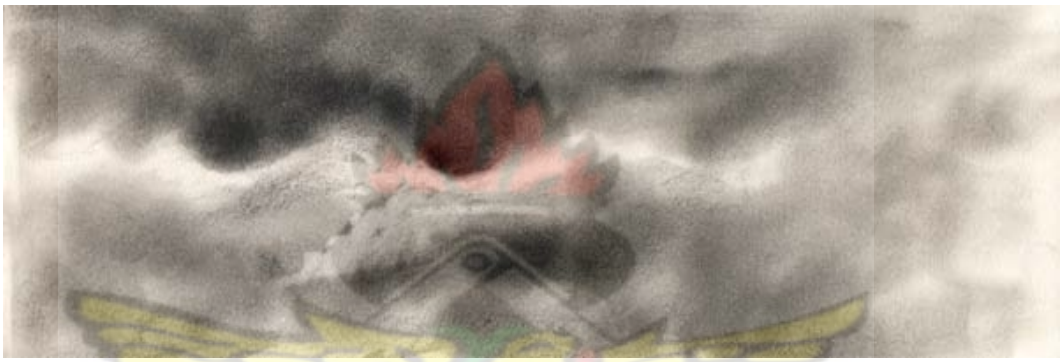


Fig. 72: The use of value to depict clouds in the sky

- **Negative Drawing and Negative Space Drawing**

Positive space is the shape of an object which makes the subject matter for a drawing. Empty space or background that is left standing when objects are drawn in a picture plane is referred to as negative space. To realize a negative drawing, connecting objects and shapes left by drawing images should be observed and studied well after which a draftsman should copy out the empty or negative spaces in between the positive spaces and shade them. The negative shaded parts are considered as “negative drawing”. This technique involves a conscious process of working to separate and protect areas of a draftsman’s paper to create negative space. The focus should be the spaces around the objects which are the white parts

and are drawn negatively. It is seen as not really drawing but drawing around the positive images. This technique is in direct contrast with positive space(see Fig. 73).

Fig. 73: An example of negative drawing technique

- **Positive drawing** is the exact opposite of "negative drawing". "Negative space drawing" is the process of imagining an object on a support and shading around the positive shape without drawing outlines to define the object as in Fig. 74.

Fig. 74: Negative space drawing of a female bust

4.13 Shading Techniques

Shading is an activity done by a draftsman to represent a subtle difference of tones ranging from dark to light. Besides, no matter the kind of tool or medium used, shading can be attained depending on the type of pressure that is exerted on the drawing tool or medium. To be exact, when firm pressure is put on a medium, it registers very dark tones while a light pressure applied to it leaves lighter shades to create variations in tones. The reverse of three dimensional shading is flat shading (two dimensional).

Good lighting system when thrown on objects is very crucial during the shading process. A strong light source provides an effective range of tones on objects. Areas on objects that are strongly hit by light are considered the very highlight and as the impact of the light recedes, it goes into the darker areas until the darkest shade on the object is seen. This means that the darkest areas do not receive light whereas the lightest areas get strong light. The type of shading used on an object should also be used to shade the shadow cast from objects when light is thrown on them.

4.13.1 Types of Shading Techniques

Shading by mass, dot as well as hatching, cross-hatching, vertical, horizontal and diagonal lines are the types of shading techniques available. Each has its unique qualities and appropriate tools and materials.

a) Shading by Mass

- Mass shading is defined as block-in forms to realize an overall union of visual weight. This technique starts by holding a drawing medium under the palm as demonstrated in Fig. 53 and gradually making broad strokes on a drawing surface preferably a smooth

one. The hallmark of mass shading is registration of broad strokes. Differences in intensity of a medium (no matter the number of shades) result from the amount of pressure put on the drawing tool or medium. This is done gradually in a much controlled manner so that wider and softer stokes could be laid. Repeatedly, after the darkest tones have been registered, dark, middle, light and highlights or any other tone can be built slowly, to achieve depth. B graphite pencils, charcoals and chalk pastels are good media for mass shading because they are soft and they blend easily (see Fig. 75). Blended circulism, "scribbling" or "circular motion" is where continuous strokes or lines overlap and interweave from the same distance from the centre to build tones as in Fig. 75.

Nonetheless, mass shading can be arrived at by using the blended circulism and blended shading techniques.

Fig. 75a: Blended circulism ***Fig. 75b:*** Blended shading technique

- Blended shading is also when a graphite pencil is put down and blended by gradual, continuous shading from dark to light. Tissue, cotton ball or the fingers can be used to blend the shades to achieve smooth shadings (see Fig. 75 c).

Fig. 75c: Shading by mass

b) Shading by Hatching

This is linear in nature. It is a sequential manner of rendering series of parallel single sloping lines at an angle of 45 degrees or curved to follow the contours of objects arranged in a row to give shades. For instance, if objects are slightly rounded or rounded, a draftsman's lines have to reflect that. Closely spaced parallel lines produce very dark tones, sparingly laid lines suggest light shades and the variation of the lines in terms of their length and sizes as well as the angle from which they are drawn all determine the tones. It is better to hatch from the darker areas and gradually move to the lighter regions. Hard pressed tools make dark tones and tools when lifted up a bit soften shades. Where lines are dense and the sizes of the lines are thick, darker shades are developed. This technique is best done with

pencils (graphite), colour pencils and different kinds of pens and inks. Constant practicing makes controlling of lines easier (see Fig. 76).

Fig. 76: Shading by hatching

c) Shading by Cross-Hatching

This is similar to the hatching technique except that cross-hatched lines are series of intersecting lines which overlap with the first hatched lines. In other words, cross-hatching is a process of hatching in two different directions. Lines should be carefully positioned to suggest tonal values. The rules as to the variation, weight, quantity and spacing of lines plus hard pencils, colour pencils, different types of pens and nibs are all good for this technique. During cross-hatching, the contours of objects should be considered. For example, to give a curved object a round look and still realize depth by making it feel alive, more contoured cross-hatched lines should be adopted otherwise, straight and random cross-hatched lines

will make the object looks flat. Nonetheless, objects should be studied well before the right approach is used. This has been clearly illustrated in Fig. 77.

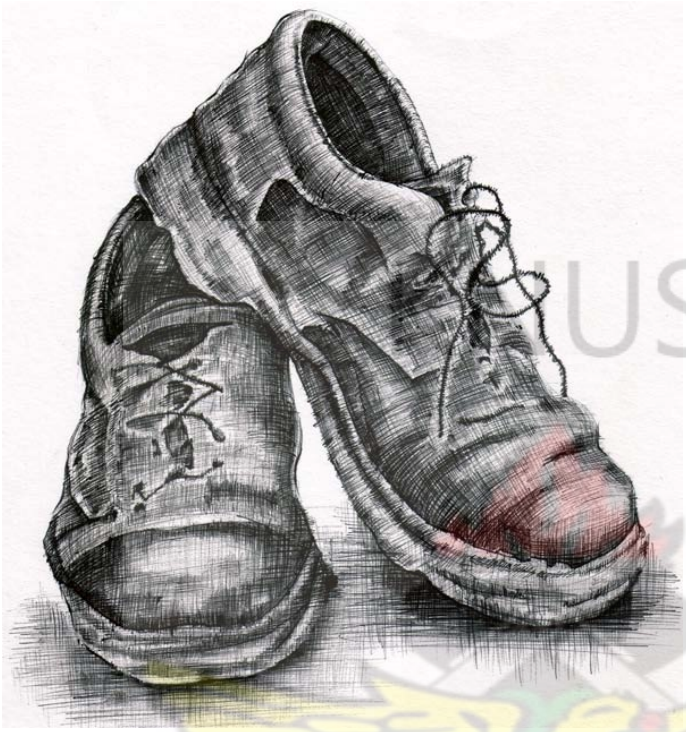


Fig.77a: Shading by cross-hatching ***Fig. 77b:*** A random cross-hatching technique

d) Shading by Vertical Lines

The Cambridge International Dictionary of English (2005) stipulates that a vertical line is where a line is pointed straight up at an angle of 90 degrees to a horizontal surface or a line. Vertical line shading technique is the use of parallel upright lines which move from the base of a support to the top at a 90 degree angle to the edge of the image to shade and create a feel of roundness. Again, the closeness or farther apart, thickness or thinness of lines and hard or light pressure on tools together create varied tones. Hard pencils, assorted pens and nibs and colour pencils are appropriate for this type of technique rendition (see Fig. 78).

Fig. 78: Shading by vertical lines

e) Shading by Horizontal Lines

The horizontal line shading is the exact opposite of the vertical line shading. It is the utilization of lines parallel to a level surface or plane. The same principles of closeness or sparseness or weight, thickness or thinness of lines determine the darkness or lightness of an area on an object. When shading with this style, the contours of objects should as well be regarded in order to achieve the solidity of the objects. Hard and pointed tips such as hard pencils, different kinds of pens (biro or ball point, rotring, calligraphy pen and others) and colour pencils are effective for this style (see Fig. 79).

