

**KWAME NKURUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY,  
KUMASI**

**AN OVERVIEW OF TEACHING/LEARNING OF CREATIVITY IN THE**

**COLLEGES OF EDUCATION IN BRONG-AHAFO REGION:**

**A CASE STUDY OF BEREKUM COLLEGE OF EDUCATION**

**By**

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**Bachelor of Art Education**

A Thesis submitted to the School of Graduate Studies,  
Kwame Nkrumah University of Science and Technology, Kumasi, in

Partial fulfillment of the requirements for the degree of

**MASTER OF ARTS IN ART EDUCATION**

Faculty of Art  
College of Art and Science

July 2012

## DECLARATION

I hereby declare that this submission is my own work towards the MA degree and that to the best of my knowledge, it contains no material which has been accepted for the award of any other degree of the university, except where due acknowledgement has been made in the text.

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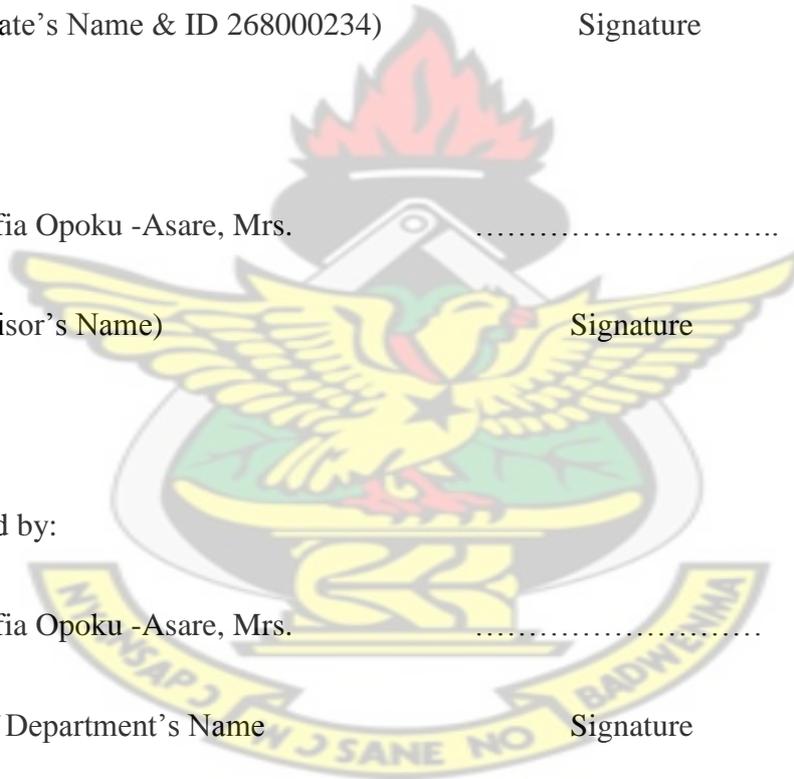
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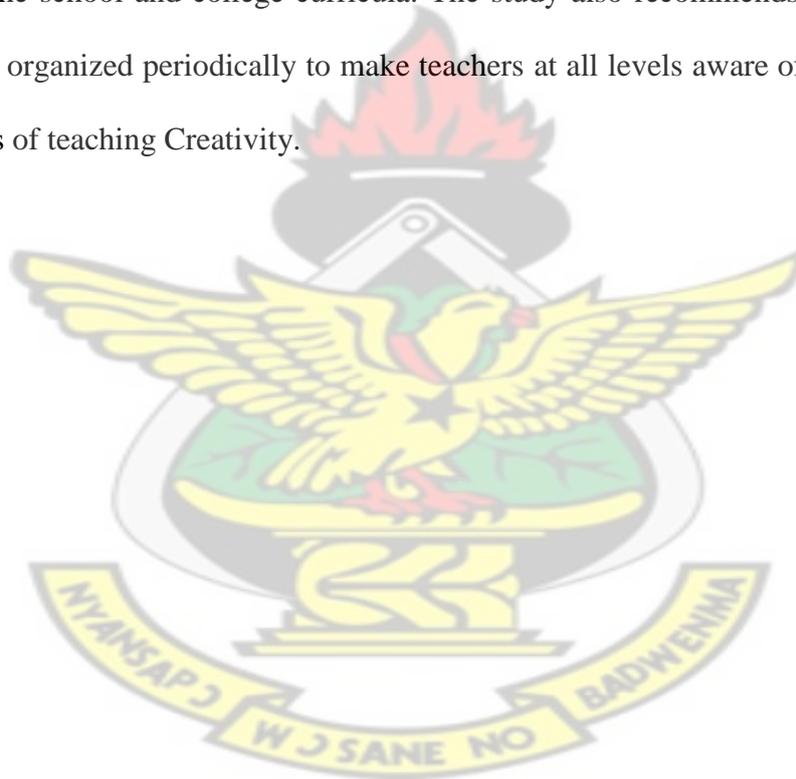
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## ABSTRACT

Many students in Ghana's Colleges of Education lack the confidence and ability to create art works. This situation negatively affects them not only in their personal attitudes but also in internal and external examinations in creativity as a subject of study in the Colleges of Education in Ghana. Creativity is a subject that is taught within the Fundamentals in Visual Arts Related curriculum. It is compulsory for first year students of Colleges of Education in Ghana and examined in the first semester examinations. This study was conducted to find out the problems associated with the teaching and learning of Creativity as a subject of study; as well as ascertain the students' understanding of creativity and how this is interpreted in the artworks produced in the three Colleges of Education in the Brong-Ahafo Region. This study employed the qualitative research method to identify and describe the challenges of teaching and learning of creativity in the Berekum College of Education as a case study, touching on appropriate methods, techniques, and importance of creativity and how to combat students' inability to perform well in the subject. This study revealed that many of the students were not exposed to the teaching and learning of Creative Arts activities at the basic and secondary levels of education; the College Art tutors find it difficult promoting creativity among teacher trainees because the time allotted for this topic is inadequate for practical activities. Although teaching strategies that were adopted for this study yielded positive results it cannot be taken for granted that all is well. The study found that teaching creativity in Visual Arts using techniques such as brainstorming, motivation, practical skills development; and teaching methods such as inquiry- discovery, demonstration and field trips assisted in the development of the sampled students' creative knowledge and skills. Problems identified in the study include the College tutors' inability to use appropriate teaching methods to help

their students to understand the concept and process of creativity since the school system in Ghana does not expose students to Visual Arts early enough to enable them develop creative skills. The study recommends that in the study of creativity, the students should work in teams and have regular practice exercises so that they would generate ideas together and work without copying from their colleagues and hence improve the aesthetic quality of works they produce. In addition, the Ministry of Education must enforce the teaching and learning of Creative Arts at all levels of education, including the Colleges of Education to promote and enhance development within the school and college curricula. The study also recommends that workshops must be organized periodically to make teachers at all levels aware of the appropriate methods of teaching Creativity.



## ACKNOWLEDGEMENTS

I wish to acknowledge with thanks the help I received in diverse ways that made it possible for me to write this thesis. First, and foremost, I thank the Almighty God who gave me the strength and knowledge to embark on this work. I am also very grateful to, Nana Afia Opoku-Asare, Mrs, my supervisor, for her useful suggestions and constructive criticisms throughout the preparation of this work. Nana, may you live up to great expectations!

Again, I owe a debt of gratitude to my wife, Mrs. Regina Yeboah Danso and my children Frank, Ben, Mama, Attanom, Sister, Owuraku and ‘Mother’, who stood firmly behind me during this Master’s degree programme in KNUST. To them I say, accept my appreciation, for without you, this dream would not have come true; all up to this lonely moment due to my long absence from home.

I cannot forget my mother and my late father, Mr. A. E. Kofi Danso (former Deputy Director of Sunyani Municipality Ghana Education Service, and the former Choir master of Samuel Otu Presbyterian Church of Ghana, Techimantia, all in the Brong-Ahafo Region), for giving me a good beginning in my education. May the good Lord also bless my Mum with long life and rest my Dad in His bosom.

Finally, I am grateful to my brothers, sisters and friends especially, Mr. Danso Yeboah, Science tutor, Agogo Presbyterian College of Education and Awo Sakyiwaa Danso, a teacher in South Africa. Let us live to enjoy the reward.

JUNE, 2011

A.D.E.

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## CHAPTER ONE

### INTRODUCTION

#### 1.0 Overview

This chapter deals with the background to the study, statement of the problem, objectives, research questions or hypothesis, delimitation, limitation, definition of terms, importance of the study, and how the report was organized.

#### 1.1 Background to the Study

Creativity is the process of making something new or improving on what is already in existence either to give it a new look or additional function. It is very essential for producing art works (Pre-Vocational Skills 1 – UTDBE Programme by Distance Learning, 2004, p.34). Oflate, students pursuing the Diploma in Basic Education (DBE) programme in Ghana's Colleges of Education have not been performing well in creativity as a topic in the Fundamentals in Visual Arts Related Subjects which is compulsory for First Year students in the first semester examination. Students cultivate the habit of copying from others whenever art assignments are given to them. For example, this occurs when each student is asked to draw any object found around him or her and shade in three tones, majority of the students draw leaves and shade in mass. It looks as if they all plan to draw and shade only leaves. Surprisingly, creativity demands a change of something to have a new look yet the students' artworks do not exhibit any change as the concept suggests. Upon reflection, the problem may be due to lack of innovation in teaching on the part of tutors in the Colleges of Education, of which the researcher is one. This prompted the researcher to look into the methodology and procedures for teaching and learning of creativity as a topic in the

Colleges of Education in the Brong-Ahafo Region, Ghana, to find out how the students understand the concept, process and application of creativity.

## **1.2 Statement of the Problem**

Personal experience shows that most of the students in first year of the Diploma in Basic Education programme in the Berekum College of Education do not perform well in creativity. One problem identified with this group of students was that they are not able to answer examination questions in creativity well and usually copy drawings from their colleagues instead of using their imagination to produce their own works. They also find it difficult to develop and organize their own teaching and learning materials knowing well that creativity is among the important activities to be taught in Pre-Vocational Skills (Art Related subject) programme.

It is not known whether the problem is due to the fact that most of the students live in illiterate environments or it is the result of a pedagogical problem in the classroom or that this might be due to the lack of early exposure to Vocational Skills in school. Knowing that the teaching and learning of creativity can assist individual students to solve their own problems and also develop creative abilities, the researcher sought ways of bringing new ideas into the teaching of the subject to enable teacher trainees to develop innovative ideas and manifest them from thought and reality. The idea is that if college students cannot think divergently to solve creative problems, how can they go out as teachers to help the pupils they would be assigned to teach to do same? This study therefore sought to identify the processes that College tutors could adopt to help their students to understand Creativity and apply the principles to improve their performance in the subject.

### **1.3 Objectives of the Research**

1. To describe the scope and content of the creativity syllabus of Ghana's Colleges of Education.
2. To observe the teaching of Creativity and assess students' understanding, and how this is interpreted in their artworks in the Berekum College of Education in the Brong-Ahafo Region.
3. To design and use a systematic pedagogic approach to teaching lessons in creativity to demonstrate the feasibility of the approach to improve students' performance in Creativity in the selected college.
4. To pretest the teaching methodology in the Colleges of Education.

### **1.4 Research Questions**

The study was guided by the following research questions:

1. What factors account for low performance of teacher trainees in the subject "creativity" in the Berekum College of Education?
2. How is "creativity" taught within the Fundamentals in Visual Arts Related Subjects in the selected College of Education in Brong-Ahafo Region?
3. What intervention process can be used to remedy students' inability to perform well in the subject?
4. How can the research intervention be administered to improve students' creative activity and attitudes?

## **1.5 Delimitation**

The study was confined to the teaching and learning of creativity in the Berekum College of Education in Brong-Ahafo Region of Ghana. It was restricted to only creativity as a topic in the Art Related Subject syllabus that is studied by first year Diploma in Basic Education students.

## **1.6 Limitation**

Inadequate funding was the major problem which prevented the researcher from making all the teaching and learning materials required for the Pre- and Post- Test exercises. The one year available for the study was also used for classroom work, co-curricular activities, and teaching sandwich courses for teachers seeking upgrading in the Region. The researcher was also engaged in teaching practice supervision among other duties. It is worth noting that because the researcher was not offered study leave to pursue the programme by the Ghana Education Service, the study had to be combined with teaching activities, which made it difficult to complete the thesis on time. Some of the people interviewed for the study were also reluctant to participate in the study because they thought it was a way of exposing their shortcomings.

## **1.7 Importance of the Study**

The study can help improve students' performance in the teaching and learning of creativity at all levels of education and Readers of this research report can adapt be acquainted with the information provided on the concept, theories, process and methodology for teaching creativity. The tutors and students in the Colleges of Education can understand the concept of creativity and use this knowledge to solve problems in real life. When college students are creative in the classroom, they are

likely to question and challenge situations they encounter even as teachers and push their pupils to be curious and do things creatively; they will also learn to question and challenge the status quo and not necessarily follow the rules.

Effective teaching and learning of creativity will also change college students' attitudes to art and make them better citizens who can apply the knowledge and skills acquired in every aspect of their lives.

### **1.8 Organization of the rest of the Text**

Chapter two dealt with the review of related literature which focused on the views and ideas of various authors on the topic.

Chapter three dealt with the general strategy adopted for the study which includes the methods used in data collection and the description of the topic.

Chapter four dealt with the presentation and analysis of data while main findings of the chapter five discussed the findings which also provide a summary of the study, some suggestions for college tutors to improve the chances of their students doing well in the learning of creativity as a subject of study in the Colleges of Education.

## CHAPTER TWO

### REVIEW OF RELATED LITERATURE

#### 2.1 Overview

This chapter has information taken from what other authors have done so far with regards to the development of creativity. The sub-headings discussed are: Teaching, Good Teaching, Effective Teaching, Learning, Factors Affecting Learning, How Adult Students Learn, Pre-Vocational Skills Curriculum, Scheme of Work, Lesson Preparation, Lesson Planning, Visual Arts Lesson Plan, Teaching in the Colleges of Education, Developing Creativity in Colleges, Colleges of Education Teachers, Concept of Creativity, Importance and Rationale for Studying Creativity, Characteristics of Creativity, Creative Process, and Qualities of a Creative Person.

#### 2.2 Teaching

Over the years, thousands of studies have been conducted to explain what teaching is. According to Encarta Dictionaries (“Microsoft Student”, 2009, DVD), teaching is the profession or practice of being a teacher of something that is taught, for example, a point of doctrine. It is also the ability to promote learning for all students and the behaviour of the teacher that evolves during the instructional process (Ornstein, 1995). Teaching is regarded as a process of bringing about learning. But one could argue that learning can take place without teaching, as in the case of a farmer who discovers that one foot-path is longer than the other (Farrant, 1980).

Accurate & Reliable Dictionary (2011) supports the definition put up by Encarta Dictionaries (“Microsoft Students, 2009, DVD) which says, teaching is a doctrine that is taught. On his exposition on the nature of teaching, Gibran (as cited in Tamakloe, 1996) says the teacher does not bid you to enter the house of his wisdom but rather

leads you to the threshold of your mind. For the wisdom of one man leads not its wings to another man. Gibran is saying that teaching is the process of imparting knowledge and skills to the individual learners. Furthermore, a learner cannot acquire the knowledge and skills without seeking help from the process of teaching.

Orlich (2004) corroborates with Schlechty (cited in Tamakloe et al, 1996) on the grounds that teaching consists of nothing more than applying the appropriate reinforcement to elicit desired learner behaviours. The implication is that teaching assists individual learners to change in behavioural attitudes for the development of the three domains (cognitive, affection and psychomotor) of knowledge. Orlich argues that teaching involves dynamic interactions among individuals, in which all concerned are continually making decisions. The implication is that there is active involvement of interaction between teachers and teachers, teachers and learners, and learners and learners that is characterized by vigorous activity or undergoing change and development. It is a process of 'Give-and Take'.

In a related development, Farrant (1996) describes teaching as a process that facilitates learning. This includes creating an environment to facilitate learning and motivating learners to have interest in what is being transmitted to them, meaning that what the students see, hear and do in the classroom is what the teacher provides for them, and what the learners are ready and able to learn. The conclusion is that the teacher should ensure the content of the lesson is within the ability levels of the learners. It also involves creating situations to facilitate learning and motivating learners to have interest in what is being transmitted to them.

According to Tamakloe, Amedahe & Atta (2005), "teaching is not pouring out knowledge, neither is it hearing lesson..., teaching is getting at the heart and mind so

that the learners begin to value learning, and to believe that learning is possible in their own case”. In other words, Tamakloe et al are saying that through teaching, learners must not only be made to love learning and appreciate its importance, but they should also be equipped with the skills of learning on their own when the teacher ceases to be on the scene. Secondly, learners must also try to learn on their own after they have received information from the teachers’ reservoir of ideas.

While Schlechty (2003) defines teaching as ‘the act of including students to behave in ways that are assumed to lead to learning which include attempts to induce students to behave’ (Dondieu, 2000), Brown, Burley and Wing (1990) emphasize the transfer of skills, attitude and knowledge from one person to another. This means the objective of teaching is therefore to bring about a desired change in the learner.

### **2.2.1 Good Teaching**

Leblanc (1998) has the following as some of the requirements for good teaching:

1. Students must be motivated to learn, but must be taught how to learn, and must be done in a manner that is relevant, meaningful and memorable. It is about caring for the teacher’s craft, having a passion for it, and conveying that passion to everyone, most importantly to the students.
2. Teachers must know the substance and treat students as consumers of knowledge. It is about doing your best to keep on top of your field, reading sources, inside and outside of your areas of expertise, and being at the leading edge as often as possible.
3. There is the need for teachers to listen, question, be responsive, and remember that each student and class is different. It is about pushing students to excel, at

the same time, it is about being human, respecting others, and being professional at all times.

