

UNIVERSITY OF EDUCATION, WINNEBA

**INQUIRY INTO THE PEDAGOGICAL CONTENT KNOWLEDGE AND
PRACTICE OF BASIC DESIGN AND TECHNOLOGY TEACHERS IN THE
CENTRAL TONGU DISTRICT**



MASTER OF PHILOSOPHY

2023

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PRACTICE OF BASIC DESIGN AND TECHNOLOGY TEACHERS IN THE
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**A thesis in the Department of Art Education,
School of Creative Art, submitted to the
School of Graduate Studies in partial fulfilment
of the requirements for the award of the degree of
Master of Philosophy
(Art Education)
in the University of Education, Winneba**

OCTOBER, 2023

DECLARATION

Student's Declaration

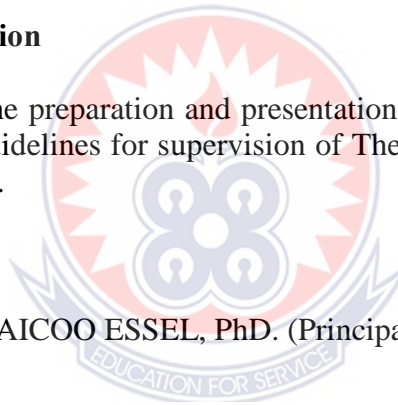
I BOATENG SOLOMON KOFI declare that this thesis, with the exception of quotations and references contained in published works which have all been identified and duly acknowledged, is entirely my own original work, and it has not been submitted, either in part or whole, for another degree elsewhere.

SIGNATURE

DATE:

Supervisor's Declaration

I hereby declare that the preparation and presentation of this work was supervised in accordance with the guidelines for supervision of Thesis laid down by the University of Education, Winneba.



PROF. OSUANYI QUAICOO ESSEL, PhD. (Principal Supervisor)

Signature:

Date:

DR. EMMANUEL KODWO AMISSAH, (Co- Supervisor)

Signature:

Date:

DEDICATION

To Ayamorpor, my wife Victoria and children, Prince Ayaakor, Grace Abitele and Wisdom Ekeme.



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For a fulfilling and a peaceful academic exercise like this I say a big thank you to my supervisor Prof. Osuanyi Quaicoo Essel, PhD, for his dedication, supervision, guidance and outstanding directions at all stages of this thesis and for his painstaking editing for the success of this study.

I also extend my appreciation to the headmasters, teachers and students of the four selected schools in the Adidome Circuit of the Central Tongu District, not forgetting my family.

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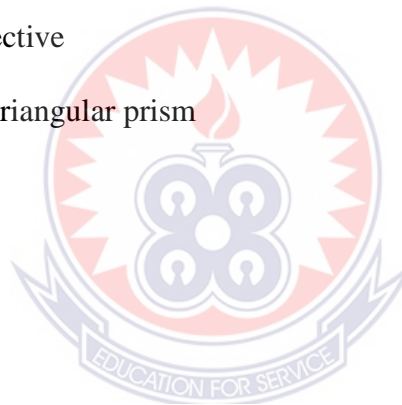
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ABSTRACT

This study was to investigate the pedagogical content knowledge and practice of Basic Design and Technology (BDT) teachers in some basic schools in the Central Tongu district in the Volta region of Ghana. In the senior high schools, however, the subject is referred to as Visual Arts. The major problem identified with students in one of the Senior High Schools was drawing difficulty. This situation motivated the researcher to: inquire into the pedagogical content knowledge and practice of Basic Design and Technology teachers in some Junior High Schools in the Central Tongu District, examine the professional practice of art teachers in drawing in some these schools and to ascertain the techniques used in assessing students' learning outcomes. Census sampling technique was adopted in selecting the Form 3 students, their BDT teachers with Case Study as the research design. The total sample size was 100 which were made up of 92 Form 3 students, 4 BDT teachers and 4 headmasters. The research instruments used included opinionnaire, interview, participant observation and focus group discussion. Simple descriptive analysis and bar charts were used to analyse findings. The study revealed that BDT teachers do not demonstrate enough skills and varied pedagogic strategies in their practical activities involving drawing, hence students' inability to draw appropriately. The study recommends regular in-service training/capacity building seminars for BDT teachers by the education directorate and to provide relevant tools and materials for BDT teachers for effective teaching and learning.



CHAPTER ONE

INTRODUCTION

1.0 Overview

This section gives the background to the study, the statement of the problem, the purpose of the study, the specific objectives of the study, research questions, significance of the study and the delimitation. The rest of the sections in this chapter are operational definitions of terms.

1.1 Background to the study

Artistic activities have been identified to be the most reliable mediums through which self-expressions are demonstrated, and this is closely associated with creativity. There are a number of factors which in diverse ways contribute to the successful achievement of the above assertion. Jenson (2018), citing (Terreni, 2010 & Grierson, 2011) explains that when participating in the arts, toddlers and children should be able to freely discover and explore materials and resources, fostering motivation to create something using their imagination and ideas. This will also allow them to express how they feel about the world, encouraging their holistic development and learning. When young children partake in art activities that allow for freedom, experimentation, and exploration in a no-fail environment, they will not become bored, stressed or passive as the atmosphere is relaxed and allows for creativity and free expression, similar to when they are free-playing. Not all, the recent curriculum for the Creative Arts and Design (CAD) of Ghanaian Basic 7 to Basic 10 schools in the recent curriculum reform by the National Council for Curriculum and Assessment (NaCCA) of the Ministry of Education (2020) provides opportunities for learners as follows:

To self-explore, self-express, build mental focus, skillfully use your hands to create (physical dexterity), manage and reduce stress, and achieve personal

satisfaction and enjoyment. The arts inform our lives with meaning every time we experience the joy of a well-remembered song, experience the flash of inspiration that comes with immersing ourselves in an artist's sculpture or painting, enjoying a sublime dance, learning from an exciting animation or being moved by a captivating play. (p.3).

It is practically true since the participation in the artistic activities actually help in revealing feelings, attitudes, ideas and creativity of the individual or a group of people. But the above explanations cannot be totally achieved without the help of a facilitator (art teacher) who must be more knowledgeable in the various visual arts domains.

As Eisner (2002) points out

The arts, like other fields, can be taught in different ways for different ends. The aims of any field are not determined solely by its subject matter, they are also determined by policy makers and teachers who decide what is important to teach. (p.70).

There is no doubt therefore, that the entire process must be linked to the pedagogical content knowledge and practice of the facilitator(s) in achieving the concepts above. To add, teaching and learning which is aimed at developing critical and creative thinking should consider the age groups, different art disciplines and focus on both the facilitators and learners.

Pedagogic skills and approaches are the links to reaching the heights of creativity. According to Merriam-Webster as cited in Cole (2019) pedagogy is the “art, science or profession of teaching; especially: education”. She further explains that the definition covers many aspects of teaching, but pedagogy really comes down to studying teaching methods. The effective use of these skills, approaches and methods remain very crucial

if meaningful progress in teaching and learning is required. In education, research has revealed two major pedagogic approaches to teaching. These are *teacher-centred* and *student-centred*. The “teacher-centred” approach to teaching, by review, has been noted not to be appropriate for imparting knowledge and skills since it appears to be holding on to only what the teacher knows, limiting the learning process to “*teacher says*” form of teaching and learning. The tenets of student-centred learning are to allow students to mould their own learning paths and place upon them the responsibility to actively participate in making their educational process a meaningful one (Attard, Di Iorio, Geven, Santa, 2010).

Student-centred approach would rather permit the learners to learn by themselves and should allow the learners to be active in gaining knowledge in practice skills and develop a healthy attitude. The role of the teacher therefore is to set the pace for learning while he or she guides and facilitates the process.

Duku (2014) explains that

Learner-centred concepts are instructional designs and teaching practices based on learning and cognition. Such practices create environments that encourage successful learning with little dependency on the teacher. With learning outcomes and student satisfaction increasingly becoming important, learner-centred concepts can help the Ghanaian institutions improve teaching and learning. (p.3).

As stated earlier, the teacher-centred pedagogy dwells mainly on the teacher controlling every aspect of the teaching and learning while learners remain passive, and always at the receiving end of the knowledge that is imparted by the teacher. Student or learner-centred pedagogy on the other hand is the type which allows the learner to be more active and takes the centre stage while the teacher still delivers the content in

the learning process. The teacher's role becomes mentoring and coaching in helping the learner.

1.2 Statement of the problem

Visual arts as a programme of study in Ghanaian schools date back to the colonial era where only a handful of schools and colleges had the opportunity to study it. This was as a result of inadequate art teachers or specialists across the country at the time, (Owusu, 1989). He added that by 1957, a considerable number of art teachers had been trained and a lot more schools joined in the study of arts and crafts. For seven years of teaching in Adidome Senior High School, it was observed with keen interest in the visual arts department that two categories of students are admitted there. The first category consists of those who willingly opted to study visual arts while the other is made of students who were “*coerced*” to study visual arts due to their average results. In the case of those who were coerced there are instances where other departments exceed their quota, send the rest of the students to the art department.

Aidoo (2018) explains:

The criteria with respect to the first class schools, is BECE aggregate 6-15, whereas aggregate 10 – 25 goes for second class schools and lastly the third class schools is aggregate 10 – 30 (Asihene, 2009). Currently, BECE aggregates close to 40 and above are accepted for visual arts programmes. Besides this many other candidates who score excellent BECE grades and desire to pursue visual arts are often coerced and lured or diverted into science, regarded as the best programme for brilliant students (Adinyira, 2012). Sadly, these acts are perpetuated by school heads, teachers and some well- informed parents. (p.140)

He adds that another unfortunate aspect of selection into visual art programmes is that candidates who do not make the grade for science or business will accept placement in visual art for the simple reason of getting their preferred or dream school, most especially the first class schools. Some schools also go to the extent of recruiting non visual arts students who are sports inclined to beef up their sports teams. These students usually end up in the visual art classes. All these and more go to fuel the perception that visual art is only good for academically weak students. Unfortunately, the latter category of students forms the majority in the visual arts department.

Interactions with the students for seven years have shown much misinformation or orientation on visual arts as programmes to be studied. Most of the students do not exhibit enough artistic behaviour toward the various subjects. This is evident in their responses to artistic concepts and skills during practical and theory lessons as observed by the researcher. In addition, activities such as drawing and designing seem to be hard nuts for them to crack with drawing being most difficult, an activity which rather serves as the foundation for most artistic works.

Some students would boldly express their unwillingness to perform any activity relating to drawing, under the pretext of not learning drawing in creative arts and BDT at the basic level. The primary schools study Creative Arts which serves as foundation while BDT is studied in the J.H.S. This situation raises a lot of concern to the Visual Arts teachers in the senior high schools since it retards progress during teaching and learning. The BDT has three major components, namely Visual Arts, Home Economics and Pre-Technical Skills (Pre-Tech) respectively. Teachers, being major stakeholders in this process could be part of some of the causes to these problems faced by visual arts students. Their ability or inability to demonstrate content and skills can either make

or unmake a positive impact during teaching and learning. If the orientation at the basic levels where the foundation of skill acquisition and development of concepts is not well laid, building upon it in S.H.S becomes problematic. The role of art teachers is very crucial in this regard.

This study therefore, delves into the pedagogical strategies, content and practice of art educators and their implications to art education in the Central Tongu District in the Volta region of Ghana.

1.3 Purpose of the study

The purpose of this study is to inquire about the Pedagogical Content Knowledge (PCK) and Practice of Basic Design and Technology (BDT) teachers in drawing in basic schools in the Central Tongu District in the Volta region of Ghana. The emphasis, however, will be on basic school (JHS) learners and their art teachers. This is because the acquisition of artistic concepts, skills and knowledge by young learners must be a collaborative effort between teachers and learners. Therefore, the contribution of teachers in achieving this is paramount in building a solid foundation of the individual learners, hence, the study.

1.4 Objectives

The main objectives for this study are to:

1. Inquire into the Pedagogical Content Knowledge of art teachers in drawing in some basic schools in the Central Tongu District.
2. Examine the professional practice of art teachers in drawing in some basic schools in the Central Tongu District.
3. Ascertain the techniques used in assessing students' drawings.

1.5 Research questions

1. What is the pedagogical content knowledge of art teachers in teaching drawing in Basic Design and Technology in basic schools?
2. What is the professional practice of art teachers and how do they apply it to teaching and learning drawing in visual arts in basic schools?
3. What assessment techniques do art teachers apply in assessing learners' learning outcomes in drawing?

1.6 Significance of the study

The in-depth knowledge on the PCK and Practice in the teaching and learning of visual arts in basic schools is hoped to enhance the study of art related courses in our senior high schools. Explicitly, it is hoped that the identification of the artistic deficit through the proposed study in the above district will assist the art educators to make informed decisions in the teaching and learning of visual arts in our basic schools, and also improve upon their practice in the art classes.

In addition, it is envisaged that the outcome of this study would greatly increase the awareness of the use of appropriate strategies during teaching and learning of visual arts subjects in basic schools. The study will also reveal the professional practice of art teachers and how they apply it to teaching and learning in drawing and painting in the basic schools. As if that is all, the study will disclose the kind of assessment techniques visual arts teachers apply to assess learners' learning outcomes.

Another contribution this study would offer is that it would serve as reference for both art and non-art teachers, headmasters, circuit supervisors and all stakeholders who matter in teaching and learning in the district and beyond. Finally, the suggested methods and recommendations will help the basic teachers to prepare JHS graduates

with the requisite knowledge and skills needed for the visual arts programmes in the senior high school levels.

1.7 Delimitation

This case study was limited to Adidome Circuit in the Central Tongu District in the Volta region of Ghana. The focus of the study was centred on drawing in Basic Design and Technology (BDT) at the Junior High School (JHS) level.

1.8 Abbreviations



BDT	:	Basic Design and Technology
CAD	:	Creative Arts and Design
CPD	:	Continuing Professional Development
DBE	:	Diploma in Basic Education
FGD	:	Focus Group Discussion
HND	:	Higher National Diploma
JHS	:	Junior High School
NaCCA	:	National Council for Curriculum and Assessment
NTC	:	National Teaching Council
NTS	:	National Teachers' Standards
PCK	:	Pedagogical Content Knowledge
RPK	:	Relevant Previous Knowledge
SHS	:	Senior High School
UNECE	:	United Nations Economic Commission for Europe
VEYLDF	:	Victorian Early Years Learning Development Framework

1.9 Definition of terms

Pedagogy: Pedagogy can be considered as the science or theory of teaching. In other words, it is the process of imparting knowledge and skills into a learner using well organised strategies and techniques.

Content: Content in education is seen as the entirety of what is to be taught in a school system based on the curriculum. It includes all the important facts, concepts and principles which are taught during teaching and learning situations.

Knowledge: Knowledge can be considered as facts, information and skills acquired by a person through experience or education.

Practice: Practice, in the context of education explains the ability of the teacher to display mastery of concepts, knowledge and skills in a particular subject area and topic through organised and well-structured presentations to learners.

Pedagogical Content Knowledge: The combination of teaching strategies, techniques and authentic subject matter which are presented systematically to a learner(s) in education.

Drawing: Drawing is the art or technique of producing images on a surface such as paper, wood, wall, fabric, human skin, plastic among others with the use of pencil and pen of all kinds, charcoal, ink and crayon among many others.

CHAPTER TWO

LITERATURE REVIEW

2.0 Overview

This chapter discussed existing texts and opinions articulated by numerous authors and commentators on the subject matter. The review discusses the definitions and instructional strategies on the topic under discussion. Literatures have been derived from websites, books, reports, journals and other relevant sources and duly acknowledged in the review below.

2.1 Theoretical Framework

The purpose of this study is to inquire into the pedagogical content knowledge and practice of art teachers and to find out the reason for the drawing difficulties among visual arts students. This study is therefore hinged on the National Teachers' Standards (NTS) (2018) which in its foreword sought to guide teacher preparation and practice in the country. It explained that:

The Standards have been developed as a professional tool to guide teacher educators, teachers, student teachers and other stakeholders in education to identify in clear and precise terms what teachers are expected to know and be able to do, qualities they are expected to possess and some behaviour they are supposed to exhibit. The Standards set a clear baseline of expectations for the professional knowledge, practice, conduct, attitude, rights and obligations expected of teachers working in schools at the pre-tertiary level. (p.3)

The Standards are divided into three main domains, each with its own sub-divisions:

Professional Values and Attitudes: Professional Development Community of Practice -According to the NTS Guidelines, teachers should be guided by legal and ethical teacher codes of conduct in their development as professional teachers.

Professional Knowledge: Knowledge of Educational Frameworks and Curriculum Knowledge of Learners - The teacher should understand how children develop and learn in diverse contexts (cultural, linguistic, socio-economic and educational backgrounds) and apply this in their teaching.

Professional Practice: Managing the Learning Environment Teaching and Learning Assessment - The teacher should employ a repertoire of learning strategies in order to meet the learning needs of all children through the application of relevant resources.

Sousa (2011) citing Grauer (1997, p.78) also argues that “pedagogical knowledge cannot be taught in isolation from the prior background, beliefs and knowledge that beginning teachers bring with them into teacher education programmes.” She continues that “if art teachers should be aware of the facts, principles and concepts that form the domain of art education, then it is imperative that this form of subject matter knowledge is available and explicit in teacher education programmes.”

The above assertion clearly demonstrates the function of teacher knowledge and ability to transmit relevant information through well-organised strategies and techniques. This is much in agreement with the researcher’s motive of inquiry into the pedagogical content knowledge of teachers of visual arts in the above mentioned district.

2.2 Conceptual framework and meaning of teaching

Teaching is one of the mediums through which knowledge, concepts, skills, attitudes and values among others are imparted to an individual or a group of people. Teaching does not happen in a vacuum in education. Its main concept or function is to make learning easy and effective for the learner. The teaching and learning process becomes complete as a result of understanding concepts, acquisition in skills and change of

attitude and behaviour of the learner. Therefore, there is a very close relationship between teaching and learning.

The concept of pedagogical content knowledge introduced by Shulman (1986) was expected to go beyond the knowledge of subject matter, specifically to the element of subject matter knowledge required for teaching. According to him, educators should be exemplary in content aspects of teaching as well as the elements of the teaching process. They must be able to illustrate ideas, analogies, examples, explanations of subject matter, and demonstrations to assist in comprehensible student achievement in the classroom.

Based on the above concept of teaching, it can be seen as a process of transferring knowledge, concepts, values, attitudes and skills from a more experienced person or persons to a less experienced person or persons to cause a change in behaviour and attitude within a time frame. Also, teaching can be seen as an interactive process between two major parties which usually goes through phases such as demonstrations, guidance, instructions, practice and feedback among others. Teaching can take place anywhere (home, school, market, workshop, on the streets, etc.) depending on the content and the processes; it will have to go through before the desired goal is achieved. But for the purpose of this study the discussion shall remain within the school setting between a teacher and a learner(s). In this case, there is always a syllabus and curriculum which guides the teacher as to what to teach (content), how to teach (practice) and in some cases where to teach whatever there is to be taught. Not all goals and objectives are also set ahead of the teaching and learning processes. These goals and objectives turn to act as the motivational factors which drive the entire process to a successful end.

Teaching, according to Smith (2018) is the process of attending to learners' needs, experiences and feelings, and intervening so that they learn particular things, and go beyond the given. To Nilsen and Albertalli (2002), teaching in its broadest sense is the process whereby a teacher guides a learner or a group of learners to a higher level of knowledge or skills while Desforges (1995), defines teaching as the management of pupils' experience, largely in classrooms with the deliberate intention of promoting their learning. Robertson (1987) indicates "teaching is a generic term which denotes actions undertaken with the intention of bringing about learning in another". In addition, teaching, to Lavery (2015) is a profession that requires the incorporation of many types of knowledge in order to create effective instructional experiences that promote student learning. Teachers need to blend their knowledge of the content with the methods for delivering that content and an understanding of their students' thinking.

The researcher cannot agree more to the above assertions since he shares similar views with them. Clearly, the concept of teaching and learning becomes meaningful when there is mutual agreement between a teacher and a learner with well laid down principles and achievable targets to be accomplished, which finally brings about behavioural and attitudinal changes, and the acquisition of useful skills and knowledge. That notwithstanding there is the need for teachers to note that their duty in the teaching and learning process is not a mere display of one's skills and knowledge to the public but to help, guide, direct and instruct a learner to identify and acquire hidden truths in a particular area of study. These truths, having been identified, would have to cause positive transformation in both behaviour and attitude in the learner.

2.3 Principles of Teaching

Principles can be defined as the fundamental basis of systems of thought or beliefs that guide behaviours and attitudes in any human endeavour. Connecting this to the discussion on teaching above, one can confidently explain principles of teaching as a basic knowledge or regulation that explains how teaching should be done or conducted. In this section, the following teaching principles given by Tamakloe (2005) as cited by Ababio (2013) are presented as follows. That the teacher must:

- ❖ time the various stages of a lesson so that each stage receives the desired attention without exceeding the time limit of the lesson.
- ❖ detect when his/her students are getting bored or restless so that s/he can vary his/her approach or the stimulus.
- ❖ use the experiences of his/her students to initiate as well as generate further learning.
- ❖ make judicious use of available resources in the teaching-learning process.
- ❖ present what s/he teaches in an interesting way.
- ❖ write an orderly layout of summaries on the chalk/whiteboard.
- ❖ express him/herself and illustrate his/her points clearly in the lesson particularly in his/her explanation of content.
- ❖ design suitable and adequate quantities of exercises and assignments for his/her pupils, and insist on prompt tackling and submission.
- ❖ use appropriate language in the teaching process.
- ❖ correct and direct his/her pupils/students without making them feel embarrassed or frustrated.

- ❖ learning situations that will serve as challenges to his/her students.
- ❖ select appropriate learning experiences of his/her students.
- ❖ employ a variety of teaching methods and techniques within a lesson.
- ❖ generate divergent thinking and creativity in his/her students
- ❖ be able to achieve the objectives of his/her lessons.
- ❖ use praise to urge his/her pupils to become eager to participate more in a lesson.
- ❖ study and become aware of the needs of the individual students in his/her class.
- ❖ be able to assist his pupils/students to be able to assess their own performances.
- ❖ maintain a reasonable balance between pupil activity and teacher activity as dictated by the nature of the lesson.

2.4 Requirements for teaching

Since professionalism and management are seen to be vital components in every life situation, specific professions and management require specific knowledge, skills and some levels of competence; teaching is no exception. Teachers as managers need a special body of knowledge and skills in order to thrive positively in their chosen profession. The nature of the various subject areas as formal academic disciplines, the objectives for teaching them, the competencies they require for their teaching and learning, and the varied methods and materials required for teaching and learning them, makes it imperative for every teacher to possess a repertoire of knowledge, qualities, attitudes and values.

Teachers play such a critical role in inspiring and challenging learners to achieve their potential that their training and subsequent development require the highest possible standards in knowledge, conduct and practice in the workplace.

The National Teachers' Standards (NTS) of Ghana (2018), in its opening paragraph of its forward is unmistakably in consonance with the above assertion by indicating that as:

the first ever collectively agreed standards to guide teacher preparation and practice in the country. The Standards have been developed as a professional tool to guide teacher educators, teachers, student teachers and other stakeholders in education to identify in clear and precise terms what teachers are expected to know and be able to do, qualities they are expected to possess and some behaviour they are supposed to exhibit.

The Standards set a clear baseline of expectations for the professional knowledge, practice, conduct, attitude, rights and obligations expected of teachers working in schools at the pre-tertiary level. All teachers completing their initial teacher training will be assessed against the National Teachers' Standards. (p.3)

In addition to that, the National Teachers' Standards of Ghana (2018) has set out the minimum levels of practice that all trained teachers must reach by the end of their pre-service teacher education course in order to play such a critical role. The minimum levels of practice are described as Standards that beginner teachers must meet under the following three categories:

Professional Values: According to the NTS Guidelines, teachers should be guided by legal and ethical teacher codes of conduct in their development as professional teachers.

Professional practice: The teacher should employ a repertoire of learning strategies in order to meet the learning needs of all children through the application of relevant resources.

Professional knowledge: The teacher should understand how children develop and learn in diverse contexts (cultural, linguistic, socio-economic and educational backgrounds) and apply this in their teaching.

Gess-Newsome (2015) as cited by Miles et al. (2018) quizzed at a PCK summit: “whether PCK is a knowledge base that can be assessed through paper-and-pencil tests or interviews, or a skill that can be assessed only through classroom observations or both”. The researcher agrees to the above definitions, considering the fact that there is a sharp difference between having material knowledge or information about a situation and organising information which resides in the mind of the holder, and the ability to demonstrate that knowledge by concretizing it in practice. The situation here could be in a particular subject (theory or practice) to be taught in a classroom, workshop or studio. Thus, the pedagogical content knowledge of a teacher differs from that of skill or practice, yet both cannot be handled in isolation in the visual arts since they contribute immensely to the success of the expected outcomes in the learner.

According to the current **National Teacher Education Curriculum Framework of Ghana (2018)**, the Curriculum Framework is a document against which all future teacher education curricula would be assessed. It emphasises the need to concentrate on the essential elements as a pre-service teacher education curriculum which needs to be focused on to produce the best teachers, adding that all Teacher Education Curricula, including the DBE, can be reviewed against the framework. It further explained that

fully prepared student-teachers would be enabled to teach the Basic School Curriculum, in particular, Ghanaian languages and English, mathematics and science, concentrating on relevant subjects and pedagogic knowledge.

The framework enumerates a few keys to success in Teacher Education which depend on the following:

1. Four Pillars of Education

- ❖ Subject and Curriculum knowledge
- ❖ Pedagogic Knowledge
- ❖ Literacy Studies (Ghanaian languages and English)
- ❖ Supported Teaching in Schools

In line with the explanation above, Melby (1994) as cited by Bethel (2013) states that:

Teaching is not merely dispensing subject or lesson-having, but an art which involves the student in the teaching-learning process where the student is given the chance to participate fully in the process – that the teacher accepts each pupil and has a favourable attitude towards individual differences. It is a relationship in which the teacher eschews sarcastic statements, ridicule and fault-finding. (p.38).