Fig.79: Shading by horizontal lines

f) Shading by Diagonal Lines

Diagonal line is defined as a line running from one corner of a straight-sided geometric shape to another at an angle. It is again a chain of line arrangements across a support, using "up and down" strokes repeatedly. The same principle of closer lines giving darker tone; wide apart lines giving highlights; and the size or weight of lines plus the kind of pressure employed on the drawing tool also apply to this shading practice. Different pens and nibs, hard pencils and colour pencils are all appropriate tools (see Fig. 80).

Fig.80: Shading by diagonal lines

g) Shading by Dots

Employing dots to shade consumes too much time. Dots may big, medium or small and these ensure the intensity of tones. A variety of pens (like ballpoint and rapidograph) are suitable for this technique. These tools come in different sizes at the tip yet they make very smooth dots without congestion (Mattia, 2008). Weight, size, densely or sparsely positioning of dots and the hard or light pressure put on tools again apply to this style of shading (see Fig. 81).

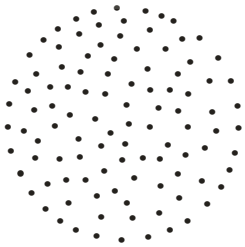


Fig. 81a: Placing dots sparsely with or without intensity make a flat image

Fig. 81b: Closely placed dot create dark tones and vice-versa

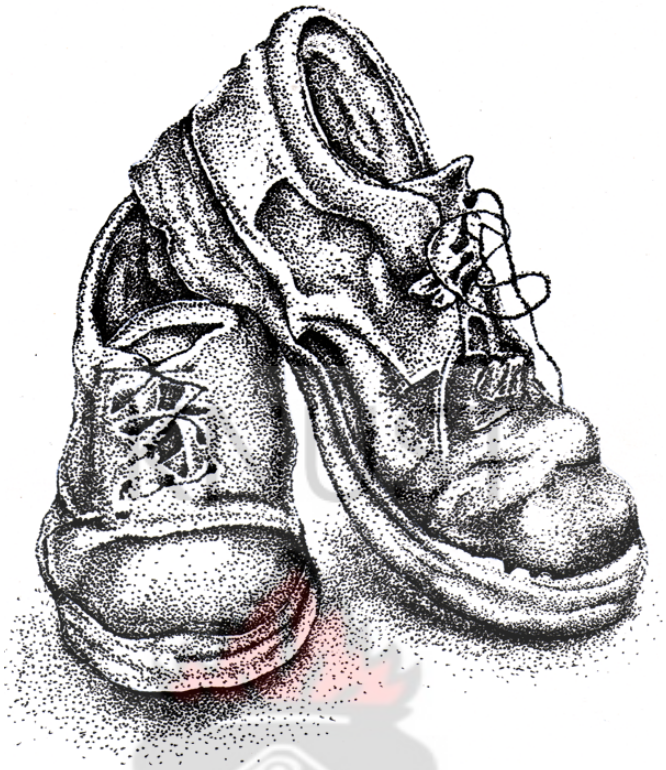


Fig. 81c: Shading by dots

h) Combination of Shading Techniques

Combining different shading techniques produce different and interesting effects as shown in Figures 82-84.

Fig. 82: Shading with vertical and horizontal lines

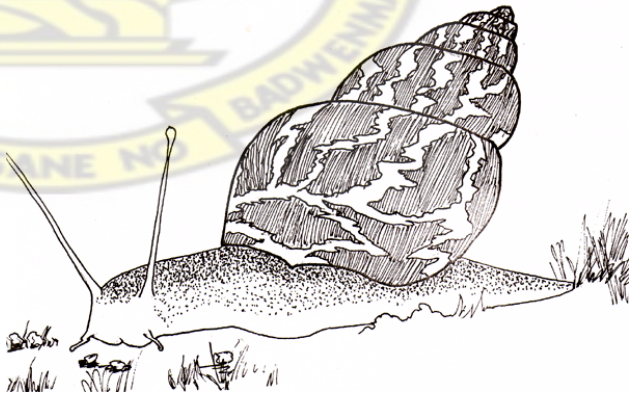


Fig. 83: Outline drawing shaded with diagonal lines and dots

Fig. 84: Vertical shading with hatched and mass shading

Shading in Tones

The Ghana Education Service syllabus for Visual Arts specifies knowledge of three tones at the Senior High School level. Three to five tones are accepted for first year the university and five to seven tones of shading from year two up to year four. As mentioned elsewhere, a good source of light on objects make definite tones that can be correctly identified and shaded accordingly by blending them to realize unity and harmony. Realistic drawings come to life when shading is done properly; the absence of middle tones makes images appear harsh. The illustrations of shading from one to seven tones are shown in Fig. 85.

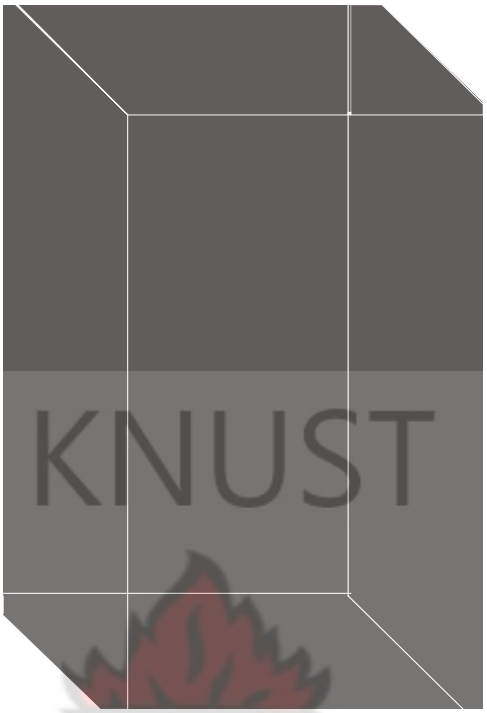


Fig. 85a: Flat shading (medium evenly applied in repetition to all planes)

Fig. 85b: Shading in two tones

Fig. 85c: Shading in three tones

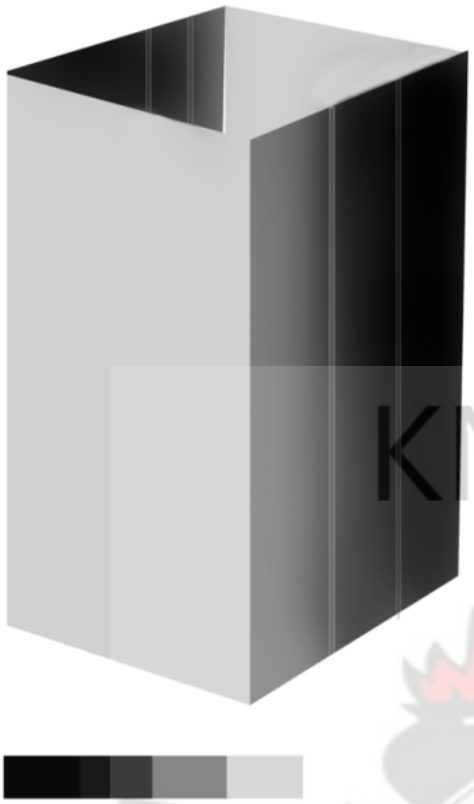


Fig. 85d: Shading in four tones

Fig. 85e: Shading in five tones

Fig. 85f: Shading in six tones

Fig. 85g: Shading in seven tones

4.14 Pretesting the New Drawing Methodology

The researcher performed this pre-testing for the following reasons:

- To find out the effectiveness of the new methodology for the Publishing Studies programme.
- To disclose the reaction of drawing students to the new methodology in drawing.
- To validate the content and procedure of the proposal.

Procedure for Pretesting the New Drawing Methodology

Permission was first sought from a drawing lecturer at the Department of Publishing Studies to use the 1st and 2nd year drawing classes to test the effectiveness of the proposed drawing methodology. Since this was the second semester, the 3rd year students were on Industrial Attachment and were not available to participate in the exercise while the 4th year students were busy doing their project works at the time. Testing of the proposed methodology involved the researcher personally taking the students through drawing exercises designed for the step-by-step methodology in the presence of the drawing lecturer. This strategy made it possible for him to monitor the students and also get them to accept the exercises as part of the semester's scheme of work and not as an additional burden for them. Works the students produced during the pre-test were used by the drawing lecturer as part of the students' assessment for course work and examinations for that semester.