4. Good teaching is about not always having a fixed agenda and being rigid, but being flexible, fluid, experimenting, and having the confidence to react and adjust to changing circumstances.
5. The style of presentation of the lesson is also a good teaching for teachers to adopt. The lesson must be entertaining.

As a concept, teaching is central to the education enterprise as such it is valuable to understand fully what it means. On the same note, Fleming (as cited in Dondieu, 2000) supports Orlich's (1998) statement that teaching is any situation in which one person tries to pass to another his knowledge (belief), feeling (appreciation), purpose (value) or action. This could take place between friends or peers or a teacher and a student. It could be from any rational being to another of any level. An example is where a painter teaches his or her son or daughter how to hold a brush and use it to write, draw and paint. For good teaching to be on track, there must be someone to engineer its process, which points to a good teacher as one of the factors of crucial issues bordering creativity.

### **2.3 A Good Teacher**

A teacher is someone who imparts knowledge, skills, attitudes and behaviours to learners. For teaching to take place effectively, there should be three focal points forming a triadic relationship (Tamakloe et al, 1996). The three focal points are the teacher, the taught (learner) and the discipline (subject area). There must be a transformation when the teacher exerts some influence on the taught and the taught in turn exerts some influence on the teacher (Tamakloe et al, p.6 and 7).

According to Ryan and Coopers (2008), a good teacher must play the under-listed roles:

1. Mediator of learning
2. Disciplinarian
3. Loco-Parentis
4. Judge
5. Confidant
6. Surrogate of specific value

As a Mediator of learning, Ryan & Coopers explain that the teacher is responsible for transmitting knowledge and to guide his pupil to learn. In fulfilling this role, he or she decides what to guide his pupils to learn, to teach, and how it must be taught by arranging all learning experiences systematically so that the learner can learn smoothly. As a Disciplinarian, the teacher creates conditions for orderliness and cleanliness both in and outside the classroom. He or she controls the learner in ensuring that there is order either by force or by persuasion and more importantly by serving as a role model.

In the position of *Locus Parentis*, the teacher serves as a parent substitute in the school setting. The teacher acts as a parent to the student by showing affection, praising him/her, advising and offering counseling services. As a Judge, the teacher acts in praising certain socially accepted values and discourages behaviour that is socially or emotionally dysfunctional through the use of rewards and punishment. As a Confidant, the teacher shows sympathy and empathy in his or her interaction with the learner. Through this, the teacher becomes supportive of the learners and earns their affection and trust. As a Surrogate of specific values, the teacher must uphold

certain accepted cultural values and morals in his dealing with the learner so as to act as a model for him or her.

With Dewey (1997), a good teacher is one who provides the environment where learning can be effective and enjoyable for both the student and the teacher. This means teachers at any level of schooling should make sure that a good learning environment is provided for students to sustain their interest in the subject they teach and motivate them intrinsically to acquire knowledge and skills. For a good teacher to work assiduously, he or she must be very conversant with appropriate and suitable methods of teaching.

#### **2.4 Teaching methods**

According to Perrot (1989), many teachers develop one or two teaching methods and stick to them. There are a variety of methods as well as ways of increasing student attention and interest to give the flexibility to deal with the wide range of challenging and infuriating problems which teachers inevitably encounter. It helps in adopting a variety of activities to ensure all students fulfill their potentials since students learn in different ways.

A teaching method comprises the principles and methods used for instruction. Commonly used teaching methods include class participation, demonstration, recitation, memorization or combinations of these. The choice of teaching methods to be used depends largely on the information or skill that is being taught and it may also be influenced by the aptitude and enthusiasm of the students.

### **Inquiry-Method of Teaching**

Perrot (1989) believes that new learning requires appropriate background knowledge, and must be organized by the learner and then integrated into his or her existing knowledge. He therefore sees discovery learning as an excellent method of producing this integrated learning.

### **Demonstration Method of Teaching**

The Demonstration method of teaching is the process of teaching through examples or experiment. For example, a science teacher may teach an idea by performing an experiment for students. A demonstration may be used to prove a fact through a combination of visual evidence and associated reasoning. Demonstrations help to raise students' interest and reinforce memory retention because they provide a connection between facts and real-world applications of those facts.

### **Lecture Method of Teaching**

Lecture method of teaching is where the teacher gives information to students while students remain passive listeners. The teacher only pauses for some time to invite questions from the students or give clarifications. Lectures are often geared more towards factual presentation than connective learning

### **Socratic Method of Teaching**

Another method of teaching is the Socratic method of teaching which involves asking or probing questions. In the Socratic method of education, teachers engage students by asking questions that require generative answers. Ideally, the answers to questions are not a stopping point for thought but are instead a beginning to further analysis and research. Teachers can use the Socratic Method in a variety of subject areas and

across grade levels in order to challenge students to examine both contemporary and historical issues. In modeling the practice of Socrates, the teacher questions students in a manner that requires them to consider how they rationalize and respond about topics. Schank (1988) explains that it is important for teachers to clarify that these questions are not intended to create an environment of judgment, but rather to help students “examine their attitudes, beliefs, knowledge and logic.” The goal of the Socratic method is to help students process information and engage in deeper understanding of topics. Most importantly, Socratic teaching engages students in dialogue and discussion that is collaborative and open-minded as opposed to debate, which is often competitive and individualized.

### **Collaboration method of teaching (Group work)**

Collaboration allows students to actively participate in the learning process by talking with each other and listening to other points of view. Collaboration establishes a personal connection between students and the topic of study and it helps students think in a less personally- biased way. Teachers may employ collaboration to assess students’ abilities to work as a team, leadership skills, or presentation abilities.

Collaborative group work requires careful planning on the part of the instructor, and is not without its difficulties for students. But the benefits can be substantial, including increased participation by students in all components of the course. One simple way of providing specific skills is to suggest roles group members might adopt in their work—for example, as a facilitator (to lead discussions), note taker (to record and summarize progress), planner (to outline where and how the group is proceeding through the assignment), evaluator (to elicit critiques) and provide descriptions (Bosworth, 1994).

## **Learning- by- teaching method of Teaching**

The Learning-by-teaching method permits students to assume the role of teacher and teach their peer students who teach others as a group or as individuals who must study and understand a topic well enough to teach it to their peers. By having students participate in the teaching process, they gain self-confidence and strengthen their speaking and communication skills (Lieberman, 2004).

According to Ornstein (1995), teaching methods are the specific ways and activities by which the teacher influences learning. Ornstein gives an example of teaching methods as practice and drill whereby students either memorize their lessons or experience the teacher's wrath (p. 160). Practice and Drill is a common method used by teachers to assist students to transfer their learning to new situations (Ornstein, 1995).

### **2.5 Effective Teaching**

Kyriacou (1997) defines effective teaching as teaching which successfully achieves learning by students. This means the teacher must have a clear idea of what learning is to be fostered and set up and provide learning experiences which achieves this. Butt (2008) asserts that effective teaching is dynamic, receptive, responsive and approachable, not static and over-programmed, meaning that teachers' pedagogical knowledge should not be static but must change in response to the content and the learners with whom it is being shared. Students learn best when they actively participate in the learning process, when they are engaged and motivated to learn, and when they can build on their existing knowledge and understanding (NRC, 2000).

According to Orlich (2004), teacher-led verbal lessons and lessons that focus on having children perform an activity are the most effective teaching methods for

student performance. Practising specific skills, testing, and evaluating performance are effective ways of enhancing student achievement. The author argues that without the local values, activities, instructional materials, national goals, teacher's philosophy and state standards, effective teaching cannot take place. Local values are the things society cherishes. Goals of the nation also determine the target it has set for its members. If teaching is not based on the national goals set, then teaching becomes meaningless. Instructional materials must not be left out because these are the things students interact with.

Within the educational community, effective teaching is the ability of a teacher establishing rapport with students and designing a nurturing, caring environment for personal development. It is also an environment that welcomes the process of having a love for learning and a superior command over a particular academic subject (Arends, 1994). According to Kyriacou (1997), there are three pedagogical variables that develop effective teaching. These are context variables, process variables and product variables.

- Context variables refer to all those characteristics of the context of the learning activity, usually a classroom-based lesson, which may have some leaning on the success of the learning activity.
- Process variables refer to what actually goes on in the classroom, and deal with the perception, strategies, and behaviour of the teacher and pupils and the characteristics of the learning tasks and activities themselves, and how these interact with each other, such as teacher's enthusiasm, clarity of explanation, use of question, use of praise and criticism, classroom climate and others.

- The product variables refer to all those educational outcomes which are desired by the teachers and which have formed a basis of teachers' lesson planning and the criteria they use or others use to judge effectiveness.

The process variables defined by Kyriacou (1997) agrees with Arends' (1994), view that effectiveness of teachers is the ability of the teacher to establish rapport with the students and caring for their personal development. Arends (1994) considers an effective teacher as one who is academically able and cares about the well-being of learners and can produce results which are mainly those of academic achievement and social learning. This means the teacher must have the ability to attract learners because learners appreciate an instructor who can always help them solve their problems or develop their talents, therefore if a teacher is capable of caring about their well-being, the pupils will not hesitate to approach the teacher.

## **2.6 Learning**

Learning can be identified as the acquisition of knowledge, skills, attitudes and insights. Gagne (1985) says "learning is a change in human disposition or capacity that persist over a period of time ..." Curzon (2000) defines learning as "any activities that develop new knowledge and abilities in the individual who carries them out, or else cause old knowledge and abilities to acquire new qualities". On the same topic, Brubaker (as cited in Curzon et al, 2000) also views learning as "what occurs when a person makes sense out of what he encounters or experiences in interacting with self, others and the environment". These definitions indicate that learning occurs as the result of given experiences which precede changes in behaviour; learning involves behaviour potentiality that is the capacity to perform some act at a future time as contrasted with performance which concerns the translation of potentiality into

behaviour; the modification of behaviour involved in learning is of a relatively permanent nature.

Tamakloe et al (1996) support the view that learning is the process of having a change of behaviour after going through personal development in an environment. It can therefore be discerned that change is brought about through perception, observation and the experiences of the individual which make him or her behave in a way the learner otherwise would not have been able to. The learner is acquiring new or modifying existing knowledge, behaviours, skills, values or preferences and may involve synthesizing different types of information (Lawton, 1986).

### **2.6.1. Factors Affecting Learning**

Many factors affect or influence learning. Some of these conditions are Genetic conditions, Management of learning, Rate, Retention and Learning theories. As Tamakloe et al (1996) indicate, learning is greatly affected by genetics or biological factors. There are individuals who genetically face hardship but are able to react better or more efficiently to stimuli to elicit learning. Management of learning is another factor that affects learning. Tamakloe et al (1996) say “If some pupils are not learning as effectively as the teacher would want them to, it might be due to how the teacher manages the environment”. This means the inability of the pupils to learn depends on the teacher’s competencies. This assertion by Tamakloe et al (1996) agrees with Traylor’s (2011) view that several factors that influence learning in students include teachers’ administration and students’ ability and willingness to learn.

It is essential for teachers to manage the learning environment in a way that will bring about effective and efficient learning particularly in creativity by not only displaying large amounts of students’ and teachers’ art works in the classroom but also the

teachers having a firm knowledge and understanding of the interplay of the development and learning of the individual student.

Traylor (2011) identifies several factors that influence learning in students. Such factors may be external – social or cultural values, teachers and administrators and students' ability and willingness to learn. In discussing socio-economic factors, it must be recognised that students come from various backgrounds. Some are poor while others come from affluent households. They may come from strong family structures in which the parents are professionals or are highly educated, while other students may come from single parent households and/or have parents with limited educational background. This means students who come from poor homes will find it difficult to purchase materials to practice at home what is learned in school. In Traylor's view, students from affluent neighbourhoods will most likely have more educational support and resources to help them through school while the others from poor neighborhoods will find it difficult to acquire this accessibility of schooling. Teachers must therefore consider these factors significant influences in the learning capacity of the students they teach.

### **2.6.2 How Adult Students Learn**

The science of teaching children is often referred to as pedagogy while that of adults is known as andragogy. The implication of pedagogy is that children learn depending on their teachers while in andragogy, students are self-directed because they have previous experiences in knowledge (Tamakloe et al, 1995). As a result, adults only require the teacher to help them to learn and not to direct learning for them. For teachers to impart knowledge, skills and attitudes to adults, they should do well to understand the characteristics of adult learners. According to Lieb(1991), adults are

autonomous and self-directed. They need to be free to direct themselves. Teachers must actively involve adult participants in the learning process and serve as facilitators for them. They must get participants' perspectives about what topics to cover and let them work on projects that reflect their interests. They should allow the participants to assume responsibility for presentations and group leadership. They have to be sure to act as facilitators, guiding participants to their own knowledge rather than supplying them with facts.

According to Lieb, adult learning is characterised by the following: -

- Adults have accumulated a foundation of life experiences and knowledge that may include work-related activities, family responsibilities and previous education. They need to connect learning to this knowledge/experience base by drawing out participants' experience and knowledge which is relevant to the topic and relate theories and concepts to the participants and recognize the value of experiences in learning.
- Adults are goal-oriented. Adults appreciate an educational programme that is organized and has clearly defined elements. Upon enrolling on a course, they usually know what goal they want to attain. Instructors must show participants how this class will help them attain their goals.
- Adults are relevancy-oriented. They must see a reason for learning something. Learning has to be applicable to their work or other responsibilities to be of value to them. Therefore, instructors must identify objectives for adult participants before the course begins. This means also that theories and concepts must be related to a setting familiar to participants. This need can be fulfilled by letting participants choose projects that reflect their own interests.

- Adults are practical, focusing on the aspects of a lesson most useful to them in their work. They may not be interested in knowledge for its own sake. Instructors must tell participants explicitly how useful the lesson will be to them on the job.
- Adults need to be shown respect. Instructors must acknowledge the wealth of experiences that adult participants bring to the classroom. They should be treated as equals in experience and knowledge and allowed to voice their opinions freely in class.

Lieb (1991) also lists six factors that serve as sources of motivation for adult learning:-

- Social Relationships
- External Expectations
- Social Welfare
- Personal Advancement
- Escape/Stimulation
- Cognitive Interest

The implication is that adult learners are self-motivated enough not to rely fully on teachers to gain the knowledge they require while children mostly depend on teachers for lack of experience. This also suggests that teachers of adults would have less work to do in the learning situation than those who teach children. In this case, the assumption is that students in teacher training are adults whose education should not depend so much on their tutors but be self-directed and motivated to acquire the needed knowledge and skills.

## **2.7 Teacher Education**

Teacher education refers to the policies and procedures designed to equip prospective teachers with the knowledge, attitudes, behaviours and skills they require to perform their tasks effectively in the classroom, school and wider community (Wikipedia, the Free Encyclopedia, 2011). Quality Assurance – quality in education relates to quality of work undertaken by a teacher, which has significant effects upon his or her pupils or students. Farrant (1986) asserts that the goal of the teacher education is to equip the student-teacher with academic and professional qualities which ensures that a teacher possesses a sound knowledge of the subject matter. Dondieu (2001) further includes the development of personal qualities like dedication and sense of responsibility on the part of the teacher as a part of teacher training.

The aim of teacher training is to equip the potential teacher with the knowledge, skills, attitudes and behaviours needed to develop individual children with cognitive, affective and psychomotor domains of knowledge. According to the US College Search (2011), an elementary teacher needs a generalist's knowledge of many aspects of teaching. Degree requirements usually include courses in teaching literacy and language; using art, music, and drama in the elementary classroom; teaching science in an engaging way for young students; and so on. The student-teachers must also know the principles of curriculum planning, time management, and interpersonal communication with children.

## **2.8 The Teacher Training System in Ghana**

Teacher training at all levels is residential boarding, essentially public and mostly co-educational. Until the 1990's two parallel systems (post-middle and post-secondary) existed for initial training of teachers for elementary schools in Ghana. Initial training

for primary and middle school teachers used to be available to Middle School Leaving Certificate holders and candidates with two or three years of secondary education. While trainees of the post-middle level worked in nursery and primary schools, the post-secondary level trained teachers worked in middle schools and currently, junior secondary schools. Besides training for the regular primary, middle and junior secondary schools, specialist training was also offered to train qualified teachers interested in the education of the deaf-mute and the blind. Such trainees teach in special primary and junior secondary schools. The training of teachers for secondary schools, teacher training colleges and polytechnics occurs in the universities. As a result of the late 1970s and early 1980s economic crisis and subsequent brain drain of qualified teachers, unqualified teachers ('pupil teachers') with Middle School Leaving Certificate (MSLC) and General Certificate of Education qualifications were recruited to fill the vacancies in primary and middle school (now junior high schools) classrooms in particular. With more of such unqualified teachers in the system, the Ministry of Education(MOE) introduced the "Modular" training scheme in 1983 to upgrade unqualified teachers while they were still on the job (Antwi, 1992).

This two-part training programme consisted of a two-year study via distance learning with residential courses during the school holidays and two years of residential full-time study for the award of the certificate 'A' teaching qualification. Opoku-Asare (2000) reports that majority of unqualified teachers did not benefit from the scheme for financial and other logistic reasons. Educational reforms in Ghana seem not to have not addressed the problem of "pupil teachers" so a significant number of them are still teaching in primary schools.