Thring (2001) says pouring out knowledge is not teaching. Hearing lessons is not teaching. But teaching is getting at the heart and mind so that the learner values learning and to believe that learning is possible in his/her own case. Pedagogy focuses on the transmission of information or knowledge, understanding or wisdom to students in an oral or written framework; teaching is set out to inform, instruct, explain or enlighten (Ackoff & Greenberg, 2008).

According to Bukari and Shani, Continuing Professional Development (CPD) is a sine qua non for high quality performance of all teachers. This is because the quality of teachers is a significant determinant in students' academic success. Hammond (2001) as cited by Bukari and Shani explained that the most key determinant of what students study is related to what teachers know. They continued to say that the teaching profession requires an incessant search for knowledge and skills through capacity building programmes in the form of refresher courses, seminars, in-service training, workshop, orientation and induction service for new staff. According to Lawal (2004) teachers' acquisition of pedagogical content knowledge for classroom activities is one most crucial aspect of the educational process for which staff development activities usually focused on, leading to the improvement of subject mastery, pedagogy skills and classroom management.

As Madumere-Obike (2007) puts it, the purpose of staff development programmes are to ensure the development of professional growth, equip teachers with current knowledge and pedagogical skills, meet particular need such as curriculum innovation and orientation, leadership duties and skills, facilitate the adjustment of new teachers in their carrier, help to promote collaboration among teachers, and to make teachers aware of up-to-date teaching methods.

Not all, studies by Kettle and Sellars (1996) as cited by Olweus (2013) agreed that:

Teachers' professional preparation and development have a great effect on establishing teachers' goals for their learners, and how these goals subsequently influence the teachers' activities in the classrooms and schools. Similarly, Youngs (2001) after studying of records measuring the effects of four different

models of professional development on teachers' professional development and school capacity in the United States of America, found that all models in the main, reinforced teachers' skills, knowledge, and attitudes, and they had diverse consequences on other facets of school capacity. A number of studies concerning the effect of teachers' professional development on students' learning, report that the more professional knowledge teachers possess, the higher the levels of student academic attainment.

It is therefore, worthy to establish the fact that for the teaching and learning process to be successful teachers must go through special training to have adequate knowledge, develop necessary skills and the appropriate attitude in their chosen profession. Not all, there is the need for them to have adequate understanding about how learning takes place in learners, individual differences among learners and the various learning theories that guide teaching and learning processes. In the case of learners, therefore, cognizance must be given to their varied reasoning capacities and capabilities, their attention span among others before, during and after the teaching and learning processes.

Shulman (1987) as cited by Ababio (2013) thinks that there are certain characteristics which every professionally-trained teacher should possess. According to him these include content knowledge, general pedagogical knowledge, curriculum knowledge, knowledge of learners and their characteristics, knowledge of educational context/human relations, pedagogical content knowledge/teacher craft knowledge and knowledge of educational ends.

Therefore, the acquisition of the required knowledge in content and the development of the necessary skills and strategies in practice must blend well with the knowledge of

learning theories in achieving the set goals and objectives of the teaching and learning processes.

Teaching and learning in general goes through processes. Each stage of the process has some knowledge and skills to be acquired which later turn out to be considered as “experience” up on which teachers and learners ride to accomplish new tasks that confront them in their day-to-day encounters. At each stage of their journey to become accomplished teachers, the NTC expect teacher to:

- ❖ demonstrate good knowledge in the relevant subject(s) and curriculum areas;
- ❖ have a sound knowledge of learners’ different ways of organising their learning;
- ❖ demonstrate knowledge and understanding of how different learning styles impact on teaching;
- ❖ reflect thoroughly on the effectiveness of teaching approaches;
- ❖ demonstrate good knowledge and understanding of how to use assessment to support learning; and
- ❖ identify their own training needs and take responsibility for addressing them through lifelong learning.

The following, according to the NTC are to benefit from the standards since they are agents of change with regards to curriculum. They include:

- ❖ Student Teachers on pre-service teacher training courses working towards meeting the Standards by the end of their course.
- ❖ All beginning teachers in their Induction Year in schools.

- ❖ All in-service teachers in schools, who are covered by the 2016 new NTC frameworks for career progression and promotion. The Standards serve as a point of reference for all standards and competencies.

The philosophy that underpins the standards for teachers, according to Ghanaian NTC is that:

Teacher education in Ghana aims to prepare teachers imbued with professional skills, attitudes and values as well as the spirit of inquiry, innovation and creativity that will enable them to adapt to changing conditions, use inclusive strategies and engage in lifelong learning. The teachers are required to have a passion for teaching and leadership, engage with members not only in the school community but also in the wider community and act as agents of change.

2.5 Learning

Defining learning is not always easy and at times seems ambiguous with a myriad of intricacies and idiosyncrasies, making one single definition very difficult to attain. Indeed, the word ‘learning’ itself has a number of meanings depending on the context in which it is used, but it is the core business of educational institutions and, as such, warrants some detailed exploration (Vick, 2013).

The Concise Oxford dictionary (11th ed) explains learning as “knowledge or skill acquired through experience or studying or being taught”. Learning can also be said to be a conscious receiving, assimilation and use of information in content and practice.

Traditionally, studies around learning focused primarily on early-years learning through childhood and adolescence. However, it is now recognised that learning is a

continuous process that commences at birth and continues until death; it is the process through which we use our experience to deal with new situations and to develop relationships. Many scholars in education psychology have done extensive research activities in finding out ways and means through which learning takes place among learners. Evident in their findings are authentic theories and principles which help teachers in major decision making in teaching and learning. The theories have taken different perspectives based on the understanding of the theorists. They include Cognitive, Behaviourism, Constructivism, Humanism and Connectivism learning theories.

French psychologist Alfred Binet who developed the famous IQ tests, John Dewey, Benjamin Bloom, Jean Piaget, B.F. Skinner among many others have contributed immensely to the development of these theories. More recently, educational psychologist Benjamin Bloom developed an important taxonomy designed to categorize and describe different educational objectives. The three top-level domains he described were cognitive, affective and psychomotor learning objectives. The APA group identified three key areas or domains of educational objectives or learning which are:

- Cognitive: mental skills (knowledge).
- Affective: growth in feelings or emotional areas (attitude or self).
- Psychomotor: manual or physical skills (skills).

These domains (knowledge, attitudes and skills) have become part of the fabric of the field of education – both formal and informal. Each domain has then been split into different categories to analyse the nature of learning and to create a hierarchy of objectives.

Most attention, not surprisingly, has been given to the cognitive domain. A recent version of the taxonomy (Anderson et al. 2001) had six categories – remember, understand, apply, analyse, evaluate, create and then broke these down into according to the type of knowledge involved: factual, conceptual, procedural, metacognitive.

Attention was also paid to the affective domain in the second volume of the taxonomy (Kraftwohl et al., 1964). Its categories were: receiving ideas; responding to ideas, phenomena; valuing ideas, materials; organisation of ideas, values; characterisation by value set (or to act consistently in accordance with values internalised) (O’Neill & Murphy, 2010). In this model, as O’Neill and Murphy comment, ‘The learner moves from being aware of what they are learning to a stage of having internalised the learning so that it plays a role in guiding their actions’.

The original taxonomy of the psychomotor domain has also been updated by Dave (1970). This mapping has several levels: perception/observing; guided response /imitation; mechanism; complex response; adaptation; and origination.

2.5.1 Learning theories

Theories are sets of general principles which are meant to explain certain activities or phenomena and their supposed outcomes. The Concise Oxford English Dictionary (Eleventh Edition) defines theories as a supposition or a system of ideas intended to explain something, especially one based on general principles, independent of things to be explained.

2.5.1.1 Behaviourism learning theory

The behaviourism learning theory is based on the idea that students’ behaviour is based on their interactions with their environment. It suggests that behaviours are influenced

and learned from external forces rather than internal forces. Psychologists have been working on the idea of behaviourism since the 19th century. Peggy and Timothy (2013) citing Schunk (1991) explained that empiricism holds the view that experience is the primary source of knowledge. That is, organisms are born with basically no knowledge and anything learned is gained through interactions and associations with the environment. Behavioural learning theory is the basis for psychology that can be observed and quantified. Positive reinforcement is a popular element of behaviourism—classical conditioning observed in Pavlov’s dog experiments suggests that behaviours are directly motivated by the reward that can be obtained.

Teachers in a classroom can utilise positive reinforcement to help students better learn a concept. Students who receive positive reinforcement are more likely to retain information moving forward, a direct result of the behaviourism theory.

2.5.1.2 Constructivism learning theory

The constructivism learning theory is based on the idea that students actually create their own learning based on their previous experience. Students take what they are being taught and add it to their previous knowledge and experiences, creating a unique reality that is just for them. This learning theory focuses on learning as an active process, personal and unique for each student.

To David et al. (2011) learning is:

The transformational process whereby an individual, to a variable degree of deliberation, constructs new knowledge, it builds on the subjectively driven interaction between the knowledge which he has already available and the mental and material experiences which he is currently going through and

narrating to himself (Carassa, Morganti, and Tirassa 2004, 2005). Learning is intrinsic to the functioning of the mind, of which it is a continuing side effect.

Teachers can utilise constructivism to help understand that each student will bring their own past to the classroom every day.

Jonassen (1991) states:

Both learner and environmental factors are critical to the constructivist, as it is the specific interaction between these two variables that creates knowledge. Constructivists argue that behaviour is situationally determined. Just as the learning of new vocabulary words is enhanced by exposure and subsequent interaction with those words in context (as opposed to learning their meanings from a dictionary), likewise it is essential that content knowledge be embedded in the situation in which it is used.

Teachers in constructivist classrooms act as more of a guide to helping students create their own learning and understanding. They help them create their own process and reality based on their own past. This is crucial to helping many kinds of students take their own experiences and include them in their learning.

2.5.1.3 Humanism learning theory

Humanism is very closely related to constructivism. Humanism directly focuses on the idea of self-actualization. Everyone functions under a hierarchy of needs. Self-actualization is at the top of the hierarchy of needs—it is the brief moments where you feel all of your needs are met and that you're the best possible version of yourself. Everyone is striving for this, and the learning environment can either move toward meeting your needs or away from meeting your needs. Kamran and Kayvan (2010) established the view that within the humanist framework, learning is viewed as a

personal act necessary to achieve the learner's full potential. The goal of this approach is for the learner to become autonomous and self-directed. Humanist activities facilitate collaborative learning with strong emphasis on learners and instructors negotiating objectives, methods, and evaluatives. Teachers can create classroom environments that help students get closer to their self-actualization. Educators can help fulfil students' emotional and physical needs, giving them a safe and comfortable place to learn, plenty of food, and the support they need to succeed. This kind of environment is the most conducive to helping students learn.

2.5.1.4 Connectivism learning theory

Connectivism is one of the newest educational learning theories. It focuses on the idea that people learn and grow when they form connections. This can be connections with each other, or connections with their roles and obligations in their life. Hobbies, goals, and people can all be connections that influence learning. Siemens (2004), as cited by Kop & Hill (2008) states, "A community is the clustering of similar areas of interest that allows for interaction, sharing, dialoguing, and thinking together." Dewey (1934. p.1) thinks that "experience occurs continuously, because the interaction of live creatures and environmental conditions is involved in the very process of living". John Dewey's ideas were progressive, and he emphasises that schools should focus on students rather than on subjects. He advocated active learning and believed that hands-on experience was an important part of the learning process.

Teachers can utilise connectivism in their classroom to help students make connections to things that excite them, helping them learn. Teachers can use digital media to make good, positive connections to learning. They can help create connections and

relationships with their students and with their peer groups to help students feel motivated about learning.

2.6 Major Perspectives

As with other areas of psychology, researchers within educational psychology tend to take on different perspectives when considering a problem.

a. The behavioural perspective suggests that all behaviours are learned through conditioning. Psychologists who take this perspective rely firmly on the principles of operant conditioning to explain how learning happens. For example, teachers might give out tokens that can be exchanged for desirable items such as candy and toys to reward good behaviour. While such methods can be useful in some cases, the behavioural approach has been criticised for failing to account for such things as attitudes, cognitions, and intrinsic motivations for learning.

b. The developmental perspective focuses on how children acquire new skills and knowledge as they develop. Jean Piaget's famous stages of cognitive development are one example of an important developmental theory looking at how children grow intellectually. By understanding how children think at different stages of development, educational psychologists can better understand what children are capable of at each point of their growth. This can help educators create instructional methods and materials best aimed at certain age groups.

c. The cognitive perspective has become much more widespread in recent decades, mainly because it accounts for how things such as memories, beliefs,

emotions, and motivations contribute to the learning process. Cognitive psychology focuses on understanding how people think, learn, remember, and process information. Educational psychologists who take a cognitive perspective are interested in understanding how kids become motivated to learn, how they remember the things that they learn, and how they solve problems, among other things.

d. The constructivist approach is one of the most recent learning theories that focus on how children actively construct their knowledge of the world. Constructivism tends to account more for the social and cultural influences that impact how children learn. This perspective is heavily influenced by the work of psychologist Lev Vygotsky, who proposed ideas such as the zone of proximal development and instructional scaffolding.

The contributions of the various exponents of the philosophical approaches have and continue to help educators in their decision making before, during and after teaching and learning.

2.7 Pedagogy

Pedagogy can be considered as the science or theory of teaching. In other words, it is the process of imparting knowledge and skills into a learner using well organised strategies and techniques. Pedagogy takes place in various forms and at varied places. Many institutions, companies and organisations have used various forms of pedagogy to either impart knowledge or disseminate information to the public about what they stand for and what needs to be done at specific moments. Pedagogical content knowledge, therefore, is an in-depth knowledge in a particular subject area while its practice is the ability of a teacher to effectively impart it to learners using appropriate

instructional methods and strategies. Pedagogical Content Knowledge and Practice remain the main links through which young individuals can reach the heights of their creativity. There are various sections of pedagogy which work together toward a unified end result. These sections or components include the way and manner in which the teaching is done (teaching strategy), the response that comes from the learners (feedback) and the mode of testing learners' level of understanding (assessment). Admittedly, each teacher has a unique pedagogical approach to teaching and learning. This notwithstanding, it is imperative of teachers to adopt the most appropriate methodology and pedagogical approach with content delivery based on the needs of learners either as a group or individuals.

Pedagogy in education therefore, is the one that exists between a teacher and pupils or students in the educational set up (school system), and it is centred on different ability levels of the learners. According to Merriam-Webster as cited in Cole (2019) pedagogy is the “art, science or profession of teaching; especially: education”. She continues to explain that the definition covers many aspects of teaching, but pedagogy really comes down to studying teaching methods.

In education, pedagogy can either be Teacher-Centred or Student/Learner-Centred. The teacher-centred pedagogy dwells mainly on the teacher controlling every aspect of the teaching and learning where the learner stays passive during teaching and learning; always at the receiving end of the knowledge that is imparted by the teacher. Student or learner-centred pedagogy on the other hand is the type which allows the learner to be more active and takes the centre stage while the teacher still delivers the content in the learning process. The teacher's role becomes mentoring and coaching in helping the learner. Mir (2013) as cited by Kassah (2019) states that in the United States of

America, there is solid emphasis on student-centred pedagogies such as discovery learning, project based learning, inquiry learning, hands-on learning, and cooperative learning while time is spent on passive teaching and learning (memorisation of materials) and formal mode of testing the learners is being curtailed.

Duku (2012), citing Barber (2007) explains that learner-centred teaching methodology represents an educational and instructional philosophy in which the key elements of teaching and learning in the traditional teacher centred format of education are reshaped, redefined and reformed. Much of discussions on teacher-centred and student-centred approaches to teaching have been in the context of primary and secondary education; these concepts have also been influential within university settings. Cole (2019) asserts that each of the pedagogical approaches to teaching and learning has strengths and weaknesses and that the ultimate way to help students learn is the combination of both approaches to reach the variety of learners in the classroom.

According to Grauer (1997, p. 78), “pedagogical knowledge cannot be taught in isolation from the prior backgrounds, beliefs and knowledge that beginning teachers bring with them into teacher education programs.”

Not all past studies relating to PCK in art education have long been carried out by a number of scholars. Shulman (1986, 1987), describes PCK as a teachers’ unique knowledge of how to create learning opportunities that make particular content more comprehensible to others While Dan (2016) states that the structure of PCK of art teachers consists of subject knowledge, pedagogy, student knowledge and situational knowledge. Kehk (2013) in his study quotes Darling-Hammond and Baratz-Snowden (2007), saying “to become competent and skilful teachers, they need to be a solid body of knowledge that serves a foundation for the judgement and analytic ability to be developed”. Pedagogical content knowledge is a construct coined by Shulman (1986)

to emphasise the importance of studying teacher professional knowledge, and teacher knowledge on subject matter in particular. To him, PCK is a special kind of knowledge possessed by experienced teachers that constitutes a fusion of subject matter knowledge and the pedagogy appropriate for teaching particular topics. He adds that this PCK includes knowledge about learners and how to represent subject matter knowledge in forms that make it comprehensible to learners.

In agreement, The researcher thinks all the statements and, or assertions of the above researchers seem to point to the fact that for PCK to be meaningful and well applied in teaching and learning one has to consider a lot of factors which contribute to achieving goals and objectives in teaching and learning. The understanding of these factors makes it easier in determining *what, where, when* and *how* to apply the PCK.

2.7.1 Nature of Pedagogical Strategies Used in the Classroom

Pedagogical strategies are the techniques a teacher uses to ensure that teaching and learning take place in or outside the classroom. According to Adediran (2014) as cited by Kassah (2019) teaching brings about understanding and it includes a teacher, a student, content and teaching resources. Therefore, to ensure that teaching and learning take place, the teacher must engage in some activities such as conversation, demonstration, giving instructions and all these are the various approaches to ensure that learning takes place. Not all, Yusof, Roddin and Awang (2015) explained that a traditional-teacher centred style is the main approach employed by teachers with the ‘chalk and talk’ (lecture method) as the most preferred teaching method used in teaching learners in the classrooms. That notwithstanding, several other techniques and strategies have been adopted and added which have broadened the scope of pedagogy in schools.

Several theories have explained how learners learn. In 1983, Howard Gardner developed the Theory of Multiple Intelligences. The theory explained that there are eight different ways in which people learn.

According to him these ways include:

1. **Visual-Spatial:** Learners display mastery in puzzles, maps and directions.
2. **Linguistic-Verbal:** Learners are good with words, both spoken and written.
3. **Interpersonal:** These learners are very intuitive and are good at relationship.
4. **Intrapersonal:** These learners are very reflective and self-evaluative.
5. **Logical-Mathematical:** Learners are good with numbers and problem solving.
6. **Musical:** These learners have a knack for rhythm and music.
7. **Bodily-Kinaesthetic:** These learners are very hands-on and have great hand-eye coordination.
8. **Naturalistic:** These learners are in tune with nature and their environment.

Upon critical analysis, the researcher shares the same views on the above learning ways of Howard Gardner which established the fact that teachers really need to consider learners' strengths and weaknesses, both individually and in groups in order to structure their teaching and learning processes. Further analysis of the above has shown that the theories are so interconnected in both fine and performing arts. This consideration will

help the teacher to cater for the needs and abilities of learners before, during and after teaching and learning which later helps in achieving the desired attitudes in the learners.

2.8 Content

Content in education is seen as the entirety of what is to be taught in a school system based on the curriculum. It includes all the important facts, concepts and principles which are taught during teaching and learning situations. The content is expected to correspond to the learning experiences in relation to clear cut objectives to be achieved by the end of each respective learning period. It can be in the form of knowledge acquisition, skills acquisition and development, positive attitudes and values that learners are exposed to among many others. Content involves subject matter drawn on the basis of problems, themes or topics cutting across traditional subjects based on socio-cultural aspirations within a given society. Content in education, in other words, can be considered as the “what to teach” with reference to the curriculum at the time of teaching and learning process. Shulman et al. (1986) opined the representation of content understanding as a special kind of technical knowledge key to the profession of teaching. They again argued that knowing a subject for teaching requires more than knowing its facts and concepts. Teachers must also understand the organising principles and structures and the rules for establishing what is legitimate to do and say in a field. The teacher need not only understand that something is so; the teacher must further understand why it is so, on what grounds its warrant can be asserted, and under what circumstances our belief in its justification can be weakened or denied.

The curriculum of every nation or society determines or directs the educationist as to what to teach, how to teach it, where to teach and in some cases when to teach what is to be taught. In short, therefore the absence of curriculum (content) in education makes teaching and learning meaningless and all efforts will result in futility.

The “*what*” of education has long been a thorn in the side of curriculum designers as well as teachers. From earliest time curriculum committees on local, state, and national levels have made recommendations as to what to be taught Levy (1966). It is clear that sufficient content and pedagogical knowledge help teachers to respond to students proactively. Teachers’ understanding of nature and purpose of the discipline strongly influences their personal pedagogical content knowledge such as what they highlight as important during teaching and learning.

2.9 Knowledge

Knowledge can be considered as facts, information and skills acquired by a person through experience or education. It can be the theoretical or practical understanding of a subject or a concept. The philosopher Plato defined knowledge as justified true belief. Schwab (1971) as cited by Lankford (2010) described teacher knowledge in practical terms as the wisdom of practice developed through classroom experience. In the same vein, Verloop, Van Driel, and Meijers (2001) posit teacher knowledge is closely related to individual experiences and contexts and, therefore, unique to the individual.

Education is a means of discovering new things which we do not know and hence it increases our knowledge. So, knowledge is a meaningful structure of facts into some relationships. We can define knowledge as information and skills acquired through experience or education. In other words, it is the awareness or familiarity gained by experience of a fact or situation. By gaining knowledge and the acquisition of skills in a particular field, helps an individual or groups of people to make informed decisions in their life endeavours. It also opens doors for new discoveries. So, it is in education.

The Guidelines by National Teachers' Standards of Ghana (2018) explicitly expresses its view on three (3) major domains in which teaching and learning are centred. They are as follows:

Professional Values and Attitudes

- Professional Development
- Community of Practice

Professional Knowledge

- Knowledge of Educational Frameworks and Curriculum
- Knowledge of Learners

Professional Practice

- Managing the Learning Environment
- Teaching and Learning
- Assessment

According to the guidelines, these three domains and aspects encompass what teachers should value, know and do, and intersect with one another to develop a teacher competent enough to teach at the end of their four-year initial teacher training. The general expectations from teachers regarding these domains are as follows.

2.9.1 Professional Development

The Teacher(s):

- (a) Critically and collectively to improve teaching and learning.
- (b) Improves personal and professional development through lifelong learning and Continuous Professional Development.

(c) Demonstrates effective growing leadership qualities in the classroom and wider school.

2.9.2 Community of Practice

The Teacher:

(d) Is guided by legal and ethical teacher codes of conduct in his or her development as a professional teacher.

(e) Engages positively with colleagues, learners, parents, School Management Committees, Parent-Teacher Associations and wider public as part of a community of practice.

(f) Develops a positive teacher identity and acts as a good role model for students

(g) Sees his or her role as a potential agent of change in the school, community and country.

2.9.3 Professional Knowledge

Essentially, professional knowledge in education can be referred to as the teachers' ability to demonstrate understanding of the curriculum, subject content, pedagogical knowledge and the needs of students by providing relevant learning experiences. Feiman Nemser (2001) notes that knowledge for teaching develops with experience as teachers learn to blend their knowledge of students as learners with their knowledge of content to make concepts understandable. Classroom teaching is a complex activity that demands that teachers should possess substantial thinking skills and a solid knowledge base.

2.9.4 Knowledge of educational frameworks and curriculum

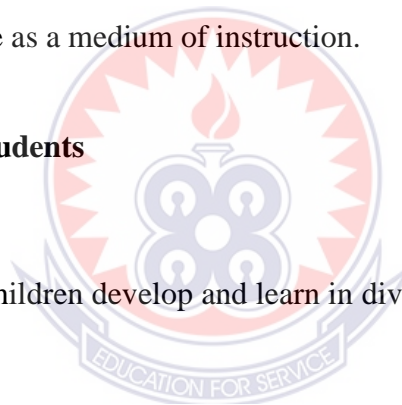
The Teacher:

- (a) Demonstrates familiarity with the education system and key policies guiding it.
- (b) Has comprehensive knowledge of the official school curriculum, including learning outcomes.
- (c) Has secure content knowledge, pedagogical knowledge and pedagogical content knowledge for the school and grade they teach in.
- (d) At pre-primary and primary the teacher knows the curriculum for the years appropriate to multigrade classes; has good knowledge of how to teach beginning reading and numeracy and speaking, listening, reading and writing, and to use at least one Ghanaian language as a medium of instruction.

2.9.5 Knowledge of students

The Teacher:

- (e) Understands how children develop and learn in diverse contexts and applies this in his or her teaching.
- (f) Takes accounts of and respects learners' cultural, linguistic, socio-economic and educational backgrounds in planning and teaching.



2.10 Content Knowledge

According to Shulman (1986), PCK is professional knowledge that teachers build while they are facing the challenge of transforming their subject matter knowledge into a form of knowledge appropriate to the students they are teaching. Pedagogical content knowledge is a form of knowledge that makes creative arts teachers, educationists rather than mere artists. Pedagogical Content Knowledge, to Niess (2005, p.510) is “the intersection of knowledge of the subject with knowledge of

teaching and learning” while Lowery (2002, p.69) argues that it is “that domain of teachers’ knowledge that combines subject matter knowledge and knowledge of pedagogy”.

Teachers differ from scientists, not necessarily in the quality or quantity of their subject matter knowledge, but in how that knowledge is organised and used during teaching and learning. In other words, an experienced art teacher's knowledge of art is organised from a teaching perspective and is used as a basis for helping learners to understand specific artistic concepts. An artist's knowledge, on the other hand, is organised from a research perspective and is used as a basis for developing new knowledge in the field. Shulman (1986, pp. 9-10), as cited by Marissa and Elizabeth (2017) expounded that:

Within the category of PCK I include, for the most regularly taught topics in one’s subject area, the most useful forms of those representations of those ideas, the most powerful analogies, illustrations, examples, explanations and demonstrations – in a word, the ways of representing and formulating the subject that makes it comprehensible to others. PCK also includes an understanding of what makes the learning of specific topics easy or difficult: the conceptions and preconceptions that students of different ages and backgrounds bring with them to the learning of those most frequently taught topics and lessons. If those preconceptions are misconceptions, as they so often are, teachers need knowledge of the strategies most likely to be fruitful in reorganising the understanding of learners, because those learners are unlikely to appear before them as blank slates.