The reasons for selecting 1st and 2nd year drawing students for the pretest are:

- 1st year students were new on the programme and formed the most appropriate group to start learning the fundamental drawing skills that will ensure they acquire the most relevant foundation for the specialized Book Design and Illustration course.

- 2nd year drawing students were included because they had been introduced to drawing and needed to know the basic skills included in this new proposal.
- 3rd and 4th year drawing students were not included in the pre-test because they had already advanced to the stage where their drawing focused on application of knowledge in drawing to book illustration.

Participating sample

Students who participated in the testing were 46 and represented 40% of the 115 Book Design and Illustration students in the Department. Of this number, 35 were in the 1st year and 11 were in 2nd year.

The testing period

Testing of the proposed methodology was done in the second semester of the 2008/2009 academic year with exercises taking place between 1:30pm and 5:00pm every Tuesday of that semester as this was the day allocated to drawing on the second year timetable. This worked out to three and-a-half hours each week.

The testing occurred in the drawing studios and began with the researcher giving out well prepared notes and tutorials to the students about the need to learn drawing in a sequential manner. This was done to enable them to easily understand what is required of them.

Teaching method

The lecture, discussion, problem solving and demonstration methods of teaching were employed to guide the students through the drawing exercises. The researcher combined the

student-centered and teacher-centered approaches to teaching. Each exercise was guided by a marking scheme developed and used by the researcher to judge the outcome of the exercises.

The teaching process went through the following stages:

a) Outlining the importance, objectives and scope of the drawing syllabus to the drawing students.

b) Recording the performance and the level of development observed for each student participating in the pre-testing.

Evaluating students' works served the following functions:

a) Judging the quality of individual drawings and determining progress made by each student.

b) Measuring the effect of the exercises on both the teaching and learning of drawing.

c) Comparing the characteristics of each student's drawings with others to help the researcher to establish a fair judgment of all works without any bias.

d) Criticizing, justifying, encouraging and discussing the students' ability to draw in order to draw valid conclusions on the effectiveness of the new methodology and also make effective suggestions for modifying or enhancing it to fit the Department of Publishing Studies drawing programme.

Grading of students' works was based on the University's assessment scale of:

First Class	70% and above
Second Class Upper	60% - 69%
Second Class Lower	50% - 59%
Pass	49% - 40%
Fail	39% and below

Schedule for the Pretesting

Teaching based on the new methodology took 12 weeks of the second semester's contact hours in the 2008/2009 academic year. In all, 40 hours were spent on the pretest considering a schedule of 3½ hours per week for the 12 weeks teaching time for drawing for second year students. The 40 hours was apportioned for the topics outlined for the new methodology as follows:

Understanding tools, materials, surfaces and equipment for drawing	= 2 hours
Exploration of drawing tools and materials	= 2 hours
Elements and principles of design in drawing	= 12hours
Techniques for holding drawing tools and materials	= 2 hours
Preliminary exercises in drawing	= 4 hours
Observation in drawing	= 8 hours
Coordinating the hand and eye in drawing	= 8 hours
Techniques in drawing	= 4 hours
Techniques in shading	= 8 hours
Exercises in shading from flat to seven tones	= 8 hours
Total number of hours needed to implement the proposal	= **50 hours**

It can be seen here that the new methodology demands a total of 50 hours instead of the 40 hours provided on the Department's timetable. The implication is that an additional 10 hours will be needed to enable the drawing lecturer to teach with the new methodology which has the objective to ensure that students in the Department will achieve the level of drawing proficiency demanded by the publishing industry. This time deficit can be taken care of in 3rd year second semester where there will be tasks of drawing and shading objects and subjects as well as applying this to book design and illustration in the final year.

4.15 Main Findings from the Pretest

Session One Week One (3rd February, 2009)

Topic: Understanding tools, materials, surfaces and equipment for drawing

Students were taken through exercises that guided them to identify the different tools, materials, surfaces and equipment for drawing and the unique marks each of them makes. Sample tools, materials, surfaces and equipment that were available for the exercise were assembled by the researcher and shown individually to the students. Photographs of items that were not immediately available were used in teaching.

Results of Pretest

At the end of the class all the students were able to identify each of the tools and materials. Some of the first year students mentioned that they had learned about some of these in Senior High Schools. Those students with no art background therefore had opportunity to learn about the basic items needed for drawing.

Session Two Week One (10th February, 2009)

Topic: Exploration of Drawing Tools and Materials

Students were taught to experiment and explore the different drawing tools, materials or supports that were ready to find in the drawing studios. For examples of works done by students, see Figs. 86a to 86b.

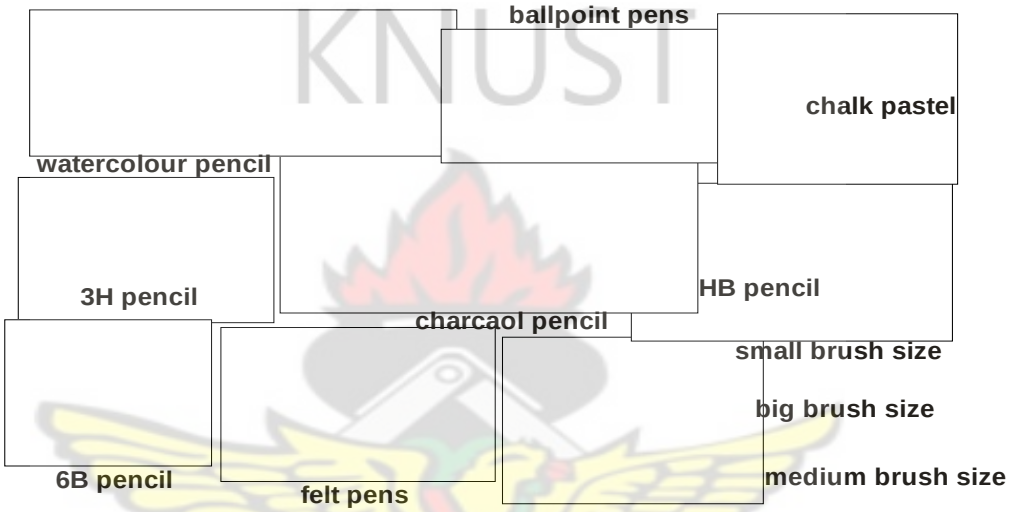


Fig. 86a: Exploration of drawing tools and materials by a drawing student

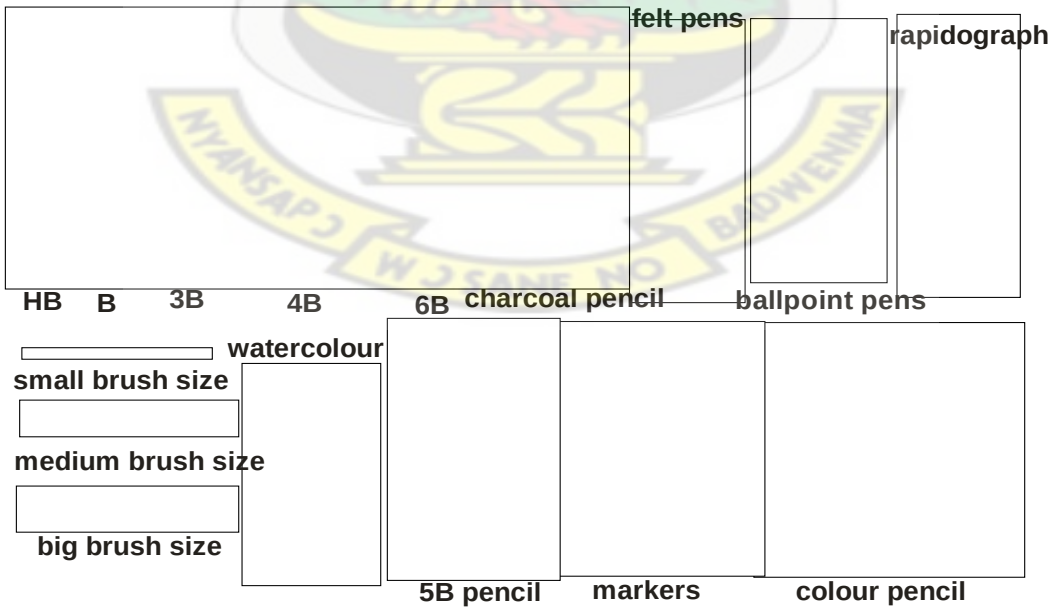


Fig. 86b: A drawing student experimenting with different drawing tools and materials

Results of Pretest

At the end of this exercise, all the drawing students who participated in performed very well. This was achieved by making the selected students hold the drawing tools and materials comfortably and to clearly identify the advantages and disadvantages of each one on their own. The students were asked to practice more to explore further. The exercises produced by the drawing students scored 70% or higher.