Upon what Opoku-Asare (2000) asserts, the Government of Ghana through the Educational reforms, instituted an Untrained Teachers Diploma in Basic Education (UTDBE) in 2004-2008 to cater for all unqualified teachers in the educational system and still many of them failed to be trained.

Initial post-secondary teacher training was introduced in 1960 to train personnel with GCE 'O' and 'A' level qualifications to teach in primary and middle schools. This two-year general programme consisted of studies in the academic subjects that comprised the elementary school curriculum. In line with the 1974 educational reforms, this programme was replaced with a three-year quasi-specialist course designed to train teachers for the proposed junior secondary schools. Both courses culminated in the award of the Teachers' Certificate 'A' (post-secondary) qualification. Unlike the two-year course where all colleges offered the same curriculum, the three-year programme entailed the colleges offering a combination of "Bias courses" in addition to Mathematics, English and Education Theory.

The 1989 Education Reform Programme in Ghana phased out the 4-year teacher training programme leaving the 3-year Post-Secondary Programme. In 2007, the National Accreditation Board recommended upgrading teacher training colleges to offer tertiary level education. To this end, facilities in all the 38 public Teacher Training Colleges were rehabilitated under the German Agency for Technical Cooperation (GATC) programme. Entry requirements into Teacher Training Colleges have also been streamlined to ensure the recruitment of students with good grades and who also have a passion for the teaching profession. Under a new programme known as In-In-Out, teacher trainees spend two years at College and use the third year for

practical training in the classroom. The Ministry of Education has now upgraded all the 38 Teacher Training Colleges into diploma-awarding institutions and renamed them Colleges of Education.

The current teacher training programme consists of two-year regular studies in residence as students, and the final or third year which is the Out segment the trainees spend the year teaching in a school as a mentee as a mentee to be mentored by a professional teacher. The Diploma in Basic Education is awarded to students who are able to make good record of marks in the theory and as well as teaching performance.

### **2.8.1 The Teacher Education Pre-Vocational Skills Curriculum**

The Curricula followed in Ghanaian schools have undergone important revisions and changes to reflect the changes recommended in the Report on the 1987 Educational Reform suggested Dzobo Committee Report, Educational Reform Review Committee Report, and Vision 2020 that have occurred in Ghana in recent times (Curriculum and Research Development Division Trainer Manual on the Use of School Syllabus, 2001). Since teachers who graduate from the colleges of Education would be posted to basic schools the Teacher Education Division (TED) of the Ghana Education Service (GES) in collaboration with the Institute of Education of the University of Cape Coast changed the TED syllabus to suit that of basic schools. The CRDD manual lays emphasis on rapid economic development that is based on good quality education which creates thinkers and problem solvers.

To ensure that whatever they teach from the syllabus or the course outline is geared towards the achievement of critical thinking and problem solving skills as Rappaport (1997) and Gardiner (1998) emphasize the Pre-Vocational Skills curriculum followed

in the Colleges of Education include a subject named Visual Arts Related Subjects which covers the first and second years of the three-year Diploma in Basic Education programme. Creativity is one of the many components of the Visual Arts Related Subjects. The tutors in the Colleges are required to improve upon the scheme of work derived from the syllabus TED has provided and prepare lesson plans to guide their teaching so that all the students will understand creativity and learn to apply the concepts to help develop the creative skills of the pupils they would have to teach in the schools after completing the programme. This implies development of creative teachers who can in turn, help their pupils to develop interest and ability to be imaginative and have problem- solving skills in line with the objectives of the national curriculum.

## **2.9 Creativity as a subject of study**

Creativity is often defined as the ability to generate innovative ideas and manifest them from thought and reality (Mumford, 2003). This is based on the suggestion that creating involves the production of novel, useful products. Mumford says that the process involves original thinking and then producing.

Creativity is defined as the ability to see things in new ways. It is also boundary breaking and going beyond the information given (Schirrmacher, 1998). When one makes something unique and is able to combine unrelated things into something new, we say creativity has taken place. As an attitude, creativity is regarded as a different way of viewing things. That is, there are no right or wrong responses, but only possibilities. According to Schirrmacher, students demonstrate a creative attitude when they try out new ideas and different ways of doing things. For example, they may manipulate and transform ideas and materials take things apart and put them

back together in different ways; physically play with objects, imagine, engage in fantasy or just daydream they may solve problems or try to figure things out and ask questions or challenge accepted ways of thinking or acting (p. 6).

Schirmacher (1998) explains creativity as a process of doing. This is because children are found to engage in creative processing as they manipulate and play with objects when given materials like play dough, ice cream sticks, cookie cutters, small toy dinosaurs, and large buttons. According to Schirmacher (1998, p.7), a process approach to creativity holds that a person can engage in the creative process even though it may not result in a finished product. This means all people are capable of creative processing; that is thinking, speaking, playing, writing, dancing, singing, playing a musical instrument, experimenting with objects, transforming materials and manipulating ideas and objects. The author says the artwork of young children can be considered creative according to this explanation. This is because artists, whether young or old, engage in the same processes when pounding clay, dancing, mixing colours, painting, weaving and making a collage. The emphasis is on making and doing rather than on completing a project. For example, children may paint but end up throwing the picture away or not claiming it to take home.

Similarly, according to The New World Encyclopedia (2008) creativity is a process involving the generation of new ideas or concepts or new associations between existing ideas or concepts, and their substantiation into a product that has novelty and originality. In the scholarly literature, creativity is said to be manifested in the production of a creative work that is both “novel” and “useful” (Keller, 2008).

Creativity as a skill is discussed by Schirmacher (1998) to refer to a creative potential that remains dormant without practice. With practice, the potential to create becomes

a reality. For instance, if a musical keyboardist does not play the piano or organ, he loses the ability to play harmonious sounds on a piano. Therefore creativity as a potential and skill requires exercise. Many adults are prone to state “I’m just not creative” forgetting that all people evidence some degree of creativity, whether in writing, sewing, cooking, making crafts, pursuing hobbies, home decorating, or even teaching.

Kaufman (1996) quotes Mcfee’s (2004) definition of creativity as “the ability to invent new symbols and ideas, to improve on established symbols, to re-arrange established organization into new organization and to integrate new or borrowed ideas into previously organized systems or situations”. Similarly, the World Book Encyclopedia (2008) emphasizes two factors in relation to creativity as involving the concept of “to design” (as a costume or a dress) and “to make or bring into existence something new (as something of an imagination or artistic characters)”. This implies that creativity is not a random expression devoid of thinking, in the sense that it is original or unique along unconventional lines.

NACCCE (1999) maintains that creativity involves originality in three possible ways: individual, relative and historic. The individual aspect coincides with Mayer’s (1999) definition of personal creativity which states that individual creativity is the ability to create something new in respect to the person that creates the product. Relative creativity refers to originality in relation to their peer group, whereas historic creativity refers to the originality in terms of anyone’s previous output in a particular field. Encarta World English Dictionary (2009) also defines creativity as the ability or power to create, to bring into existence, to invest with a form, to produce through imaginative skills, to make or bring into existence something new. Newell, Simon and

Shaw (1997) view creativity as a special class of problem solving characterized by novelty.

On the other hand, Carnevale, Grainer and Meltzer (1990) view creativity as the ability to use different models of thought to generate new and dynamic ideas and solutions. Creativity is the quality of being creative or the ability to use the imagination to develop new and original ideas or things, especially in an artistic context (Encarta World English Dictionary, 2009). Encarta World English Dictionary (2009) uses such synonyms as originality, imagination, inspiration, ingenuity, resourcefulness, vision and innovation to define creativity.

Hartmann (1993) also defines creativity as “the ability to imagine or invent something new. It is not something created out of nothing but it is the ability to generate new ideas by combining, changing, or reapplying existing ideas”. This describes creativity as an attitude in the sense that it is capable of accepting change and newness, a flexibility of outlook, the habit of enjoying the good while looking for ways to improve it. In viewing creativity as the act of turning new and imaginative ideas into reality, Naiman and Hao (2010) say creativity involves the two processes of thinking, then producing. The explanation is that innovation is the production or implementation of an idea, implying that if one has ideas that are not acted on, the person is said to be imaginative but not creative.

Sternberg and Lubart (as cited in Naiman, 2010) state that “A product is creative when it is (a) novel and (b) appropriate. A novel product is original not predictable. The bigger the concept and the more the product stimulate further work and ideas, the more the product is creative”. These sources cited make it clear as Amenuke et al (1991) point out that, creativity involves making something new, inventing new

things or ideas; improving upon new things or ideas, and rearranging old things or ideas into new forms.

### **2.9.1 Importance of creativity**

Petty (1994) agrees with the statement raised by the National Curriculum Action (2010) that creative works are important for the teacher of any subject. Petty's reason is that creativity develops our students' ability to think creatively or "think outside the box" or think divergently to solve problems and communicate in new and different ways. Petty continues that creativity satisfies a deep human need; to make something and gain recognition for it thus increases motivation of the individual. Creativity therefore provides an opportunity to explore feelings and develop skills in self-experience. Students need to exercise their imagination, and explore feelings and perceptions. They need to make personal meanings of their experiences and to express these to others. It offers a change from what is and has been, to what might be or what is yet to be discovered. Creativity is thus thought of as being a constructive, productive behavior that can be seen in action or accomplishment.

### **2.9.2 Characteristics of Creativity**

The characteristic of creativity is the feature or quality that makes new things or ideas recognizable. The Business Dictionary (2011) identifies creativity as a distinguishing attribute of an item, person, or phenomenon. Some common characteristics associated with creativity are:

1. Creative thinking
2. Critical thinking
3. Divergent thinking

4. Convergent thinking
5. Visual thinking
6. Analytical thinking/ lateral thinking
7. Flexible thinking of ambiguity.
8. Synthetic ability
9. Practical ability
10. Ability to see or exhibit sensitivity to problems.
11. Fluency of thinking
12. Originality
13. Tolerance

These are explained as follows:-

1. Creative thinking

Creative thinking is a process that is best approached as a problem-solving discipline. In other words, to achieve a practicable solution, creative thinking and practicable problem-solving need to happen at the same time. In order to formulate ideas and communicate them clearly, one needs to take a systematic approach. According to De Bono (as cited in Schirrmacher, 1998), there are two types of thinking: vertical and lateral. Vertical thinking involves learning more about something or arriving at a conventional, accepted, convergent answer but if the object is to find unusual, divergent, creative solutions for problems, lateral thinking is appropriate. The way of using one's mind or mental processes that lead to creative thinking or product is lateral thinking (Schirrmacher, 1998). Art is not the only way to express one's creativity. Being able to think in creative ways is another way of creativity. Some believe that creative thinking is abstract and reserved for adults.

Creative thinking is not confined to authors, artists, scientists and inventors alone. Young learners can and should engage in creative thinking. Creative thinking is a skill that does not only help learners solve problems in their daily lives but also prepares them for life in the twenty-first century (Schirmacher, 1998). If we are to solve social, economic, political and environmental problems it will be through efforts at creative problem solving. Using the same old solutions to curb persistent problems has not worked. Children who grow up valued as creative and original thinkers will have the necessary skills to confront and solve problems facing them in the twenty-first century.

According to Schirmacher (1998), there are four main areas in creative thinking:-

- i) Fluency (the number of ideas generated)
- ii) Originality (unique, unusual ideas)
- iii) Elaboration (the ability to vividly elaborate or add details to ideas, use vivid vocabulary)
- iv) Flexibility (the variety of ideas)

## 2. Creative thinking

Schirmacher (1998) says creative thinking can be equated with divergent thinking. Thinking is divergent when many possibilities or options result. Divergent thinking is open-ended, allowing for an array of possibilities. For example, one can engage in divergent thinking when planning a creative curriculum. If it should make provision for children's creative enhancement, there would not be one piece of material or

specific activity but endless possibilities, including experiences in art, play, language, music, and movement, among others.

### 3. Divergent thinking

Divergent thinking contrasts with convergent thinking, which produces responses that are based primarily on knowledge and logic. Feldman (1995) supports Schirmacher's (1998) ideas of divergent thinking in that they are open-ended questions or issues that allow for an array of possibilities. Convergent and divergent thinking are very important in the sense that students who lack opportunities to engage in convergent thinking will lack access to a core body of knowledge needed for school success and academic achievement. Free Thinking or Divergent Thinking is also known as brainstorming and it involves anything that might come to the mind concerning a subject. Divergent Thinking is a cognitive process (a mode of critical thinking) in which a person generates many unique, creative responses to a single question or problem. This is different from convergent thinking which attempts to find a single, correct answer to a problem (<http://www.alleydog.com>).

### 4. Convergent thinking

This is another type of creative thinking which is defined as the ability to use logical and evaluative thinking to critique and narrow ideas to ones best suited for a given situation or set criteria. We use this type of thinking when we make crucial and well-formed decisions after appraising an array of ideas, information, and alternatives. Convergent thinking is used when a person attempts to give the one correct answer to a problem. For instance, the Maths problems children and teens encounter require convergent thought; there is only one right answer to  $15+2$ . In fact, much of a typical school's curriculum and assessments rely on convergent thinking. Standardized tests,

multiple choice exams and traditional intelligence tests all solely measure a child's ability to think convergently (<http://tweenparenting.about.com/ed/educationissues/a/convegent>", 2011). Knowledge of these types of thinking can assist teachers to impart accurate knowledge and skills in creativity. This is because students need to think critically to develop their ability to understand a concept or a given subject matter.

### 2.9.3 The Creative process

Creative process is a series of actions directed towards the use of the imagination to make new ideas of things. Creativity deals with imagination to do something and thinking critically in the creative process is very crucial to the teaching and learning of creativity. Creative process is the imaginative or inventive course of action or proceeding, especially a series of stages in manufacture. To Isaken, Trefflinger and Parnes (1992), Creative Problem Solving Process (CPS) is a structured method for generating novel and useful solutions to a problem. It follows three processes, which match a person's natural creative process and six explicit steps as explained here.

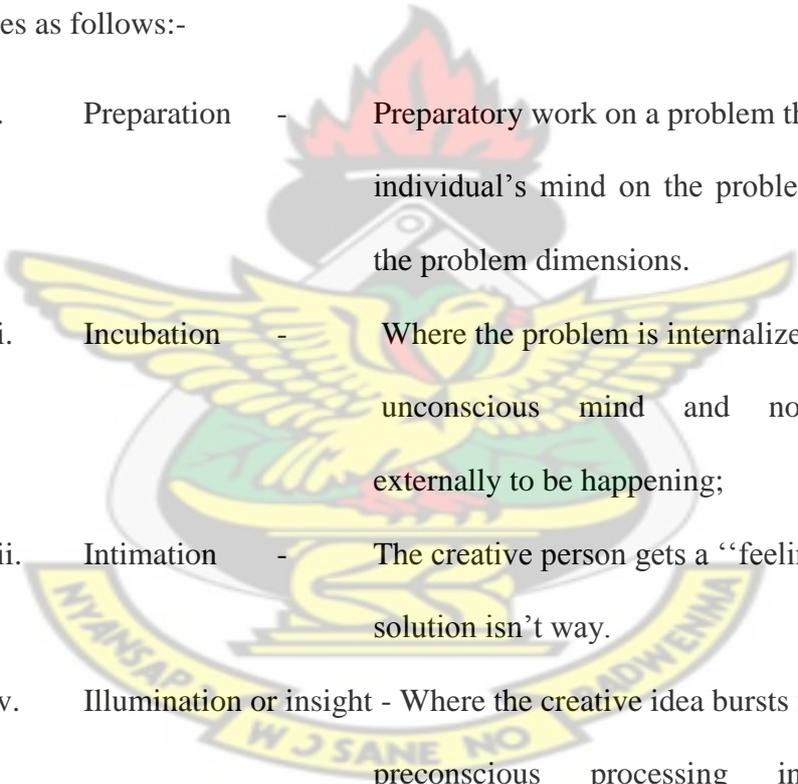
Process Stage	Steps
1. Explore the Challenge	1. Objective finding (identify the goals, wish or challenge). 2. Fact finding (gather the relevant data). 3. Problem finding (clarify the problems that need to be solved in order to achieve the goal).
2. Generate Ideas	4. Idea finding (generate ideas to solve the identified problem).
3. Prepare for Action	5. Solution finding (move from idea to implementable)

solution).

6. Acceptable finding (plan for action).

The steps described here are flexible and their uses depend on the situation. They can be used in a linear fashion (from start to finish) but it is not necessary to use all the steps. For example, if one already has a clearly defined problem, the process would begin at idea finding.

Wallas (1995) presented one of the first models of the creative process. In his stage model, creative insights and illuminations were explained by a process consisting of five stages as follows:-

- 
- i. Preparation - Preparatory work on a problem that focuses the individual's mind on the problem and explores the problem dimensions.
  - ii. Incubation - Where the problem is internalized into the unconscious mind and nothing appears externally to be happening;
  - iii. Intimation - The creative person gets a "feeling" that a solution isn't way.
  - iv. Illumination or insight - Where the creative idea bursts forth from its preconscious processing into conscious awareness;
  - v. Verification - Where the idea is consciously verified, elaborated and then applied.

According to Wallas (1995), Incubation aids creative problem-solving in that it enables "forgetting" of misleading clues. Absence of incubation may lead the

problem solver to become fixated on inappropriate strategies of solving the problem. Rossman (as cited in Plsek, 1996) leans his model towards the theory that novel ideas emerge from the conscious effort to balance analysis and imagination. He further expanded Wallace and Kogan's (1995) original four steps to seven as follows:-

1. Observation of a need or difficulty.
2. Analysis of the need.
3. A survey of all available information.
4. A Formulation of all objective solutions.
5. A critical analysis of these solutions for their advantages and disadvantages.
6. The birth of the new idea – the invention.
7. Experimentation to test out the most promising solution and the selection and perfection of final embodiment.