However, Shulman failed to mention the usefulness and roles that environment, relevant tools and equipment, and materials which I call elements or building blocks of

content knowledge, play in the attempt to impart the subject matter to learners to achieve the desired skills and knowledge. Since the creative arts are mostly practical/activity oriented it is worth noting that the above elements are inseparable from the organisation of the content to be delivered. Williams (2012), citing (Kind, 2009; Rohaan, Taconis, & Jochems, 2010), explained the fact that in recent studies of PCK the point is made that expert teachers are not born with PCK, and it is a lengthy process for novice teachers to acquire the bank of skills and new knowledge needed to become professional teachers who are experts in their fields.

Shulman laments over the inability of researchers to ask central questions on *content* in many literature. According to him, the emphasis has always been on how teachers manage their classrooms, organise activities, allocate time and turns, structure assignments, ascribe praise and blame, formulate the levels of their questions, plan lessons, and judge general student understanding. He explained that the missing questions must rather be about the content of the lessons taught, the questions asked, and the explanations offered. He argues further that from the teacher's perspective of development and teacher education, a host of questions arise. Some of these questions may seek the sources of teachers' explanations to the contents. How teachers decide what to teach, how to represent what they teach, how to question students about it, and how to deal with problems of misunderstanding. He adds that the cognitive psychology of learning has focused almost exclusively on such questions in recent years, but strictly from the perspective of learners, and that research on teaching has tended to ignore those issues with respect to teachers. The above questions, therefore, have influenced him and his colleagues to attempt to redress this imbalance through their research program, "Knowledge Growth in Teaching," with the big question "what are the sources of teacher knowledge?"

In recent studies of PCK (Kind, 2009; Rohaan, Taconis & Jochems, 2010), the point is made that expert teachers are not born with PCK, and it is a lengthy process for novice teachers to acquire the bank of skills and new knowledge needed to become professional teachers who are experts in their fields (Williams, 2012). Digesting it a bit further, Dan (2016) as cited by Wahid et al. (2017) in his study explains that art subject matter knowledge is a basic connotation of PCK structure, in which pedagogical content knowledge is converted from subject matter knowledge while art subject matter knowledge is a complete knowledge integration, which can be specified into art culture knowledge (art history, art theory, art criticism) and art skill knowledge. In the context of teaching appreciation of art, teachers need to have good knowledge of this field. In affirmation, Kehk (2013) explained that a teaching approach requires teachers to have a good knowledge base in the subject matter while Koroscik (1993) emphasises 'filling-the-head' approach that gives exclusive attention to expanding the student's knowledge base rarely leads to higher-order understanding in teaching and learning processes in art.

According to Mir (2013), the pedagogical strategies in India classrooms are teacher-directed and guided instruction with minimum use of the play-way method, learning-by-doing and the activity-based method. Yancy (2013) states that in Singapore, teachers demonstrate more content knowledge than pedagogical knowledge, and rote learning remained the most predominant pedagogy, compared to learner-centred pedagogy. A study conducted in Nigeria by Igbokwe (2010) observes that several teachers still use the old style of teaching strategies in which the teacher is in charge of content knowledge and makes the decision on what a student should do.

Amosa, Folasayob and Oluwatoyinc (2015) identify that teachers do not select suitable teaching strategies to be used, let alone plan how to use them for efficient teaching and

learning to take place in the classroom. Kigwilu (2014) in a study on pedagogical strategies has revealed that many skill training teachers prefer theoretical teaching over practical aspects of the skill acquisition subjects.

2.11 Practice

Practice, in this context explains the ability of the teacher to display mastery of concepts, knowledge and skills in a particular subject area and topic through organised and well-structured presentations to learners. In other words, it is the application or demonstration of ideas, beliefs or methods, as opposed to theories relating to it as in the principles and practice of teaching. Here, the teacher considers abilities (strengths and weaknesses) and ages of learners. In other instances, the environment, tools, materials, equipment among others can influence the practice or the delivery of the subject matter. The teacher's duty to learners in this regard include but not limited to the following as in encouragement, guidance, creating opportunities for learners to find their own interests and become engaged both socially in dialog with peers and academically in terms of the learning contents in pedagogically supportive ways. I must admit that in as much as teachers endeavour to perform their duties by teaching in schools and in higher education institutions, they need to adapt to the needs of twenty-first century learners and society.

2.12 Assessment

Pedagogical content knowledge and practice of teaching and learning would hardly be achieved in the absence of assessment. Volk (1992) sees assessment as the systematic process of gathering specific evidence of what a student accomplishes. Its principal function in schools is to provide diagnostic information, formal or informal, about pupils' abilities and levels of attainment. The progress and success of PCK and practice

can only be determined through some forms of assessment. Assessment in education refers to the wide variety of methods or roots that educators use to evaluate, measure, and document the academic readiness, learning progress, skills acquisition, or educational needs of students. To Adjayi (2018) *unpublished*, it is the process of collecting, reviewing and using data, for the purpose of improvement in the current performance.

The National Council for Curriculum and Assessment (2018) defined assessment in education as a process for obtaining and interpreting information that is used for making decisions about learners, curricula, programmes and educational policy. The council argues that a number of decisions made about learners' competence are informed by information derived from assessment data. Therefore, assessing a learner's competence entails collecting information from the learner regarding their progress towards attaining the necessary knowledge, skills, attitudes, or behaviours, which is useful in deciding the degree to which the learner has achieved the performance standards. In every organised educational endeavour such as schools where teaching and learning is paramount there is the need to be certain with a number of circumstances and phenomena in terms of progress with regards to the aspirations, philosophy, goals and objectives laid down for the programme along the way. To find these out, therefore, one cannot ignore assessment since that is the surest means of getting such information. From the start through the progressive stage to the end of the stipulated time assessment is key in determining what to do, how to do it and where to do it or go about situations at each stage of the journey. As learning progresses, assessment is used to gather evidence about where the learners are in their learning, so that teaching and learning can be adapted to meet learners' needs. Assessment is again carried out at the completion of developmental activities or units of work to determine the extent of

progress and achievement. Duku (2013) claims that art is a creative and silent way that helps children to express themselves unequivocally. However, various interpretations are assigned to a work of art by various people. Reyner (2006) as cited by Duku (2013) declares that children's art is many things to many people. In a further explanation Duku argues that there are differences seen in the assessment approach adopted by teachers which may greatly enhance the development or withdrawal of the child's artistic talents, and that the assessment of art at the foundational levels of the basic education in Ghana is difficult and full of subjectivities and biases. He continued by indicating that the study of art at the basic levels of education in Ghanaian institutions prior to the Education Reform in 2007 has been absent from the official curriculum or subsumed under other subjects. This adversely affected two sets of early childhood teachers who now face the challenge of adequately understanding and interpreting the child's expressions in the form of art. According to him:

The first sets of early childhood teachers are those who may not have had the opportunity of developing their artistic talents and are now made to teach and assess art at the Kindergarten (KG) or the primary level which is the harp of spontaneous expression of the child's art work. They may misinterpret children's art expression and may not also be sensitive to the unique qualities of tools' marks made on their artistic expressions. The other category is the art specialist early childhood teachers. They are endowed with the skills and the abilities in the technicalities of media and the production of art. Nevertheless, this knowledge is not translated in the assessment of developmental and spontaneous artistic expression of the child.

Some interesting features about assessment are that it is *diagnostic* - it provides feedback on performance which helps to identify areas for improvement, formative – it

is process oriented based on observation with regards to strengths and weaknesses and summative – product oriented based on the level of quality as per set standards. It is therefore worthy to note that educational assessment can be done before, during and after a programme or course of study.

Assessment is integral to the teaching–learning process, facilitating student learning and improving instruction, and can take a variety of forms. Both teachers and learners can be assessed along the teaching and learning journey. Classroom assessment is generally divided into three types: assessment **for** learning, assessment **of** learning and assessment **as** learning.

2.12.1 Assessment *for* Learning (Formative Assessment)

The philosophy behind assessment for learning as explained by McNamee & Chen (2005, p. 76) is that:

“Assessment and teaching should be integrated into a whole. The power of such an assessment doesn't come from intricate technology or from using a specific assessment instrument. It comes from recognizing how much learning is taking place in the common tasks of the school day – and how much insight into student learning teachers can mine from this material.”

Assessment **for** learning is on-going assessment that allows teachers to monitor students on a day-to-day basis and modify their teaching based on what the students need to be successful. This assessment provides students with the timely, specific feedback that they need to make adjustments to their learning.

To Burns (2005, p. 26),

“After teaching a lesson, we need to determine whether the lesson was accessible to all students while still challenging the more capable; what the

students learned and still need to know; how we can improve the lesson to make it more effective; and, if necessary, what other lesson we might offer as a better alternative. This continual evaluation of instructional choices is at the heart of improving our teaching practice”.

2.12.2 Assessment of Learning (Summative Assessment)

Assessment **of** learning is the snapshot in time that lets the teacher, students and their parents know how well each student has completed the learning tasks and activities. It provides information about student achievement. While it provides useful reporting information, it often has little effect on learning.

2.12.3 Assessment *as* Learning

Assessment **as** learning develops and supports students' metacognitive skills. This form of assessment is crucial in helping students become lifelong learners. As students engage in peer and self-assessment, they learn to make sense of information, relate it to prior knowledge and use it for new learning. Students develop a sense of ownership and efficacy when they use teacher, peer and self-assessment feedback to make adjustments, improvements and changes to what they understand.

Table 2.1: Comparing Assessment *for* Learning and Assessment *of* Learning

Assessment <i>for</i> learning (Formative Assessment)	Assessment <i>of</i> Learning (Summative Assessment)
Checks learning to determine what to do next and then provides suggestions of what to do—teaching and learning are indistinguishable from assessment.	Checks what has been learned to date.
Is designed to assist educators and students in improving learning.	Is designed for the information of those not directly involved in daily learning and teaching (school administration, parents, school board, Alberta Education, post-secondary institutions) in addition to educators and students.
Is used continually by providing descriptive feedback.	Is presented in a periodic report.
Usually uses detailed, specific and descriptive feedback—in a formal or informal report.	Usually compiles data into a single number, score or mark as part of a formal report.
Is not reported as part of an achievement grade.	Is reported as part of an achievement grade.
Usually focuses on improvement, compared with the student's “previous best” (self-referenced, making learning more personal).	Usually compares the student's learning either with other students' learning (norm-referenced, making learning highly competitive) or the standard for a grade level (criterion-referenced, making learning more collaborative and individually focused).
Involves the student.	Does not always involve the student.

Assessment Consortium, 2003), p. 4. Used with permission from Ruth Sutton Ltd. Consortium, *Refocus: Looking at Assessment for Learning* (Edmonton, AB: Alberta
Adapted from Ruth Sutton, unpublished document, 2001, in Alberta Assessment

2.13 Assessment principles

2.13.1 Learning and development

It is evident in many researches and theories that learning and development are inseparable. This assertion therefore necessitates the need to assess both the process and product of teaching and learning. Geoff (2013) articulates that assessment begins from birth through to adulthood. He further opined a number of principles which reflect the purpose and meaning of effective assessment from birth to adulthood.

2.14 Foundational principles of assessment

2.14.1 Principle 1:

Since learning and development are continuous or lifelong process:

Assessment should be on-going and based on a continuum of learning /development. Learning and development are maximised when opportunities are matched to current readiness, building on what has already been experienced, learning and developed.

2.14.2 Principle 2:

Assessment should provide information where individuals are in their learning and development, and inform practitioners in planning and delivering progressive learning opportunities. Emotions, beliefs and relationships play a crucial role in learning and development.

2.14.3 Principle 3:

Assessment should build positive attitudes and self-confidence in children, young people and learners by assisting them to see what they have achieved and the progress they are making. Feedback and reflection are important elements of effective learning and development.

2.14.4 Principle 4:

Assessment should promote further learning and development when combined with constructive feedback and opportunities for reflection. It should enable individuals and appreciate the progress that they have made and recognise that they are being successful in their learning. Learning and development is advanced with opportunities, support and engagement within families and partnership with practitioners.

2.14.5 Principle 5:

Approaches to assessment should maximise collaboration and sharing of knowledge between families and practitioners, to allow all parties to support and participate in children and young people's learning and developments.

2.15 Assessment and the learning continuum

Learning occurs in a continuum from birth to adulthood and through life. Assessment of where a child is at this learning continuum enables the practitioner, learner and family to understand what knowledge, skills and understandings the child has developed so far and to plan an appropriate learning programme to further learning, Geoff (2013). He added that insights into learning have revealed that research in the field of neuroscience and cognitive sciences have provided insight into the capacity of the brain to learn continually throughout life. Learning occurs continually and incrementally along the learning continuum. The rate and pace of learning along the continuum is not fixed and constant; there may be plateaus and even setbacks and that different children learn at different rates. The Victorian early Years Learning Development Framework (VEYLDF) describes five outcomes for children from birth to 8 years. The Framework recognizes that every child will take a unique path to the

five Outcomes and that all children will require different levels of support, some requiring significantly more than others.

He suggests that for practitioners to provide the learning opportunities that promote excellent progress along the learning continuum, it is helpful to assess where the child is at their learning and development and what progress they have made so far. This assessment enables the practitioner to understand what the child has learned and determine what the child needs to learn next. They can then set goals for further improvement, design a learning and development program in collaboration with the learner and their family and

2.16 Drawing

Drawing is the art or technique of producing images on a surface such as paper, wood, wall, fabric, human skin, plastic among others with the use of pencil and pen of all kinds, charcoal, ink and crayon among many others. Drawing is an artistic creation which is the linear rendition of objects in the visible world, as well as of concepts, thoughts, attitudes, emotions, and fantasies given visual form of symbols and even of abstract form.

Adom (2017) explains that drawing is the art of representing an idea or event in a medium such as pencil, crayon, pastel or brush with colour. Reference can be made from the prehistoric era where people without any form of writing used this medium to record events and to break language barriers. Thus, drawing is the bedrock of art and communication. These drawings could be abstractions or realism.

Drawing, to Marion (2018) is simply about leaving a visible mark with a tool. He went on to say that drawing is the outward physical manifestation of the inborn urge to create

and communicate and is a basic skill used in all the visual arts and design. In the same perception he asserts:

A classic drawing is an artwork created from lines or areas of tone created with a drawing instrument such as a graphite pencil, charcoal, coloured pencil, silverpoint, eraser, dry pastel, or another dry medium on a piece of paper. In a broader definition of the term, a drawing is a two-dimensional artwork created from lines or tone that is dominated by a dry medium but can include wet mediums such as ink, and washes of paint.

Drawing is the means where mark making not only plays a part in forming things visually, but also transfers energy from the artist to the image, something a machine cannot do. The static forms of a machine-made image aren't the same as the breath we find in hand-made art. But drawing isn't really mark-making either, nor is it the same thing as design or composition. Lines with different characteristics can be used in drawing with the use of different kinds of media on varied surfaces or supports. A burnt stick was one of the first drawing tools, used in primitive cave paintings in locations such as Lascaux.

Drawing is a form of communication that preceded writing and continues to serve as another form of communication. Drawings can do amazing things. They can tell stories, educate, inspire, reveal, entertain and inform. They can also describe appearances, offer commentary, convey drama and relate history. Children begin to make marks as soon as they can hold writing or drawing tool. In recent years, however, better and more sophisticated tools have been adopted as tools for drawing. They range from graded graphite pencils to charcoal, crayons, colour pencils, pens of all kinds and sizes, brushes

of different sizes etc. Sometimes sharp and pointed tools are used to create meaningful marks on surfaces.

Drawing plays a big role in our cognitive development. It can help us learn to think and write creatively, develop hand-eyes coordination, hone analytic skills, and conceptualise ideas.

But drawing is rarely used as a tool for learning in schools. Generally, most high school teachers are not trained in visual education. Notably in recent years, various artistic experimentations using more methods and materials and sometimes mixing of media have blurred the differences between drawing and painting. Currently one can draw with a paintbrush to achieve painterly effects with drawing media such as water-soluble crayons and pencils. Generally, a drawing is considered to be a work of linear marks or tones on paper, regardless of the actual medium or technique, but the *act* of drawing can occur on any support, and drawing is an important part of painting, whether you paint representationally or abstractly.

Drawing is done with the help of a number of what the researcher terms as *ingredients*, without which features of objects cannot be represented accurately. These elements are referred to as *elements* of arts which include line, shape, colour, value, texture, space, and form. These elements are always organised artistically by a set of principles on the surfaces where the drawings are done. The principles, on the other hand, include harmony, repetition, contrast, balance, dominance among others. Understanding the concepts and the application of these principles and elements of art, are keys to meaningful drawing in communicating ideas and thoughts appropriately.



(Boateng 2021)

Figure 2.1 (a): Some drawing tools and materials

Drawing in its fullness, therefore, is inevitable in the world of arts. The role of drawing in planning and designing in visual arts is equivalent to the blood that keeps humans and other living creatures alive, without which there is virtually no life.

2.16.1: Purposes of Drawing

There are many uses of drawing. Aimone and Steven (2019) have explained that: Drawing is a form of communication that preceded writing and that continues to serve as another form of communication. "Drawings can do amazing things. They can tell stories, educate, inspire, reveal, entertain, and inform. They can describe appearances, offer commentary, convey drama, and relate history. Arrangements of line and mark can speak of things visible, imaginary, and even invisible." Furthermore, from concept to completion, drawings are the mainstay of all things designed by humans, from the things we view onstage or in theatres, to the objects and buildings of the actual world in which we live.

2.16.2 Types of Drawing

Just as we have different types of painting, there are also different types of drawing, ranging from more representational to more abstract. They can be broken down into three different types: realistic, symbolic, and expressive types of drawing.

2.16.2.1 Realistic Drawing

Realistic drawing is what most people think of when they think of drawing - capturing what we see with our eyes and representing the three-dimensional world onto a two-dimensional surface using the *elements of art* such as line, shape, colour, value, texture, space, and form. People have long valued the ability to be able to reproduce through drawing their environment and surroundings, and this is how drawing is generally taught. Many artists keep sketchbooks for that purpose, either as studies for bigger works and paintings or as finished artworks in their own right. Indeed, this is an important type of drawing and involves learning how to see and how to accurately transfer what you see onto a two-dimensional surface.

2.16.2.2 Symbolic Drawing

Symbolic drawing is actually much more common than you might expect. If you can write your name you are using symbolic drawing. The letters or marks you make stand for your name. Paul Klee (1940) was an artist who used a variety of symbols— a shorthand notation of lines, marks, or shapes that stand for something else—in his paintings and drawings. You can create your own symbols and use them within a composition. Symbolic drawings can still be recognizable as the object or event they represent but in a simplified, more graphic form.

2.16.2.3 Expressive Drawing

Expressive drawing often communicates ideas or emotions that are not visible or tangible. Expressive drawings may capture movement and energy, feelings, memories, or even the spiritual realm. Gesture drawings can be quite expressive, capturing the energy of a figure's movement, or the delicate motion of a flower.

The distinction between these different types of drawing is not always distinct and a single drawing can incorporate any or all three of these modes. For example, a gesture drawing, while being representational might also be quite expressive - but one mode will generally be dominant.

The drawing process, itself, is meditative, enriching, and edifying. When you are drawing something, you become absorbed in the process of drawing, and come to know your subject through truly seeing it.

2.16.4 Basic elements of drawing

All forms of drawing activities depend on some basic elements (ingredients). Ideas and concepts are well articulated through the organisation of these basic elements on surfaces. These basic elements include lines, space, dots, shapes, texture, colour, value and value.

2.16.4.1 Line

A line can be referred to as a continuous mark (path) which is created by any object by way of movement, either visible or implied. In drawing, therefore, a line is created when marking tools such as pencils, pens, brushes etc move from one end to another on surfaces like paper, wall, canvas, wood among many others.

Line, according to Adom (2014) is the moving point of a marking tool such as a pencil which creates a path of connected dots on paper. He further explained that a line is an element of art that refers to the continuous mark made on some surface by a moving point (pen, pencil, etc.), and a painting technique in which importance is placed on contours or outlines. This path of connected dots or marks left by a moving point is referred to as a line. Sarpong (2019) sees a line to be a continuous mark made by the moving point of a tool. In the same way a line can be defined as the path of dots through space. This indicates that it takes movement to create a line. Examples of lines in the natural and man-made environment include leaves and branches of trees, rivers, the contours of a bird, outlines of electrical gadgets like Television sets, speakers, computers etc. A skilled artist uses lines to control the movement of the viewer's eyes. Lines may have interesting effects on a viewer by leading his/her eyes into, around and out of visual images in an artwork. One of the most fundamental elements of art is the line. An important feature of a line is that it indicates the edge of a two-dimensional (flat) shape or a three-dimensional form. A shape can be indicated by means of an outline and a three-dimensional form can be indicated by contour lines.

Line is fundamental to drawing. It has length and width and can be dark or light. Line also has many characteristics which are used to express varied moods, concepts and other forms of communicative ideas. Many drawing techniques focus on line and how to use it. Artists manipulate line quality in drawings by pressing down on the pencil or using a lighter touch to vary line thickness. They also use combinations of **H** and **B** pencils for contrast.

Methods of drawing with line include **contour drawing**, done only with outlines. Mitter & Howze (2007) mention outline drawing while suggesting light and shade in

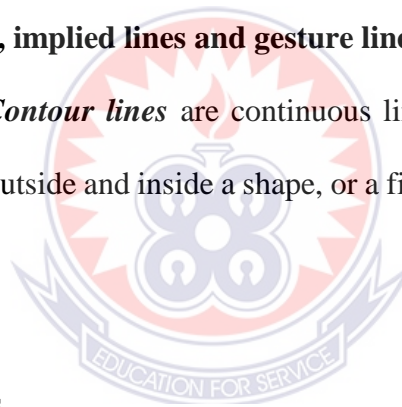
relation to Vincent van Gogh who regarded line as the underlying factor in drawing. They claim that Vincent adopted contrasting lines to balance light and dark values to produce unified and appealing drawings that showed a wide variety of textures, defined space and identified shapes.

When making a contour drawing, you don't worry about dark and light areas. Just draw the image using the point of your pencil to create a line. This is how most people begin drawing, with outlines.

2.16.4.2 Types of line

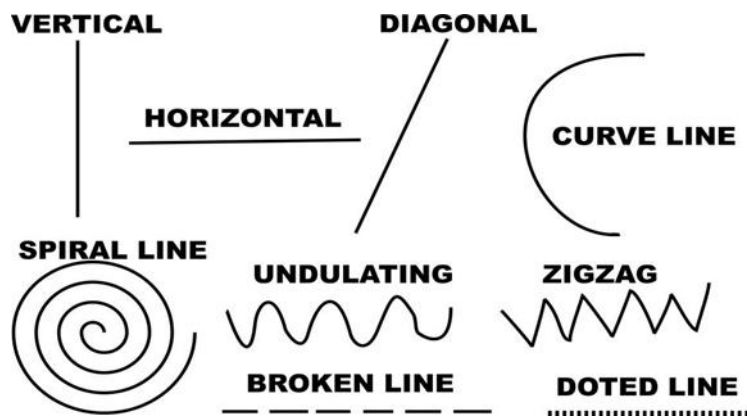
The types of line are **contour lines, continuous lines, parallel or cross-hatching lines, decoration lines, implied lines and gesture lines.**

As indicated above, *Contour lines* are continuous lines that define the outline of a shape. They can exist outside and inside a shape, or a figure and are often referred to as line art.



2.16.4.3 Kinds of lines

Lines, being so fundamental and important in drawing, painting and decorating, are of about five different kinds which play very important roles in the world of drawing. Many fields of life make use of these lines for different purposes. Some of these lines include Vertical, Horizontal, Diagonal, Zigzag and Curved lines. In their application to drawing, however, they may portray certain characteristics to be *thin, broad, thick, narrow, short, and long* among others. In the same way variety can be made from lines. They include Length, Width, Weight, Texture and Style.



(Boateng 2021)
Figure 2.1 (b): Some examples of lines

2.16.4.4 Techniques of Drawing Using Line

When you pick up your pencil and put the point on paper, odds are you'll use it to make a line.



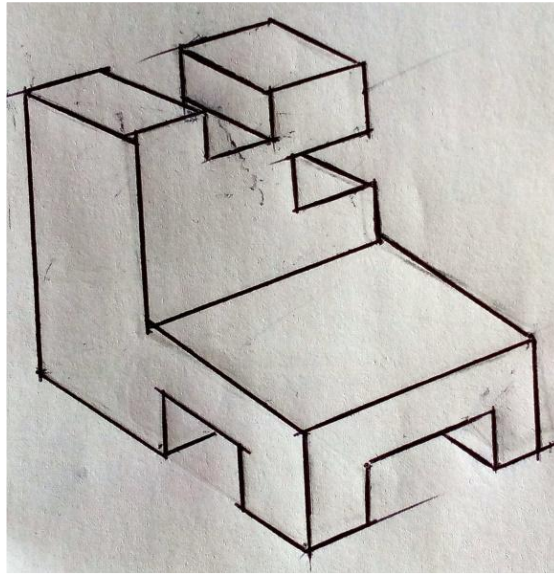
(Boateng 2021)
Figure 2.2: Contour or line drawing (Figure drawing)

Another significance of contour drawing is seen in the diagrams and illustrations in tools and equipment found in the technical or technological world, science laboratories, operational manuals for electronic gadgets etc. Most creative arts subjects or Basic

Design and Technology (BDT) depend so much on contour or line drawings. **Line art** or **line drawing** is any image that consists of distinct straight or curved lines placed against a (usually plain) background, without gradations in shade (darkness) or hue (colour) to represent two-dimensional or three-dimensional objects. Line art can use lines of different colours, although line art is usually monochromatic.