Session Three; Week Two to Three, Four and Five (10th, 17th, 24th February & 3rd March, 2009)

Topic: Elements and Principles of Design in Drawing

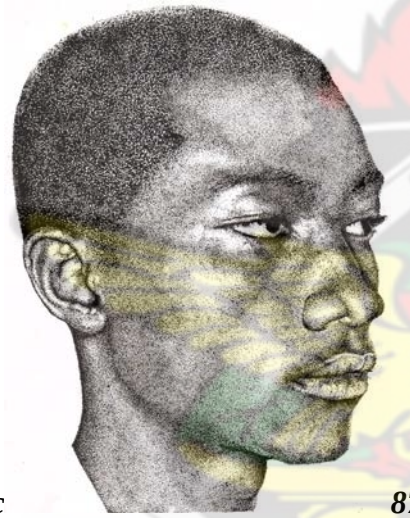
The work entailed guiding students to define, differentiate, create and use each elements as well as principles of design in drawing. Students were given assignments that involved applying the elements (dot, line, shape, texture, space, plane and colour) and principles (unity, variety, balance, rhythm, contrast, repetition, proportion, scale, harmony and opposition) of design in drawing. This was done after they had been introduced to the different styles of holding drawing tools and materials and the preliminary exercises to relax the wrist muscles before drawing. The results are shown in Fig. 87.

Criteria Set for Evaluation

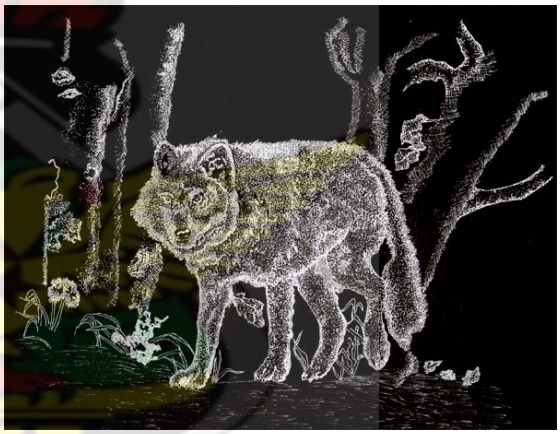
- Works should reflect the various elements and principles of design.
- Works must portray specific elements/principles truthfully and accurately.
- Two or more elements and principles should be rendered correctly.

Fig. 87a: Scribbling to create human hair

Fig. 87b: Lines to draw and shade a dog



87c



87d

Figs. 87c and ***87d:*** Application of dots to shade subjects

87e

87f

Figs. 87e and ***87f:*** Application of scribbling to shade an object and a subject

Fig. 87g

Fig. 87h

Table 11: Scoring of students works on elements and principles of design in drawing

Year Group	**Type of work (Elements and principles of design)**				
	70% and above	60%-69%	50%-59%	49%-40%	39 and below
1st year (46)	38	1	5	0	0
2nd year (11)	9	1	1	0	0

Results of Test

Table 11 shows that the students did well with 83% of the 46 first year students and 82% of 11 from second year students scoring first class marks. From the table, it is seen that no drawing student had below 50% in the exercise. This indicates that the drawing students understood what was taught and were able to apply the knowledge of elements and principles of design appropriately.

Session Four Week Five (10th March, 2009)

Topic: Holding Drawing Tools and Materials

This exercise saw drawing students experimenting with the different ways of holding drawing tools and materials to produce different marks. This brought out the different characteristics that each grip possesses.

Criteria Set for Evaluation

- Tools and materials should be held correctly.
- The different characteristics of the tools and materials should be used appropriately.

Results of Test

All the participating drawing students performed this assignment with excellence.

Session Five Week Six (17th March, 2009)

Topic: Preliminary Exercises in Drawing

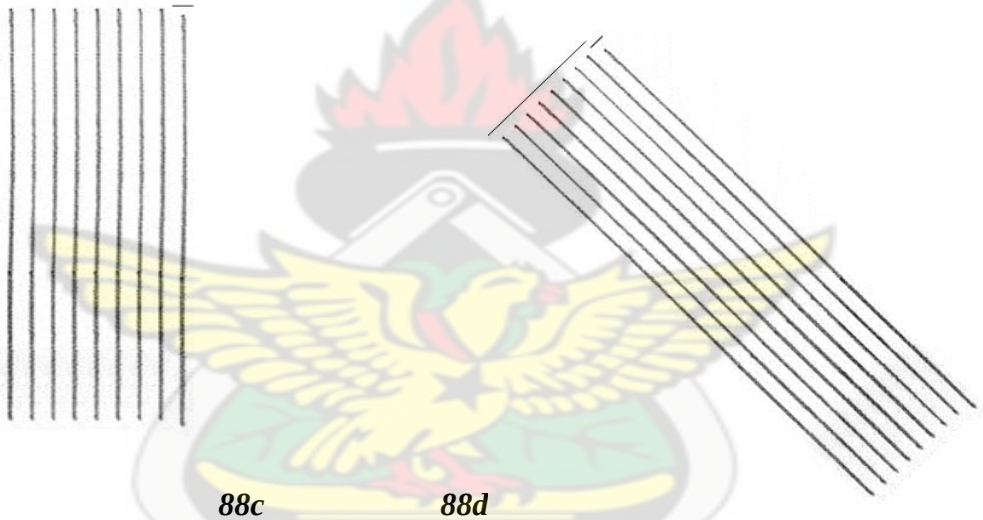
Students drew series of long and parallel horizontal, vertical, diagonal and concentric lines repeatedly until they had the spaces between them as even as possible to relax the students' hand muscles. After getting the spaces even, efforts were put in to increase the speed of drawing the lines. Figures 88a to 88d are examples of the students' drawings.

Criteria Set for Evaluation

- Long straight parallel vertical, horizontal, diagonal and concentric lines should be seen.
- Spaces in between the various lines should be the same as the speed increases.

88a

88b



88c ***88d***

Fig. 88: Wrist exercises by some drawing students

Table 12: Scoring of students works in exercising the wrist muscles through preliminary drawing activities

Year Group	**Type of work (Wrist exercises to relax muscles before drawing)**				
	70% and above	60%-69%	50%-59%	49%-40%	39 and below
1st year (46)	36	6	4	0	0
2nd year (11)	8	1	2	0	0

Results of Test

Out of the 57 drawing students who participated in this exercise, Table 12 shows that 77% passed with Grade "A" marks with no one falling below 50%. This suggests that most of the students acquired the skill of drawing series of long lines whiles maintaining the spaces between them even as their speed increased.

Session Six Weeks Seven to Nine (24th, 31st March and 7th April, 2009)

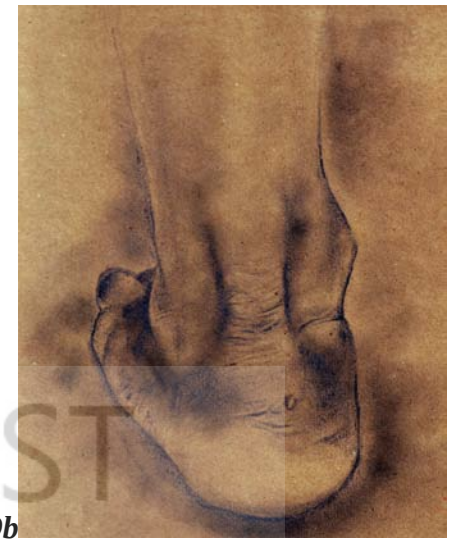
Topic: Observation in Drawing

This lesson was to assist drawing students to know and understand how to observe by perceiving with the senses of sight, taste, touch, smell, hearing and kinesthesis. It was observed that this exercises helped the students to acquire this knowledge and skill to sharpen their senses. It also enabled them to see and capture the colours, shapes, sizes, forms, texture and other qualities that were found on the objects or subjects drawn. Fig. 89 shows examples of the students' observation in drawing works.

Criteria Set for Evaluation

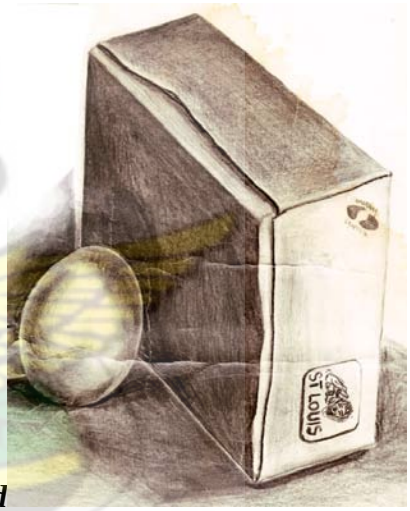
- Objects/subjects should have correct sizes, shapes, forms, colours and proportion.
- Works should include all details and look realistic or naturalistic.
- Rendering of works should be accurate.
- Human senses must well be used to capture objects and subjects.