Plucker and Renzulli (1999) embraced a similar theory of balance between analysis and imagination in his seven-step model for creative thinking which are:

1. Orientation: Painting up the problem.
2. Preparation: Gathering pertinent data.
3. Analysis: Breaking down the relevant material.
4. Ideation: Piling up alternatives by way of ideas.
5. Incubation: Letting up to invite illumination.
6. Synthesis: Putting the pieces together.
7. Evaluation: Judging the resulting ideas.

On the other hand, Silva (1983) states five steps for the creative process as:

1. Preparation - The left brain does its homework.
2. Absorption - The right brain imparts the groundwork and the goal.

3. Incubation - this is a period of gestation and maturation of ideas that take place at the subconscious level.

4. Illumination- “the Eureka!” factor. The idea explodes into our conscious when we least expect it.

5. Verification- this is a logical left brain process that eliminates extraneous ideas and checks the final conclusion”.

Hartmann (1993) analysed the creative process into four familiar stages as:

1. Preparation
2. Incubation
3. Inspiration, and
4. Verification.

According to Hartmann, preparation consists of observing, listening, asking, reading, collecting, comparing, contrasting, analyzing, and relating all kinds of objects and information. Incubation which is both conscious and unconscious, involves thinking about parts and relationships, reasoning, and is often a fallow period. Inspiration very often appears during this fallow period (of incubation). This probably accounts for the popular emphasis on releasing tensions in order to be creative. Verification is a period of hard work. This is the process of converting an idea into an object or into an articulated form. Torrance (1998) asserts that Wallas’ model is the basis for most of the creative thinking training programmes available today.

#### 2.9.4 Qualities of a Creative person

According to Amenuke et al (1991), a creative person is someone who is able to use his imagination to make, form, or design something new. They describe two types of creative people: those whose creative ability is limited (they can create but need to put in a lot of effort), and the genius whose ability is high and creates as if without effort.

The following qualities are associated with a creative person: He/she

- is able to cope up with paradoxes.
- challenges the status-quo.
- confronts assumptions.
- exhibits curiosity.
- like to investigate new possibilities.
- tend to take initiative in most matters.
- is highly imaginative.
- is future oriented.
- tends to think visually.
- sees possibilities within the seemingly impossible.
- is not afraid of taking risks.
- is prepared to make mistakes.
- is adaptable to different work environments.
- is adaptable to changing circumstances.
- must see relationships between seemingly disconnected elements”

(<http://www.citefin.com/2183-19-qualities-creative-persons-12-ways>).

Curiosity and problem seeking are among the factors of a creative person's qualities. The American psychologists, Sternberg and Lubart (1995) compare traits of autonomy and problem solving to buying low and selling high in the "market place of ideas." This means the creative individual identifies a unique need- perhaps a problem or opportunity that no one else recognizes.

High intelligence is common in creative persons yet while they can meet the problems of life as rationally as anyone else can, their intellect does not rule at the expense of intuition or other seemingly non-rational influences. Most studies of the relationships of creativity to intelligence have also shown that extreme general intelligence does not necessarily kindle creativity (Stenberg & Lubart, 1995). Some findings have contributed to the "threshold" model of intelligence and creativity, which claims that above a certain level, intelligence has little correlation with creativity- that is, a highly intelligent person may not be as highly creative. It may be that intelligence sets the limits on the amount of information a person can learn and retain while creative thinking provides the flexibility necessary for the original production of ideas.

A distinction is sometimes made between convergent thinking (the analytic reasoning measured by intelligence tests) and divergent thinking (exemplified by a richness of ideas and originality of thought). Both seem necessary to creative performance although the degree of each varies according to the task of occupation, in the sense that a mathematician may exhibit more convergent than divergent thinking while an artist would exhibit the reverse (Stenberg & Lubart, as cited in Encyclopaedia Britannica, 2011).

Other qualities of creative individuals identified by Torrance (cited in Villalba, 2008) include fluency or the ability to think of many ideas rapidly; flexibility, the capacity

to use ideas and tools in unusual ways; and originality, the capacity to think of novel ideas and products.

### **2.9.5 Strategies for Developing Creativity in students**

- **Role Modelling**

Sternberg (1996) has the view that the most powerful way to develop creativity in students is to be a role model because students develop creativity not when they are told to but when they are being shown how. In cultivating and enhancing creativity among individuals, there must be the spirit of “I can do it” as Silvano (1993, p.361) declares. It is more promising to develop creativity through the educational system. The creation of ideas rather than product is where traditional methods of creativity identification have taken place.

Most traditional measures of developing children's creativity have focused on ideational fluency. Ideational fluency tasks require children to generate as many responses as they can to a particular prompt, much like brainstorming. Ideational fluency is generally considered to be a critical feature of the creative process. Students' responses may be either new and exciting, or popular and cliché (<http://www.is.wayne.edu/drbowen/crtvyf04/objectiveCharacteris>).

- **Motivation**

Sternberg and Lubart (1996) indicate that motivation is a strong driver of creativity with Amabile (1999) stating that creativity is developed through higher level intrinsic motivation. Amabile (cited in James, Gerard and Vagt-Traore, 2005) asserts that there are six strategies that influence intrinsic motivation: challenge, freedom, resources, work-group features, supervisory encouragement, and organizational support.

Challenge is the stretch between being able to do something with great ease and, being unable to achieve an objective. Somewhere within the stretch, there is a gap which is known as Zone of Proximal Development (Galloway, 2001). Here, the student has just knowledge, ability or skills to make considerable progress in pursuing the goal and yet not feel overwhelmed by the task Sternberg and Lubart (1996) believe that there are five essential attributes within our personalities that enhance creativity: tolerance of ambiguity, perseverance, willingness to grow, openness to experience, and willingness to take risks. These attributes are useful and support the idea that challenge is a strategy for developing creativity.

Freedom corresponds to choice and control. When people have control over how they reach their satisfaction, they will be more creative. Conversely, control over the actual goal is not as critical to fostering creativity. Providing clearly defined goals can boost creativity (Amabile, as cited in James et al, 2010). “Freedom about process also allows people to approach problems in ways that make the most of their expertise and creative-thinking skills” (Amabile, 1999, p. 82).

Students exercise autonomy as exhibited by their self- evaluation skills and self-management skills (Orey, 2001) necessary to manage performance through each product iteration. When students are given the freedom to guide their own work they do well to make discoveries and learn directly from their experiences (Nickerson, 1999).

Resources contribute to creative enhancement. Also known as environment, resources may include the political atmosphere, the interpersonal relationships, the physical space, or even the equipment and supplies available for a project (Sternberg & Lubart, as cited in James et al, 2010). Teachers should allow time to explore ideas but must be careful that the project does not stagnate. Teachers need to balance the

need for this exploration with the costs of the time. Additionally, it is important to provide the physical space needed to work comfortably in groups (Amabile, 1999). An environment needs to be conducive to the students' style of work, whether working individually or in collaboration (James et al, 2010).

Work-group features or diversity in the team makeup will foster creativity (Amabile, 1999; Simonton, 2000; De Souza and Fleith, 2000). A diversity of people means a variety in expertise, creative-thinking styles, and cognitive abilities. According to Amabile (1999), when teams are comprised of like-minded students, they will reach their conclusions quickly and feel good about the process but will fail to explore and debate other ideas, because they did not bring them to the table. Work group features open the group dynamics and discussions, and encourage sharing and exploring of divergent ideas. Hearing an opinion from someone of a different economic background or a linear thinker rather than a global thinker might be just the “whack on the side of the head” needed to produce innovative solutions (Von Oech, 1998, p.1).

Supervisory encouragement can take many forms, such as offering feedback, boosting a student's confidence, or providing structure to a student overwhelmed by the task. Teachers provide the encouragement or positive support that their learners need to move forward. Creativity develops when teachers encourage curiosity, exploration, confidence, risk-taking, and balance. Curiosity and a desire to explore even things taken for granted seem to be some of the important factors that build towards more creativity.

Csikszentmihalyi (1996) states that “the first step towards more creativity is the cultivation of curiosity”. Therefore, teachers can support and reward exploration to

enhance creativity in students. Having self-confidence helps learners' perseverance. It enables students to champion their point of view and work. The implication is that those who lack confidence in their abilities will often fail to produce creative work (James, Gerard and Vagt-Traore, 2010). It engenders a sense of safety for risk taking without fear of repercussions for making mistakes (De Souza & Fleith, 2000).

Balance in the classroom structure can encourage creativity. Students can benefit from some external organization in their processes, and a teacher should not hesitate to intercede. This offers a realistic view that some students need assistance in how they attack their work. However, the amount of support provided should be moderated by students' needs for imagination and spontaneity (James et al, 2010).

Organizational support requires a school, district, town or city and even the state to support the educational efforts at a more global level. In every nation building, there is a government sponsored initiative's focus on enhancing creativity in all aspects of educational institutions because "creativity is vitally important and should feature across all school activities and this encourages the nurturing, fostering and teaching of creativity and looks at the implications and challenges facing schools" (Simmonton, 1999).

According to Amabile (1983), motivation is one of the factors of the development of creativity. This is because motivation is a strong driver of creativity and more easily influenced than other contributing factors (Sternberg and Lubart, 1996). De Souza and Fleith (2000) are of the view that direct involvement of the teacher in the team make-up will foster creativity. Therefore, teachers must encourage curiosity, exploration, risk-taking and balance to enhance creativity.

Motivation is the basic means teachers have of evoking artistic responses in elementary students. A motivation is composed of a dialogue that is usually enriched with visual images in the classroom prior to cut production. For example, actual objects, posed models, photographs, or computer images. Some motivations may include stories or poems that stimulate the child to imagine and fantasize before making a drawing or painting (Herberholz and Herberholz, 1996).

Motivation needs to be ongoing while children are drawing. A student, who shows signals of lack of confidence and/or knowledge about, and perceptual experience with the subject, can be assisted through accretion. According to Herberholz and Herberholz (1998), “a strong self-motivation can transform perceptions, feelings, and thought into an art form, however, the teacher usually needs to provide motivation for the students and to help them order their impressions and concepts”.

- **Problem solving**

The open-ended approach to problem solving is used to develop skills in problem solving. Teachers present a problem defined by a set of rules or criteria, students are given opportunity to work within the criteria to solve the problem. Using this approach, teachers recognize individual differences, a variety of problem-solving behaviours, and multiple “right” answers (Bates, 2000). According to Bates, “Laissez-faire”(a French expression meaning “without interference or direction”) is a teaching method that allows students maximum freedom to explore and experiment (Bates, 2000, p.4). Here, students are presented with a wide range of materials in order to discover how they can be used in self-expressive ways.

According to Schirrmacher (as cited in Modern Language Association, 2007), one method for fostering creativity in students is to firstly understand the basis of learning models for children with learning sets. For example, if creativity is defined as being ‘artistic’ then the teacher should learn the basic concepts of painting or other forms of artistic expression such as drawing and sculpting. By garnering knowledge in these forms of creativity, the teacher should be able to relate these tools of creativity to help the child build skills along established standards. However, the pure physicality and exploration of art may only require the teacher to provide paints, clay or whatever building blocks that helps the child ‘play’ with materials. This will help bring possibly innate creative qualities that will support a more open response on that part of the child to learn how to be creative.

A second necessary condition for student originality and expressiveness is the freedom to experiment. Designing open – ended projects, tests, and assignments, as well as establishing a classroom climate that accepts trial and error and consciously takes steps to build students’ self – confidence make it possible for students to feel pressured to adopt a specific viewpoint or be stifled by too much control over their creative work.

- **Time**

Sternberg and Williams (1996) state that time is another important condition for students to develop creativity. Students must explore various approaches, interpret and analyse materials, and experiment with various schemes of organization. This is because it may take weeks; our challenge is to stimulate creativity over the course of the semester”. Encourage students to write out their plans where appropriate, as a draft journal, log of activities, often followed by peer group discussion so that they

will be experienced in what they would want to bring out to solve problems since practice makes a man perfect.

Sternberg & Williams say that it may be possible under special circumstances, to assign creative work without the basic knowledge. For example, in an introductory course in photography, students might be given cameras and asked to document campus life. This task might provide a pre-measure of native composition and subject selection skills as the course progresses. Students could revisit the original assignment to make changes and improvement, thus documenting their progress and developing sophistication. Students must be engaged in creative activities such as brainstorming possible solutions to a problem or devising work plans (Renzull, 1994).

### **2.9.6 Teaching Creativity**

There are questions about whether creativity can be taught or not. According to Schirmacher (1998), it can be taught because research shows that the training one needs before certifying a teacher of creativity at the Norwegian Institute of Creativity is eight hundred hours of training including participating and running workshops and doing 4-5000 pages of reading. Torrance (1987) gives the results of 308 studies of trying to teach children and students creativity. In 70% of these cases the attempts were successful. The education in fact increased the creativity.

Explicit explanations about processes regarding creative thinking also involve encouragement for different skills of thinking. To teach creativity, the teachers must be creative too. Even if it is important to master creative methods, it seems to be even more important what happens in the other subjects. It is therefore important that the teachers know what hinders and what stimulates creativity. We cannot expect teachers to be creative if the climate they work in is strongly anti-creative. It is important, and

probably necessary, to do something with the organizational cultures in the schools. It is necessary that the teaching is fitted to the students. But it is as important that it also is fitted to the teachers. Teachers, not only the pupils, are also individual, unique human beings that function best if they are allowed to teach in the ways that fit them best.

In order to encourage creative thinking, teachers must reformalise the theory behind pedagogical instruction. More open ended questions and varied students responses are to be encouraged and explicit skills must be taught. Creative thinking should not ruin intrinsic motivation by restricting certain types of thinking processes. Sasson (2007) believes teachers should teach strategies of flexible thinking through:-

- Brainstorming
- A search for alternatives
- Incidental associations
- Provocation (the method of showing another way of looking at something).

One of the ways to encourage creativity among students is to motivate students to understand creativity. Teachers should therefore embody a variety of learning and thinking styles in order to bring out the best of students' creative skills and abilities (Sasson, 2007).

Creative thinking is the most useful tool in life and many people consider it as a high form of intellectual developed ability as it offers the ability to solve problems and to create what does not yet exist, sometimes even from a product that is unknown. Ornstein (1995) recommends students' own creative activities in class for creative enhancement. Examples of how this can be done are for the teacher to:

- Encourage manipulation of objects and ideas

This means a lot of artefacts, teaching and learning materials, tools and materials must be displayed or made available for students to interact with. This agrees with the adage that says, “If I see, I remember; if I hear, I forget and if I do, I understand”. Students are able to have experience in whatever they do more than what they do not involve themselves in.

- Ensure to make students more sensitive to their environment

They need to be appreciated, to have their special needs and sometimes intense reactions and behaviors understood, and, when correction is needed, they need to be handled with special care so that they do not become anxious or ashamed of their failure.

- Develop tolerance towards new ideas

Students must be taught to develop skills in accepting individuals’ suggestions, ideas and different views to enhance their creative activities. Students must possess the ability to put up with harsh or difficult conditions towards new ideas and this will go a long way of developing students’ creative potentials.

- Encourage students to explore, test, search and predict

Teachers must entice students to investigate or study carefully about an event or find out and give factual information so that an action can be made to solve it. Students must also be motivated to evaluate new products and tell what will occur on the basis of experience. Students must learn to investigate experiment, relate information and draw logical conclusions.

- Interrogate knowledge in a variety of subjects

Ornstein (1995) asserts that teachers must question students' ability to recall events or information in different subject matter to upgrade their creative skills and abilities.

- Develop adventure and spirit in the classroom

Teachers must employ techniques to permit students to have the will power and attitude to undertake projects of uncertainty and risk. This will enhance students' creativity since they will not be afraid of any impediments that come their way.

One approach, recommended in the Talents Unlimited model (Schlichter, 1986; Schlichter, Palmer, & Palmer, 1993), is direct teaching about divergent thinking. In the Talents model, this type of thought, called productive thinking, is taught as one of several types that are important for success in a variety of tasks. Students are taught that when the task calls for productive thinking they should do four things (Schlichter, 1986, p. 364):

1. Think of many ideas (fluency).
2. Think of varied ideas (flexibility).
3. Think of unusual ideas (originality).
4. Add to their ideas to make them better (elaboration).

The authors believe there are at least three things teachers can do to help create a classroom in which creativity can flourish: teach the skills and attitudes of creativity, teach the creative methods of the disciplines, and develop a problem-friendly classroom. Teaching the skills and attitudes of creativity entails teaching students explicitly about creativity. It includes teaching about the lives of creative individuals, the nature of the creative process, and strategies that can be used to generate creative ideas.

Teaching the creative methods of the disciplines requires teaching students how individuals are creative in the disciplines they study. In science, for example, this type of teaching entails learning the processes of scientific investigation, in addition to the concepts and generalizations resulting from such investigations in the past. This is more complex than teaching the five steps of the scientific method, although that is a place to start. Real science rarely progresses in such neat and predictable steps. Learning how creative scientists operate entails learning the kinds of questions scientists ask and the methods they use to investigate them. It examines the obstacles that can impede progress, the circuitous paths that can lead to success, and the skills necessary to conduct investigations. Parallel kinds of knowledge can be examined for any field in which creativity emerges.