Typical examples may include Pre-Technical skills, Clothing and Textiles, Food and Nutrition, Jewellery, Leather arts among others, and are represented in two-dimensional forms. When solidity and perspective is needed in an image the technique of *shading* is applied. This is where the combination of elements of art (drawing) is used. Shading in drawing is a concept of turning line drawings which are considered two-dimensional; without mass and distance around them (normally on flat surfaces) into solids, also referred to as three-dimensional objects on flat surfaces. When shading is appropriately applied to drawings it creates the feelings of mass, length and distance (depth) such that one feels like picking the drawn objects or being able to go round it even on a flat surface, which is also referred to as perspective.

Some examples of line drawings in some BDT subject areas include:



(Boateng 2021)

Figure 2.3: Line Drawing (Technical Skill/Drawing)



(Boateng 2021)

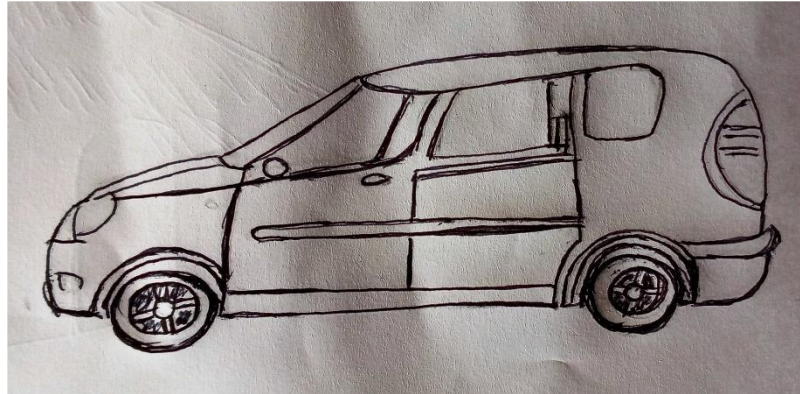
Figure 2.4: Line drawing (Clothing and Textiles)



(Boateng 2021)
Figure 2.5: Line drawing (Home Economics)



(Boateng 2021)
Figure 2.6: Architectural drawings



(Boateng 2021)

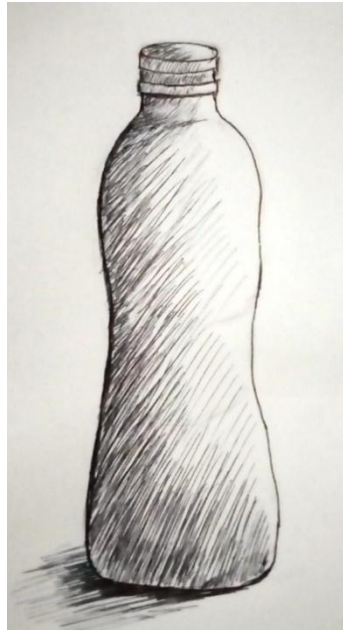
Figure 2.7: Line drawing in Engineering

2.17 Shading

Shading is a process in drawing where value is added to shapes to create the illusion of form, space and the effect of light on the drawn objects on flat surfaces. Mattia (2009) describes shading as critical art work, except abstract art because it is shading which establishes value (lights and darks) in drawings. Shading is an art where a dark effect is added to a drawn object to bring out its form (Steve K. 2012. p.69). Shading techniques are the best way to introduce dimensions into drawing. This activity helps two-dimensional drawings to look three-dimensional on flat surfaces. In order to communicate mass, volume, space and depth, shading is key to achieving these concepts. There are a number of shading techniques used in drawing. Some of these include mass shading, hatching, cross-hatching, pointillism or stippling etc.

2. 17.1 Hatching

It is a shading technique where parallel lines are created to demonstrate tonal values on a shape on a two-dimensional surface. Steve (2012) sees hatching as the kind of shading using one set of parallel lines. The lines can be drawn diagonally, vertically or horizontally to achieve the intended purpose of three-dimensionality.

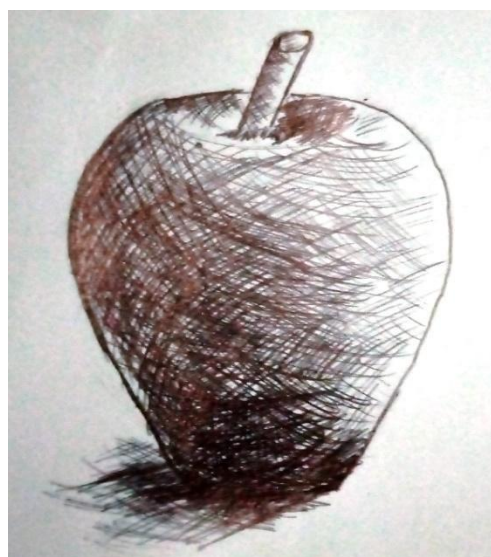


(Boateng 2021)

Figure 2.8: Hatching shading technique

2.17.2 Cross-hatching

This is the use of lines to demonstrate values on a shape in creating a three-dimensional feel on a two-dimensional surface such as paper, wall and wood among many others. According to Adom (2014) it is shaded with two layers of parallel lines, one layer crossing the other at an angle.



(Boateng 2021)

Figure 2.9: Cross Hatching technique

2.17.3 Mass shading/Blending Technique

Mass shading or blending technique of shading is the most common shading technique. It is usually done in smoothly graded values from dark to light such that the tones are gradually blended without distinctive demarcations between the various tones.

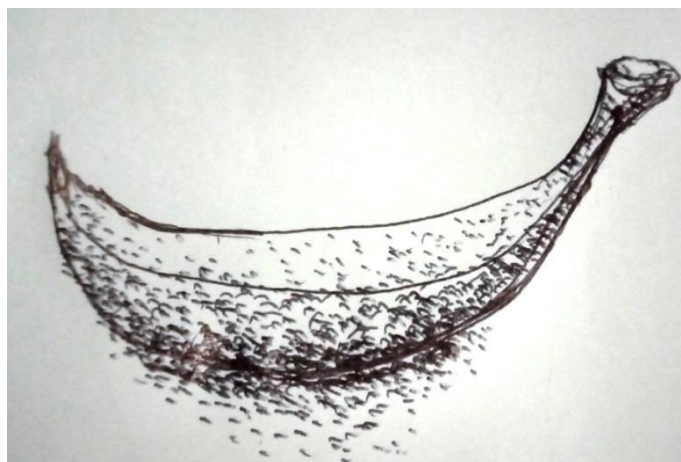


(Boateng 2015)

Figure 2.10: Mass shading /Blending Technique

2.17.4 Pointillism/Stippling

This shading technique is the art of using dots (points) to create values on a shape on a flat surface to render it solid or three-dimensional. Tones are created by the closeness of the dots in given areas on the shapes; the closer dots, the darker the tones while lighter tones are created by placing them farther.



(Boateng 2021)

Figure 2.11: Pointillism/Stippling

Techniques which are related to contour drawing include **continuous line contour drawing**, where you don't pick your pencil up from the surface while you draw. Another method, called **blind contour drawing**, is done by looking only at the subject you are drawing. While creating a blind contour drawing, you don't look at the paper, not even once, while you're working on the drawing until it's completed.

Gesture drawing is another drawing method using lines. In gesture drawing, an artist makes a series of very quick, often timed sketches of a subject to capture the essence of form, shape, or movement. When doing gesture drawings, some artists work on very large sheets of paper to keep their arm relaxed and moving.

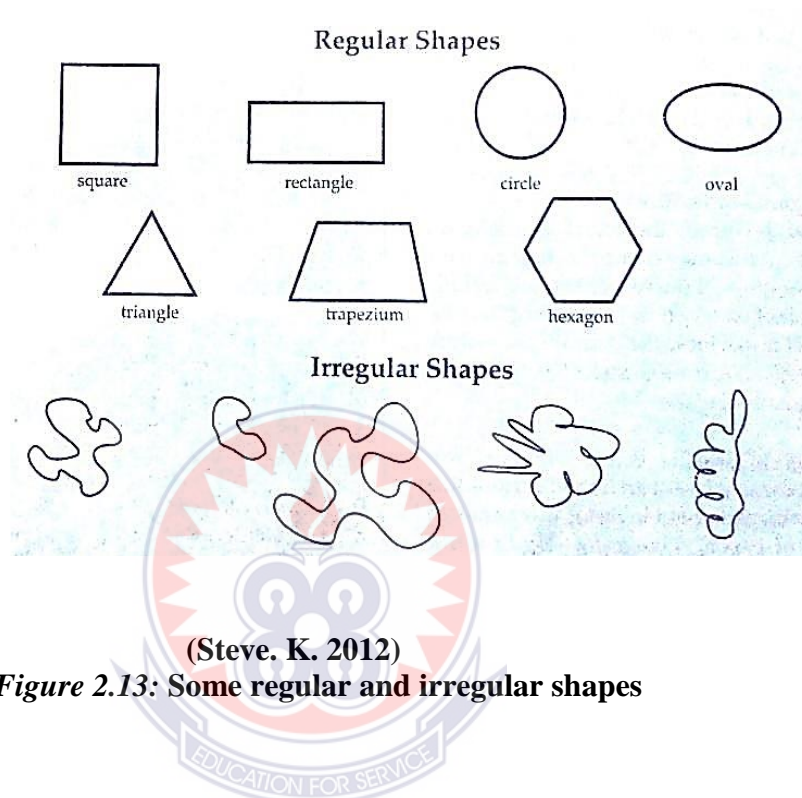


(Annor et al., 2011)
Fig. 2.12: Gesture drawing

2.18 Shapes

A shape is seen to be the outline created by a continuous line which crosses or intersects itself forming an enclosure. According Sarppong (2019), a shape is an enclosed area which may be circular, cylindrical, regular or irregular. Generally, shapes are two-dimensional; they have height and width but without depth. Every tangible object, be it natural or artificial has a particular shape. The shapes of objects can either be regular

or irregular. In drawing however, some objects are represented using a combination of two or more shapes. Shapes therefore, play very vital roles in drawing and designing in all areas of visual arts. Below, are some common basic shapes used in drawing and designing activities.

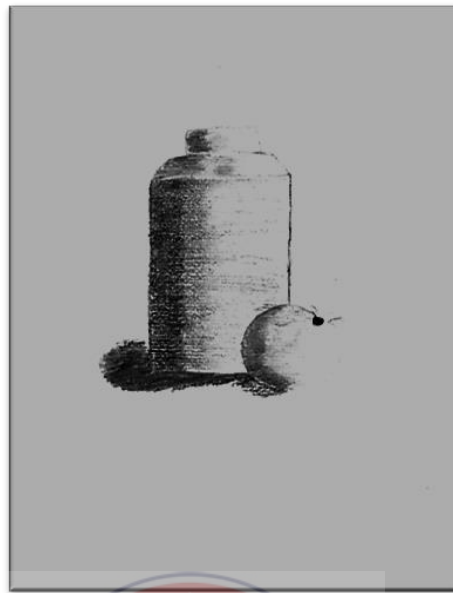


(Steve. K. 2012)
Figure 2.13: Some regular and irregular shapes

2.19 Space

Space is another important variable or element of art which is used in drawing, painting, sculpture and other forms of artistic processes. It takes space to identify one object from the other in the picture plane. It can be seen around, above or inside an object within a drawing on the support. The space, so used, can be seen in two categories in drawing and designing. While one is a positive space (areas occupied by objects), the other is referred to as the negative space (open areas without objects) respectively. Not all, the illusion of distance (depth) in a picture on a flat surface is aided by the technical and judicious use of space. As Shelley (2019) puts it, space, as one of the classic seven elements of art, refers to the distance or areas around, between, and within components

of a piece. She added that “space can be positive or negative, open or closed, shallow or deep, and two-dimensional or three-dimensional.



(Boateng 2021)

Figure 2.14: Positive and Negative spaces in a picture

2.20 Texture

Texture of an object is the physical appearance of its external or internal surface, which can either be seen or felt. Generally, the texture of an object can be rough or smooth depending on its natural or artificial make-up. For example, the surface quality of pineapple is rough while that of an egg is smooth when felt. Therefore this type is said to be *tactile*. However, there are other forms of texture which may look rough but through perception they are identified to be smooth and are referred to as *visual*. Most of these kinds of texture are usually artificial. A typical example is a terrazzo floor having a smooth surface with roughness beneath. Below are some examples of natural and artificial textures.



(Boateng 2021)

Figure 2.15: Tactile surface of tree back (rough)



(Boateng 2021)

Figure 2.16: Tactile surface of clay ware (very rough)



(Boateng. S. 2015)

Figure 2.17: Tactile textured surface of Leather (fairly rough)



(Boateng 2021)

Figure 2.18: Visual textured surface of Formica (smooth)

CHAPTER THREE

METHODOLOGY

3.0 Overview

This chapter outlines the research approach and the research design employed to carry out the study. It also explains the research design and provides a justification for its use. The section also discusses the study variables, target population, accessible population, sampling techniques and sample size. It further discusses instrumentation, data collection techniques, data analysis and ethical considerations.

3.1 Research approach

Research approaches, according to Creswell (2014) are plans and procedures for research that span the steps from broad assumptions to detailed methods of data collection, analysis, and interpretation. There are three different approaches used in research activities. They include qualitative, quantitative and mixed me approaches respectively.

Often the distinction between qualitative research approach and quantitative research approach is framed in terms of using words (qualitative) rather than numbers (quantitative), or using closed-ended questions (quantitative hypotheses) rather than open-ended questions (qualitative interview questions), while mixed methods research is an approach to inquiry involving collecting both quantitative and qualitative data, integrating the two forms of data, and using distinct designs that may involve philosophical assumptions and theoretical frameworks. The core assumption of this form of inquiry is that the combination of qualitative and quantitative approaches provides a more complete understanding of a research problem than either approach alone.

The main approach which was adopted for this research is qualitative. This approach is used for exploring and understanding the meaning individuals or groups attribute to a social or human problem. This process of research involves developing questions and procedures, where data is typically collected in the participant's setting, the data analysis is inductively built from specifics to general themes, and the researcher makes interpretations of the analysis.

3.2 Research Design

A research design is the framework of research methods and techniques chosen by researchers. The design allows the researchers to enhance research methods that are suitable for the subject matter and set their studies up for success.

According to Saunders, Lewis and Thornhill (2012) as cited by Kassah (2019), a research design is a general map of how the researcher intends to go about answering the study's questions. It is the structure of research that outlines what the researcher seeks to find out from the study and how he or she will carry out the study (Muzenda, 2014). The researcher therefore used case study as the research design.

Case study as explained by Shona (2020) is a detailed study of a specific subject, such as a person, group, place, event, organisation, or phenomenon. In addition, case study research design usually involves qualitative methods, but quantitative methods are sometimes also used. Case studies are good for describing, comparing, evaluating and understanding different aspects of a research problem.

There are different types of case studies that are adopted in research processes, each type used for the rationale behind the study. These include Collective case studies Descriptive, Explanatory, Exploratory and Intrinsic case studies.

Case study, being one of the numerous research designs, has some considerable strengths and weaknesses depending on the topic under discussion or study. That notwithstanding, the researcher chose to combine **descriptive, exploratory** and **explanatory** types under the case study over other research designs because the researcher deemed them most appropriate in getting authentic answers to the inquiries into the problem statement and research questions. The data were analysed using simple descriptive analysis.

The following are but a few importance of the use of case study: It

- ❖ Allows researchers to collect a great deal of authentic information from the subject of the study.
- ❖ Gives researchers the chance to collect information on rare or unusual cases.
- ❖ Allows researchers to develop hypotheses that can be explored in experimental research.

Despite some disadvantages such as being labour-intensive, long time in analysing data, attitude of participants influencing data among others, the researcher deemed it most appropriate due to its effectiveness in getting information. Based on the objectives, the researcher employed Case Study under the approach for this research. This research was conducted using research instruments which were deemed most appropriate to gather the data leading to successful analysis and results to answer the research questions. They include semi structured interview, opinionnaire, participant observation and focus group discussion.

3.3 Target Population

According to Alvi (2016), a target population is the group of elements to which a researcher intends to obtain his or her data from. He added that a target population refers to all the elements who meet the particular conditions outlined for a research study. A target population refers to a group of persons with distinctive features in which a researcher wants to study and collect data (Arthur-Nyarko, 2017). The target population is the group of individuals to which the researcher wants to make an inference.

The target population for the study was basic school visual arts students, their teachers and headmasters. They included Teachers of Basic Design and Technology and students in selected Junior High Schools in the Adidome Circuit in the Central Tongu District in the Volta region of Ghana.

3.4 Accessible Population

The accessible population is a consciously selected number of participants out of the target population which would always be available for the researcher to carry out data collection activities. It is also the group that a researcher can actually measure for results and analysis. The accessible population for this study included 92 *Form 3* BDT, students, 4 BDT teachers and four 4 headmasters, totalling 100 from 4 selected Junior High Schools within the Adidome Circuit of the Central Tongu District in the Volta region. They include Comboni Roman Catholic Junior High School, Evangelical Presbyterian Church Junior High School, Methodist Junior High School and GLOBSERVE Junior High School.

3.5 Sampling and sampling Technique

The method by which a sample is obtained from a population is called sampling (Alvi, 2016). For the sake of convenience and easy accessibility, 100 participants constituted the sample size for the study using convenience sampling technique. Convenience sampling is selecting participants because they are often readily and easily available. Typically, convenience sampling tends to be a favoured sampling technique among learners in schools as it is inexpensive and an easy option compared to other sampling techniques (Ackoff, 1953). Convenience sampling often helps to overcome many of the limitations associated with research.

Census Sampling was used as the main sampling technique based on the specific objectives of the research. Census sampling is defined as a systematic method of collecting and recording data about members of a population. Census sampling is a non-probability sampling deemed most appropriate, commonly used in qualitative research where all sampled participants take part in the data collection process. This happens when all the members of a sample population are analysed and results are used to generalise opinions or phenomena about a larger group with respect to well defined characteristics (UNECE, 2000). In this research all members of the sampled population were engaged for information. The statements and questions were closed-ended with few open-ended ones which would allow participants to express their views.

The rationale behind this research is to have a reasonable knowledge about the artistic deficit regarding drawing in basic school BDT learners and the pedagogical content knowledge and strategies or skills used by their teachers in teaching Creative Arts as a subject using Descriptive Case Study in some selected basic schools in Adidome Circuit in the Central Tongu District in the Volta Region of Ghana. This notwithstanding, the

researcher employed a few of the strategies used in action research. These include verbal interview, opinionnaire, observation and primary data from students' work books.

This study focused on **Form 3** students from **4** different Junior High Schools, **4** Basic Design and Technology (BDT) teachers in addition to **4** headmasters from the selected schools (Comboni R. C. Junior High School, E. P. Junior High School, Methodist Junior High School and GLOBSERVE Junior High School) in the Adidome Circuit in the Central Tongu District in the Volta region of Ghana. A total number of 92 J.H.S 3 students, 4 creative arts teachers and 4 headmasters from the selected school making a sum total of 100 was the sample size. The researcher used typical case purposive sampling technique as it is seen to be most appropriate for his own judgement from the selected population. It is worth noting that the respondents (students) to the opinionnaire are teenagers within the ages of **13** and **15** years who may not necessarily be fully aware of the importance of the exercise or the need to be objective in their choice of answers to some of the questions posed on the sheets. The **92** respondents were made up of **55** males and **37** females, all being adolescents. That notwithstanding, the researcher had to explain a few of the issues and concepts to them before the start of the exercise as the researcher became a partial member of their classes, making them to feel relaxed and to freely express themselves before, during and after each lesson or activity period. This provided the opportunity for the researcher to gather authentic and reliable information through observation and partial participation for the study.

In addition, since all participants are expected to take part in the study, Census sampling technique was used for the recruitment of participants for this study. It involves selecting research participants according to the needs of the study (Glaser & Strauss;

Morse, 1991) in that researchers choose participants who give a richness of information that is suitable for detailed research (Patton, 1980). The selection criteria for inclusion was teachers, students and headmasters in their respective fields who could articulate their experiences as they relate to the situation being investigated—providing information on the pedagogical content knowledge and practice of Basic Design and Technology teachers.

3.6 Research Instruments

A research instrument is considered as a medium, tool or a channel used to gather and measure data or information which relate to a researcher's interest. Anything that becomes a means of collecting information for your study is called a 'research tool' or a 'research instrument', for example observation form, interview schedules, opinionnaire, questionnaires and interview guides (Ranjit, 2011). The following areas of life normally use these media in gathering data. They include education, health sciences and social sciences to assess students, teachers, patients, clients and staff, and even worrying situations within our societies. The research instruments used in this research includes *interviews, opinionnaire, observation and focus group discussion*.

Also, the research instrument is usually determined by the researcher based on his or her study's methodology. These instruments were carefully chosen for this research due to their ability to produce valid and reliable information on the topic.

The following constituted the instruments for the research:

- ❖ Semi structured Interview
- ❖ Opinionnaire
- ❖ Participant observation
- ❖ Focus group discussion

3.6.1 Interviews

Interviews are the interactions where verbal questions are posed by an interviewer to elicit verbal responses from an interviewee. Interview is one of the very important data gathering techniques which deal with verbal communication between the researcher (interviewer) and the interviewee. According to Rowley (2012), interviews are face-to-face oral interactions in which one individual, the interviewer, tries to obtain data from and gain comprehension of other individuals; the interviewee. Interviews are commonly used in survey designs and in exploratory and descriptive studies. Creswell (2014) explains the interview as a qualitative data gathering technique with the intention of finding out the experiences, understandings, opinions, or motivations of participants. To Cohen and Manion (2006) as cited by Kassah (2019) an interview is a talk between two or more people that is instigated by the interviewer for the intention of obtaining research data. There are a range of approaches to interviewing. These include a completely *unstructured* one in which the subject is allowed to talk freely about whatever he or she wishes, and a highly *structured* one in which the subject's responses are limited to answering direct questions and recorded using a standardised procedure.

The semi-structured interview guide which is made up of eleven questions was used for each BDT teacher. Similarly, the headmasters were taken through the interview process to elicit their views and experiences on the statements and questions for data collection (Appendix D). Both teachers and headmasters were taken through verbal interactions at different days, times and locations individually based on the interview questions which were designed to get answers to the research questions. While the teachers were met either under shades of trees on their school compounds or staff common rooms, the headmasters were engaged in their various offices. All the responses given by each of

the respondents were written down against their respective questions and analysed descriptively.

3.6.2 Opinionnaire

An opinionnaire, according to the American Psychological Association online Dictionary (2022) is a type of measure for assessing the attitude or beliefs of an individual about particular topics. It explained further that opinionnaire comprises a list of various statements or questions that the respondent is asked to endorse or reject. The Merriam-Webster Dictionary (2022) defines it as a questionnaire designed to elicit views on matters of opinion from which generalisations may be drawn. Opinionnaire is a research instrument used to collect the opinions of a sample population on certain facts or factors of a problem under study. It consists of a series of questions or statements for the purpose of gathering information from respondents. They are usually carried out face to face, by telephone, computer or post (McLeod 2018). Opinionnaires have been identified to be effective in obtaining relatively easy, quick and efficient information from small or large samples of people (groups). However, a problem with Opinionnaire is that respondents may lie due to social reactant effect or desirability. Most people want to present a positive image of themselves and so may lie or bend the truth to look good, e.g., pupils would exaggerate in situations where they think conditions may not be in their favour therefore concealing vital information from the researcher.

This, notwithstanding, opinionnaire can be an effective means of measuring the behaviour, attitudes, preferences, opinions and intentions of relatively large numbers of subjects more easily and quickly than other methods. Often, opinionnaire uses both open and closed statements, or questions to collect data. This is beneficial as it means both quantitative and qualitative data can be obtained.

The researcher agrees with the above assertions and theories, hence the adoption of opinionnaire for this study. It was therefore used in getting the views and experiences from students, teachers and headmasters for the third objective which sought to ascertain the assessment techniques used in assessing learners' learning outcomes (Appendix B, C and D). The semi-structured questions on sheets of paper were given out to each participant to express their opinions on the various questions regarding the research questions. The opinions so expressed were collated, sorted and tabulated (Table 4.1). Information from *table 4.1* was translated into percentages (Table 4.2).

3.6.3 Observation

It is a systematic data collection approach which allows a researcher to be part of a process involving a group of people over a period for the purpose of getting information for analysis. Observation, as the name implies, is a way of collecting data through observing. Observation data collection method is classified as a participatory study, because the researcher has to immerse herself in the setting where her respondents are, while taking notes and/or recording (Dudovskiy, 2022). It is also seen as a method in which the researcher records the behaviour patterns of the populations, items and occurrences without communicating with them (Swamy, 2014). There are two types of observation. They include participant observation and non-participant observation. In participant observation, the researcher takes part in all the activities being performed by the participants whilst examining and keeping records in order to experience the occurrence under study (Anum, 2017). On the other hand, in non-participant observation, the researcher only observes and records the activities without any participation (Zohrabi, 2013).

For detailed information on the three objectives, this study employed structured observation as a data collection method due to its advantages. Some advantages of structured observation data collection methods include direct access to research phenomena through first-hand experience, high levels of flexibility in terms of application and generating a permanent record of phenomena to be referred to later, among others. However, the observation method is disadvantaged with longer time requirements, high levels of observer bias, and impact of observer on primary data, in a way that presence of observer may influence the behaviour of sample group elements, a situation that is referred to as social reactant effect.

During the entire research period the researcher continually took note of proceedings before, during and after each drawing lesson. Keen attention was on the teaching process while key information which were deemed relevant to answering the research questions were documented in the form of field notes. The data was later coded to generate themes according to the research questions which were analysed descriptively. Worthy to note, that strict ethical issues were fully applied where the consent of the research participants was sought and informed consent forms were duly signed before the commencement of the study.