89a



89b

89c



89d

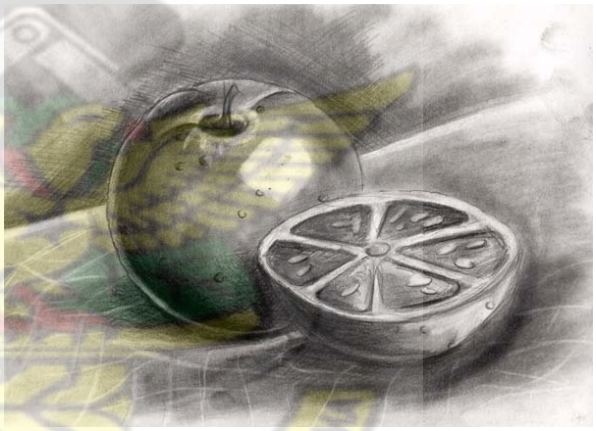
89e

89f

89g

89h

89i



89j

89k

89l

Fig. 89: Works by students to show observation in drawing

Table 13: Scoring of students works in observation during drawing sessions

Year Group	**Type of work (Observing critically what is to be drawn)**				
	70% and above	60%-69%	50%-59%	49%-40%	39 and below
1st year (46)	26	6	10	4	-
2nd year (11)	5	3	1	1	1

Results of Test

Students at this level avoided tracing from photographs and instead critically observed with their senses to draw. The students learned hard to acquire this knowledge and skill through the exercises they were taken through. The results showed that 54% and 16% of the two groups passed with first and second class upper division grades while the rest fell below 50%. This presupposes that drawing students were challenged to learn and get the processes right.

Session Seven Weeks Nine to Eleven (7th, 14th and 21st April, 2009)

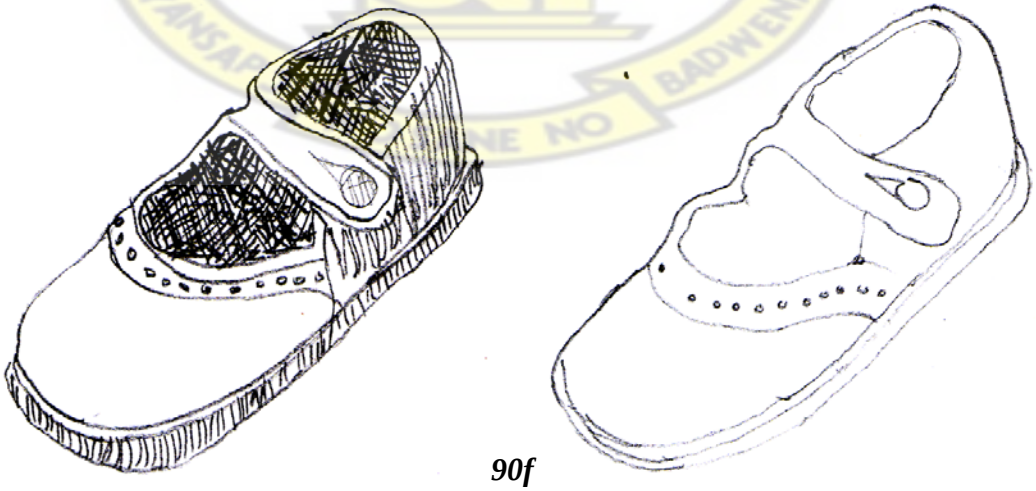
Topic: Coordinating the Hand and Eye in Drawing

Teaching was to equip students with the ability to acquire the knowledge and skill of harmonizing their hands and eyes to intensely observe and draw precisely at the same time. This was to help the students to attempt to draw continuous outlines without breaking. This exercise made the students portray outlines, structure, three-dimensionality or flatness of objects and subjects. For examples of works done by students, see Fig. 90.

Criteria Set for Evaluation

- Shapes, forms, solidity or flatness of objects/subjects should be seen as they are.
- Relationship (such as below/above, low/high, infront/behind or short/tall) between objects/subjects and their location should be well established.
- The scale between foregrounds and backgrounds of objects/subjects should be distinct.
- Objects/subjects in their correct perspective and size in comparison with other things in the picture plane should be represented well.

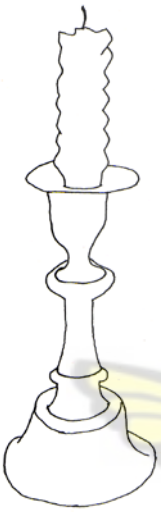
90a ***90b*** ***90c*** ***90d***



90e ***90f***

90g

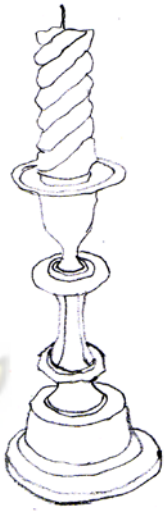
90h



90i

90j

90k



90l

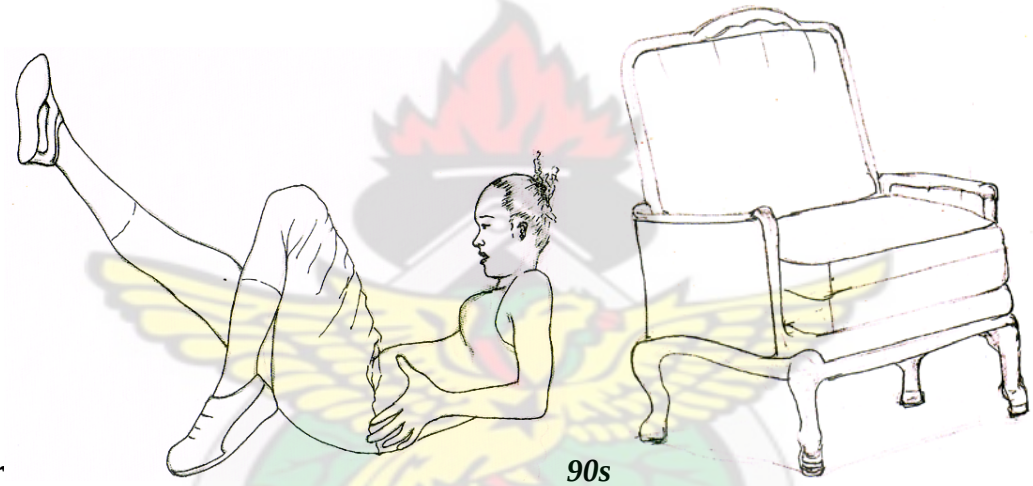
90m

90n

90o

90p

90q



90r *90s*

90t

Fig. 90: Hand and eye drawings by students during pretesting

Table 14: Scoring of students' works in coordinating with the hand and eye to draw

Year Group	**Type of work (Hand and Eye Coordination)**				
	70% and above	60%-69%	50%-59%	49%-40%	39 and below
1st year (46)	30	10	6	6	-
2nd year (11)	6	2	0	1	1

Results of Test

This lesson was yet another daunting task for students to comprehend. As high as 25% of participants had below 50% but progress of understanding this concept was encouraging as drawing students learned very hard and continued to practiced this task.

Session Eight Week Twelve (28th April, 2009)

Topic: Techniques in Drawing

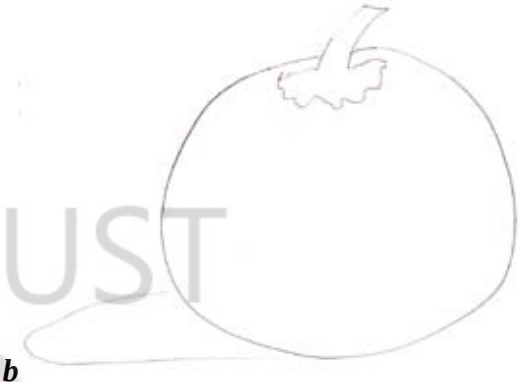
Students had knowledge in only one technique which is drawing the outlines of objects or subjects. Outline drawing always preceded shading, although it was stipulated in the drawing syllabus for the department that shading techniques must be taught and learned in year one semester one and drawing technique, in year one, semester two. This exercise trained the students on the need to attain more than one technique of drawing. At the beginning of this lesson, students were taught about the different types of techniques that are available. For examples of works produced by students see Fig. 91 to 93.

Criteria Set for Evaluation

- Drawing technique(s) used should be accurate.
- Drawing technique(s) used should accomplish desired effect(s).