Developing a problem-friendly classroom entails creating a classroom atmosphere in which seeking and solving problems is welcomed. In brief, a problem-friendly classroom provides experiences with choice, provides informational feedback in assessment, encourages self-assessment, uses rewards thoughtfully, teaches both cooperation and independence, encourages questioning and experimentation, and addresses appropriate stage(s) of talent development.

As the experiences at Raunyr (cited in Gardiner, 1993) shows, one of the best ways to teach creativity is to use what is already there. In other words:

- Do more of what you are doing that stimulates creativity, and
- Do less of what hinders creativity. Much existing materials are very well fitted to be used in more creative education. There must be a proper teaching / learning material to facilitate the teaching of creativity.

According to Sternberg and Williams (1997) there are twenty-four tips of developing creativity. Some of these are Model Creativity, Build Self-Efficacy, Question

Assumptions, Encourage Idea Generation, Cross-Fertilize Ideas, Allow Time for Creative Thinking, to mention just a few. In promoting creativity, Roger von Oech (1983) describe the characteristics of the creative process which might be thought of as guidelines for a brainstorming session which is equally good for teaching creativity. This involve these ideas:

- 1) Generate as many answers as possible. Do not look for the one "right answer".
- 2) Do not ask if something is "logical".
- 3) Set aside all rules.
- 4) Do not judge the quality of an idea by looking at its "practicality".
- 5) Allow ambiguity.
- 6) Do not worry about being wrong.
- 7) Indulge yourself...let yourself play.
- 8) Let yourself go into new areas.
- 9) Be foolish and silly.
- 10) Accept your own creativity.
- 11) Make yourself receptive to new ideas.

## **2.10 Teacher Professional Practice**

As part of the teachers' responsibilities, they have to plan and prepare lesson plans to guide what they teach. According to Curzon (2000), preparation of a formal lesson demands consideration of three factors: the students, the subject matter, and the resources and constraints. Dondieu (2001) also asserts that if a lesson plan is to be

effective, it should indicate what the teacher is going to teach, why he wants to teach that lesson, how he seeks through a network of interactions and activities to teach the lesson, and what he should do to ensure that pupils have learnt what is taught”. The author indicates that a good lesson preparation reduces the workload of a teacher because it ensures continuity of activities and serves as a written record of the work done by both students and the teacher (p. 241). There is a strong attestation to the value of the lesson preparation in the delivery of the curriculum.

The disadvantages of lack of lesson preparation as Dondieu (2001) opines, include the following:

1. Lack of appropriate and suitable Teaching and Learning Materials: - teachers will not be able to organize systematically the teaching and learning materials and other activities that go with the lesson for transfer of knowledge to take place.
2. Insufficient and false information: - decisions that teacher takes may not be real and information given to students will not be enough for their level.
3. Unsystematic Presentation: - teachers who fail to prepare lessons will ‘beat about the bush’. Lesson presentation will not be in a systematic manner. It will be in a higgledy-piggledy manner. Lesson presentation demands adequate reading and consultation of teaching materials and references to enhance the presentation of the lesson. So failure to prepare lesson will not permit the teacher to identify and gather such materials that are required for teaching a particular lesson.
4. Handicapped Subject matter: - A teacher will not find it easy to remember all the salient points during the instructional process.

5. A teacher who fails to prepare beforehand is likely to create mistakes that will influence the instructional process negatively.

## **2.11 Lesson Planning**

In lesson planning, the teacher should bear in mind that life is a continuous experience and so all the experiences provided for the students must be connected with those of the past and those that follow. According to Bruner and Gagne (as cited in Tamakloe et al, 1996), there are certain cognitive tasks which the individual is not capable of performing below certain age limits. So in planning the lesson, the teacher needs to ascertain whether or not the subject matter is within the cognitive capacities of the students for whom the lesson is being planned (p. 34). Planning of a lesson is when one looks at the curriculum standards and develop lesson content that match those standards (O'Bannon, 2002).

Subject matter -concepts, knowledge, skills and values- is acquired effectively when appropriate learning activities are designed and applied. Another cardinal consideration in lesson planning is that students' activities must eclipse those of the teacher since it is what the learner does which yields effective learning and not what the teacher does (Tyler, as cited in Tamakloe et al, p. 35). Curzon (2001) affirms that lesson planning should commence with a consideration of ends and means: the topic of the lesson will define its ends; the activities necessary to accomplish the ends will suggest the instructional means.

Schlechty (2003) views lesson planning from the artist's point of view and narrates that visual planning promotes a playful search for ideas. Butt (2008) is of the view that most experienced teachers have established a reservoir of lesson activities from which they can quickly select for different classes and subsequently know which

activities will work best in which situation. Tamakloe et al (2005) in agreement to the above assertion, append that effective planning by the teacher to use experience already gained by his students as a starting point for his lessons helps. With Dondieu (2000), the merits of planning and preparation of lessons before teaching are:

- (1) It helps the teacher to identify relevant goals and how to achieve them.
- (2) It spells out clearly the teaching strategies. For example, it indicates the communication techniques, the feedback (assessment), timing, content relevance of facts to the topic etc. those help to make the teacher's work interesting, enjoyable and effective.
- (3) It enables the teacher to identify and gather such materials that are required for teaching a particular lesson because it demands adequate reading and consultation of teaching materials and references to enhance the presentation of the lesson.
- (4) Developing teachers' own lesson plans helps teachers "own" the subject matter content they are teaching, and that is central to everything good teachers do.

Lesson plans should be informative enough for other teachers to use them when necessary. They should also have a distinct flow of information that is easy to navigate and understand (Njogu, 2010). This means a good lesson plan determines what the students will be taught on specific days and why they will need to learn what has been specified. With the lesson plan, the teacher becomes more knowledgeable and current on the subject material that he/she is about to teach his/her students (Dondieu, 2002).

Dondieu (2002) defines a lesson plan as a written account of the preparation for a lesson and that any good lesson plan must have the following features:

- (i) Proper introduction
- (ii) Logically ordered presentation
- (iii) Appropriate pupil activities
- (iv) Well thought out questions
- (v) Well prepared teaching and learning materials
- (vi) Evaluation procedure (that is, assessment to check the level of learning achieved).

In Ghana, the format for writing lesson plans is determined by the Ministry of Education so teachers at all levels write their lesson plans the same way. If college students are trained to impart knowledge, skills and attitude to the primary school child, such lesson plans should be done according to the primary school format. Although lesson planning is an important aspect of teacher professional practice as Dondieu (2001), Curzon (2000), O' Bannon (2002) and Butt (2008) assert, Opoku-Asare (2000) indicates that majority of Ghanaian primary school teachers do not refer to their lesson plans when teaching. This clearly shows that there is a vast gap between professional requirement and teaching practice.

### **2.11.1. The Visual Arts Lesson Plan**

A Visual Arts lesson plan focuses on the teaching of visual arts and associated techniques (Technology, 2011). According to National Standards for Art Education (NSAE, 1994) and the Arizona State Standards (ASS, 1997), the arts have been a part of humanity from the very beginning. The NSAE and ASS explain that Visual Art Lesson Plan has a philosophical framework that is deeply embedded in our daily life,

whether realized or not, and is an inseparable part of our humanity. This is because the arts have both intrinsic and instrumental value; they have worth in and of themselves and can also be used to achieve a multitude of purposes. For example, the arts play a valued role in creating cultures and building civilizations; they are a way of knowing, and enable students to grow in their ability to comprehend the world when they learn the arts. Therefore teachers are to inculcate this philosophical framework in the Visual Art Lesson Plan (Crayola Dream Makers, 2011). The Visual Art Lesson Plan must integrate art into the daily curriculum and stimulate independent thinking through visual learning.

The literature cited reveals that creativity is the process of making new things or improving on old things to become new. This implies a change of idea or behaviour in doing things. Creativity is seen as a key that opens doors to physical, emotional, intellectual, and moral self improvement. Creativity therefore needs to be encouraged in the life of every student to enable them to gain much from formal education.

Creativity serves as an outlet. That is, we find ways to express what we want to get out through our creative abilities in different forms. Motivation is a factor that develops creativity in a learner and it is a strong driver of creativity and more influenced than other factors, therefore teachers must do well to factor motivation both in their presentation of lessons and other activities in the classroom to encourage students to develop their creative potentials. In the same way, the literature points to the first step to creativity as the cultivation of curiosity and direct involvement of the teacher in the team make-up to foster creativity. Therefore, teachers at all levels must encourage curiosity, risk-taking and balance to enhance creativity in the classroom.

## CHAPTER THREE

### METHODOLOGY

#### 3.0 Overview

This chapter describes the research design and procedures employed in obtaining data on the Teaching and Learning of Creativity in Colleges of Education in Ghana. Topics discussed include Population for the study, Data Collection Instruments, Type of Data, Administration of Instruments, and Data Analysis Plan.

#### 3.1 Research Design

The Action Research design under the qualitative approach to research was used for the study. It is an approach which aims at improving a problem-related situation through change. Action Research encourages teachers to be aware of their own practice of teaching, to be critical of that practice, and to be prepared to change for the better in the school situation. It is participatory and collaborative in that it involves the teacher in its inquiry and other people as part of the shared enquiry. Action Research is a research ‘with’ rather than a research ‘on’. Action Research allows both the teacher and the students to learn experientially about the research process by being there and by doing it instead of being told how to do it (Institute of Education, 2006).

Action research is known by many other names, including participatory research, collaborative inquiry, emancipatory research, action learning, and contextual action research, but all are variations on a theme. Put simply, action research is “learning by doing” - a group of people identify a problem, do something to resolve it, see how successful their efforts were, and if not satisfied, try again. While this is the essence of

the approach, there are other key attributes of action research that differentiate it from common problem-solving activities that we all engage in every day (Gunnell, 2011).

Action Research enables the participants to develop appropriate intervention strategies aimed at finding solutions to the problems identified in the teaching – learning situation and does not only focus on generating new knowledge. Action Research is an inquiry method of a research conducted into a particular issue of current concern, usually undertaken by those directly involved, with the aim of implementing a change in a specific situation. The focus of Action Research is on specific problems identified and a means of finding solutions to the problems in order to bring about change. Action research is an informal, qualitative, formative, subjective, interpretive, reflective and experiential model of inquiry in which all individuals involved in the study are knowing and contributing participants (Hopkins, 1993).

The action research framework is most appropriate for participants who recognize the existence of shortcomings in their educational activities and who would like to adopt some initial stance in regard to the problem, formulate a plan, carry out an intervention, evaluate the outcomes and develop further strategies in an iterative fashion (Hopkins, 1993). Findings from “Action” Research provides teachers with the opportunity of acquiring a better understanding of all aspects of their own practice, be it in relation to subject, content, the curriculum or the methods appropriate to the level of the student in that class. The modern teacher needs to be equipped to understand the various methods or approaches that best suit the learners he or she teaches (Institute of Education, 2006). Action Research is also important to the classroom teacher in the sense that it does not only enhance the teacher’s professional status but also promotes the teacher’s personal development and the improvement of his or her

practices (Orey, 2001). Action research methodology involves interaction between the researcher and his or her subject, as well as his or her data. It is therefore outcome based in that it aims to improve the methods used in educational, social science, community, and other settings. Because this method of research is participatory in nature, it calls for insight, reflection, and personal involvement with the topic being explored. Action research is conducted in real world settings by the people directly involved with the problem or situation being investigated.

In this study, Action research methodology was adopted because the problem identified related to a subject the researcher teaches and had been seeking answers to with regard to students' low performance in creativity as a subject of study. The method also helped the researcher to use his own students and colleague tutors as research subjects of the study and also gather data on the teaching and learning of creativity in the Berekum College of Education where the researcher works as a tutor. An interventional project was then designed to help solve the problem of teacher trainees failing to attain the required competence and skills that are built into the Visual Art curriculum to foster the development of their creative potentials.

### **3.2 Population for the Study**

According to Castillo (2009), a research population is generally a large collection of individuals or objects that is the main focus of a scientific query. It is for the benefit of the population that research is done. However, due to the large sizes of populations, researchers often cannot test every individual in the population because it is too expensive and time-consuming. This is the reason why researchers rely on sampling techniques. A research population is also known as a well-defined collection of individuals or objects known to have similar characteristics. All individuals or objects within a certain population usually have a common, binding characteristic or trait. In

this study, the population consisted of the first year students of the Berekum College of Education in Brong-Ahafo Region of Ghana, who studied creativity within the Visual Arts Related Subject of the curriculum in the first semester of the 2010/ 2011 academic year.

### **3.2.1 Target Population**

Target population refers to the entire group of individuals or objects to which researchers are interested in generalizing the conclusions. The target population usually has varying characteristics and it is also known as the theoretical population. The accessible population is the population in research to which researchers can apply their conclusions. This population is a subset of the target population and is also known as the study population. It is from the accessible population that researchers draw their samples. The target population for this study consisted of Post Basic Diploma in Education students of Berekum College of Education in the Brong-Ahafo Region, Ghana.

### **3.2.2. Sample and Sampling**

Because the accessible population of students in the Berekum College of Education is too large to study effectively, one out of the seven first year classes was randomly selected for in-depth study because they follow the same curriculum and use the same timetable. All the tutors of the Vocational Skills Department were selected because they are the ones who encounter problems associated with the teaching and learning of Creativity in the Colleges of Education. The random sample consisted of 47 respondents, comprising four tutors and 43 first year students. A simple random sample of 43 students was not difficult to select since the seven classes of the College

had already been stratified into classes of specific sizes. The selection was also guided by factors such as convenience, accessibility and familiarity. The study respondents were made up of 20 students and four tutors. In line with much qualitative studies (Ary et al, 2002) and because express permission was not sought to use the names of tutors, they are identified by codes as seen in Appendix E.

### **3.3. Instrumentation**

Instrumentation is the whole process of data gathering which involves selecting or designing of the instrument and the condition under which the research tools would be administered (Fraenkel and Wallen, 1996). Ary et al (2002) refer to instrumentation as a process of soliciting information in research. The study of teaching and learning of Creativity under Visual Arts in the Colleges of Education required strategies that included in-depth interviews with the tutors and students in order to understand how they prepare and teach Creativity as part of the Visual Arts subjects studied in the Colleges.

The use of multi-method instruments in a research study is known as triangulation. Cohen and Manion (1994) suggest that multiple methods of instrumentation can assess and investigate factors such as teaching methods, academic achievement, and practical skills including factors that account for student skills performance in the subject. The instruments used for this study were Test (Pre-test and Post-test), interviews, observation and questionnaire. The combination of interview, questionnaire, observation and test made triangulation and relation of data possible as different sources were consulted in order to eliminate inherent weaknesses of each of the techniques to improve the credibility of the study. The researcher chose pre-test simply to have a prompt means of identifying students' understanding of Creativity

and how to assist the sampled students to acquire skills that could help them to understand creativity in the Teacher Education curriculum.

### **3.3.1 Interview**

An interview is a conversation between two people where questions are asked by the interviewer to obtain vital information from the interviewee (Encarta Dictionaries, 2010). It is also a systematic way of talking and listening to people (<http://www.who.int>) and is another way to collect data from individuals through conversations. In this study, the researcher conducted face-to-face interviews with the four tutors of Berekum College of Education to clarify why teacher trainees do not perform well in Creativity as a subject within the Visual Art Curriculum. The researcher often uses open questions. The respondent is therefore the primary data for the study. Interviewing is a way to collect data as well as to gain knowledge from individuals. Kvale (1996) regards interviews as “an interchange of views between two or more people on a topic of mutual interest, sees the centrality of human interaction for knowledge production, and emphasizes the social situations of research data”.

The key benefit of interview is its flexibility (Bell, 1999). The use of the interview in research makes a move away from seeing human subjects as simply something the researcher can manipulate (Cohen et al, 1995). The purpose of interviewing people, according to Fraenkel and Wallen (1996), is to get a wind of what is in their minds. As Patton (1990) asserts, we cannot look at everything. It is necessary that we interview people to find out from them those things we could not directly observe.

According to Fraenkel and Wallen (1996), there are four types of interviews:

- i. Representative interview
- ii. Informal interviews
- iii. Structured; and
- iv. Semi-structured interviews:

In this study, the semi-structured interview, which is non-standardised because different questions may be asked of all respondents, was employed to find out problems associated with the teaching and learning of Creativity in the sampled College of Education whilst informal interviews were used to collect data from the tutors about the subject being studied in the Vocation/Technical Skills Department. Face-to-face interviews were conducted with the four tutors to clarify the issue of students' poor performance in Creativity as a subject of study. Students of Class 1F in Berekum College of Education were also interviewed to find out why they had not been performing well in creativity so that a remedy could be adopted to assist the students to perform better. All the respondents' interviews were recorded. The purpose of the sound recordings was to enable the researcher play back and retrieve information gathered as data to enrich the analysis of data collected for the study.

The choice of informal interview was based on the fact that more information could be retrieved since the interviewee was allowed to talk freely about the subject. The researcher's role was to check on unclear points and to rephrase the answer to check for accuracy and understanding (Gray, 2004 p. 217). Appendix A shows the sample interview guide used.

### 3.3.2 Questionnaire

The third research instrument used was the questionnaire. A questionnaire is a research instrument consisting of a series of questions and other prompts for the purpose of finding information about the problem under study. This is given to learners or people who can read and write. Questionnaire is also defined as a list of research or survey questions asked of respondents, and designed to extract specific information (Fraenkel & Wallen, 1996). The questionnaire serves four basic purposes: (1) Collect the appropriate data, (2) Make data comparable and amenable to analysis, (3) Minimize bias in formulating and asking questions, and (4) Make questions engaging and varied Oppenheim(1992) indicates that the questionnaire is an effective mechanism for efficient collection of certain kinds of information. Questionnaire is not, however, a comprehensive means of evaluation and should be used to support and supplement other procedures for evaluating and improving teaching.