3.6.4 Focus Group Discussion

Focus group discussion (FGD) is a facilitated discussion, held with a small group of people who have specialist knowledge or interest in a particular topic. It is used to find out the perceptions and attitudes of a defined group of people. Focus group discussions are qualitative data gathering tools, and they are used to generate qualitative insights or produce direct quotes that can represent the views of the group concerned (INTRAC, 2017). The discussion was aimed at getting the views of students about the content

knowledge, the practical explanation or presentation of the content and the mode of assessment of students' drawings by their BDT teachers.

The researcher adopted the focus group discussion as one of the instruments for data collection. In getting authentic information to be analysed to answer the research questions based on the three research objectives.

In conducting this focus group discussion, certain principles were followed. These include developing a set of questions or discussion guide based on the three research objectives and questions, identification of groups and participants for the discussion, location for the discussion, selection of two facilitators for each group to moderate and record salient points that emanated from the discussion, decision on timing, conduction of the discussion and finally analysing the data descriptively to draw conclusions. In all, four different groups of 12 participants each took part in the process on their school compounds at different times and days since they found these locations most convenient for them.

Worthy to note, that all necessary principles guiding the process were duly followed with all the groups. In addition, the same semi-structured questions were utilised for the data collection (Appendix E).

3.7 Data Analysis Plan

Data analysis summarises collected data. It involves the interpretation of data gathered through the use of analytical and logical reasoning to determine patterns, relationships or trends. It is the most crucial part of any research. The main purpose of data analysis is to find answers to specific questions.

Data analysis plan, on the other hand, is the roadmap for how survey data will be organised and analysed by a researcher which will help in getting answers to the research questions based on the objectives of the research.

For the purpose of this research the researcher employed data collecting tools such as interview from the four (4) BDT teachers and their headmasters, opinionnaire from the teachers and ninety-two (92) students, participant observation and focus group discussion with four (4) groups of twelve (12) participants each. The responses from the opinionnaire from students were tabulated (Table 4.1) after which they were translated into percentages (Table 4.2). Information from *tables 4.1* were descriptively interpreted and analysed with pictorial representations in bar charts while *table 4.2* was interpreted descriptively only. Not all, the interviews with teachers and headmasters were also interpreted and analysed descriptively (Table 4.3 and 4.4). The data collected from the study with the various instruments were meticulously organised and analysed based on the research objectives in getting authentic answers to the research questions.

3.7.1 Data Analysis

According to Pattanaik (2017, pg. 4), “Analytical tools refer to all the mathematical, statistical, heuristics and algorithms, modelling and simulations and soft computation based on non-physical or non-tangible approaches for problem solving, optimization, data interpretation, decision making and analysis”. Based on the research objectives and questions the data were analysed and interpreted by adopting simple descriptive analysis and statistics. The interviews, opinionnaire, FGD and observations were analysed descriptively while the responses of students to the opinionnaire were analysed with pictorial representations - statistics in *Microsoft Excel* using bar charts.

Since the study is qualitative in nature, the researcher deemed the above analytical tools most appropriate due to the fact that they are able to help in articulating and eliciting the authentic information from the experiences of the participants, which will then guide the researcher in getting answers to the research questions based on the research objectives.

3.8 Ethical Considerations

According to Twum (2013), there are four (4) phases in research principles, namely; preparation, data collection, processing and analysis of data collected and reporting of the outcome. At the start of this study, therefore, the researcher obtained an introductory letter from the School of Creative Arts, University of Education, Winneba that indicated the approved topic for the study as official introduction and was subsequently presented to the headmasters of the four selected Junior High Schools to seek permission in order to conduct interview, opinionnaire, observation and focus group discussion with them and their students to collect data. Permission was subsequently granted with their promises of full support before, during and after the entire process.

In addition, informed consent forms were presented, explained and duly signed by the headmasters and teachers, giving assurance of participating in the research process. During the data collection stage, the interviewer (researcher) limited himself to questions and statements outlined in the interview guide but left room for flexibility. The respondents also had the chance to complete the opinionnaire confidentially in order to secure privacy. Due to ethical consideration issues the researcher referred to the participants and their schools as A, B, C and D (Appendix O).

3.9 Trustworthiness and authenticity

Trustworthiness in qualitative research is one way researchers can persuade themselves and readers that their research findings are worthy of attention (Lincoln and Guba, 1985). From a constructive perspective, they have established four factors of trustworthiness of analysed data (credibility, transferability, dependability and confirmability). In support of the above Stahl and King (2020) have explained that trustworthiness allows readers to have confidence in what the researcher has written about a phenomenon.

Authenticity in research can be explained as the genuineness and credibility of its conduct and evaluation, and that the research is valuable and contributes to the field of study. Also, the credibility of a research asks the compatibility of findings with the realities.

According to Stahl and King (2020, p.26), “one method of promoting credibility is through the various processes of triangulation”. They added that triangulating means using several sources of information or procedure from the field to repeatedly establish identifiable patterns. There are many forms of triangulation for the establishment of the trustworthiness of research. These include but are not limited to methodological triangulation which involves the use of more than one method of collecting or analysing data. Data triangulation is the use of more than a single type of data to establish findings, Investigator triangulation, and the type which is the use of multiple researchers to complete comparative analyses of individual findings, among many others.

However, for this research, being qualitative in nature the data triangulation method was deemed most appropriate. Data from all the opinionnaire, interview, observation and focus group discussion were used for the triangulation.

Based on the instruments used, the data collection methods and the analytical tools employed, one can confidently conclude that the findings are trustworthy, credible and dependable. This is evident in the repeated established identifiable patterns that were revealed through the triangulation process, where the findings (data) from interview guides for both the four headmasters and the four creative arts teachers, the opinionnaire for the teachers and students, and the observation together with the focus group discussion seemed to be producing similar outcomes.



CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.0 Overview

This chapter discusses the findings of the study done on the pedagogical content knowledge and practice of creative arts and BDT teachers from selected basic schools in the Central Tongu district in the Volta region of Ghana. The data is chronologically presented, analysed and discussed with regards to the research objectives.

4.1 Pedagogical content knowledge of art teachers

Based on the instruments used and the responses given by students it is deduced from the opinionnaire that out of **92** respondents **80** agreed to teachers displaying enough knowledge of content, while **12** of them disagreed, giving reasons such as “the teacher talks too fast”, “I don’t understand the words (*vocabularies*) used by the teacher during teaching”, “...I want to do practical work but teacher is always using the mouth to describe the thing”, among many others (Fig. 4.1). The above responses point to the fact that the teachers have the knowledge of the content. What seems to be missing, however, is the proper presentation of the content with regards to the choice of words or vocabularies to the intellectual levels of the students since many of them lamented over their inability to comprehend vocabularies used during teaching.

Table 4.1: Responses to opinionnaire of students studying Creative Arts in basic schools

QUESTIONS	YES	NO	NONE	TOTAL
1	90	2	-	92
2	85	7	-	92
3	60	32	-	92
4	80	12	-	92
5	39	51	2	92
6	67	15	10	92
7	54	38	-	92
8	26	63	3	92

Table 4.2: Responses in percentage to opinionnaire of students studying creative arts in basic schools

QUESTIONS	YES (%)	NO (%)	NONE (%)
1	97.8	2.2	0.0
2	92.4	7.6	0.0
3	65.2	34.8	0.0
4	87.0	13.0	0.0
5	42.4	55.4	2.2
6	72.8	16.3	10.9
7	58.7	41.3	0.0
8	28.3	68.5	3.3

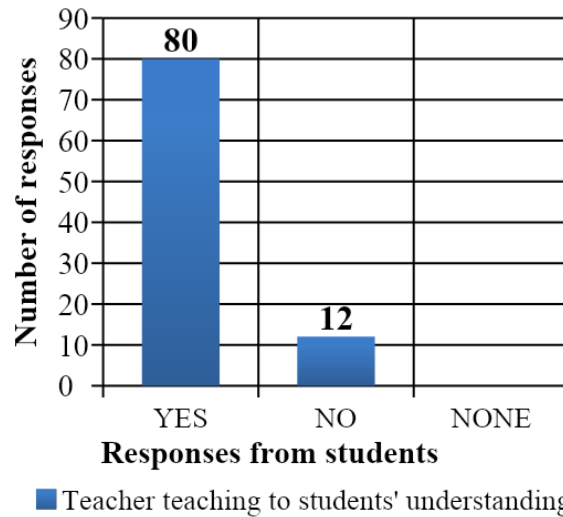


Figure 4.1: *Teacher teaching to students' understanding*

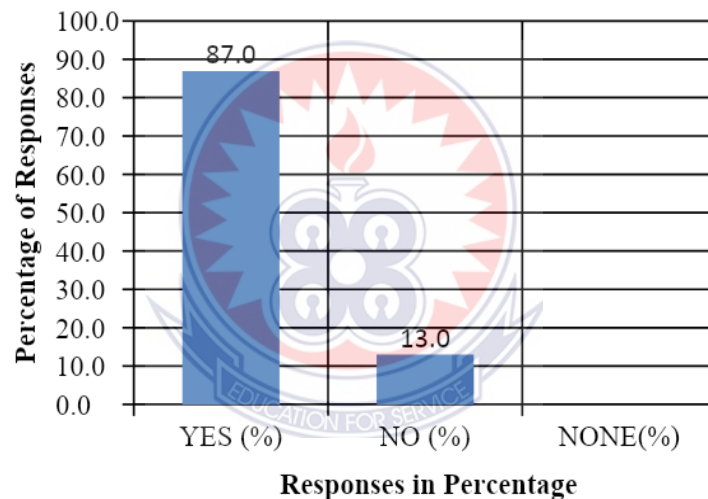


Figure 4.2: *Responses in percentage to Teacher teaching to students' understanding*

Closely related to responses from students on the opinionnaire are the responses given in the FGD from the four groups. Responses from the focus groups were positive but came with varied reservations according to what pertains to the group members in their individual schools. From the discussion, group **A** responded “Yes, to their teacher displaying enough knowledge of the content. However, they added “But, not all the time. Sometimes he rushes”, in the case of group **B**, they said “Yes. The teacher takes

her time to explain the concepts”, then group **C** responded saying “Yes. But we don’t understand some terms” while group **D** said “Yes. But sometimes we don’t get the concepts well”. This confirms the assertion of Shulman (1986) on the importance of studying teacher professional knowledge, and teacher knowledge on subject matter in particular. He sees PCK as a special kind of knowledge possessed by experienced teachers that constitutes a fusion of subject matter knowledge and the pedagogy appropriate for teaching particular topics. He adds that PCK includes knowledge about learners and how to represent subject matter knowledge in forms that make it comprehensible to learners. In the same vein Grauer (1997) also argues that pedagogical knowledge cannot be taught in isolation from the prior background, beliefs and knowledge that beginning teachers bring with them into teacher education programmes.” She continues that if art teachers should be aware of the facts, principles and concepts that form the domain of art education, then it is imperative that this form of subject matter knowledge is available and explicit in teacher education programmes.”

The four headmasters’ responses in the interview also indicated their teachers’ possess considerable content knowledge of the subjects since their responses included “Yes. At least, to the best of their abilities” – (headmaster – **A**), “I may say yes” – (headmaster – **B**), “Yes. They do. It shows in their delivery” – (headmaster – **C**) and “Yes. It is evident in his work” – (headmaster – **D**).

From the researchers’ observation, not all the four art teachers possess appreciable knowledge of content in their various areas of specialisation in the visual arts subjects. Some could not present lessons in basic terminologies or vocabularies pertaining to topics under drawing. Even the few that were used could not be explained nor demonstrated enough to the understanding of the learners. Further observations reveal

that the sequential presentation of the content from simple to complex which enhances easy understanding and skill acquisition was absent. This, to the researcher, is much in line with the reservations held by members of the various groups from the group discussions. A critical look at the above has a link to the statement made by Thring (2001) who says pouring out knowledge and hearing lessons are not teaching. Rather, teaching is getting at the heart and mind so that the learner values learning and to believe that learning is possible in his/her own case.

4.2 Examining the professional practice of art teachers

Professionalism is key to teaching and learning. The teacher, therefore, is expected to live up to this philosophy through a number of well-planned programmes and activities. One of these is professional training to acquire pedagogical knowledge and skills for practice. In line with the above Williams (2012) made a point that expert teachers are not born with PCK, and it is a lengthy process for novice teachers to acquire the bank of skills and new knowledge needed to become professional teachers who are experts in their fields. It is interesting to know that all the four teachers are professionals from Teacher Training Colleges and a Polytechnic school. This was confirmed by the responses provided to the second interview question (Appendix A). The response of particularly Teacher C indicates “Yes. I went to Polytechnic and later did an educational course under G.E.S”. Not all, they have confirmed to enjoy their respective subjects especially because the subjects are their major areas of study; Teacher A: “*I trained as Pre-Tech teacher from the Teacher Training College*”, Teacher B: “This is my major subject from secondary school through Teacher Training College”, Teacher C: “This is what I studied from Secondary Technical School through Polytechnic” and Teacher D: “I like the subject and I enjoy teaching it” (Appendix P). The above

responses try to answer the research question which seeks to know the pedagogical content knowledge of BDT teachers.

Results from the opinionnaire by the teacher revealed that for the number of years the teachers have been teaching only one of them has ever attended a seminar/ In-Service Training course which is supposed to enhance their professional practice and content knowledge in teaching visual arts or BDT in the basic schools. This situation therefore, could be a contributing factor to some of the circumstances which militate against successful academic development in the teaching and learning of BDT in the basic schools in the district, a confirmation of what Hammand (2001) explained that Continuing Professional Development (CPD) is a sine qua non for high quality performance of all teachers. This is because the quality of teachers is a significant determinant in students' academic success. He strongly suggests incessant search for knowledge and skills through capacity building programmes in the form of refresher courses, seminars, in-service training, workshops, orientations and induction service for new staff.

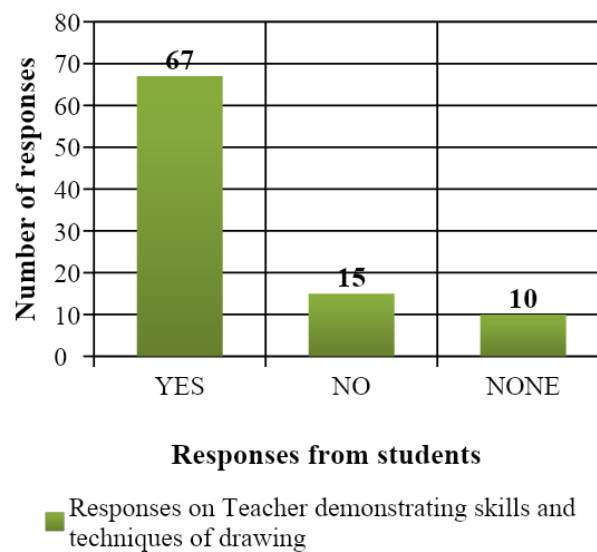


Figure 4.3: *Teacher demonstrating skill and techniques*

The responses given by students from the opinionnaire also point to the fact that teachers' professional practice is appreciable. It was demonstrated in the bar chart where out of 92 respondents 67 gave positive response, 15 gave negative response and 10 remained neutral to their response. Yet, it was observed that the manner in which this is applied in teaching and learning is inadequate. This clearly stresses on the need to improve personal and professional development through lifelong learning and Continuous Professional Development, and to demonstrate effective growing leadership qualities in the classroom and wider school. As to whether the teachers have ever had any additional professional training to enhance their professional practice from the fourth question, three headmasters' (**A, C, and D**) responses were negative while headmaster **B** confirms ever having one, a response which agrees to teacher **B**'s response saying "Yes. There was one organised by one German NGO some 3 years back" (Figure 4.3). Inferring from these responses therefore, it is clear that the teachers do not update their knowledge in content and practice to improve upon teaching and learning of creative arts in general and drawing in particular.

In terms of teaching strategies and professional practice the four teachers admitted using "the normal ones" they have learnt from school. As Teacher **B** puts it, "*I use Discussion, Questioning and Answering, and Demonstration*" and the same runs through the responses of the other three teachers. The responses provided by the 4 teachers were almost the same. They include: Teacher **A**- "Pupil centred approach", Teacher **B**- "Discussion, questions and answers, demonstration and group work", Teacher **C** - "Demonstration, Discussion and practical work" and Teacher **D**- "Demonstration, Discussion and practical work" (Appendix O). But comparing the response of Teacher **A** to the rest of the teachers regarding the pedagogical strategies it is clear that even though Teacher **A** mentioned Pupil Centred approach, there was no

further explanation as to the activities that accompany it; the mode of application of the approach which enhances the teaching and learning processes was not defined.

Inferring from teachers' responses to the kinds of strategies used during teaching and learning of drawing and designing it is clear that 90% of them are teacher-centred, a situation which will definitely not bring about effective transformation and dependable outcomes in learners.

The use of other teaching strategies such as outdoor sketches or drawings, field trips, project-based, cooperative learning among many others have been identified to be very effective in art related activities since they allow learners to express themselves freely devoid of pressures from teachers and instructors. However, teachers and instructors are expected to direct or moderate learners' activities to arrive at the acquisition of the right skills and concepts which is consistent with Lawal (2004) asserting that teachers' acquisition of pedagogical content knowledge for classroom activities is one most crucial aspect of the educational process for which staff development activities usually focus on, leading to the improvement of subject mastery, pedagogy skills and classroom management.

The most appropriate place for doing art practically is the studio or workshops where teachers would demonstrate their professional practice. Therefore the fifth question was to find out if schools had studios or workshops for practical activities including drawing and designing. The response to that indicated **39** agreeing to have one while **51** was not in agreement to having one and **2** remained neutral in their responses. A clearer presentation is found in Figure 4.4 below.

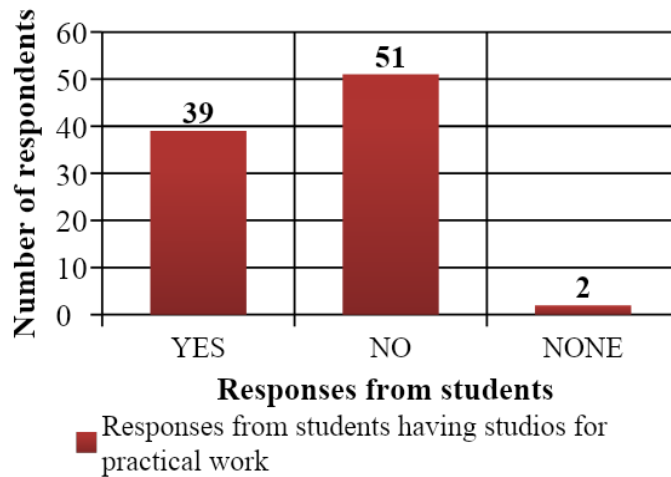


Figure 4.4: *Students having studios for practical works*

Findings from the focus group discussions on the locations of the drawing lessons, revealed that the classroom was common to the four groups while groups **B** and **C** sometimes had theirs either under a tree or out of the classroom in the open; “We do it in our class room and under the tree, once a week” – group **B**, “In the classroom or outside, once a week” - group **C**. These responses clearly show that none of the groups has art studios for practical activities such as drawing, painting and designing. What is common to the two groups (**B** and **C**) again was the fact that they had drawing lessons just once in a week while the other two groups (**A** and **D**) had theirs twice weekly.

Closely connected to professional practice is the motivational factor to teaching and learning which the sixth question sought to ascertain from the teachers. The responses to that question revealed that 3 of the teachers (**B, C and D**) agreed to enjoy the subjects they are teaching, giving reasons such as “Yes. The positive attitude of my students towards it motivates me”, “Yes, because it is a practical course/subject,” and “Yes, because I like the subject”. But teacher **A** disagreed with the reason that “I don’t enjoy it because of pupils’ inability to buy learning materials” (Appendix O). This too, suggests that teaching and learning of BDT in the basic schools is hampered due to the

absence of tools and materials in addition to non-availability of workshops and studios for visual arts, and kitchens for home economics subjects. Even students who claimed to be having studios and workshops referred to their normal classrooms and under trees. This surely would make it extremely difficult to effectively impart skills, knowledge and artistic concepts to learners.

Not all responses provided for the fifth question during the group discussions have shown that, even though it was clear, that the schools have neither studios nor workshops it is also clear from the responses given by students that teachers do little if not at all, in demonstrating skills and strategies to students during practical works which involve drawing and painting among many others. In seeking to know the professional practice of the teachers regarding how teachers taught the drawing lessons the responses given varied from one focus group to another. To group **A** - “the teacher does it on the board”, group **B** - “the teacher composes the items and explains how to draw them”, group **C** - “He explains and sometimes demonstrates” and finally group **D** - “the teacher explains and demonstrates for us to see”. Inferring from the responses therefore, it can be established for a fact that the teachers have been trying to guide learners to draw. But the effectiveness of their limited teaching strategies is what the groups could not establish.

Again, responses given by teachers during interviews as to how often they engage students in drawing activities include: Teacher **A**- “Yes. Once every month”, Teacher **B**- “Yes. At least twice every term”, Teacher **C**- “Yes. But only when we have the teaching and learning materials” and Teacher **D** “Yes. At least twice in a term”. A critical look at these responses suggests that students do not have enough practical activities to acquire the necessary skills that have been explained or demonstrated to them by their teachers.

This situation can be linked to one of the minimum levels of practice the National Teachers' Standards has set for beginning teachers for professional practice: that the teacher should employ a repertoire of learning strategies in order to meet the learning needs of all children through the application of relevant resources. What is more intriguing is the observation made by the researcher that the teachers were not resourced for their drawing activities. It was observed that only teacher **B** used some teaching and learning materials (TLMs) during drawing lessons. This is evident in the response given by Teacher - **C** that practical activities are carried out only when teaching and learning materials were available. He added that he had to personally acquire those he could to be able to teach. Inquiries from both opinionnaire and interview revealed lack of support from the educational directorates to acquire relevant resources for teaching visual arts subjects.

Additional explanations from the interview revealed the little support their headmasters/mistresses have been giving in any way to promote teaching and learning. The following are the responses provided by the four teachers: Teacher **A**-“Yes. The Headteacher helps in the provision of Teaching Learning Materials (TLMs)”, Teacher **B**- “Yes. The Headteacher helps in acquiring some ingredients for demonstration”, Teacher **C**- “Yes. He helps in the provision of TLMs if there is none” and Teacher **D**- “Yes. The teacher helps in the provision of some tools and materials for practical work”. The above responses from the teachers suggest a considerable level of teamwork and commitment from the leaderships of the four schools. Yet, the fact remains, as evident in the responses provided to the eighth question, that despite the provision of the support by heads to teachers, practical activities have not been enough to really develop and master the necessary artistic skills and concepts in the students before they leave the basic level for second cycle education.

During the interview with headmasters the following responses were given. Headmaster-**A**- “Hhmm. Actually, I don’t do anything much,” and headmaster-**C** – “Actually, I don’t do anything as such”. The other two confirmed their support both financially and materially toward the promotion of teaching and learning of creative arts. Headmaster-**B** said “I provide needed tools and materials” while headmaster-**D** said “I provide materials for drawing and designing.” In addition to the support, it was revealed that the four headmasters have been supervising once a while to keep the teachers on their toes.

In finding out if teachers teach drawing lessons to the understanding of the learners, a question which sought to know both the content knowledge in general and professional practice in particular, all the groups agreed but gave varied reservations according to what pertains to them in their individual schools. To group **A**, they responded “Yes. But not all the time. Sometimes he rushes”, in the case of group **B**, they said “Yes. She takes her time to explain the concepts”, then group **C** responded saying “Yes. But we don’t understand some terms” while group **D** said “Yes. But sometimes we don’t get the concepts well”. This is a confirmation of the observation made by the researcher with the four teachers that the majority of the students do not get through with drawing lessons. Yet, none of them creates the opportunity for the weak and slow learners to catch up with the acquisition of skills and concepts before new activities are introduced.

These responses, coupled with those given to the opinionnaire, therefore, point to the fact that the professional practice of the art teachers is not enough to provide the necessary skills and techniques needed to equip the learners in drawing to pursue visual arts related subjects in the senior high schools.

4.3 Techniques used by teachers in assessing students' learning outcomes

Assessment is the tool used to determine the progress of teaching and learning.

In education, the term *assessment* refers to the wide variety of methods or tools that educators use to evaluate, measure, and document the academic readiness, learning progress, skill acquisition, or educational needs of students (Great School Partnership, 2014). The third research question seeks to know the assessment techniques art teachers apply in assessing learners' learning outcomes in drawing.

The opinionnaire and interview sought to find out from the teachers, the mode of assessment that they take students through. Here too their responses were similar since they appeared to have used similar assessment techniques such as “Through question and answers, class exercises and tests, end of term exams, and sometimes practical works”. The above assessment techniques and tools have been the traditional means through which teachers and other educators get authentic information about learners' learning progress and difficulties. This helps teachers and other stakeholders in education to make informed decisions either on learners or themselves or in some instances both learners and educators. It is based on situations such as the one above that Burns (2005) declared that:

After teaching a lesson, we need to determine whether the lesson was accessible to all students while still challenging the more capable; what the students learned and still need to know; how we can improve the lesson to make it more effective; and, if necessary, what other lesson we might offer as a better alternative. This continual evaluation of instructional choices is at the heart of improving our teaching practice.

In ascertaining the assessment techniques used by the creative arts teachers in assessing learners' learning outcomes in drawing, the four headmasters agreed that they see both teachers and learners discussing or appreciating drawings done by learners in addition to end of term examinations which involve drawing and designing. From the responses on techniques in assessing students' learning outcomes by both learners and teachers it was deduced that summative assessment overshadowed the formative one.

The focus group discussions to ascertain the techniques used by the teachers in assessing learners' learning outcome revealed that almost the same techniques were adopted by the teachers in all the schools. These techniques included questioning, discussion, appreciation, class exercises and end of term examinations. It can be deduced, therefore, that the above assessment techniques are not enough to boost the confidence of learners in drawing which could have equally affected the performance of students in BDT over the years with regards to the Basic Education Certificate Examination (BECE). The varied responses given by both teachers and headmasters to this include: Teacher **A**- "Unlike last year where students performed well, this year was not the best", Teacher **B**- "Not bad. They have been doing well", Teacher **C**- "Fairly good" and Teacher **D**- "It was quite good". All the responses to this question have confirmed the mood and reactions, most especially the response by Teacher **A**, as not pleasant.