Figures 91a to 91e are examples of outline drawing technique

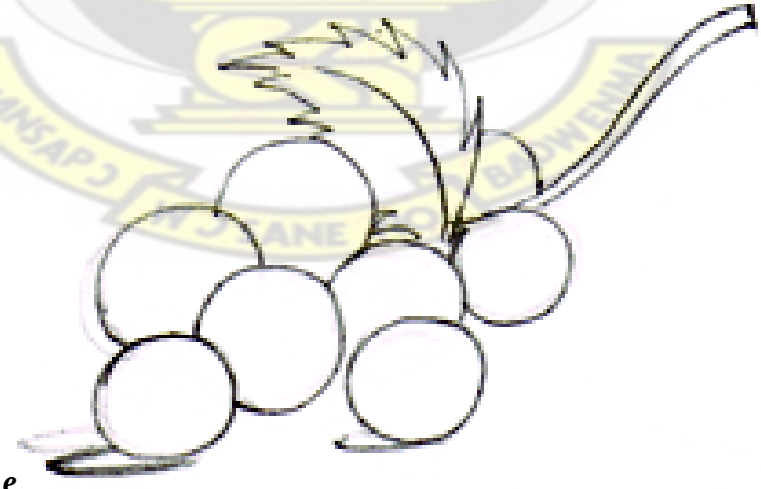
91a



91b

91c

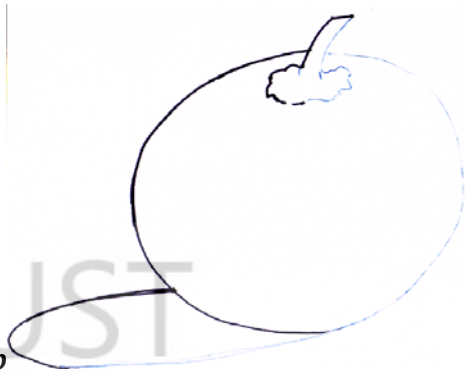
91d



91e

Figures 92a to 92d show outline drawings suggesting light and shade of the objects

92a



92b

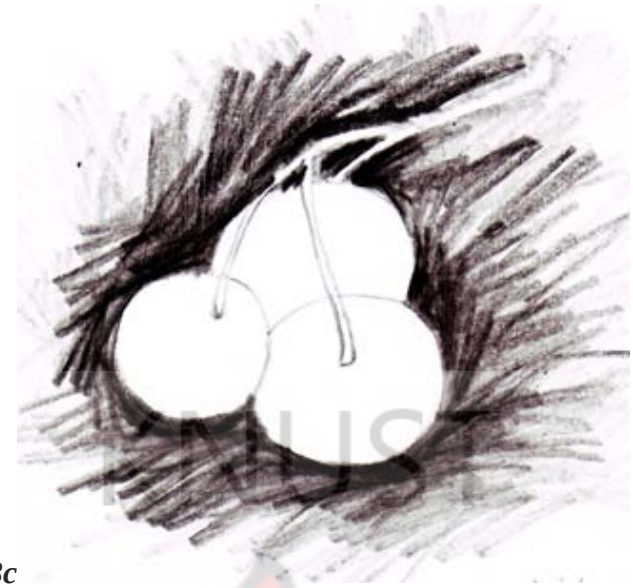
92c

92d

Figures 93a and 93c are examples of negative space drawing

93a

93b



3c

Table 15: Scoring of students works in drawing technique

Year Group	**Type of work (Drawing Technique)**				
	70% and above	60%-69%	50%-59%	49%-40%	39 and below
1st year (46)	40	5	1	-	-
2nd year (11)	9	2	-	-	-

Results of Test

At the end of this workout, most students had the drawing techniques right. While 86% of the two groups of participants had 70% and higher, 2% of the students had between 50% and 59%. This happened since participants had learned about holding drawing tools and materials as well as performed preliminary exercises in drawing.

Session Nine Week Thirteen (Additional week used)

Topic: Shading techniques

As drawing students had experienced shading techniques in drawing as well spelt out in the drawing syllabuses for the Department, the researcher started teaching with mass dot, vertical, horizontal, diagonal lines, hatching and cross-hatching. For examples of students works see Fig. 94.

Criteria Set for Evaluation

- Shading should clearly show the different tones on an object or subject.
- Accuracy in shading should be seen.
- Shading must portray the three-dimensionality of objects or subjects drawn.

Figures 94a to 95f show mass shadings of objects and subjects by drawing students

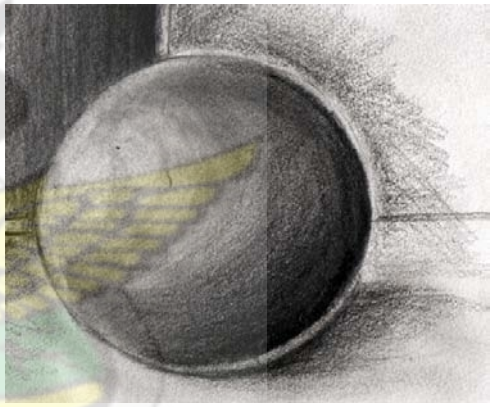
94*a*

94*b*

94*c*

94*d*

94*e*



94*f*

Figures 95a to 95d are examples of works shaded with vertical lines by drawing students

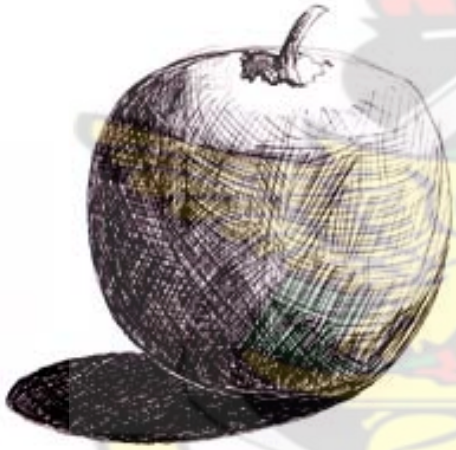
95a

95b

95c

95d

Figures 96a to 96f are cross-hatching shading of objects by drawing students



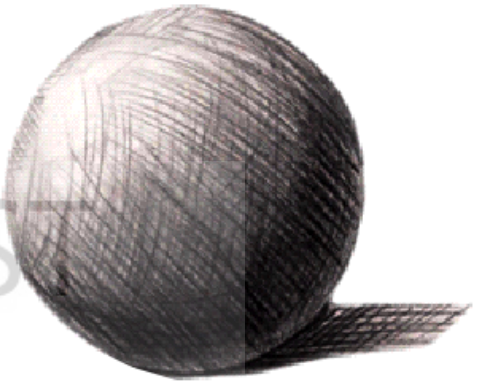
96a

96b

96c

96d

96e



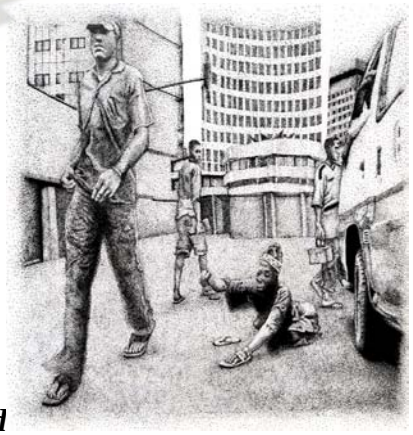
96f

Figures 97a to 97f are examples of dot shading of objects and a subject by drawing students

97a

97b

97c



97d

97e

97f

Figures 98a and 98b are diagonal line shading of objects by drawing students

98a

98b

Figures 99a to 9b are horizontal line shading of objects by drawing students

99a

99b

Beside the prescribed shading techniques in the new methodology, some drawing students went an extra mile to integrate the different shading techniques in one work (see Fig. 100).

Fig. 100a Dot and mass shading techniques

Fig. *100b* Mass, dot and scribbling shading techniques

100c Use of hatching and cross-hatching shading techniques

100d Mass, vertical and cross-hatching shading techniques

Results of Test

Comparing works that were executed by students before and after the pre-testing exercise the students' works looked pale before the exercises but they had become bold and rich after the exercises. It was clear that 82% of the two year groups scored between 70% and 100% while the rest scored below 60% and 40%. This implies that most of the participating drawing students had understood this lesson and were therefore able to explore and experiment using more than one technique to shade.

Session Ten

Topic: Object/subject shading in one to seven tones

This exercise was not carried out because of time limitation.

Criteria Set for Evaluation

- The ability to clearly establish different tones on objects from one to about seven.

4.16 Examining the Pretesting

The students who accepted the challenge to participate in the pre-test exercise worked very hard to learn the new knowledge and skills that had been outlined by the researcher. The drawing students were attentive to receive drawing tuition in class and participated fully and enthusiastically in all exercises. Assignments that were given to them were also done and submitted on time to enable the researcher and the drawing lecturer to assess and grade them as their end-of-semester continuous assessment. The outcome of the pre-test suggests that adopting this proposed methodology for teaching drawing to students in the Department of

Publishing Studies and other art institutions will help students to understand drawing and why it is important to improve the output of teachers and students of drawing.