A questionnaire has uniformity because each respondent receives an identical set of questions. Questionnaire can address a large number of issues and questions of concern in a relatively efficient way, with the possibility of a high response rate. Often, questionnaire is designed so that answers to questions are scored and scores summed to obtain an overall measure of the attitudes and opinions of the respondents.

#### **Forms of Questionnaire**

Questionnaires consist of open and closed ended forms of questions were adopted. The closed ended questionnaire consists of items that call for short check responses while the open- ended questionnaire requires free responses in the respondent's own words. The researcher uses these two forms of questioning to make up any inbuilt weaknesses of each form (Leedy and Ormrod, 2005). In this study, the researcher

adopted closed- ended form of questionnaire for respondents to pick or tick an answer from a given number of options in order to retrieve information within a shorter period. Open-ended questions were adopted to enable the tutors to formulate their own answers.

### **3.3.3 Observation**

The fourth research instrument used was observation. Observation is a research method that researchers use to gather qualitative data. A group is observed by a researcher and detailed notes taken about the way that group behaves. Observation may be defined as systematic viewing coupled with consideration of the seen phenomena, in which consideration must be given to the layer unit of activity by which the specific observed phenomena occurred. It is a classic method of scientific and social research inquiry. Moses and Altan (2000) are of the opinion that observation implies the use of the eyes rather than of the ears and voice.

Observation is selective because one has to observe the range of things which fall within the observation. Observation is also purposive. That is to say that it is limited to those facts and details which help in achieving the specified objective of research. Observation has to be efficient. Mere watching alone is not enough but there should be scientific thinking. Observation reveals certain sequences and trends and these generally form the basis for new hypothesis.

#### **Types of Observation**

The three major types of research observations are non-participant, participant and partial-participant observation ([www.ehow.co.uk/info8365815types-research-observationhtm](http://www.ehow.co.uk/info8365815types-research-observationhtm)).

## **Non-Participant Observation**

Researchers in non-participant observation interact with the subjects they are researching as little as possible. Here, the ultimate goal is to avoid the researcher affecting the way that the subjects act. The use of video recording or transmitting equipment enhances this effect because it allows for the researcher to observe while not being directly present. This type of observation has its demerits. Subjects or respondents may act differently than they would normally just because they know they are being observed. It is also more difficult to gain a full understanding of some social events when not actively participating in the group.

In this study both the non-participant and participant observation were used. The non-participant observation method was adopted to observe the four tutors of the selected first year group of students on different dates. See Appendix H for a sample of the observed lessons taught by the tutor respondents.

## **Participant Observation**

Researchers become active members of the group they are observing. They talk, interact and play games with the group so they gain a better understanding of roles in the group, and how the group functions. Participant observation is much more involving than non-participant observation but there is a greater risk for research bias and influence to skew the results of the study. The researcher also used participant observation to teach the selected first year group of students because it allowed him to gain a better understanding of the problems facing students with regards to the teaching and learning of creativity in the Colleges of Education.

## **Partial-Participant Observation**

This type of observation is a mixture of non-participant and participant observation. Researchers participate in some of the activities the group does, but not all; they switch between the role of outside observer and active participant. For example, a researcher studying a group may observe without interacting for most of his study but decide to participate in one of the group games to gain a fuller understanding of how the game works.

### **3.3.4 Tests (Pre and Post Tests)**

In Action Research, tests can be used to diagnose the extent of a problem and to determine the effectiveness of an intervention that has been designed to address the identified problem. A pre-test is used as a diagnostic instrument for the purpose of comparison. After administering the intervention, the same test or a parallel one (of the same difficulty level, but different in form or wording) is used as a post- test to determine the effectiveness of the intervention, and to ascertain whether there has been a change or not (Castillo, 2009). A pre-test consisting of 10 questions on the concept of creativity (as shown in Appendix D) was given to 43 sampled 1<sup>st</sup> Year students selected to work out. The purpose was to gather information about why the students find it difficult to deal with creativity as a subject of study within the teacher education curriculum. The answers formed the basis of the intervention that was planned to help the students understand the topic.

The researcher chose pre-test simply to have a prompt means of identifying students' understanding of creativity and how to assist the sampled students to acquire skills that will help them to understand creativity in the Teacher Education curriculum. In this study, the researcher conducted a pre-test consisting of 10 questions on creativity

that the sampled students answered to help the researcher ascertain the extent of poor performance in creativity. The questions asked were subjective to help the researcher to identify the major problems the sampled students face in studying creativity as a subject and to find remedies to those problems.

The researcher conducted a pre-intervention drawing test to assess the sampled students' understanding and level of creativity.

### **3.4 Administration of Instruments**

An Interview Guide designed by the researcher (Appendix A) was used to interview the four tutors of the Vocational/Technical Skills department of the Berekum College of Education. Four copies of the questionnaire given to the tutors were retrieved within an hour of distribution. Twenty copies of a second questionnaire (see Appendix B) that were also distributed to 20 students were retrieved the next day. The researcher used seven days to conduct face-to-face interviews with the 20 students. This was done after lunch between 2<sup>nd</sup> and 8<sup>th</sup> December, 2010, at 3:00pm each day. Three students were interviewed each day and on the final day, two students were also interviewed. Separate days were arranged for the tutors to be interviewed as seen in Appendix E.

### **3.5 Data Collection Procedures**

The primary data were gathered through questionnaire administration, observation, interviews and tests, while secondary data consisting of the literature on teaching and learning of Creativity in Visual Arts were gathered from libraries and the internet.

They were then asked to draw any natural object they could think of. The exercise was done to find out if the students could draw on their own.

### **3.6 The Intervention strategy**

The intervention was designed as pedagogical steps intended to enhance the teaching and learning of creativity as a subject of study. This involved lessons on the concept of creativity, theories of creativity, the creative process, brainstorming, critical thinking, and the production stage. On the 7<sup>th</sup> of December, 2010, the researcher taught a lesson on “the concept of creativity” to the 43 selected students in Class 1F. The class was asked to take pieces of paper and either draw, tear apart off, cut a template from, crumple or do anything they liked on the piece of paper, then insert into water colour and unfold it. The students were then asked to tell whether the image of the paper was the same as before it was crumpled. They were then asked to unfold the paper to identify the lines that had been created on the surface. Lastly, the students were asked to use two different colours to trace along the lines created on the surface of the unfolded paper. The students’ responses were collated as data for the study. They were then asked to formulate a statement on the activity they had engaged in as a means of developing the meaning for creativity.

The next lesson involved the researcher helping the students’ to view their inability to understand creativity from a new perspective by teaching a lesson on the theories of creativity in Art on the 9<sup>th</sup> December, 2010 from 7.30pm to 9.00pm. This was done to help the students to be aware of the formal set of ideas that explain the different theories of creativity, the benefits of creativity to mankind, and how creativity affects the identity and growth of mankind. Posters displayed around the Teachers Resource Centre enhanced the students’ concept of creativity.

The researcher used the following tools and materials to teach theories of creativity in art: art works, Kente items, carvings, baskets, poster board with Kwafie festivals in the Brong-Ahafo Region, paper, pencils, crayon, poster colours, plasticine, play

dough, dry clay and others. The researcher introduced the basic art concepts such as line, shape, colour, form, value, texture, and space to students through songs. The researcher allowed the students to select a theory at a time to examine in depth. For example, when a lesson on lines was taught, the students used colours to create different types of line. They were made to include information about colours. Then the researcher introduced primary, secondary and tertiary colours to students. In this exercise, the researcher pointed out contrasting colours like black and white, yellow-green and green, and complimentary colours such as red and green, violet and yellow, orange and blue.

Again, the researcher made connections between line drawings and the pre-historical cave art and aboriginal art and compared these to Egyptian, Greek, and Chinese art. Going through examples of art forms gave the students opportunity to be familiar with the different art techniques. The researcher used plasticine for student to experience the practice of working in the round. Clay was pounded for the students to practice making pinched pots, coil clay pots and slab pots. The students also created standing figures using papiermâché to get them acquainted with how to create texture. The next lesson taught was “the creative process” which assisted the students to develop skills in how to make artefacts.

### **The creative process**

For this topic the researcher adopted the ‘brain-storming’ technique to develop the lesson on the four main steps of the creative process which involves preparation, incubation, illumination and verification (Helmholtz cited in Wallas, 2011) to make the learning process as simple as possible to the students. In this lesson, the researcher took the students through the following steps:-

1. Identifying a problem.
2. Finding a solution to the problem.
3. Going into one's self to think seriously.
4. Giving form to one's ideas through a medium or material.

### **Brainstorming**

In the brainstorming session, the researcher used a flip-chart and red, blue, black, and green marker pens with which answers that were given by the students were written down. In managing the brainstorming activity, the researcher allowed the students to suggest ideas on creativity at random. He encouraged every student to participate and dismissed nothing that was said to prevent anyone from pouring scorn on the suggestions made. The students were also not allowed to criticize anyone for what they said. The researcher recorded every suggestion on the flip chart which was later pulled apart. Masking tape was used to affix the loose sheets separately on the classroom walls for all to see. At the end of the session, when ideas were exhausted, different coloured pens were used to categorize the ideas under topics such as concept of creativity, process of creativity, creative items and to link up the random ideas written on the flip chart.

The researcher then condensed and refined the ideas by making new headings or lists and placing ideas within other themes to avoid dismissing or rejecting contributions made by students. The researcher then implemented the actions agreed from the brainstorming. When students saw that their efforts had resulted in action and change, they were motivated and were keen to help again. The researcher on this note encouraged the students to embark on an exercise of personal brainstorming by asking them to jot down their ideas on a sheet of paper or in a note book. Students who wished to conduct the personal brainstorming were told to acquire four colours of

pens to make their records clear and legible. It was suggested that they use different colours to identify common ideas within a random list, or to show them as patterns and categories, or to overwrite notes without making a confusing mess, and generally to generate far more value from their notes and ideas on a single sheet of paper.

### **Critical Thinking**

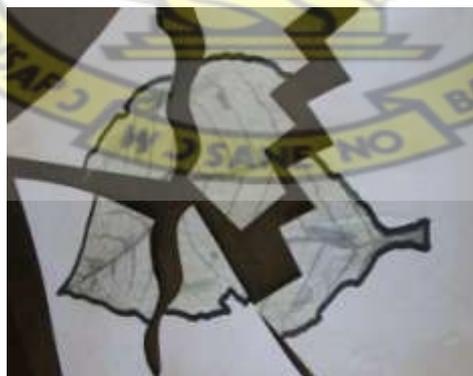
To facilitate this abstract thinking or “the separation of the mind from the environment to think seriously”, the researcher used a Jig- Saw puzzle that was based on a green leaf and a white cock drawn on two sheets of manila cards. The two cards were then cut out into various shapes of geometrical and irregular dimensions as shown in Plates 1- 3.



**Plate 1: Jig-Saw Puzzle (arranged).**



**Plate 2: Jig- Saw Puzzle (organized).**



**Plate 3: Jig- Saw Puzzle (dismantled).**

The emphasis of this activity was to identify the students’ ability to produce different types of line as they cut out the pictures they had drawn into pieces. The jig-saw

puzzle pictures drawn by the students assisted them to know that cutting through the pictures has many styles and each of the style has the same result. This enlightened the students to understand creativity because numerous types of line may be employed to cut through the pictures to obtain the requisite item.

### **Production stage**

At this stage, the students were asked to explore the use of various tools and materials in making some three dimensional products. Tools used included pen- knives, blades, pencils, pens, rulers, and pair of compasses, while the materials included manila cards, paints or colours, starch, glue, newsprints, and palm rachis. Skills used included cutting, trimming, moulding, modeling, drawing, interlacing, and finishing.

### **3.7 Helping students to develop creativity**

To develop creativity through thinking skills, the researcher gave the students tools and materials to be used in artworks and also took them on a field-trip to some indigenous crafts areas in Ashanti Region. On the 16<sup>th</sup> December, 2010, a lesson on 'how to develop creativity' was taught by the researcher using pencils, markers, poster colours, manila cards, Polyvinyl Adhesives, erasers and rulers. In this lesson, the students were asked to draw the 12-point Colour Wheel on manilla cards and to construct geometrical shapes like square, rectangles, cones, triangles and circles into forms such as cubes, cuboids, truncated bi-cones, pyramids and German balls with other manila cards. At the beginning, the researcher demonstrated the activity in making them and cautioned each student to avoid copying from a friend. Instead they were advised to think creatively to produce their own version of the work. During the lesson the students made preliminary designs and chose one that best suited their

purpose. The researcher guided them to produce three different types of design for each of the 12-Point Colour Wheel and three geometrical forms.

The second lesson took place on 18<sup>th</sup> December, 2010, which was a Saturday when the researcher took the sampled class on a field- trip to the indigenous textile towns of Bonwire, Adanwomase and Ntonso; the Ahwiaa carving centre and the Centre for National Culture in Kumasi. The purpose of this trip was to motivate the students to get the “will power” or the “I can do” attitude (Amenuke et al, 1991) towards developing interest in Art activities. At Bonwire, the group was led by the secretary of the Kente Village Industry to see different types of Kente fabrics and learn about the various designs and their names. At Adanwomase, also a Kente weaving town, the group saw different designs of Kente that they compared with that of Bonwire to identify the similarities and differences between them. At Ntonso, which is the centre of the traditional dyeing and printing of decorative fabrics in Ghana, the students learned of the types of decorated hand-made fabrics and the different skills and styles that are employed to make them.

At Ahwiaa where wood is carved to produce statuettes, dolls, images of natural objects and proverbial symbols, the students observed how the sculptors were carving, smoothening, glueing, varnishing and painting their artefacts. At the Centre for National Culture in Kumasi where many artefacts are produced, the students saw Pottery/Ceramics, paintings, Textiles, Sculpture, Graphics and other artefacts being made or displayed. The students became curious while looking at the processes the objects were taken through.

On the 14<sup>th</sup> January, 2011, reports on the field-trip were discussed with students. This involved the students being asked to choose a type of art work they had seen on the trip and discussing them in teams to encourage each student to willingly contribute to

the story. The researcher encouraged the students by telling them the career opportunities available to people who study art, mentioning automobile designer and set designer on TV as examples. To encourage students to acquire creative abilities, the researcher introduced them to various careers in the art industry such as the following: -

T.V. Animation	Pottery making	Architectural Ceramics
Photography	Textiles production	Plaster Moulding
Cinematography	Textiles Designing	Metal Casting
Graphic designing	Ceramic Consultancy	Typography.
Computer Graphics	Advertising	Commercial Art
Illustration	Interior Decoration	Teaching Art

The researcher used clay modeling as a tool for developing creativity in students. In this lesson, the researcher showed the students how to make textile designs on fabrics or paper by demonstrating and practicing of creative ideas and drawings. The researcher encouraged them to make preliminary designs of which the best ones were selected and finishing techniques were applied to them to create their own logos or motifs. Their textiles designs were displayed in the class for appreciation and criticism. The above activity was repeated and they became used to creating different styles or designs to produce good works on their own as shown in Appendix H.

### **Defining and redefining problems**

To promote creative performance the students were encouraged to define and redefine problems and projects. They were encouraged to choose their own topics for presentations and choose their own ways of solving problems and to choose a new

way when they discovered that they had made a mistake. They were told their choice must be relevant to the topic being treated. The lesson also involved teaching the students to solve problems that do not have well defined answers as another way to foster creativity among them. This was done by the researcher asking the students to develop a motif to use as a logo based on ideas developed from natural objects such as leaves, sticks, seeds, fruits, or birds. After an hour, the researcher moved round to assist students to make use of the principles of designing such as unity, balance, variety, rhythm, contrast, repetition, dominance, opposition and harmony in their drawing. The researcher recognized and rewarded students through praises to boost their morale in creativity.

The researcher used idea generation as a technique for developing creativity in students. The topic “Traditional Ghana and its artefacts” was given to students to write a report on it. The Project method of teaching Art was employed to allow students enough time to research the topic and submit their findings in a week. The students were also given an assignment on the topic “What are the effects of culture on creativity?” and as Gruber (1986) points out, most creative insights do not happen in a rush, so the students were allowed to take the assignment home where they could ask their parents and elders to help them generate ideas.

### **3.9 Post Intervention Test**

The researcher conducted a post-test to assess how much the students had understood creativity. The test (Appendix G) consisted of a practical work and 10 questions that the students answered.

### 3.10 Data Analysis Plan

The data collected were assembled in the form of tables and in a descriptive form, analysed, the facts interpreted, conclusions drawn from them, and recommendations made for solving the problem. The details of this appear in Chapter Four.

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## CHAPTER FOUR

### PRESENTATION AND DISCUSSION OF FINDINGS

#### 4.1 Overview

This chapter presents a discussion of findings from the Teaching and Learning activities of Creativity activities conducted in Berekum College of Education and described in Chapter 3. The data have been documented according to the objectives outlined for the study.

1. Describe the scope and content of the syllabus for creativity used in Ghana Colleges of Education.
2. Observe the teaching of creativity and assess the students' understanding and how this is interpreted in their outworks in the three Colleges of Education in the Brong-Ahafo Region.
3. Adopt a systematic pedagogy to enhance the teaching of creativity within Visual Art Related Subjects taught in the Berekum College of Education in Brong-Ahafo region.
4. Ascertain feedback on students' understanding of creativity in art lessons.