4.4 Analysis of Themes

This part deals with the examination of the impact of pedagogical content knowledge of creative arts or Basic Design and Technology (BDT) teachers on drawing as one of the aspects studied in Visual Arts. With reference to (Table: 4.1) and (Table 4.2) it is evident that teachers have considerable command over the subject matter (content) in

the various aspects of the subjects. From the observation, therefore, it was clear that teachers could perform better, if they had enough periodic professional development through seminars or In-service training to learn new skills and ways to teach the subjects. The drawing skills and capabilities of some of the teachers too do not really motivate students enough as a result of their inability to display confidence and mastery over still life drawing, for example. Also, the use of chalkboards for drawings and illustrations have a negative influence on creative arts lessons. Instead, easels, drawing boards, sketch books, and other appropriate tools and materials could help in creating confidence and hope in the students to perform better in drawing activities in the visual arts courses in the senior high schools.

Assessment could be more interesting with the use of group works and project activities. The current classwork and tests alone may not bring out the best of skills and creativity in the students.

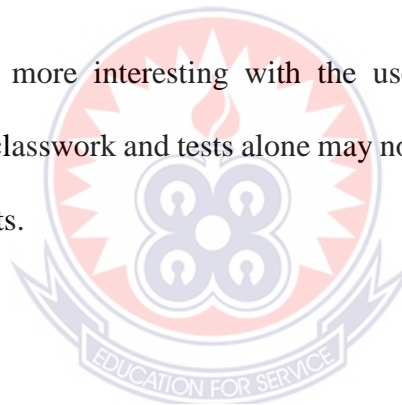




Figure 4.5: Still life composition (A flask and an orange)

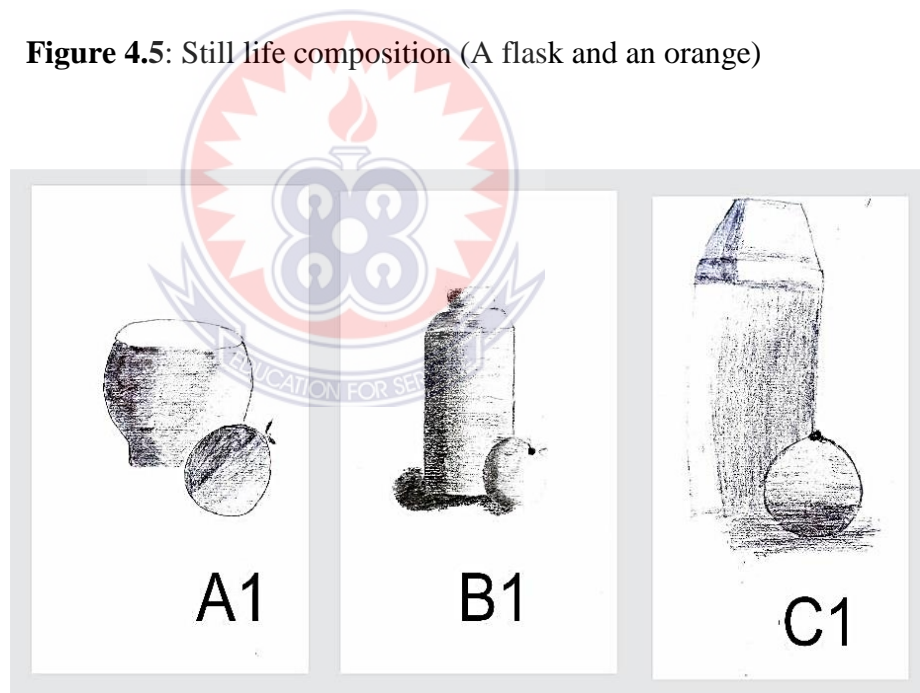


Figure 4.6: Poorly represented drawings

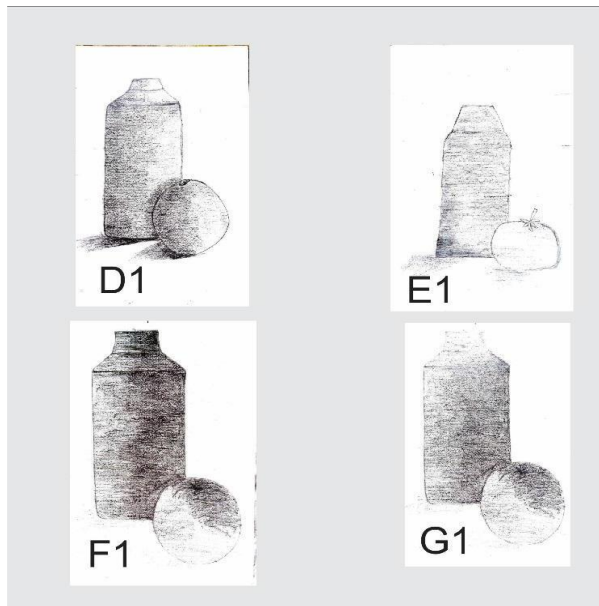


Figure 4.7: Fairly well represented drawings

The representation of the still life composition in *figure 4.5* can be seen in *figure 4.6* and *figure 4.7* which have been labelled with alphabets. The drawings in *figure 4.6* are considered poor regarding the draughtsmanship, use of space, shape and size. Evident in the draughtsmanship in **A1**, it is clear that the student could not capture the flask and orange appropriately, the representation in **B1** appears to be too small in size regarding the space provided while **C1** is rather too large and poorly captured. The drawings in *figure 4.7* are considered fairly well, since the draftsmanship, use of space, shape and size can be seen to have been managed according to the rudiments of drawing.



Figure 4.8: Still life drawing involving a transparent plastic container and a cuboid

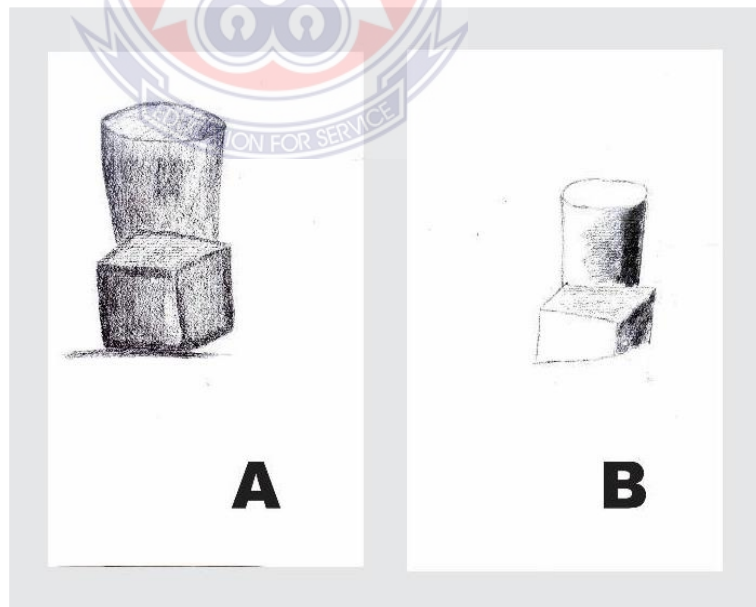


Figure 4.9: Poorly represented drawings

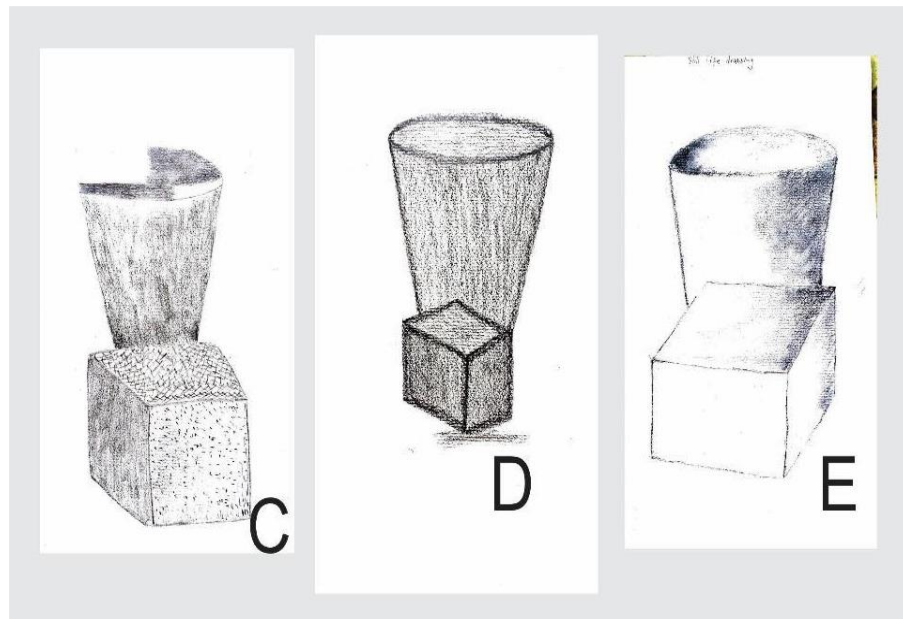


Figure 4.10: Fairly represented drawings

From the drawings above it can be seen that the still life objects in *figure 4.8* which involve a transparent plastic container and a cuboid across the foot of the container were rendered in two categories by students. The first category which is labelled **A** and **B** in *figure 4.9* were poorly represented with regards to draftsmanship, position, size, space and shape. The second category in *figure 4.10* which were labelled **C**, **D** and **E** respectively, however, is fairly well drawn despite the inability of the students to capture the container and the cuboid appropriately.

4.4.1 Professionalism and Practice of teachers

Another interesting thing is that all the four teachers are professionals from Teacher Training Colleges and a Polytechnic school respectively. This was confirmed by the responses provided to the second question most particularly by Teacher –**C** as “Yes. I went to Polytechnic and later did an educational course under G.E.S”. Not all, they have confirmed to enjoying their respective subjects especially because the subjects are their major areas of study; Teacher –**A**: “I trained as Pre-Tech teacher from the Teacher

Training College”, Teacher –**B**: “This is my major subject from secondary school through Teacher Training College”, Teacher –**C**: “This is what I studied from Secondary Technical School through Polytechnic” and Teacher –**D**: “I like the subject and I enjoy teaching it”. The above responses try to answer the research question which seeks to know the pedagogical content knowledge of BDT teachers and the strategies used to impart artistic knowledge, skills and concepts to learners. In terms of teaching strategies and professional practice the four teachers admitted using “the normal ones” they have learnt from school. As Teacher –**B** puts it, “I use Discussion, Questioning and Answering, and Demonstration” and the same runs through the responses of the other three teachers.

From the table (Table 4.2), it is obvious that there was inadequate professional development and practice. This can be seen in the responses given to the sixth question as to how often teachers attended professional seminars/trainings or courses. According to them only Teacher -**B** and **C** had ever attended one each for over five years that they have been teaching; “Yes. There was one on nutrition by one German NGO, some 3 years back” and “Yes. About 4 years ago”. Teacher –**A** and **D** never had any seminars/training or courses. This goes to indicate that the content knowledge of teachers in their respective areas of specialisation may not be rich enough to cope with the trend of imparting knowledge to learners. This situation therefore, may contribute to the use of the limited teaching strategies and the inability of teachers to impart refined content to learners. In addition, in a verbal interaction between some teachers and the researcher revealed that they longed to attend such programmes but the district directorate does not organise any for them so they had little to do in that situation: “The district education office doesn’t organise any workshops or seminars for BDT teachers.

What can we do then? So, we always depend on what we have learnt in school and use the textbook, that's all." Teacher –D retorted.

4.4.2 Students' attitude and participation

During the study, the researcher made the following critical observations on the students. Structured observation was part of the data collecting tools used by the researcher. This part of the discussion will deal with the observations made in the four schools; the results of the findings are common to all students (*research population*). It was observed that:

- ❖ The attention span of students was a bit short; they were able to concentrate for a little above 40 minutes out of 1 hour 30 minutes teaching period.
- ❖ Regularity was a challenge to most of them. Most of them skipped school and some class exercises.
- ❖ Most of the students could not express themselves in the English language to either ask or answer questions. Others too, could not read and understand so writing what has been read or heard was equally a challenge. Some basic principles of learning include the ability to read and understand what is read thereby responding to it. They appeared to be assimilating the concepts, skills and the knowledge being explained theoretically through their demeanour and body language. However, their weaknesses were exposed by their inability to respond positively to questions thrown to them by their teachers in relation to the topics of the lessons under discussion. Not all, even those who demonstrated a little understanding and had some confidence could not express themselves fluently in the English language but did so well in the local (*Evegbe*) language. What this situation suggests, therefore, is the fact that students felt more

comfortable with their local (*Evegbe*) language than the terminologies and vocabularies being used by their teachers in English language in relation to the BTD subjects.

- ❖ The rapport which existed between the teachers and the students was considerably good. A situation which is expected to enhance effective teaching and learning processes. Therefore, the atmosphere in most of the classrooms was conducive for teaching and learning processes.
- ❖ Regularity was also a challenge. Some of the students skipped lessons such that they missed some of the topics which were treated and the assessments which were carried out during such periods.
- ❖ Majority of the students lack basic tools and materials (*pencil, eraser, ruler, sketch book, crayon etc*) for drawing in all the BDT subjects. This makes it very difficult for them to participate in all the drawing activities.
- ❖ Drawing, being part of the learning process, was a challenge to both teachers and students. Observations revealed that BDT text books were scarce. Therefore, teachers had to illustrate most of the concepts, some tools, equipment and materials on the chalkboard for students to copy into their notebooks. This happened when there were no originally prepared diagrams, charts nor pictures to be displayed during teaching and learning. Not all, the principles or elements of drawing (space, line, shape, shading, texture etc) were poorly applied during drawing and design activities. In this case, line drawings dominated most of the pictures or images under discussion. However, a few tools were used for demonstration by the subject teachers during Pre-Tech drawing sessions, and a few students demonstrated considerable understanding

of the concepts of drawing and so were very enthusiastic about the practical lessons which reflected positively in their output of work.

4.4.3 Tools, Materials and Equipment for Practical Activities

The tenth question sought to know the provider of tools, equipment and material for practical lessons. Here too, similar responses were provided. From the table (Table 4.2) it is clear that the provision of these items was mostly done by the teachers while the school heads only come in when things appear to be getting out of control. This can be deduced from Teacher –A’s response as: *“Myself. But at times too, the headmaster helps in getting some.* To Teacher –B: *“I use my own utensils while the headmaster helps in getting some ingredients”.*

This is an indication that the schools lack the requisite resources to enhance effective teaching and learning processes.

4.4.4 Role of Teachers during Practical Activities

The duty of the teacher before, during and after creative arts and BDT lessons cannot be overemphasised. The success of any practical activity depends greatly on the role played by the teacher or facilitator. This, the eleventh question sought to know. From the table therefore, all the four teachers provided similar responses. This is what Teacher –C had to say: *“I demonstrate to students and guide them to do the same either in groups or individually”.* Similarly, Teacher –D said *“I lead discussions; I demonstrate and guide students to do the same in groups”.* These responses also confirm some of the assessment techniques used by creative arts and BDT teachers on their learners which is what the third research question sought to inquire about.

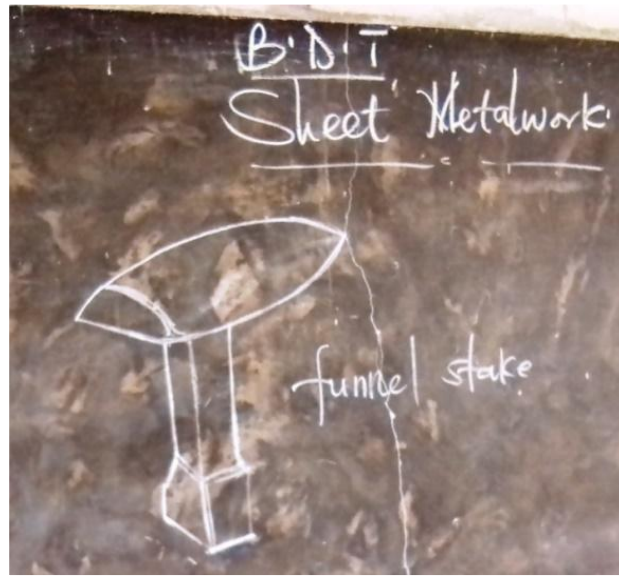


Figure 4.11: A drawn funnel stake in sheet metal work



Figure 4.12: Some poorly represented drawings by some students

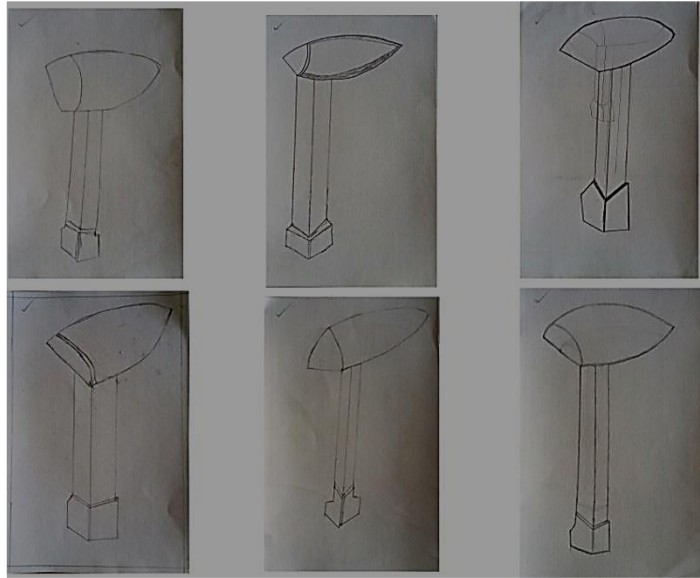


Figure 4.13: Some averagely represented drawings of students

4.4 Teacher's Knowledge of Student

The teacher's knowledge of how students learn helps him or her greatly in factoring that influence into students' learning and achievements.

Another critical discovery made through the observation was the fact that 3 out of the 4 teachers could not pay attention to students' ability levels. Despite their declarations of using *student centred* kind of teaching method during teaching, this was seldom applied during the teaching and learning process. Teachers did not cater for the less ability groups to go along with the speed and level of performance during teaching and learning. Individual attention was also missing in their teaching moments. This also confirms why some students would not understand what is taught or cope with the pace at which the teaching was travelling.

To the 3 teachers, it seemed they were more interested in delivering the message than focussing on the destination of the message. I saw them to be *content-focused* while I saw the fourth teacher as being *student-focused*. Practically therefore, students who studied under the student-focused teacher turned to react more positively than the

content-focused teachers. *What pedagogic strategies do art teachers use in teaching and learning both creative arts and Basic Design and Technology in the basic schools?*

The above analyses made from the observations have clearly answered this research question. As Franke (2001) puts it, teachers who use student-focused language may have teaching practices that more frequently draw out student thinking and thus they think about student thinking more explicitly, while the content-focused teachers' practices may be less likely to elicit student thinking in the classroom. The relationship here is that since students do not occupy the centre space before, during and after lessons the learning outcomes will surely be adversely affected.

4.5 Pedagogical Content Knowledge of Teachers

With reference to the responses to the interview from the table, it was established that all the teachers were professionals who have been teaching their subjects for over five years. In addition, they have majored in their various subject areas. The teacher's knowledge of his or her subject matter is very important. It is therefore expected of the teacher to possess a variety of effective teaching and assessment practices to enhance the achievement of teaching objectives.

A close look at their content knowledge shows considerable mastery of the contents of their subjects. Yet, further analyses reveal inconsistencies in the presentation of topics and sub-topics. This was identified with Teacher –A and Teacher –C who happen to be the Pre-Vocational skills and Pre-Technical skills teachers. This sometimes leaves students together with the researcher in a state of confusion.

It took a series of questions and answers to clarify issues before lessons continued. This confirms the responses given by students to the fourth question about their ability to understand lessons; “the teacher talks too fast”, “I don't understand the words (vocabularies) used by the teacher during teaching”, “..... I want to do practical

work but teacher is always using the mouth to describe the thing”. Another interesting observation made was the involvement of some students to express themselves with a few demonstrations which turned out to enhance the understanding of concepts and skills. The motivation here is that some of these students come from homes and environments where the Pre-Technical/Pre-Vocational skills and Home Economics activities take place; parents and other relatives of some of the students practise these vocations and trades such as carpentry, masonry, restaurants (*Chop bars*), dressmaking, painting, designing and decoration among many others. Some students confirmed having taken part or still taking part in some of these psychomotor activities including drawing at home. This suggests that these categories of students have very rich previous knowledge (RPK) with regards to the various subjects hence their rich contributions to the lessons. In a nutshell, the intellectual capacities, gender and other variables which determine the direction of planned learning activities were somehow neglected.

4.6 Teacher Professional Practice

What is the professional practice of art teachers and how do they apply it to teaching and learning visual arts in basic schools? This is the second research question through which the researcher seeks to acquire the true professional practice of the BDT teachers under study.

Professional practice in this context refers to the situation where a teacher goes through training for a given period of time to acquire relevant knowledge and skills. The main objective is to impart these skills and concepts to learners using varied techniques and strategies during the process. The trained teacher uses his or her professional knowledge with regards to pupils’ understanding of curriculum, legislation, teaching practices, and classroom management strategies to promote the learning and achievement of his or

her pupils. This becomes successful when the teacher is able to identify him or herself in terms of capabilities in content and practice. Staying within the idea of the significance of defining self-identity and professional identity, Palmer (1997) asserts the connections between teachers' self-identities, professional identities, and teaching practices:

In fact, knowing my students and my subject depends heavily on self-knowledge. When I do not know myself, I cannot know who my students are. I see them through a glass darkly, in the shadows of my unexamined life—and when I cannot see them clearly, I cannot teach them well. When I do not know myself, I cannot know my subject—not at the deepest levels of embodied, personal meaning. I will know it only abstractly, from a distance, a congeries of concepts as far removed from the world as I am from personal truth.

Furthermore, the implications of learning in the classroom only depress psychomotor emphasis alone without imposing cognitive and affective values.

Apart from the text books which not all students had during teaching and learning moments, demonstration and group work as claimed by all four teachers were seldom used in teaching. Students were seen in groups only when they needed to peruse diagrams and other information in the text books because all of them did not have the text books. This situation admittedly, cannot be blamed on the teachers since textbooks were inadequate for all the students to use and that there were no tools nor materials to demonstrate with, let alone asking students to work in groups as indicated in their responses to the interviews. The irregularities between the cognitive and psychomotor aspects of skill acquisition cause imbalances in teaching and learning practical oriented subjects.

The teachers could not adapt and refine their teaching practice through continuous learning and reflection, using a variety of sources and resources. This was established in their responses to the interview question which sought to know if teachers have been attending special courses and seminars to improve upon their professional development and practice. Not all, much cannot be said about teachers' use of appropriate technology in their teaching practices and related professional responsibilities. That notwithstanding, teachers conduct on-going assessment of their students' progress and evaluate their achievement results through reports to students and their parents regularly. In addition to that, the teachers demonstrated a variety of effective classroom management strategies which helped them to have the students' attention throughout the lessons.

4.7 Assessment Techniques used by Teachers

In education, the term assessment refers to the wide variety of methods or tools that educators use to evaluate, measure, and document the academic readiness, learning progress, skill acquisition, or educational needs of students. This suggests that assessment is an integral part of education which has to be applied to the teaching and learning processes with utmost diligence. The researcher therefore, observed that formative assessment was administered intermittently as the lessons progressed. Another observation made was the fact that not many assessment tools were used; the most common techniques were verbal questioning and answering, class exercises, class tests and sometimes homework. Another sad situation which was observed was the absence of projects (practical activities) as part of the assessment process. A balanced application of two or more of the above assessment techniques enhances the holistic development of the individual in terms of the three major domains (cognitive, affective and psychomotor). It is worthy to note that the assessment was concentrated on the

cognitive domain at the expense of the psychomotor domain which is supposed to develop the acquisition of skills and techniques.