4.17 Limitations of the Pretest

The major setbacks that hindered the smooth running of this exercise were:

a) Lack of drawing tools, materials, supports and equipment.

The students who participated in the exercise brought their own palettes, utility knives, pencil sharpener, drawing pins and erasers. There were no easels and donkeys in the drawing studio but some stools and drawing tables were available for use.

b) Inadequate Time

Due to the busy schedule of lectures for the 1st and 2nd year drawing students, the allotted times that the researcher had for the drawing periods were not enough for the study. This drawback made it difficult to insist that the drawing students sit in the studio and practice every knowledge and skill taught. Therefore, the researcher was compelled to give drawing tasks as assignments in addition to the few works that were done in the drawing studios.

4.18 Conclusions on the Pretesting

a) The evidence presented shows that a systematic methodology for teaching drawing that spells out the "why to teach (rationale)", "what to teach (content)" and "how to teach (methodology)" in the Department of Publishing Studies is appropriate and very much needed. This proposal by the researcher will serve its purpose of training skilled manpower for the publishing industry if it is implemented by the Department.

b) The students who accepted the challenge to participate in the exercise as well as work hard to ensure that they learn and acquire all the outlined knowledge and skills had clearly gained more skills to draw then those of their course mates who were not part of the pretesting. That was observed through the way these drawing students were attentive to receive drawing tuition in class and also fully taking part in all the exercises. Assignments were done and also submitted on time for both the researcher and the lecturer in charge to assess since they were taken as end of semester and continuous assessment results.

4.17 Recommendation

The researcher suggests that drawing lecturers, demonstrators and students in the Department of Publishing Studies and other art related institutions acknowledge the worth of this thesis and adopt it in teaching their students to learn to draw well.

CHAPTER FIVE

PRESENTATION OF RESULTS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Overview

This chapter provides the results, conclusions and suggestions to address the problems identified in the study which sought to accomplish the following;

a) To evaluate the existing methods used in teaching drawing to students in the Department of Publishing Studies in KNUST.
b) To develop a sequential method of teaching drawing based upon the outcome of the evaluation of the existing method(s) used at Department of Publishing Studies.
c) To pre-test the propose drawing methodology to ascertain its effectiveness on teaching and learning drawing by drawing lecturers and students at Department of Publishing Studies.

Evidence from the observation of teaching and learning of drawing in the Department, the results of the pretesting of the proposed methodology for teaching drawing, and the standard of drawing that the Department of Publishing Studies students who were taught with this systematic teaching methodology shows that it is an appropriate tool for bringing all students in the Department of Publishing Studies to the level where they can understand drawing and have the confidence to apply this knowledge correctly to book illustration. The study has also shown that the drawing course does not include the basic topics that can build a strong foundation for drawing by all the students since some are admitted with no art background. Taking all the students through the fundamentals of drawing in a sequential

manner is the only means by which these students can be brought up to the level where they can understand how they can benefit fully from the drawing course.

The pretest exercise also makes it clear that the course content and how drawing is taught in the department contributes significantly to a lack of adequate knowledge in drawing and the fact that many of the students in the Department opt for Publishing Administration and Printing Technology and Management while only those who are talented in drawing offer Book Design and Illustration as their major specialization. The idea is that exploring the "rationale" (why), "content" (what) and "methodology" (how) of the drawing course in the Department has provided a good opportunity for the researcher to propose topics that can strengthen the course to make it more relevant to the training of highly skilled manpower for the publishing industry, as well as providing a teaching strategy that will make it easy for the drawing Lecturers and their Demonstrators to satisfy the needs of every student who has been admitted to the programme. This way, more students will understand the technical skills required and have more of them encouraged to offer Book Design and Illustration.

5.1 Summary of this Study

a) The teaching of art at the Junior and Senior High School levels differ from school to school. This is why some of the students who are admitted to the Publishing Studies have little or no drawing skills and therefore only a few of them specialize in Book Design and Illustration.

b) Many students who studied Visual Arts in the Senior High School did not learn how to draw well. It is important therefore that a step-by-step systematic method is

adopted to teach them drawing in order to have illustrators for the book publishing industry.

c) Most of the students who are admitted to offer the degree programme in Publishing Studies at KNUST have no knowledge in drawing although drawing is a compulsory course for all first year students in on the programme.

d) Not all the topics taught under drawing correspond with the drawing syllabus designed for the Book Design and Illustration specialization.

e) There is no course description for the third year Industrial Attachment part of the drawing programme to explain what the students do at this time.

f) Only students who are talented in drawing offer the Book Design and Illustration specialization, forcing those who have inadequate drawing talent to opt for Publishing Administration or Printing Technology and Management. A systematic teaching methodology that includes topics in basic drawing could help such students to develop their creativity in drawing and encourage them to enter the publishing industry as illustrators.

g) The new ideas proposed to improve the existing teaching methodology and content of drawing will make drawing more accessible to students in the Department as they learn to draw accurately.

h) The suggested method of teaching drawing by means of a sequential order of topics is a more effective way of transmitting knowledge and skills in drawing.

5.2 Conclusions

Analysis of the major issues affecting drawing in the Department of Publishing Studies, KNUST indicates that dissimilar content and approaches to teaching drawing in the Junior and Senior High Schools results in students acquiring different levels of knowledge and skills in drawing. This causes confusion among some students when they get onto the Publishing Studies programme and are confronted with the existing course content and teaching methods. Inadequate teaching of drawing at these lower levels of Ghana's education does not help students to have a good grounding in drawing for their first year of university education. This also makes it difficult for them to choose their area of specialization in their second year of Publishing Studies; forcing some of the students to opt for either Publishing Administration or Printing Technology and Management although they may be interested in Book Design and Illustration. This limits the students' career choices and development of their creative potentials as a result of limitations in drawing.

Another challenge lies with the inconsistencies in the interpretation of the drawing syllabus prescribed by the Department for drawing and what goes on in the drawing studios. This is seen in the lack of clear connection between the course description and the requirements of the publishing industry. The course description of drawing for the various levels of the four-year Publishing Studies programme does not link up well to provide the sequence needed for the subsequent years. One reason is that the course syllabus and approaches to teaching drawing have not been reviewed for a long time to enable the Department see its way through their role as the most important source of the manpower needs of the industry.

It is important to say here that any student who wishes to draw can also do it accurately, irrespective of whether one is talented or not. This may be achieved by learning to understand what it takes to draw and practicing the goal-oriented principles of drawing as shown by the results of the pretest of the proposed methodology for teaching drawing. Using the right drawing methodology to teach a course in drawing that also includes the new topics proposed by the researcher will produce very knowledgeable and skilful graduates to run the publishing industry. The idea is that the suggested methodology will promote more effective teaching and generate more interest in drawing than is currently happening in the Department of Publishing Studies, other tertiary art institutions and also the Junior and Senior High Schools which produce students for tertiary education.

5.3 Recommendations

The following recommendations have been made to assist the Department of Publishing Studies to enhance the teaching of drawing:

a) Ghana Education Service should revise the syllabus for the Senior High School Visual Arts to emphasize drawing in all the subject areas to reflect the expectations of its graduates and their job prospects after school.

b) Ghana Education Service should ensure that teaching at Junior and Senior High Schools conform to the syllabus designed for each level so that students will learn the same thing irrespective of which school one attends.

c) The Department of Publishing Studies should ensure that a step-by step method is prescribed and adopted for teaching drawing to its students.

d) Lecturers who teach drawing are to be encouraged to adopt different teaching methods to suit the teaching of specific tasks, eliminate boredom in the drawing studio and take the diversity in knowledge which the students bring to the course and also ensure effective skills transfer to drawing students.

e) The drawing syllabus in the Department of Publishing Studies should be reviewed periodically to suit the needs of the publishing industry.

f) The drawing Lecturers should team up and devise a means of evaluating their strategies to ensure proper correlation between what is taught in the drawing studios and the drawing syllabus provided by the Department.

g) The Department of Publishing Studies is encouraged to adopt this step-by-step methodology for teaching drawing which includes new topics, demonstration exercises and goal-oriented projects that have been organized in sequence to help develop the creative abilities and potentials of all the students admitted to the programme, regardless of their background in art.

h) Additional research in the teaching of drawing in the Faculty of Fine Art, KNUST, will provide more insight into how this study could be used to help more art students to excel in drawing.