#### 4.2 Objective 1: Scope and content of the Creativity syllabus in Colleges of Education

Creativity is one of the eleven units of topics under the Visual Art Related Subjects studied in the Colleges of Education in Ghana. It is a one semester course of study within the six semesters Diploma in Basic Education programme. Creativity consists of seven topics that students are expected to study for two weeks with two instructional periods of two- hour periods per week.

The topics studied under creativity are as follows:-

1. Concepts of Creativity
2. The Creative Person
3. Qualities of a Creative Person
4. The Creative Process
5. The Creative Environment/ Creative Attitudes
6. The Creative Product
7. Effects of Culture on Creativity e.g. taboo, superstition, social restrictions.

**Allocation of Time:** The time allotted for the study of the Visual Arts Related Subject is inadequate to allow effective teaching of creativity. Although sixteen weeks are allocated for students to study creativity each semester, two weeks are used for registration, sports and other non-academic activities leaving twelve weeks for the teaching and learning of the units of the Visual Arts syllabus. With seven major topics to teach per semester of 12 weeks suggests that each topic will not be taught fully in the two fixed instructional hours per week. The intervention lessons indicated that the time for creativity is very limited. The tutors also attested to this and suggested that it is only by organizing additional classes that students can get enough lessons to complete the syllabus. There is a clear indication why the students find it difficult to understand the concept of creativity and perform well in the examinations.

#### **4.3 Objective 2: How creativity is taught in Berekum College of Education**

An effective lesson can never be taught without the preparation of a lesson plan. According to Farrant (1996), a lesson plan is necessary for the teacher to gain good mastery of the subject matter of the topic which he/she intends to teach. However, the classroom observation showed that three (75%) of the four tutors did not have lesson

plans to guide their teaching. Only one was seen using a detailed prepared lesson plan to teach. This confirms a general belief that teachers in second and third cycle institutions teach without lesson plans. The general impression created from this observation is that lesson plans seem to have no direct effect on the actual teaching of Art lessons in the college.

Information shared by one tutor was that they are experienced teachers who have no need to use lesson plans, forgetting this is required of professional teachers in Ghana as indicated by Opoku-Asare (2000). What was seen is that the tutors usually teach from pamphlets or handouts to which they refer to issues they discuss with their students. This negates Kizlik's (2011) assertion that there is the need for every teacher, whether experienced or inexperienced, to prepare and plan his or her lessons before proceeding rightly into the classroom. This means planning and presentation of lesson is a way of communicating which helps new or experienced teachers to organize content, materials and methods.

### **Teaching methods**

Tutors in the sampled College employed questioning, lecture, discussion and at times demonstration methods of teaching Art. It was clearly seen during the intervention lessons that when the sampled students were taught using the Inquiry-discovery and Field trip methods of teaching, the students understood the lessons better than the lecture and discussion methods of teaching Art during which most of students were spotted dozing.

The question method of teaching, which is used to elicit students' thinking, was commonly used by the tutors. The procedure for this question-response method of teaching was for the tutors to pose the questions to class and call randomly anyone to

provide the answers. At times the tutors ignored those whose hands were raised and called those whose hands were not raised to detect any problems such students had and also those who were not paying attention.

The lecture method of teaching was used in presenting a lesson on the topic “Idea Development” to students for practical works. During the intervention lesson, the researcher used Inquiry-Discovery method, Demonstration and Field-trip where students were given problems to go and solve within some days. It was obvious the tutors found it difficult promoting creativity in the classroom. They did not vary their teaching methodology. Due to this, the students could not identify the teachers’ creative skills let alone their methodology. This means the tutors were static in their application of teaching methods and therefore, tutors could not make any innovative work to motivate their students.

### **Teaching and Learning Materials Used in lessons**

The Marker board and handouts were the only teaching and learning materials that all the tutors used. One tutor used a lot of natural objects to explain the difference between natural and artificial objects in relation to dot, line, shape, texture, colour and other elements of design. This made the students understand the lesson well.

#### **4.3.1 Assessing the Students’ Understanding and Performance in Creativity**

Assessment of the students’ artworks generated from lessons taught in creativity showed that a number of problems prevent the students from performing well. As this study revealed, the students’ inability to perform well can partly be attributed to poor attitudes to Art subjects in Ghanaian society. It came to light that many of the students come from farming backgrounds and have relatives who are peasant farmers and do not have the requisite creativity-enhancing tools and materials for art work.

Creativity involves a lot of practical work and therefore students who are not exposed to these have difficulty in admiring and understanding the concept, process and products of creativity unless motivation is incorporated in the teaching and learning process. The absence of appropriate method in teaching does not also make the subject attractive to students. It also came to light that majority of the trainees had not been exposed to creative activities kindergarten to the current level. The data also revealed that only five of the 20 student respondents (representing 25%) studied either Basic Design in Graphics, Textiles, Sculpture, or Gourd and Calabash Art at WASCCE but 15 (representing 75%) did not study any Art subjects at all in WASCCE. Lack of exposure to art is clearly an attribute to the students' low understanding of creativity in the College of Education sampled.

The study revealed that only three respondents (constituting 15% of the 20) studied Art in the basic school while 17 respondents (constituting 85%) had not been exposed to any Art subjects. This shows that very few of the students knew something about creativity. This supports Torrance's (as cited in Villalba, 2000) assertion that students are to be enlightened to study Vocational Skills/ Creative Arts subjects at their early stages to avoid difficulties in the teaching and learning of creativity.

The study also found that 70% of the sampled student respondents did not have interest in creative activities and for that matter, were not able to perform well in solving creative problems. As Sternberg and Lubart (1996) indicated, motivation is [really] a strong driver of creativity, and perhaps more easily influencing than other contributory factors. This suggests that lack of interest is a contributory factor in the students' inability to perform well in creativity. Like the tutor respondents, the students also pointed out that their interest in vocational skills subjects is low, which seems also to make understanding of the course in creativity to be very difficult for

them. The students also asserted that they had no interest in the Art courses and, if they were able to draw at all, there was no motivation to ginger them to improve upon their performance in creativity.

The study revealed that 16 respondents (constituting 80%) of students sampled) had not participated in any activities in creativity at home. The home background of students in connection with Art relates to the situation where some relatives have little knowledge about creative activities, others have no idea and some have not even heard of creativity at all just as Traylor (2011) has identified as that influence learning among students. Relatives in the home, according to the respondents, do not show any creative attitudes or make new things that contribute to the daily activities at home. All that they think of is how their farms could yield enough food for home consumption and marketing. Moreover, relatives do not discuss any innovations with their wards let alone purchase tools such as pencils, brushes, erasers, rulers, pair of scissors and materials such as poster colours, papers, manilla cards, crayons, and others for the students to practice with. What the students mentioned reflects the tutors' views and Sternberg and Williams' (1996) assertion that the basic key to creative work must include the ability to make abstract things become realistic. This means people must be allowed to display the innate ability through creative activities.

The study backs up the revelation from respondents that relatives in their homes do not exhibit attitudes of creativeness to encourage their wards to emulate the creative atmosphere. Poor recognition of Art by the students' relatives does not encourage students to study Art. Students were not exposed to works of Art at the basic and secondary education levels because they were not taught any of the Visual Art related subjects such as paper Craft, picture making, graphics, pottery, bead making, and others. Creative Art as a subject of study was only introduced by the Curriculum and

Research Development Division (CRDD) of the Ghana Education Service into the basic school (KG and Primary) curriculum in 2007 which means the current sampled students did not learn any art at the time. This suggests that until these teacher trainees attain a high level of creativity, they will not be able to teach creative Arts well when they are posted to the schools as qualified teachers.

Three of the respondents inferred that poor teaching methodology also contributes to the students' poor performance in creativity. The inability of a teacher to impart good skills of practice in art to students may easily kill their creativity. The implication is that, students could sleep through a demonstration but cannot sleep through a hands-on practice lesson. "Tell me and I might remember a little while – if I listen; show me and I will remember a bit longer – if I pay attention; Have me do it – I learn it," as cited by Bartel in Bronson et al (2010) who also says he kills creativity when he praises neatness and conformity more than expressive original work ("I kill creativity if I allow students to copy other artists rather than learning to read their minds"). These statements indicate that teachers who are creativity killers in the classroom neglect the actual direction in teaching creativity and do their own thing due to lack of knowledge about better practices, which gives students opportunity to copy from their colleagues instead of thinking divergently to bring out something that is different from what others do to solve crucial problems.

Poor teaching methods have been identified as one of the attributes to the students' inability to perform well in creativity as 12 students (constituting 60%) of the total respondents pointed out. Respondents who got the chance to study Vocational Skills at the basic education level told the researcher that they do not understand the concept of creativity because what their teachers did was to ask them to draw a hen, a goat, a dog, a house and some other objects. They felt bored and lost interest in art.

#### 4.5 Objective 3: Intervention to Enhance Students' Performance in Creativity

In most learning situations, the learner is expected to receive knowledge, skills, techniques and opinions developed by others. Creative work is the important exception but it is often misunderstood and undervalued by teachers and others. Below are some findings of the techniques the researcher used to develop creativity in students during the intervention project. Table 1 shows that 12 respondents (constituting 60%) said they understood the creative lesson better when the teacher used brainstorming in the teaching of creativity; eight respondents (constituting 40%) were more involved in the lesson when practical activities were adopted.

Brainstorming is one of the salient methods of teaching creativity: when the researcher used brainstorming as an introduction to the creativity lesson, the students understood the creative process very well and the lesson became more captivating and interesting. Brainstorming with a group of people is a powerful technique (Chapman, 2009) as it encourages learners to learn more because it involves members of the team in bigger management issues, and it gets a team working together.

**Table 1: Strategies in Developing Creativity**

Strategies in Developing Creativity	Number of Respondents	Percentage (%) of Total
Brainstorming	12	60
Practical Skills	8	40
Total	20	100

**Table 2: Strategies in Developing Creativity**

<b>Strategies in developing</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Motivation	16	80
Criticism	4	20
<b>Total</b>	<b>20</b>	<b>100</b>

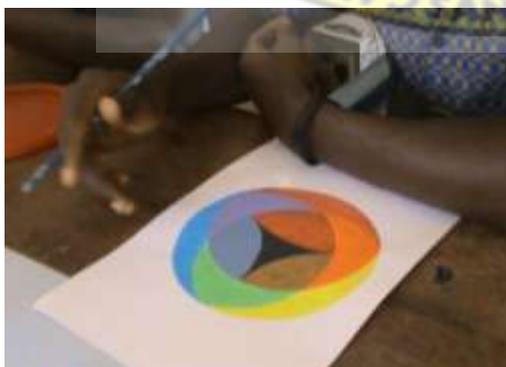
The study shows that 16 respondents (representing 80%) of the 20 students really understood the creative lessons taught them through the use of the motivation technique of teaching. Four respondents (representing 15%) also captured what was given to them when the researcher criticized the students' effort to create. This indicates that motivation has a great deal to do with creativity as pointed out by Lepper (1990). Therefore, in choosing an instructional strategy to develop creativity in students, a teacher needs to consider the effects of motivation as well as cognition.

**Table 3: Teaching Methods used in intervention**

<b>Teaching Methods</b>	<b>Number of Respondents</b>	<b>Percentages (%)</b>
Demonstration	2	10
Discussion	1	5
Lecture	1	5
Inquiry / discovery	12	60
Field Trip	4	20
<b>Total</b>	<b>20</b>	<b>100</b>

Table 3 shows that 12 respondents (representing 60%) came out with creative products/ideas when the researcher employed the Inquiry-Discovery method to intervene in the poor performance of students in creativity. One respondent (constituting 5%) was able to think and come out with creative products and ideas when the lecture method of teaching creativity was adopted. It could be realized that the Inquiry-Discovery method was very effective in developing the learners' understanding. As Petty (1994) declares, "activities in inquiry-discovery method motivate all but the most apathetic students". The activities of this method require high-order thinking skills in order to puzzle them out, and because learners are developing their own meaning, learning is of a high quality.

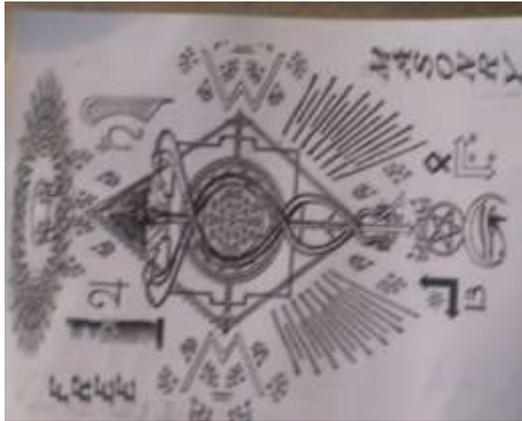
The study revealed that the lecture method does not enhance learners' creativity due to its theoretical ways of knowledge impartation in the classroom situation. This is because when the researcher used the lecture method, only one respondent (representing 5%) was able to come out with creative works. The teaching of creativity makes room for the use of inquiry-discovery method of teaching because students perform better when it is employed in the teaching of creativity. Plates 4 and 5 and Appendix G show examples of students' works after the intervention strategies were put in place. These are displayed in Plate 4.



**Plate 4a: Students' finished works**



**Plate 4b: Students' finished works**



**Plate 5a: Students' works after intervention.**

**Plate 5b: Students' works after intervention.**

The use of teaching techniques such as brainstorming, divergent thinking and motivation in the intervention lesson lured students to participate very well in the art lessons and also generated interest which enhanced the activity of the sampled respondents to understand what the tutor put across. Critical thinking was also introduced to students to solve problems regarding the teaching and learning of creativity which helped them to produce products differently. The use of Demonstration, Inquiring-Discovery, and Field trip method of teaching Art were the intervention methods used to develop the students' ability to perform well in Creativity.

One of the teaching methods that enhance students' creativity is field trip. Students were amused with the various artifacts they saw during the fieldtrip to the craft centres which contributed to the students' interest in the creative subjects.

As the observation revealed, the sampled tutors made use of questioning and discussion methods that are not practical oriented to develop students' practical skills. Practical lessons were hardly taught in class. Only marker board illustrations were used to direct students' learning during the observed lessons. These do not provide

enough motivation for the students to want to learn Art. It was also observed that the tutors normally left practical topics that they found challenging to teach the topics they found comfortable. The students' participation in creative activities done through practical works was not encouraging but even with the intervention lessons that were theoretical, more of the students got involved.

#### **4.6 Objective 4: Ascertaining the effect of intervention on students' understanding of creativity in Art lessons**

The results of the pre-intervention test which was conducted to identify problems on teaching and learning of creativity shown as Table 4 indicates that none of the students scored A or B (70-100) whilst eleven respondents (constituting 55%) got grade E (01- 49) the lowest mark. The result testifies that the sampled students were not familiar with creativity as a subject of study.

**Table 4: Pre-Test**

Grades	Numbers of Respondents	Percentage
A (80-100)	0	0
B+(75-79)	0	0
B (70-74)	1	5
C+(65-69)	1	5
C(60-64)	2	10
D+(55-59)	3	15
D(50-54)	2	10
E(01-49)	11	55
Total	20	100

A pre-test was conducted to identify problems on teaching and learning of creativity so from Table 5 above, it is clear that among the students who took the test, none of the students scored A or B (70-100) whilst eleven respondents (constituting 55%) got grade E represented by one up to 49 marks (01- 49) being the lowest mark. This results testifies that students were not familiar with creativity. To teach creativity, there must be measurable indicators to judge how much students have gained from instructions. From the 10 questions that were given to students to answer in order for the researcher to get feedback on how to improve the students' performance in creativity, the post-test shows a reverse of the results - 10 students scored A and five scored B.

**Table5: Post -Test**

<b>Grades</b>	<b>Frequency</b>	<b>Percentage</b>
A (80-100)	10	50
B+(75-79)	5	25
B (70-74)	2	10
C+(65-69)	1	5
C (60-64)	1	5
D+(55-59)	0	0
D (50-54)	0	0
E (01-49)	1	5
<b>TOTAL</b>	<b>20</b>	<b>100</b>

Table 5 is an indication of a tremendous improvement in the students' performance in creativity. The implication is that the pedagogy that was adopted and the use of

brainstorming, critical thinking and sharing of views had broadened the students' perspective to grasp the concept of invention of new ideas.

#### **4.7 Major findings**

##### **1. Difficulties with promoting creativity in students' work**

All the four teachers felt that they were creative in some aspects of their personal lives and hence felt that they generally understood what being creative meant, even though this understanding differed among the tutors. It was significant that none of the students commented on this assertion, which suggests that they did not recognize the tutors as role models or mentors in this respect. All four tutors felt that personal creativity plays a role in the teaching and learning of the subject, but a subservient one to the development of knowledge and skills. The tutors' views were shaped by:

- Their own interpretation of what constitutes creativity,
- Their own personal, "self-perceived" levels of creativity and,
- Concerns about wasting time when assessment goals need to be achieved.

The intervention lessons helped the students to understand creativity better than their tutors had done. The various artefacts the students saw during the fieldtrip, including photos in Appendix F enabled them to appreciate artworks that will probably encourage them to offer art as their elective subject in the second year of the Diploma in Basic Education programme at the College. The fieldtrip had a positive influence on the students in that they began to attend classes in their numbers and ensured that all assignments were done on time.

What the students experienced from the field trip also encouraged them to practice a lot of creative art. They were also able to identify some of the indigenous names

associated with the artefacts. The brainstorming sessions also enabled them to deal with management issues that got them to work together. Brainstorming is indeed an effective way to begin teaching creativity as the method generates a lot of possibilities which one might otherwise miss by getting into lectures. The following statements were what students deduced when brainstorming sessions:

1. There must be freedom to rebel against conditions when one wants to create.
2. Acceptance of everyone possessing good thing in him / her and that he/ she be given the chance to grow.
3. People should refrain from judging others when they do not know much about them.
4. The acceptance of people with their weaknesses and providing them with opportunities to develop.