As part of the assessment process the following depict samples of some drawings done by students in Pre-Tech:

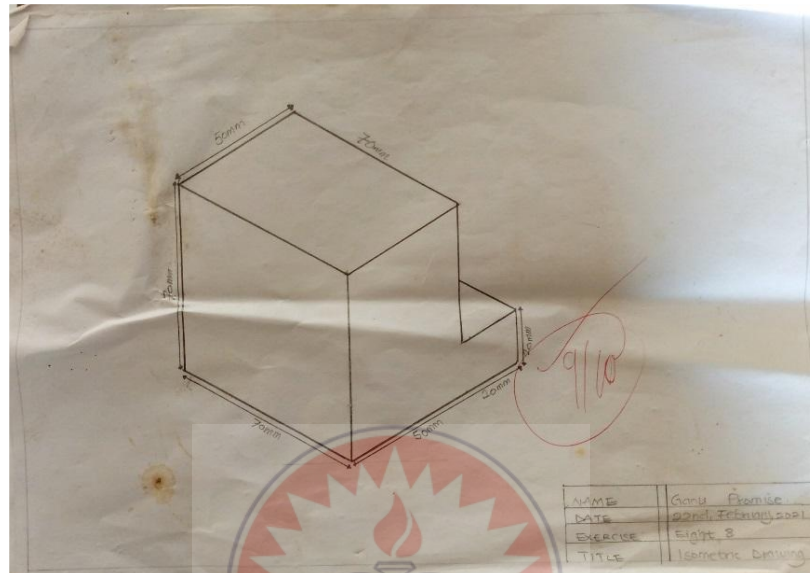


Figure 4.14: Isometric drawing

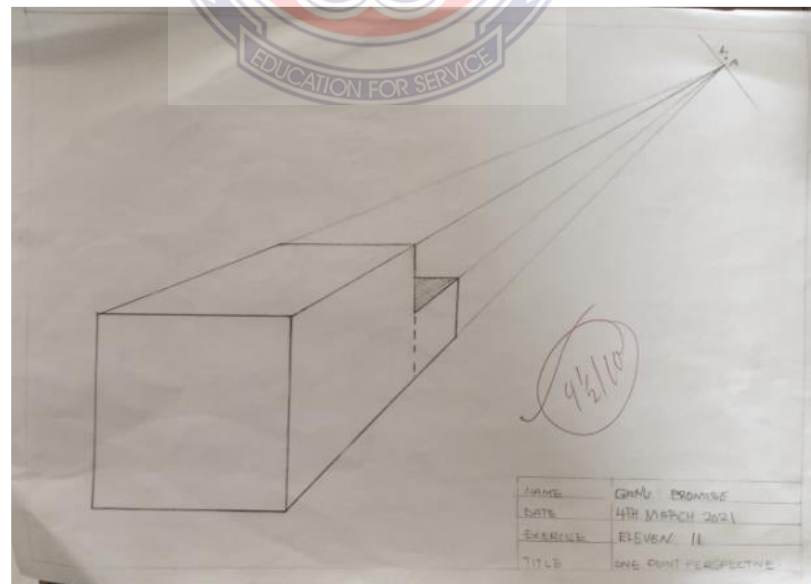


Figure 4.15: One-point perspective

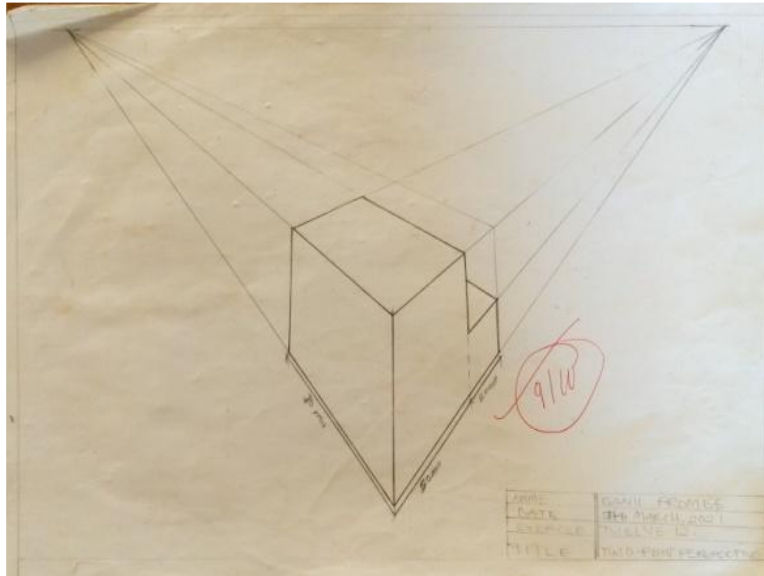


Figure 4.16: Two-point perspective



Figure 4.17: Development of triangular prism

Another form of drawing which was done by students for assessment was *still life* in the classroom. Two sets of still life were composed involving a mini cylindrical silver flask without the lid behind an orange which is slightly shifted to the right at the foot of the flask while the other set is made up of a transparent conical plastic container and a wooden cuboid across the foot of the container. These drawings represent the strengths and weaknesses of the students in the display of their drawing capabilities as in good, fairly good and poor representation of the still objects. The drawings have been labelled with alphabets such as A, B, C and so on for easy identification.



CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Overview

This chapter presents the summary of the study's goals and uncovers conclusions drawn from the study and suggests recommendations as well as suggestions for further studies.

5.1 Summary of findings

The study was guided by these three (3) objectives to:

Inquire into the Pedagogical Content Knowledge of creative arts teachers in drawing in some selected basic schools in the Central Tongu District, Examine the Professional Practice of BDT teachers in drawing in basic schools and finally, Ascertain the Assessment Techniques used by creative arts teachers in assessing learners' drawing in basic schools.

Based on objective one, this study shows that:

All the teachers in the four selected basic schools in the Central Tongu District were professionals who have been teaching their subjects for over five years. In addition, they have majored in their various subject areas. The teachers' knowledge of their subject matter is very important. It is expected of the teacher to know a variety of effective teaching and assessment practices to enhance the achievement of teaching objectives.

A close look at their content knowledge shows considerable mastery of the contents of their subjects. However, further analyses revealed inconsistencies in the presentation of topics and sub-topics. This was identified with two of the teachers which, on many occasions leave students in a state of confusion; it took a series of questions and answers to clarify issues before lessons continued. This confirms the responses given by students

in the opinionnaire about their ability to understand concepts of lessons; “the teacher talks too fast”, “I don’t understand the words (vocabularies) used by the teacher during teaching”, “..... I want to do practical work but teacher is always using the mouth to describe the thing”.

The results of the analyses indicated that there was a significant relationship between the pedagogical content knowledge of BDT teachers and the skills acquisition of pupils and students of basic schools. This is evident in all the responses provided to the interviews and opinionnaire with reference to the results found in the tables.

Examining the professional practice of arts teachers in drawing in some selected basic schools in the Central Tongu District has revealed that BDT teachers’ ability to display their professional capabilities was inadequate. Majority of the teachers themselves have drawing difficulties. It therefore has influenced the understanding of the concepts being explained to their learners.

Many factors were identified to be contributing to this situation. Some of them include, but not limited to:

1. Inappropriate use of teaching methods during teaching and learning. The BDT teachers have demonstrated appreciable levels of methodology in their teaching. Yet, despite their declarations of using a student-centred kind of teaching method during teaching, this was seldom applied during teaching and learning processes. Teachers were unable to cater for slow learners to go along with the speed and level of performance during teaching and learning. Individual attention was also missing in their teaching moments. This also confirms why some students would not understand what is taught or cope with the pace at which the teaching was travelling.

2. Insufficient practical activities to enhance the theory aspect of the teaching and learning. This is evident in the reactions of some students such as “ I want to do practical work but the teacher is always using the mouth to describe the thing”.
3. The absence of standardised and permanent workshops and studios/kitchens, tools/ equipment and material are other huge causes of the artistic deficit in the basic school pupils and students. This is an indication that the schools lack the requisite resources to enhance proper teaching and learning processes.
4. Total lack of professional development and practice is another serious situation which contributes to the artistic deficit in pupils and students in basic schools. There is a lack of regularly organised workshops and seminars for BDT teachers to update their skills on modern pedagogical strategies in teaching and learning drawing.
5. Many of the students were not regular in school. This, according to some teachers, leads to their inability to follow lessons to acquire necessary skills and concepts during teaching and learning.
6. Inadequate currently published creative arts related textbooks in the system for both teachers and students.

In ascertaining the techniques used in assessing students’ learning outcomes in objective three, it is revealed that:

Regarding the responses given by the four BDT teachers, they have been using the same assessment instruments and techniques in assessing students over the years. The obviously missing instrument which could clearly and most reliably reflect learners’ learning outcomes is the use of practical activities under studio setting. This is very

crucial since all BDT subjects are practical oriented where the acquisition and mastery of artistic knowledge, skills and concepts are displayed for better assessment.

Not all, the handling and manipulation of tools and materials with confidence would have to be watched carefully and assessed. Closely linked to this is the presence of workshops, studios and kitchens with standardised tools and equipment. Yet the responses given by the four teachers and students suggest that conditions are not how they are supposed to be. From the responses given to the ninth question which sought to know if the schools have studios for their BDT practical activities, one of the teachers, for example, responded that “No. We use either the classroom or under the trees”, a response which is in consonance with the other three teachers.

5.2 Conclusions

Based on the study’s objectives and findings:

1. The pedagogical content knowledge of art teachers in drawing in some basic schools in the Central Tongu District was inquired into based on the fact that drawing difficulties in visual arts students at the senior high schools was a reflection of the quality of teaching and learning which takes place at the basic levels of schooling. It therefore had a significant negative influence on the students and pupils in the Adidome circuit of the Central Tongu district. Also, the pedagogical content knowledge competencies of the Basic Design and Technology (BDT), was seen not to be encouraging, therefore, cannot equip the Junior High School graduates with the necessary skills needed to study the visual arts subjects in the Senior High Schools. It is established therefore, that the cause of the above problem is linked to the inability of or the inadequate competencies of some of their BDT teachers leading to the shortfall in drawing.

2. In the four selected schools in the Central Tongu District, the professional practice of the art teachers was examined and it emanated that there was negative influence of their inadequacies of professional practice as BDT teachers on teaching and learning hence the identification of the gap.
3. Based on ascertaining the techniques used in assessing students' learning outcomes it was clearly revealed that assessment was based on the cognitive domain at the expense of other domains of child development (affective and psychomotor). The usual traditional techniques of questions and answers, class exercises among others were inadequate to unearth the real progress and solve the drawing challenges of learners.

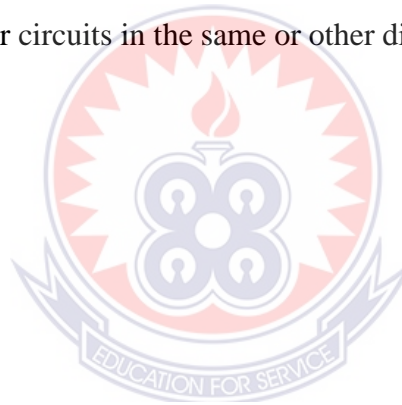
5.4 Recommendations

This research has made some useful suggestions and recommendations to help improve and build upon the study's goals in the Central Tongu District in the Volta Region. Based on these goals, the researcher recommends that:

1. Educational authorities should organise in-service training/capacity building or other relevant courses and seminars in BDT subjects regularly for teachers who teach them. This, the researcher believes, would improve their pedagogical content knowledge and skills for effective teaching and learning.
2. Educational authorities in the Central Tongu District should provide relevant tools and materials, and studios/workshops for basic schools to undertake their practical activities in BDT. In addition, BDT teachers should try to vary their teaching strategies to adequately cater for the intellectual levels and abilities of learners of all ages. Also, creative arts teachers could adopt the services of resource persons who are well vested in some of the seemingly difficult areas

of their subjects to help make the comprehension and acquisition of artistic concepts and skills easier to learners.

3. Apart from questions and answers, class exercise, end of term exams, among others being the traditional assessment forms, BDT teachers could adopt projects in drawing, appreciation of students' drawings, educational trips which are drawing oriented and the introduction of digital arts to assess students' learning outcomes.
4. Since this study focused on only four (4) basic schools in the Adidome circuit of the Central Tongu District in the Volta region of Ghana further studies could be conducted on the pedagogical content knowledge and practice of BDT teachers in other circuits in the same or other districts.



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APPENDICES

APPENDIX – A

SAMPLE INTERVIEW GUIDE FOR TEACHERS

1. For how long have you been teaching Basic Design and Technology (BDT)?
2. Are you a trained teacher?
3. Do you enjoy teaching BDT? **Yes** [] **No** []
4. Which aspect(s) of BDT do you teach?
5. Why did you accept to teach the aspect(s) but not the others?
6. Have you ever attended any workshop(s)/ seminar/ In-service training in creative arts?
7. What kind(s) of teaching strategies do you use during teaching and learning?
8. Does your school have a studio for the BDT subjects? **Yes** [] **No** []
9. Who provides tools and materials for practical works?
10. What role do you play during practical lessons?
11. How do you assess students in theory and practical works?

APPENDIX –B

SAMPLE OPINIONNAIRE GUIDE FOR TEACHERS

1. Is creative arts the only subject you teach? **Yes**..... **No**.....
2. How many classes do you teach the BDT subject in?
3. Are you a trained teacher? **Yes**..... **No**.....
4. Which aspect of creative arts do you teach?
5. Have you ever attended any seminar/ In-Service Training course?
Yes..... **No**.....
If **Yes**, which one(s)?
6. Do you enjoy teaching BDT? **If yes, why?**
- If No, why?**
7. What kind(s) of teaching strategies do you use during teaching and learning
creative arts?
8. Do you engage learners in practical activities?
If Yes, how often?
- If No, why?**
9. Do you have the support of your headmaster/mistress in teaching this subject?
If yes, how?
- If no, why?**
10. How do you assess students in theory and practical works?.....
11. What has been the performance of your students in Basic Education Certificate
Examination (BECE) over the years?

APPENDIX –C

SAMPLE OPINIONNAIRE FOR STUDENTS

1. Do you study Basic Design and Technology (BDT)? **Yes** [] **No** []

2. Do you enjoy studying BDT? **Yes** [] **No** []

3. Which aspect of BDT do you study in your school?

4. Would you say your teacher teaches to your understanding?

If **Yes**, how?

If **No**, why?

5. Do you have a studio for practical work in your school? **Yes** [] **No** []

6. Does your teacher demonstrate skills and techniques of drawing during teaching?

Yes [] **No** []

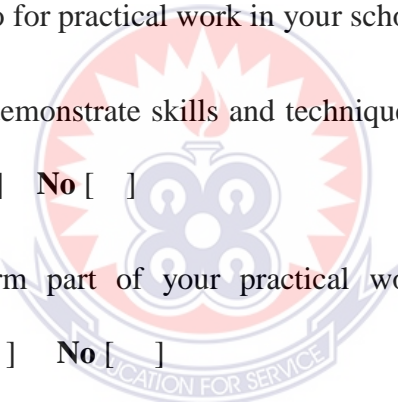
7. Does drawing form part of your practical works during or after lessons?

Yes [] **No** []

8. Would you like to study Visual Arts in S.H.S? **Yes** [] **No** []

If **Yes**, which aspect?

If **No**, why?



APPENDIX –D

SAMPLE INTERVIEW GUIDE FOR HEADMASTERS

1. Which area(s) of Basic Design and Technology (BDT) do your students study?
.....
2. Do you have a qualified or trained teacher(s) for the subject(s)?
YES. () NO. () If **Yes**, how may?
3. Does the teacher(s) display enough content and knowledge in his/her area of specialisation? Explain:
4. Does the teacher(s) attend professional trainings (seminars, in-service trainings etc.) in BDT? i. If **Yes**, how often?
ii. If **No**, why?
5. Who provides tools and materials for BDT practical lessons including drawing?
.....
6. What are your impressions about the performance of your BDT students over the years? YES. () Give reason(s)
NO. () Give reason(s)
7. How do you contribute to the success of teaching and learning of BDT in your school?.....
8. How often do you supervise BDT lessons in your school?
.....
9. What assessment techniques does your BDT teacher(s) apply to students' learning outcomes?
10. Are you impressed about the performance of your BDT teacher(s) over the years?
YES. () **NO.** () Give reason(s).....

APPENDIX –E

SAMPLE QUESTIONS FOR FOCUS GROUP DISCUSSION FOR STUDENTS

1. Does your teacher demonstrate mastery and confidence during drawing lessons?

Explain.

.....

2. Explain if your teacher teaches drawing to your understanding or not?

.....

3. What tools and materials does your teacher use in teaching drawing?

.....

4. Where do the drawing lessons take place and how often do you draw?

.....

5. How many periods do you have for drawing lessons with your BDT teacher in a week?

.....

6. What kind of drawings do you learn?

.....

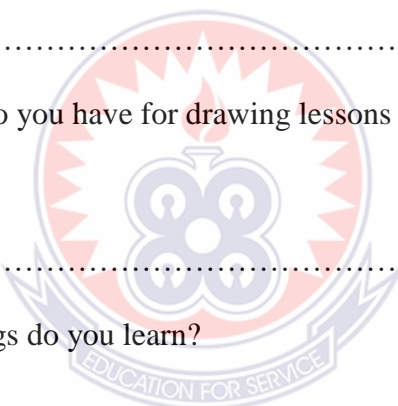
7. How does your teacher assess your drawings?

.....

8. How would you describe your BDT teacher based on how he/she teaches you?

Explain?

.....



APPENDIX - F**SAMPLE OBSERVATION CHECKLIST**

Name of the research project: Inquiry into the pedagogical content knowledge and practice of Basic Design and Technology teachers in drawing in some selected basic schools in the Central Tongu District.

Teacher's Name:..... **Subject**

Date.....

SN	COMPONENTS	Yes	No	REMARKS
1	CONTENT KNOWLEDGE			
	Good introduction			
2	CONTENT KNOWLEDGE			
	Presentation			
3	PROFESSIONAL PRACTICE			
	Competence/Rapport			
	Varied teaching strategies			
	Use of teaching learning materials			
	Use of appropriate vocabularies			
	Students' participation in lesson			
	Time management			
	General Class Control			
4	ASSESSMENT			
	Varied Techniques			
	Works marked and discussed			

APPENDIX – G

Responses from teacher –A

1. Is Basic Design and Technology (BDT) the only subject you teach? **Yes**.....
No.....

Response: “No. I teach English language too”

2. How many classes do you teach the BDT subject in?

Response: “2”

3. Are you a trained teacher? **Yes**..... **No**.....

Response: “Yes”.

4. Which aspect of BDT do you teach?

Response: “Pre-Vocational Skill (Pre-Voc)”.

5. Have you ever attended any seminar/ In-Service Training course? **Yes**.....
No..... If **Yes**, which one(s)?

Response: “No”.

6. Do you enjoy teaching BDT? **If yes, why?**

If No, why?

Response: “I don’t enjoy it because of pupils’ inability to buy learning materials”.

7. What kind(s) of teaching strategies do you use during teaching and learning BDT?

Response: “Pupil centred approach”.

8. Do you engage learners in practical activities including drawing in drawing?

If Yes, how often?.....**If No, why?**.....

Response: “Yes. Once, every month”.

9. How do you assess students in theory and practical works?

Response: “through question and answers, class exercises and tests, end of term exams, and sometimes practical works”.

10. Do you have the support of your headmaster/mistress in teaching this subject?

If yes, how?**If no, why?**.....

Response: “Yes. He helps in the provision of Teaching Learning Materials (TLMs)”

11. What has been the performance of your students in Basic Education Certificate Examination (BECE) over the years?

Response: “Unlike last year where students performed well, this year was not the best”.

APPENDIX – H

Response from teacher –B

1. Is Basic Design and Technology (BDT) the only subject you teach? **Yes**.....
No.....

Response: “Yes”

2. How many classes do you teach the BDT subject in?

Response: “3”

3. Are you a trained teacher? **Yes**..... **No**.....

Response: “Yes”.

4. Which aspect of BDT do you teach?

Response: “Food and Nutrition, and Sewing”.

5. Have you ever attended any seminar/ In-Service Training course? **Yes**.....
No.....

If **Yes**, which one(s)?

Response: “Yes. A Seminar organised by a German NGO on Food Groups and Diets”.

6. Do you enjoy teaching BDT? **If yes, why?** **If No, why?**

Response: “Yes. The positive attitude of my students towards it motivates me”.

7. What kind(s) of teaching strategies do you use during teaching and learning BDT?

Response: “Discussion, questions and answers, demonstration and group work”.

8. Do you engage learners in practical activities including drawing?

If Yes, how often? **If No, why?**.....

Response: “Yes. At least twice every term”.

9. How do you assess students in theory and practical works in drawing?

Response: “through class exercises and tests, end of term exams, and sometimes practical works”.

10. Do you have the support of your headmaster/mistress in teaching this subject?

If yes, how? **If no, why?**.....

Response: “Yes. He helps in acquiring some ingredients for demonstration”.

11. What has been the performance of your students in Basic Education Certificate Examination (BECE) over the years?

Response: “Not bad. They have been doing well.”

APPENDIX – I

Response from teacher –C

1. Is Basic Design and Technology (BDT) the only subject you teach?

Yes..... **No**.....

Response: “Yes”

2. How many classes do you teach the BDT subject in?

Response: “3”

3. Are you a trained teacher? **Yes**..... **No**.....

Response: “Yes”.

4. Which aspect of BDT do you teach?

Response: “Pre-Vocational Skill (Pre-Voc)”.

5. Have you ever attended any seminar/ In-Service Training course? **Yes**.....

No..... If **Yes**, which one(s)?

Response: “Yes”.

6. Do you enjoy teaching creative arts? **If yes, why?** **If No, why?**

Response: “Yes. Because, it is a practical course/subject”.

7. What kind(s) of teaching strategies do you use during teaching and learning BDT?

Response: “Demonstration, Discussion and practical work”.

8. Do you engage learners in practical activities including drawing?

If Yes, how often?.....**If No, why?**.....

Response: “Yes. But only when we have the teaching and learning materials”.

9. How do you assess students in theory and practical works in drawing?

Response: “I use class exercises and tests, sometimes practical works and end of term exams,”.

10. Do you have the support of your headmaster/mistress in teaching this subject?

If yes, how? **If no, why?**

Response: “Yes. He helps in the provision of TLMs if there is none”.

11. What has been the performance of your students in Basic Education Certificate Examination (BECE) over the years?

Response: “Fairly good”.

APPENDIX – J

Response from teacher –D

1. Is Basic Design and Technology (BDT) the only subject you teach? **Yes.....**
No.....

Response: “Yes”

2. How many classes do you teach the BDT subject in?

Response: “3”

3. Are you a trained teacher? **Yes..... No.....**

Response: “Yes”.

4. Which aspect of BDT do you teach?

Response: “Home Economics”.

5. Have you ever attended any seminar/ In-Service Training course?

Yes..... No..... If Yes, which one(s)? Response: “No”.

6. Do you enjoy teaching BDT? **If yes, why? If No, why?.....**

Response: “Yes. Because, I like the subject”.

7. What kind(s) of teaching strategies do you use during teaching and learning BDT?

Response: “Demonstration, Discussion and practical work”.

8. Do you engage learners in practical activities including drawing?

If Yes, how often?.....If No, why?.....

Response: “Yes. At least twice in a term”.

9. How do you assess students in theory and practical works in drawing?

Response: “I use class exercises and sometimes practical works, and end of term exams”.

10. Do you have the support of your headmaster/mistress in teaching this subject?

If yes, how? If not, why?

Response: “Yes. He helps in the provision of some tools and materials for practical work”.

11. What has been the performance of your students in Basic Education Certificate Examination (BECE) over the years? **Response:** “It was quite good”.

APPENDIX – K

INTERVIEW GUIDE FOR TEACHERS

Responses to the interview by teacher- A

1. For how long have you been teaching creative arts?

Response: “5 year”.

2. Are you a trained teacher?

Response: “Yes”.

3. Do you enjoy teaching creative arts? **Yes** [] **No** []

Response: “Yes”.

4. Which aspect(s) of creative arts do you teach?

Response: “Pre-Vocational Skills (Pre-Voc)”

5. Why did you accept to teach the aspect(s) but not the others?

Response: “I trained as Pre-Tech teacher from the Teacher Training College”

6. Have you ever attended any workshop(s)/ seminar/ In-service training in creative arts? **Response:** “No”.

7. What kind(s) of teaching strategies do you use during teaching and learning?

Response: “Discussion, Demonstration, and questioning and answering”

8. How do you assess students in theory and practical works in drawing?

Response: “Class exercises, group work, end of term examination”.

9. Does your school have a studio for the creative arts subjects? **Yes** [] **No** []

Response: “No. not at all”.

10. Who provides tools and materials for practical works?

Response: “Myself. But at times too, the headmaster helps in getting some”.

11. What role do you play during practical works and drawing lessons?

Response: “I demonstrate first and guide students to also try their hands on the activity”.

APPENDIX – L

Responses to the interview by teacher –B

1. For how long have you been teaching creative arts?

Response: “8 year”.

2. Are you a trained teacher?

Response: “Yes”.

3. Do you enjoy teaching BDT? **Yes** [] **No** []

Response: “Yes. I do”.

4. Which aspect(s) of BDT do you teach?

Response: “Home Economics (Sewing)”

5. Why did you accept to teach the aspect(s) but not the others?

Response: “This is my major subject from secondary school through Teacher Training College”

6. Have you ever attended any workshop(s)/ seminar/ In-service training in BDT?

Response: “Yes. There was one on nutrition by one German NGO some 3 years back”.

7. What kind(s) of teaching strategies do you use during teaching and learning?

Response: “I use Discussion, Questioning and Answering and Demonstration,”

8. How do you assess students in theory and practical works in drawing?

Response: “Mostly, I do that through class exercises, group work and end-of-term examination”.

9. Does your school have a studio for the BDT subjects? **Yes** [] **No** []

Response: “No. We use either the classroom or under the trees”.

10. Who provides tools and materials for practical works?

Response: “I use my own machine while the headmaster helps in getting some fabric”

11. What role do you play during practical works and drawing lessons?

Response: “I demonstrate first and guide students to do the same in groups”.

APPENDIX – M

Responses to the interview by teacher -C

1. For how long have you been teaching Basic Design and Technology (BDT)?

Response: “6 year”.

2. Are you a trained teacher?

Response: “Yes. I went to Polytechnic and later did an educational course under G.E.S”.

1. Do you enjoy teaching BDT? **Yes** [] **No** []

Response: “Oh! Yes”.

4. Which aspect(s) of BDT do you teach?

Response: “Pre -Vocational Skills (Pre-Voc)”

5. Why did you accept to teach the aspect(s) but not the others?

Response: “This is what I studied from Secondary Technical School through Polytechnic”

6. Have you ever attended any workshop(s)/ seminar/ In-service training in creative arts?

Response: “Yes. One. About 4 years ago”.

7. What kind(s) of teaching strategies do you use during teaching and learning?

Response: “I use Discussion, Questioning and Answering and Demonstration,”

8. How do you assess students in theory and practical works?

Response: “Through class exercises, group practical works and end-of-term examination”.

9. Does your school have a studio for the BDT subjects? **Yes** [] **No** []

Response: “No. We use the classrooms”.

10. Who provides tools and materials for practical works?

Response: “I use my own tools while the headmaster helps in getting some materials”

11. What role do you play during practical works and drawing lessons?

Response: “I demonstrate to students and guide them to do the same either in groups or individually”.

APPENDIX – N

Responses to the interview by teacher –D

1. For how long have you been teaching Basic Design and Technology (BDT)?

Response: “7 year”.

2. Are you a trained teacher?

Response: “Yes. I am”.

3. Do you enjoy teaching BDT? **Yes** [] **No** []

Response: “Yes. I do”.

4. Which aspect(s) of BDT do you teach?

Response: “Home Economics”

5. Why did you accept to teach the aspect(s) but not the others?

Response: “I like the subject and I enjoy teaching it”.

6. Have you ever attended any workshop(s)/ seminar/ In-service training in BDT?

Response: “No”.