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APPENDICES

Appendix A (1) INTERVIEW GUIDE FOR STUDENTS AND GRADUATES OF THE IN THE DEPARTMENT OF PUBLISHING STUDIES OF KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

An Interview Guide to solicit opinions on the topic: **Development of Methodology in Drawing for Students in the Department of Publishing Studies**

Absolute confidence is assured and please tick correct answer appropriately in the box provided

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Preliminary Interview Questions

1. Which year are you?

   (a) 1st Year [ ] (b) 2nd Year [ ] (c) 3rd Year [ ]

   (d) 4th Year [ ] (e) Post School [ ]

2. What course did you offer in 2nd cycle institution/or any other institution before gaining entry into Publishing Studies Department?

   (a) Home Economics [ ] (b) Visual Arts [ ] (c) Business [ ]

   (d) General Arts [ ] (e) Science [ ]

If not any of the above, please specify …….

3. Do you have any drawing background? (a) Yes [ ] (b) No [ ]
4. Where did you have the training? ……
5. For how long how you trained as a draftsman? .....
6. Do you have interest in drawing?

   (a) Yes [ ] (b) Not at all [ ] (c) Partially [ ]

Give reasons for your answer in either case. ……

7. What is your area of specialization at the Department of Publishing Studies?.....

Please explain the reason behind your choice……

8. How do you think you could have performed in the Design and Illustration class if you are not offering Design and Illustration?

   (a) Excellent [ ] (b) Very good [ ] (c) Good [ ]

   (d) Fairly good [ ] (e) Average [ ] (f) Poor [ ]

9. What would have prevented you from offering drawing assuming you liked it?

   (a) Lack of interest in drawing [ ]

   (b) No knowledge in drawing[ ]

   (c) Because of the Lecturers handling drawing [ ]

   (d) Because of the method(s) Lecturers use in teaching drawing [ ]

   (e) Because drawing is difficult [ ]

   (f) Because the class is too competitive for my liking[ ]

   (g) Lack of text books or reference materials[ ]

Please write if any other reason ……..

(You can choose more than one answer for Question 7)

Appendix A (2) INTERVIEW GUIDE FOR STUDENTS OFFERING DESIGN AND ILLUSTRATION (SECOND, THIRD AND FOURTH YEARS) IN THE DEPARTMENT OF PUBLISHING STUDIES OF KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

An Interview Guide to solicit opinions on the topic: **Development of Methodology in Drawing for Students in the Department of Publishing Studies**

Absolute confidence is assured and please tick correct answer appropriately in the box provided

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Questions

1. Gender: (a) Male [ ] (b) Female [ ]
2. Which year are you?

   (a) 1st Year [ ] (b) 2nd Year [ ]

   (c) 3rd Year [ ] (d) 4th Year [ ]
3. Did you offer art before entering the Department of Publishing Studies?

   (a) Yes [ ] (b) No [ ]
4. If **yes**, were you taught drawing and at what level?

   (a) J.H.S [ ] (b) S.H.S [ ] (c) J & S.H.S [ ]

   (b) Self Tutelage [ ] (e) Since infancy [ ]
5. Has the training at that level in anyway helped you in improving upon your drawing skills in the university?

   (a) Yes [ ] (b) No [ ]
6. If **yes** to question 5**,** please explain? ……
7. If **no** to question 5**,** please explain?.....

8. Which of the two major areas (Design or Illustration) in the Design and Illustration Section of the Department of Publishing Studies are you good at?

   (a) Design [ ] (b) Illustration [ ]

   (c) None of the above [ ] (d) All of the above [ ]

9. How will you rate the teaching of drawing is in the Department of Publishing Studies?

   (a) Excellent [ ] (b) Very high [ ] (c) Good [ ]

   (d) Average [ ] (e) Low [ ]

10. How has the teaching of drawing in the Department of Publishing Studies helped in improving your drawing skills?

    (a) Very much [ ] (b) On the average [ ] (c) Not at all [ ]

11. What discourages you from acquiring high drawing skills?

    (a) Marks [ ] (b) Competition in the class [ ]

    (c) Lack of interest in drawing [ ] (d) Lecturers handling drawing [ ]

    (e) Because drawing is difficult [ ] (f) Because the teaching is not clear for me [ ]

Other(s)……

12. As of now, can you refer to yourself as an Illustrator who can confidently and efficiently work in the publishing industry?

    (a) Yes [ ] (b) No [ ] (c) Average [ ]

13. Please, give reason(s) for your answer?

    (a) No, I have not yet attained the needed knowledge and skills for drawing.[ ]

    (b) No, because I need to do more after school. [ ]

    (c) No, I prefer designing on computer than drawing. [ ]

(d) Yes, I have the knowledge and skills. [ ]

(e) Yes, if student-centered approach is used in teaching drawing, I would have acquired all the knowledge and skills to become a confident illustrator. [ ]

(f) Hopeful to be one by the end of school [ ]

Appendix (3) CHECKLIST FOR OBSERVING THE TEACHING OF DRAWING IN THE DEPARTMENT OF PUBLISHING STUDIES, COLLEGE OF ART AND SOCIAL STUDIES, NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY, KUMASI

This observation checklist is to gather what is taught drawing students in the Department of Publishing Studies, College of Art and Social Sciences, Kwame Nkrumah University of Science and Technology, Kumasi

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The Drawing Lecturer (Goals Set):

..... The purposes of functions of drawing and illustration are clearly explained to students by lecturers.

..... Knowledge, skills, competence and behaviours sought after in teaching learners drawing are consistent.

..... Teaching method(s) are significantly easy and simple for beginners to learn drawing in the department.

The Drawing Lecturer (Qualities of a Good Teacher):

..... Drawing lecturers ensure that students understand their teachings.

..... Drawing lecturers are creative.

..... Drawing lecturers are constantly resourceful.

..... Drawing lecturers give helping hands to students.

..... Drawing lecturers motivate students.

..... Drawing lecturers direct students

..... Drawing lecturers play the role of catalysts.

Teaching Methods Employed:

..... Other teaching methods are employed.

..... Teaching methods are appropriate for the content.

..... Teaching methods are highly student-centered.

..... It is an activity oriented (hands on).

..... The lesson presentations are in agreement with the lesson aims.

..... Motivation, appreciation and criticism in class are evident.

..... Self evaluation is a crucial aspect of what is taught students.

Content:

..... The content depends on students need.

..... The content gives prominence to deep studies.

..... Drawings are adequate.

..... Drawings are appropriate.

..... Relevant teaching materials are readily available.

..... Content is sequentially organized.

..... Content is overloaded.

The appropriate content features are emphasized:

..... i) Duration of teaching.

..... ii) Other methods of teaching employed.

Assessment:

..... There is a detailed or well thought out criteria for assessment (marking scheme)

..... Assessment is done on drawing process.

For example: ..... Composition

..... Design

..... Perspective

..... Experience of the student

..... Balance

..... Overall effect of the work

..... Assessment is done at the end of the semester's work.

..... There are consistencies in assessing students in class.

..... There are consistencies in assessing students across the various classes.

Techniques Used in Teaching Drawing:

..... Teaching of drawing follows a logical procedure.

..... The different kinds of drawing tools, materials, media, supports and equipment are made known to students, especially, beginners.

The various methods of exercising the wrist are performed:

..... Series of horizontal parallel lines are practiced.

..... Series of vertical parallel lines are practiced.

..... Series of diagonal parallel lines are drawn.

..... Series of concentric circles starting from the centre and drawing outwards are again rehearsed.

..... Speed increases gradually while keeping the distance/space between them as equal as possible.

..... The skilful way or otherwise of holding tools are taught and demonstrated.

..... The various tools, materials, media, supports and equipment are explored in making different lines, shapes, forms, textures, patterns and the use of colours.

..... Theme, meaning and symbolism of the elements of design are explained and demonstrated for the understanding of students.

..... Observation is done in terms of the human senses.

..... The practice of the hand and eye coordination is taught and practiced.

..... The use of a viewfinder is encouraged and explained.

..... Elements and Principles of Design are taught.

..... The different shading techniques are taught.

The Drawing Student:

..... He/she has interest in drawing.

..... He/she is motivated and encouraged to learn drawing.

..... He/she is eager to learn drawing.

..... He/she creates ideas which are relevant to his/her drawing works.

..... He/she can interpret and analyze his/her work.

..... He/she understands the purpose(s) for drawing.

..... He/she shows greater understanding of tools, materials, media, supports and equipment and how to use them.

..... He/she has developed mastery of drawing tools, materials, media, supports and equipment.

..... He/she has explored the various drawing tools, materials, media, supports and equipment to choose which best suits him/her.

..... He/she can interpret the symbolism or expressive meanings of lines, shapes and the other elements of design.

..... He/she has attained the knowledge and skills which commensurate with his/her maturity level.

..... He/she is able to observe object/subject intensely through the use of the human senses.

..... He/she is able to "look and draw" simultaneously.

Has the knowledge and skills needed to draw:

..... i) Excellently

..... ii) Very good

..... iii) Good

..... iv) Averagely

..... v) Badly