7. What kind(s) of teaching strategies do you use during teaching and learning?

Response: “I use Discussion, Questioning and Answering and Demonstration.”

8. How do you assess students in theory and practical works?

Response: “Through class exercises, group work and end-of-term examination”.

9. Does your school have a studio for the creative arts subjects? **Yes** [] **No** []

Response: “No. We do everything in the classroom”.

10. Who provides tools and materials for practical works?

Response: “I do, while the headmaster helps at times”

11. What role do you play during practical works and drawing lessons?

Response: “I lead discussions. I demonstrate and guide students to do the same in groups”.

APPENDIX - O

Table 4.2: Summary of responses from teachers to opinionnaire

QUESTIONS	RESPONSES			
	TEACHER-A	TEACHER-B	TEACHER-C	TEACHER-D
1	“No. I teach English language too”	“Yes”	“Yes”	“Yes”
2	“2”	“3”	“3”	“3”.
3	Yes	“Yes”.	“Yes”.	“Yes”.
4	“Pre-Vocational Skill”	“Home Economics (Sewing)”.	“Pre-Vocational Skill”	“Home Economics (Sewing)”.
5	“No”.	“Yes. A Seminar organized by a German NGO”.	“Yes”.	“No”.
6	“I don’t enjoy it because of pupils’ inability to buy learning tools and materials”.	“Yes. The positive attitude of my students towards it motivates me”.	“Yes. Because, it is a practical course/subject”.	“Yes. Because, I like the subject”.
7	“Pupil Centred approach”.	“Discussion, questions and answers, demonstration and group work”.	“Demonstration, Discussion and practical work”.	“Demonstration, Discussion and practical work”.
8	“Yes. Once, every month”.	“Yes. At least twice every term”.	“Yes. But only when we have the teaching and learning materials”.	“Yes. At least twice in a term”.
9	“Through question and answers, class exercises and tests, end of term exams, and sometimes practical works”.	“Through class exercises and tests, end of term exams, and sometimes practical works”.	“I use class exercises and tests, sometimes practical works and end of term exams,”	“I use class exercises and sometimes practical works, and end of term exams”.
10	“Yes. He helps in the provision of Teaching Learning Materials (TLMs)”	“Yes. He helps in acquiring some for demonstration”.	“Yes. He helps in the provision of TLMs if there is none”.	“Yes. He helps in the provision of some tools and materials for practical work”.

11	“Unlike last year where students performed well, this year was not the best”.	“Not bad. They have been doing well.”	“Fairly good”.	“It was quite good”.
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APPENDIX - P

Table 4.3: Summary of Responses given by teachers to the interview guide

QUESTION S	RESPONSES			
	TEACHER-A	TEACHER-B	TEACHER-C	TEACHER-D
1	“5 year”.	“8 year”.	“6 year”	“7 year”
2	“Yes.”	“Yes”	“Yes. I went to Polytechnic and later did educational course under G.E.S”.	“Yes. I am”.
3	“Yes”	“Yes. I am”	“Oh! Yes”.	“Yes. I do”
4	“Visual Arts”	“Home Economics-sewing”	“Visual Arts”	“Home Economics-sewing”
5	“I trained as Pre-Voc teacher from the Teacher Training College”	“This is my major subject from secondary school through Teacher Training College”	“This is what I studied from Secondary Technical School through Polytechnic”	“I like the subject and I enjoy teaching it”
6	“No”.	“Yes. There was one organised by one German NGO some 3 years back”.	“Yes. One about 4 years ago”.	“No”
7	“Discussion, Demonstration, and questioning and answering”	“ Demonstration, Discussion, Questioning and Answering”	“ Discussion, Questioning and Answering and Demonstration”	“I use Discussion, Questioning and Answering and Demonstration”
8	“Class exercises, group work, end of term examination”.	“Mostly, I do that through class exercises, group work and end-of-term examination”.	“Through class exercises, group practical works and end-of-term examination”.	“Through class exercises, group work and end-of-term examination”.
9	“No. Not at all”.	“No. We use either the classroom or under the trees”.	“No. We use the classrooms”.	“No. We do everything in the classroom”.

10	“Myself. But at times too, the headmaster helps in getting some”	“I use my own machine while the headmaster helps in getting some fabric”	“I use my own tools while the headmaster helps in getting some materials”	“I do, while the headmaster helps at times”
11	“I demonstrate first and guide students to also try their hands on the activity”	“I demonstrate first and guide students to do same in groups”	“I demonstrate to students and guide them to do same either in groups or individually”	“I lead discussions, I demonstrate and guide students to do same in groups”



APPENDIX – Q

Table 4.4: Summary of responses from headmasters to the interview

QUESTIONS	RESPONSES			
	HEADMASTER – A	HEADMASTER – B	HEADMASTER – C	HEADMASTER – D
1	Visual Arts and Sewing.	Visual Arts only.	We do Visual Arts and Sewing in our school.	For now, we're doing Visual Arts.
2	Yes. I have one.	Yes. I have one.	Yes. I have one professional teacher and one HND holder.	Yes. Very qualified; a trained teacher
3	Yes. At least, to the best of their abilities.	I may say yes.	Yes. They do. It shows in their delivery.	Yes. It is evident in his work.
4	No. None has been organised since he came into this school.	Yes. There was one by a German NGO for BDT teachers.	Yes. There was one about 4 years ago, and that was all.	No. There was no secular on that for some time now.
5	Discussion and Demonstration.	He uses Discussion and Demonstration during drawing lessons.	I see him demonstrate and discuss skills and concepts.	Mostly, I see them discuss their works in the class.
6	Well, not bad. Just that most of them don't have tools and materials for practical activities like drawing and designing.	I think they do well.	Well, not bad. Just that most of them don't have tools and materials for practical activities like drawing and designing.	They have been doing their best. So, I may feel proud of them.

7	Hhmm. Actually, I don't do anything much.	I provide needed tools and materials.	Actually, I don't do anything as such.	I provide materials for drawing and designing.
8	Once a while. That is when I am less busy in the office.	That one! Any time I get the chance to go round the classes, I do.	Once a while. That is when I am less busy in the office.	At least once a week.
9	I see them draw and hang them on the wall for discussion.	Drawing and designing exercises and examinations.	Students draw and design. And I see them discuss their works in the class with the teacher.	Drawings and designs are appreciated one after the other.
10	YES. He has been hard-working. He doesn't joke with his work.	Oh yes. He does well. I like his spirit.	YES. I am quite impressed because students pass the subject each year.	Yes, I am. He does well.

APPENDIX – R

Table 4.5: Summary of discussions with focus groups

QUESTIONS	OUTCOMES OF DISCUSSIONS			
	F. GROUP -A	F. GROUP - B	F. GROUP - C	F. GROUP - D
1	Yes.	Yes	Yes	Yes.
2	Still life and technical drawing.	Still life, animals and trees.	Still life drawing and designing,	Still life and Landscape.
3	“In the classrooms, twice a week.	We do it in our class room and under the tree, once a week	In the classroom or outside, once a week.	In the classroom, two times in a week.
4	He does it on the board.	He composes the items and explains how to draw them.	He explains and sometimes demonstrates.	He explains and demonstrates for us to see.
5	Pencils and colour in sketch books. We provide them.	Pencils (<i>black and coloured</i>) in sketchbook. We and our teacher.	Pencils and paper.	Pencils and Crayons on paper or sketch books.
6	Yes. But not all the time. Sometimes he rushes.	Yes. She takes her time to explain the concepts.	Yes. But we don't understand some terms.	Yes. But sometimes we don't get the concepts well.
7	Through discussions, class exercise and examinations.	Through appreciation and discussion.	We appreciate our drawings.	Class exercises, appreciation and examinations.
8	Yes, we will try it and see.	Well. Not all of us. Some want to study General Arts and Science.	Yes. Some of us want to be artists.	Some of us will study it.

APPENDIX - S

INTERVIEW GUIDE FOR HEADMASTERS

Responses to the interview by headmaster - A

1. Which area(s) of Basic Design and Technology (BDT) do your students study?

Response: Visual Arts and Sewing

2. Do you have a qualified or trained teacher(s) for the subject(s)? If Yes, how many?

Response: Yes. They are two; a male and a female.

3. Do the teachers display enough content and knowledge in his/her area of specialisation? Explain. **Response:** Yes. At least, to the best of their abilities.

4. Does the Visual Arts teacher attend professional training (seminars, in-service training etc.) in BDT? **i.** If **Yes**, how often? **ii.** If **No**, why?

Response: No. None has been organised since he came into this school.

5. What pedagogical strategies do your teachers use in drawing lessons?

Response: Discussion and Demonstration.

6. What are your impressions about the performance of your BDT students over the years?

Response: Well, not bad. Just that most of them don't have tools and materials for practical activities like drawing and designing.

7. How do you contribute to the success of teaching and learning of BDT in your school?

Response: Hmm. Actually, I don't do anything much.

8. How often do you supervise BDT lessons in your school?

Response: Once a while. That is when I am less busy in the office.

9. What assessment techniques do your BDT teachers apply to students' learning outcomes regarding drawing?

Response: I see them draw and hang them on the wall for discussion.

10. Are you impressed about the performance of your BDT teachers over the years?

Response: YES. He has been hard-working. He doesn't joke with his work.

APPENDIX – T

Responses to the interview by headmaster – B

1. Which area(s) of Basic Design and Technology (BDT) do your students study?

Response: Visual Arts only.

2. Do you have qualified or trained teacher(s) for the subject? If yes, how many?

Response: Yes. I have one.

3. Does the teacher display enough content and knowledge in his/her area of specialisation? Explain. **Response:** I may say yes.

4. Does the Visual Arts teacher attend professional trainings (seminars, in-service trainings etc.) in BDT? **i.** If **Yes**, how often? **ii.** If **No**, why?

Response: Yes. There was one by a German NGO for BDT teachers.

5. What pedagogical strategies does your teacher use in drawing lessons?

Response: He uses Discussion and Demonstration during drawing lessons.

6. What are your impressions about the performance of your BDT students over the years?

Response: I think they do well.

7. How do you contribute to the success of teaching and learning of BDT in your school?

Response: I provide needed tools and materials.

8. How often do you supervise BDT lessons in your school?

Response: That one! Any time I get the chance to go round the classes, I do.

9. What assessment techniques does your BDT teacher apply to students' learning outcomes regarding drawing?

Response: Drawing and designing exercises and examinations.

10. Are you impressed about the performance of your BDT teacher over the years?

Response: Oh yes. He does well. I like his spirit.

APPENDIX - U

Responses to the interview by headmaster – C

1. Which area(s) of Basic Design and Technology (BDT) do your students study?

Response: We do Visual Arts and Sewing in our school.

2. Do you have qualified or trained teachers for the subject? If Yes, how many?

Response: Yes. I have one professional teacher and one HND holder.

3. Does the teacher(s) display enough content and knowledge in his/her area of specialisation? Explain. **Response:** Yes. They do. It shows in their delivery.

4. Does the Visual Arts teacher attend professional trainings (seminars, in-service training etc.) in BDT? **i.** If **Yes**, how often? **ii.** If **No**, why?

Response: Yes. There was one about 4 years ago, and that was all.

5. What pedagogical strategies does your teacher(s) use in drawing lessons?

Response: I see him demonstrate and discuss skills and concepts.

6. What are your impressions about the performance of your BDT students over the years?

Response: Well, not bad. Just that most of them don't have tools and materials for practical activities like drawing and designing.

7. How do you contribute to the success of teaching and learning of BDT in your school?

Response: Actually, I don't do anything as such.

8. How often do you supervise BDT lessons in your school?

Response: Once a while. That is when I am less busy in the office.

9. What assessment techniques does your BDT teacher(s) apply to students' learning outcomes regarding drawing?

Response: Students draw and design. And I see them discuss their works in the class with the teacher.

10. Are you impressed about the performance of your BDT teacher(s) over the years?

Response: YES. I am quite impressed because students pass the subject each year.

APPENDIX - V

Responses to the interview by headmaster – D

1. Which area(s) of Basic Design and Technology (BDT) do your students study?

Response: For now, we're doing Visual Arts.

2. Do you have a qualified or trained teacher(s) for the subject(s)? If Yes, how many?

Response: Yes. Very qualified; a trained teacher

3. Does the teacher display enough content and knowledge in his/her area of specialisation? Explain. **Response:** Yes. It is evident in his work.

4. Does the Visual Arts teacher attend professional training (seminars, in-service training etc.) in BDT? **i.** If **Yes**, how often? **ii.** If **No**, why?

Response: No. There was no secularism on that for some time now.

5. What pedagogical strategies does your teacher use in drawing lessons?

Response: Mostly, I see them discuss their works in the class.

6. What are your impressions about the performance of your BDT students over the years?

Response: They have been doing their best. So, I may feel proud of them.

7. How do you contribute to the success of teaching and learning of BDT in your school?

Response: I provide materials for drawing and designing.

8. How often do you supervise BDT lessons in your school?

Response: At least once a week.

9. What assessment techniques does your BDT teacher apply to students' learning outcomes regarding drawing?

Response: Drawings and designs are appreciated one after the other.

10. Are you impressed about the performance of your BDT teacher(s) over the years?

Response: Yes, I am. He does well.

APPENDIX – W

FOCUS GROUP DISCUSSION

Responses given during discussion by group – A

1. Does drawing form part of Basic Design and Technology (BDT) lessons?

Response: “Yes”.

2. What kind of drawings do you learn?

Response: “Still life and technical drawing”.

3. Where do the drawing lessons take place and how often do you draw?

Response: “In the classrooms, twice a week”.

4. How does your teacher teach you drawing?

Response: “He does it on the board”.

5. What tools and materials do you use in drawing and who provides them?

Response: “Pencils and colour in sketch books”. “We provide them”.

6. Does your teacher teach drawing to your understanding? Explain.

Response: “Yes. But not all the time. Sometimes he rushes”.

7. How are your drawings assessed?

Response: “Through discussion, class exercise and examinations”.

8. Would you like to study Visual Arts in S.H.S and why?

Response: “Yes, we will try it and see”.

APPENDIX – X

Responses given during discussion by group – B

1. Does drawing form part of Basic Design and Technology (BDT) lessons?

Response: “Yes”.

2. What kind of drawings do you learn?

Response: “Still life, animals and trees”.

3. Where do the drawing lessons take place and how often do you draw?

Response: “We do it in our class room and under the tree, once a week”.

4. How does your teacher teach you drawing?

Response: “He composes the items and explains how to draw them”.

5. What tools and materials do you use in drawing and who provides them?

Response: “Pencils (*black and coloured*) in sketchbook”. “We and our teacher”.

6. Does your teacher teach drawing to your understanding? Explain.

Response: “Yes. She takes her time to explain the concepts”.

7. How are your drawings assessed?

Response: “Through appreciation and discussion”.

8. Would you like to study Visual Arts in S.H.S and why?

Response: “Well. Not all of us. Some want to study General Arts and Science”.

APPENDIX – Y

Responses given during discussion by group – C

1. Does drawing form part of Basic Design and Technology (BDT) lessons?

Response: “Yes”.

2. What kind of drawings do you learn?

Response: “Still life drawing and designing”.

3. Where do the drawing lessons take place and how often do you draw?

Response: “In the classroom or outside, once a week”.

4. How does your teacher teach you drawing?

Response: “He explains and sometimes demonstrates”.

5. What tools and materials do you use in drawing and who provides them?

Response: “Pencils and paper”.

6. Does your teacher teach drawing to your understanding? Explain.

Response: “Yes. But we don’t understand some terms”.

7. How are your drawings assessed?

Response: “We appreciate our drawings”.

8. Would you like to study Visual Arts in S.H.S and why?

Response: “Yes. Some of us want to be artists”.

APPENDIX – Z

Responses given during discussion by group – D

1. Does drawing form part of Basic Design and Technology (BDT) lessons?

Response: “Yes”.

2. What kind of drawings do you learn?

Response: “Still life and Landscape”.

3. Where do the drawing lessons take place and how often do you draw?

Response: “In the classroom, two times in a week”.

4. How does your teacher teach you drawing?

Response: “He explains and demonstrates for us to see”.

5. What tools and materials do you use in drawing and who provides them?

Response: “Pencils and Crayons on paper or sketch books”.

6. Does your teacher teach drawing to your understanding? Explain.

Response: “Yes. But sometimes we don't get the concepts well”.

7. How are your drawings assessed?

Response: “Class exercises, appreciation and examinations”.

8. Would you like to study Visual Arts in S.H.S and why?

Response: “Some of us will study it”.

APPENDIX – A1



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15th April, 2021

TO WHOM IT MAY CONCERN

Dear Sir / Madam,

LETTER OF INTRODUCTION

Boateng Solomon Kofi with index number 200013783 is a second year MPhil Student in the Department of Art Education, University of Education, Winneba. He is undertaking a research project on the topic: "Inquiry into the Pedagogical Content Knowledge of Art Teachers in the Central Tongu District" and has requested for this letter to enable him collect data from your outfit.

We will be grateful if you could offer him the required assistance.

Thank you.

Yours faithfully,

DEPT. OF ART EDUCATION
UNIVERSITY OF EDUCATION
WINNEBA

Dr. E R K Amisshah
Ag. Head of Department



www.uew.edu.gh

APPENDIX – B1

CONSENT FORM FOR HEADMASTER AND TEACHERS

I am researching on the topic: **Inquiry into the Pedagogical Content knowledge and Practice of Creative Arts teachers in the Adidome circuit of the Central Tongu District**. I therefore need the consent of you and your **Form 3** Creative Arts students to participate in the process for information.

CONSENT TO TAKE PART IN RESEARCH

I.....voluntarily agree to participate with my students in this research study.

- ❖ I understand that even if I agree to participate now, I can withdraw at any time or refuse to answer any question without any consequences of any kind.
- ❖ I understand that I can withdraw permission to use data from my interview within two weeks after the interview, in which case the material will be deleted.
- ❖ I have had the purpose and nature of the study explained to me in writing and I have had the opportunity to ask questions about the study.
- ❖ I understand that participation involves observation, interview, opinionnaire, and focus group discussion.
- ❖ I understand that I will not benefit directly from participating in this research.
- ❖ I agree to my interview being audio-recorded or in any other appropriate forms.
- ❖ I understand that all information I provide for this study will be treated confidentially.
- ❖ I understand that in any report on the results of this research my identity will remain anonymous. This will be done by changing my name and disguising any details of my interview which may reveal my identity or the identity of people I speak about.
- ❖ I understand that under freedom of information legalisation I am entitled to access the information I have provided at any time while it is in storage as specified above.
- ❖ I understand that I am free to contact any of the people involved in the research to seek further clarification and information.

Solomon Kofi Boateng, MPHIL- Art Education. University of Education, Winneba.

.....

.....

Signature of participant

Date

I believe the participant is giving informed consent to participate in this study

.....

.....

Signature of researcher

Date

APPENDIX – C1

CONSENT FORM FOR HEADMASTER AND TEACHERS

I am researching on the topic: **Inquiry into the Pedagogical Content knowledge and Practice of Creative Arts teachers in the Adidome circuit of the Central Tongu District.** I therefore need the consent of you and your **Form 3** Creative Arts students to participate in the process for information.

CONSENT TO TAKE PART IN RESEARCH

I, AGLANU REJOICE voluntarily agree to participate with my students in this research study.

- ❖ I understand that even if I agree to participate now, I can withdraw at any time or refuse to answer any question without any consequences of any kind.
- ❖ I understand that I can withdraw permission to use data from my interview within two weeks after the interview, in which case the material will be deleted.
- ❖ I have had the purpose and nature of the study explained to me in writing and I have had the opportunity to ask questions about the study.
- ❖ I understand that participation involves observation, interview, opinionnaire, and focus group discussion.
- ❖ I understand that I will not benefit directly from participating in this research.
- ❖ I agree to my interview being audio-recorded or in any other appropriate forms.
- ❖ I understand that all information I provide for this study will be treated confidentially.
- ❖ I understand that in any report on the results of this research my identity will remain anonymous. This will be done by changing my name and disguising any details of my interview which may reveal my identity or the identity of people I speak about.
- ❖ I understand that under freedom of information legalisation I am entitled to access the information I have provided at any time while it is in storage as specified above.
- ❖ I understand that I am free to contact any of the people involved in the research to seek further clarification and information.

Solomon Kofi Boateng, MPHIL- Art Education. University of Education, Winneba.

[Signature]
Signature of participant

18/08/2021
HEADMASTER
METHODIST JHR. HIGH
P. O. BOX 15
ADIDOME

I believe the participant is giving informed consent to participate in this study

[Signature]
Signature of researcher

18/08/2021
Date

APPENDIX – D1

CONSENT FORM FOR HEADMASTER AND TEACHERS

I am researching on the topic: **Inquiry into the Pedagogical Content knowledge and Practice of Creative Arts teachers in the Adidome circuit of the Central Tongu District**. I therefore need the consent of you and your Form 3 Creative Arts students to participate in the process for information.

CONSENT TO TAKE PART IN RESEARCH

I, LAWRENCE AVICKSON.....voluntarily agree to participate with my students in this research study.

- ❖ I understand that even if I agree to participate now, I can withdraw at any time or refuse to answer any question without any consequences of any kind.
- ❖ I understand that I can withdraw permission to use data from my interview within two weeks after the interview, in which case the material will be deleted.
- ❖ I have had the purpose and nature of the study explained to me in writing and I have had the opportunity to ask questions about the study.
- ❖ I understand that participation involves observation, interview, opinionnaire, and focus group discussion.
- ❖ I understand that I will not benefit directly from participating in this research.
- ❖ I agree to my interview being audio-recorded or in any other appropriate forms.
- ❖ I understand that all information I provide for this study will be treated confidentially.
- ❖ I understand that in any report on the results of this research my identity will remain anonymous. This will be done by changing my name and disguising any details of my interview which may reveal my identity or the identity of people I speak about.
- ❖ I understand that under freedom of information legalisation I am entitled to access the information I have provided at any time while it is in storage as specified above.
- ❖ I understand that I am free to contact any of the people involved in the research to seek further clarification and information.

Solomon Kofi Boateng, MPHIL- Art Education. University of Education, Winneba.


Signature of participant

24/08/2021
Date
HEADMASTER
JIDOME E. P. JNR. SEC. SCH,
NTED/JSS/03
P. O. BOX
ADIDOME

I believe the participant is giving informed consent to participate in this study


Signature of researcher

24-08-2021
Date

APPENDIX – E1

CONSENT FORM FOR HEADMASTER AND TEACHERS

I am researching on the topic: **Inquiry into the Pedagogical Content knowledge and Practice of Creative Arts teachers in the Adidome circuit of the Central Tongu District**. I therefore need the consent of you and your Form 3 Creative Arts students to participate in the process for information.

CONSENT TO TAKE PART IN RESEARCH

I, MARGARET IVY AIKORA.....voluntarily agree to participate with my students in this research study.

- ❖ I understand that even if I agree to participate now, I can withdraw at any time or refuse to answer any question without any consequences of any kind.
- ❖ I understand that I can withdraw permission to use data from my interview within two weeks after the interview, in which case the material will be deleted.
- ❖ I have had the purpose and nature of the study explained to me in writing and I have had the opportunity to ask questions about the study.
- ❖ I understand that participation involves observation, interview, opinionnaire, and focus group discussion.
- ❖ I understand that I will not benefit directly from participating in this research.
- ❖ I agree to my interview being audio-recorded or in any other appropriate forms.
- ❖ I understand that all information I provide for this study will be treated confidentially.
- ❖ I understand that in any report on the results of this research my identity will remain anonymous. This will be done by changing my name and disguising any details of my interview which may reveal my identity or the identity of people I speak about.
- ❖ I understand that under freedom of information legalisation I am entitled to access the information I have provided at any time while it is in storage as specified above.
- ❖ I understand that I am free to contact any of the people involved in the research to seek further clarification and information.

Solomon Kofi Boateng, MPHIL- Art Education. University of Education, Winneba.

Mary
.....
Signature of participant

25/05/2022
.....
Date

Mary
.....
HEADMISTRESS
GLOBEVIEW BASIC SCHOOL
P. O. BOX 51, ADIDOME
DATE

I believe the participant is giving informed consent to participate in this study

[Signature]
.....
Signature of researcher

25/05/2022
.....
Date

APPENDIX – F1

CONSENT FORM FOR HEADMASTER AND TEACHERS


I am researching on the topic: **Inquiry into the Pedagogical Content knowledge and Practice of Creative Arts teachers in the Adidome circuit of the Central Tongu District**. I therefore need the consent of you and your **Form 3 Creative Arts** students to participate in the process for information.

CONSENT TO TAKE PART IN RESEARCH

I, LAWRENCE AGBOMA.....voluntarily agree to participate with my students in this research study.


- ❖ I understand that even if I agree to participate now, I can withdraw at any time or refuse to answer any question without any consequences of any kind.
- ❖ I understand that I can withdraw permission to use data from my interview within two weeks after the interview, in which case the material will be deleted.
- ❖ I have had the purpose and nature of the study explained to me in writing and I have had the opportunity to ask questions about the study.
- ❖ I understand that participation involves observation, interview, opinionnaire, and focus group discussion.
- ❖ I understand that I will **not benefit** directly from participating in this research.
- ❖ I agree to my interview being audio-recorded or in any other appropriate forms.
- ❖ I understand that all information I provide for this study will be treated confidentially.
- ❖ I understand that in any report on the results of this research my identity will remain anonymous. This will be done by changing my name and disguising any details of my interview which may reveal my identity or the identity of people I speak about.
- ❖ I understand that under freedom of information legalisation I am entitled to access the information I have provided at any time while it is in storage as specified above.
- ❖ I understand that I am free to contact any of the people involved in the research to seek further clarification and information.

Solomon Kofi Boateng, MPHIL- Art Education. University of Education, Winneba.


.....
Signature of participant

24/08/2021
.....
HEADMASTER
ADIDOME D. A / R. CHS
P. O. BOX 12, ADIDOME

I believe the participant is giving informed consent to participate in this study


.....
Signature of researcher

24/08/2021
.....
Date