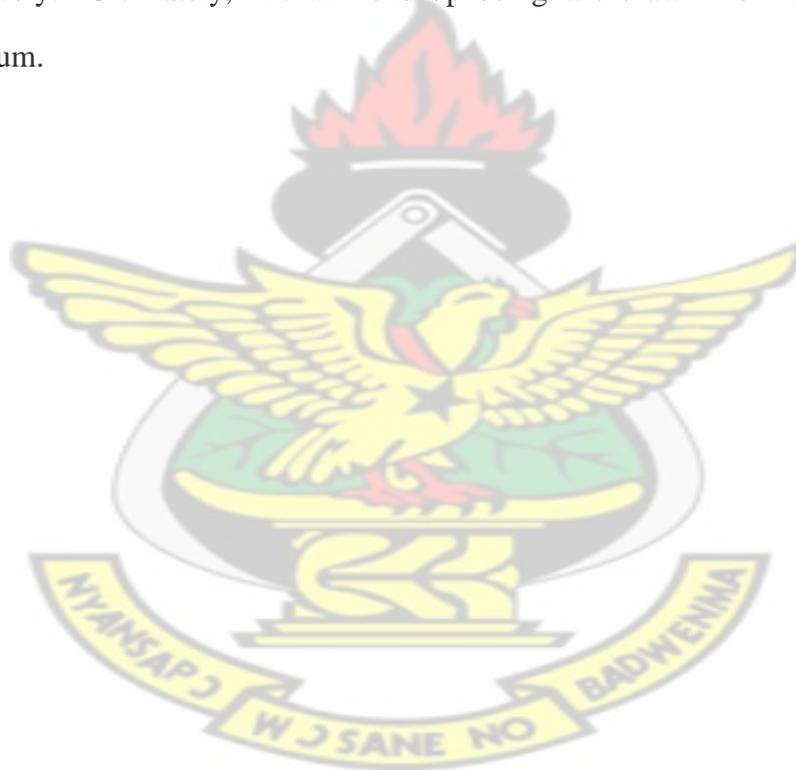
This shows that the technique enabled the students to produce a lot of ideas and put them into action. Some of the images they produced are seen in Appendix G. With the comprehensive knowledge of creativity, the students would be able to improve on the old designs or products or make new ones.

### **Students' interest in Creativity**

With new knowledge and interest derived from the intervention lessons, the students would now be able to select art as one of their elective subjects in their second year.

This means that the intervention generated much interest among the students. They are more likely to do well in the subject. This based on the fact that the students contributed immensely during the lessons on creativity when brainstorming was used for discussing issues in creativity. the implication is that within the Colleges of

Education in Ghana, effective and quality teaching and learning of creativity are being subverted by issues such as lack of knowledge on the part of tutors, lack of interest in students, inadequate time on the college time table for teaching the subject, misconceptions of the worth of Art and inability of students to be taken on field trips. Invariably, these factors pose extra difficulty in the achievement of the objectives of creativity lessons for the one semester allotted to it in the Teacher Education programme. If these issues are not addressed well and immediately, Art will be redundant in the Colleges curriculum and there will be no teachers to teach Creative Arts and Basic Design and Technology in the primary and Junior High schools respectively. Ultimately, Art will end up being withdrawn from the basic school curriculum.



## CHAPTER FIVE

### SUMMARY, CONCLUSIONS, RECOMMENDATIONS

#### 5.1 Overview

The need for a sustainable supply of highly qualified Creative Arts teachers is critical to the human resource development of Ghana cannot be over-ruled as much as educational technology is concerned. The Art teacher is really responsible for preparing the next generation of creative thinkers and problem solvers who will change ideas of the nation to fit the fast pace of global technological developments. The dire need for qualified Creative Arts teachers is reasoned in relation to the presence of a high percentage of general classroom teachers in the public basic schools in the country. This chapter is devoted to the summary of the findings of the study, the conclusions drawn from them and recommendations for how best the process approach could be used to improve students' performance in creativity.

#### 5.2 Summary

It emerged from the study that when students are motivated intrinsically, they will have interest in studying Art and thereby perform very well in creative activities. It also came to light that when tutors employ creative teaching techniques such as Brainstorming and Practical Skills, students perform better. The tutors' failure to develop and use lesson plans distorts teaching and learning processes, making presentation of the lesson disorganized.

The study indicates that several factors are causes of the sampled students' inability to perform well in creativity as a subject. One major cause is lack of interest on the part of the students. There is also not enough motivation by the tutors to enable the

students have the will power of creating. The number of periods allocated to the teaching of Pre- Vocational Skills which has Art related subjects (under which creativity is taught) on the Colleges' time table per semester is not adequate. Poor teaching methods adopted by some tutors also make it difficult for the teacher trainees to do well as students who would become teachers in the basic and secondary schools. As a result, the students do not get enough foundation knowledge to enable them engage pupils in the basic schools in more creative activities. Poor performance of the teacher trainees could be attributed to the fact that most of the students do not have interest in the subject because not all of them had been exposed to Art in their basic and secondary education. They are also not briefed about the careers in Art by their tutors to get them interested in Art.

Generally, the study found that the College tutors themselves do not have the right attitude to teaching as they do not use lesson plans to guide their presentation of lessons on creativity because they believed they were experienced enough to teach without lesson plans, knowing well that some of the vital information may be forgotten. The use of textbooks to guide class discussions and the Lecture method with questioning in teaching Art as the only teaching methods without adopting practical lessons and teaching-learning materials such as Marker board illustrations resulted in the students copying from their colleagues rather than doing their own works.

The study showed that brainstorming motivated the students to participate actively in the intervention lessons which generated understanding of what was taught. This introduced critical thinking that helped the students solve problems in creativity and also to produce different artworks. The use of Demonstration, Inquiring-Discovery, and Field trip method of teaching Art were also found to be effective methods that

enhanced the students' understanding of creativity and helped them to perform well in the classroom.

### **5.3 Conclusion**

Creativity is crucial to creative thinking, problem solving, and socio-economic progress. As shown in chapter 2, the rationale for studying creativity in Colleges of Education is to train student-teachers to develop competencies in preparing, executing and producing teaching and learning materials to enhance teaching and learning processes at the basic level of education (Ghana Education Service, 2001) where the Diploma in Basic Education graduates ultimately function as teachers. If the trainees do not understand the concept of Creativity, they would not be able to adopt creative teaching methods and activities to positively affect their pupils' creative thinking to promote awareness and acceptance of creativity in the school, home and the community in which they live so that people will begin to respect art. Since very few of the students had been exposed to Visual Arts in Senior High School but do not get the opportunity to engage in creating art works in College shown in chapter 4, makes it difficult for all the sampled teacher trainees to excel in lessons taught on Creativity so that the basic school pupils could also benefit from college programme.

The result of this study gives a clear picture of the challenges that tutors and students encounter with respect of Creativity in Berekum College of Education. As this report indicates, the process approach to teaching Creativity can guide students, college tutors and primary school teachers to indulge in innovative activities that are more likely to promote pupils' participation in Creative Art lessons when they graduate from college and thereby improve national creativity qualitatively.

## 5.4 Recommendations

Based on the findings of the study, the following recommendations are made as a means to correct the problems associated with a poor teaching and learning of creativity in the Colleges of Education.

1. Due to the importance of Creativity to the development of the nation, Visual Arts must be included in the curriculum followed in the Colleges of Education and also placed on the time table for the three year Diploma in Basic Education programme with a 3-credit hour rating per week. This would ensure that more time is devoted to the subject to encourage active student participation and understanding of the subject.
2. Teaching and learning materials, tools and equipment for teacher demonstration in class is vital in the delivery of good quality education. It is therefore appropriate for Ghana Education Service (GES) to ensure regular supply of the right quantities of what is required in the Colleges.
3. The Ministry of Education must periodically organize in-service training to enhance teacher knowledge and build capacity for tutors to use appropriate teaching and learning materials to impart knowledge and skills in Art.
4. Further research should also be conducted to identify the materials that can help teach creativity effectively to develop students' interest in the subject matter from the lower levels of education in Ghana.

## REFERENCES

- Amabile, T.M. (1999). How to kill creativity. *Harvard Business*, pp. 77-87.
- Amabile, T.M. (1983). Motivation and Creativity. *Journal of Personality and Social Psychology*. Vol. 48(2), 393- 399.
- Amenuke, S. K. et al (1991). *General Knowledge in Art for SSS*. London: Evans Brother Limited.
- Arends, R.I. (1994). *Learning to Teach (2<sup>nd</sup> Ed)*. New York: McGraw Hill, Inc.
- Barnes, D. (1985). *Practical Curriculum Study*. London: Routledge and Kegan Paul.
- Bates, J.K. (2000). *Becoming an Art Teacher*. U.S.A: Wadsworth/  
[www.wadsworth.com](http://www.wadsworth.com).
- Bono, E. D. (1992). *Senior Creativity*. New York: Harper Business.
- Boscariol, P. and Neden, J. (2008). Specialists Teachers: who are we and what do we have to offer. *Teachers Magazine*. Retrieved June 30, 2011 from Ask Web site. <http://betlabctfnews.blogspot.com/2008/02/special> .
- Bosworth, K. (1994). "Developing Collaborative Skills in College Students." In K. Bosworth and S. Hamilton(Eds.), *Collaborative Learning: Underlying Processes and Effective Techniques*. San Francisco: Jossey-Bass.
- Brown, G., Burley, J., & Wing, J. (1972). Influence of family life on the course of Schizophrenia disorders: A replication. *British Journal of Psychiatry*, 121, 241-258. Butt (2008). (<http://www.bbc.co.uk/news/magazine-17777556>)
- Carnevale, A.P., Gainer, J., & Meltzer, A.S. (1990). *Workplace Basics: The Essential Skills Employers want*. San Francisco: Jossey- Bass.
- Cohen, L., Manion, L., & Morrison, K., (2000). *Research Methods in Education*.

London: RoutledgeFalmer.

Csikszentmihalyi, M. (1996). *Creativity: Flow and the psychology of discovery about invention*. New York: Harper Collins.

Curzon, L.B. (2000). *Teaching in further Education. (An Outline of Principles and Practice)*. (4<sup>th</sup> ed). London: Cassell Educational limited.

De Souza, and Fleith. (2000). Teacher and students with critical workplace competencies. *Journal of Education for Business*, 77 (1), 28- 33.

Dewey, J. (1997). *Experience and Education*. New York: Touchstone.

Dondieu, C. K. (1985). *Guide Notes to the study of the Development of Education in Ghana for Students in Teacher Training Colleges*. Sunyani: Brong-Ahafo Printers.

Encarta World English Dictionary.(2009). *Microsoft Corporation*. U.S.A: Bloomsbury Publishing Pic.

Erickson, E. (1976). *Developmental Stages of Thinking*. Retrieved on 3/5/2011 from [www.sil.org/inqualiuks/.../developmentalstrageserickson.htm](http://www.sil.org/inqualiuks/.../developmentalstrageserickson.htm) Retrieved on 3/5/2011

Feldman, R.S. (1996). *Understanding Psychology* (4<sup>th</sup> Ed). Boston: McGraw Hill Co.

Farrant, J.S. (1980). *Principles and Practice of Education*. U.K: Longman.

Fraenkel, J. R & Wallen, N. E (2002). *How to design and evaluate research in education* (4<sup>th</sup> ed.). New York: McGraw-Hill, Inc.

Gagne, M. R., Briggs, J.L., & Wager, W. W. (1985). *Principles of Instructional*

*Design*. Florida: Holt, Rinehart and Winston, Inc. Gardiner, L. (1998). Why we must change: The Research Evidence. *Teachers Magazine*.

<http://www2.honolulu.hawaii.edu/facdev/guidebk/teachtip/>

Galloway, G.A. (2001). Vygotsky's learning theory. In M. Orey (ed). *Emerging Perspective On Learning, Teaching and Technology* [Electronic Version]. Retrieved April 29, 2004 from Google web site: [http://www.projects.coe.uga.edu/epltt/inde.php?TitleVygotsky%27s\\_constructivism](http://www.projects.coe.uga.edu/epltt/inde.php?TitleVygotsky%27s_constructivism).

Gardner, H. (1993). *Creating minds*. New York: Basic Books.

Gunnell, B. (2011). *Pretty Patterns Colouring Book*. U.K: Buster Books ISBN 9781907151576.

Hartmann, S. (1993). What is creativity? Retrieved June 01, 2011 from [www.silvaHartmann.com](http://www.silvaHartmann.com)

Herberholz, D. and Herberholz, B. (1998). *Art Works for Elementary Teachers* (8<sup>th</sup> Ed). U.S.A: McGraw Hill Co.

Hopkins, D. (1993). *A Teacher's guide to classroom research*. Michigan, USA: Open University Press.

Hornby, A. S. (2002). *Oxford Advanced Learner's Dictionary* (6<sup>th</sup>ed). Oxford: Oxford University Press.

James, V., Gerard, R. & Vagt-Traore, B. (2005). *Enhancing Creativity in the Classroom*. Educational Psychology and Instructional Technology. University of Georgia.

Kaufman, L. (1996). *Art and Education in Contemporary Cultures*. New York: Macmillan Ltd.

Keller, (2008) .*New World Encyclopaedia*.

<http://www.newworldencyclopaedia.org/creativity> Retrieved June 30. 2011

from yahoo web site.

Kyriacou, C. (1997). *Effective Teaching in Schools: Theory and Practice*.

Cheltenham, U.K: Stanley Thomas (Pub) Ltd.

Leblanc, R. (1998). Good Teaching: The Top ten Requirements. *The Teaching Professor, Vol. 12.(New York-USA)*.

Leib, S. (1991).Principles of Adult Learning.

<http://www2.honolulu.hawaii.edu/facdev/guidebk/teachtip/adult/>.

Lieberman, Ann. (2004). *Teacher Leadership*. California: Jossey-Bass.

Mayer, R. R. (1999). Fifty years of Creativity research. In R.J. Stenberg (ed.) *Handbook of Creativity*, pp. 449-460. London: Cambridge University Press.

Mcfee, G. (2004). *The Concept of Dance and Education*. U.K: Pageantry Press. ISBN 0954714709.

Mumford, M. D. (2003). Where have you been, where are we going? Taking Stock in Creativity Research. *Creativity Research Journal* 15, 107-120.

Naiman, D. Q. &Hao. (2010). *Assessing Inequality*. U.S.A: SAGE.

National Advisory Committee on Creative and Culture and Education. (NACCCE)

(1999). *All Our futures: Creativity, Culture and Education*. London: DfES.

National Curriculum Action. (2010). *Implementing the Mathematics National*

Curriculum. London: SAGE.

Nickerson, R.A. (1999). How we know – and sometimes misjudge what others know: In putting one's own knowledge to others. (Ed), *Psychological Bulletin*, 125, 73-759.

Nicola, G. (1997). Psychoanalytic Aesthetics: The British school. In Freud's Theory of Art and Retrieved September 29, 2010 from New world web sites:  
<http://www.newworldencyclopaedia.org/entry/creativity>.

Njogu, M. (2010). Importance of lesson Plans. Retrieved September 05, 2010.  
<http://www.ezinearticles.com/?Importance-of-lesson-Plans&id=5205c> .

O'Bannon, B., & Puckett, K. (2010). *Preparing to Use Technology: A Practice Guide to Curriculum Integration, 2e*. Boston: Allyn and Bacon. ISBN.

Oech, V. (1998). *How you can be more creative*. USA: Warner Co.

Orey.M. (2001). *Emerging Perspectives on Learning, Teaching and Technology* Retrieved 20/04/2011, from  
<http://projects.coe.uga.edu/epltt/>

Oppenheim, A. N. (1992). *Questionnaire Design. Interviewing and Attitude Measurement*. London: Printer Publishers Limited.

Orlich, D. (2004). *Teaching Strategies. A guide to Effective Teaching*. U.S.A: Houghton Mifflin.

Ornstein, A. C. (1995). *Strategies for Effective Teaching* (2<sup>nd</sup> ed). U.S.A: Wm. C. Brown Communications, Inc.

Papalia, D.E and Olds, S.W (1992).Human Development (5<sup>th</sup> Ed). New York: McGrawInc.

Perrot, E. (1989). *Effective Teaching: A Practical Guide to Improving Your Teaching*. London: Longman.

Plucker.J.A. and Renzulli, J.S (1999). Psychometric approaches to study of human creativity. InR.J. Sternberg(ed) Handbook of creativity, pp. 35-62. London: Cambridge UniversityPress.

Rappaport, T.S &Rong, Z (1997).*Principles & Practice of Communications Prentice Hall: Kluwer Academic Publishers*.

Ryan, K & Cooper J.M (2008)*Those who can Teach*. U.K: Houghton Mifflin Harcourt (HMH).

Runco, M.A. (2004). *Theories of Creativity*. Cresskill, New Jersey: Hampton Press.

Sasson, A. (2004). Natural applications of Applied Behavior Analysis for children with autism. *Israeli Journal of Occupational Therapy*, 13(2), E37-E53

Schank, R. C. (1988). *The Creative Attitude: Learning to Ask and Answer the Right Questions*. New York: Macmillan.

Schirmacher, R. (1998). Art and Creative Development for Young Children. California: Delmar Publishers.

Schlechty, P.C (2003). *Inventing Better Schools: An Action Plan for Education*

*Reform. U.S.A: John Wiley & Sons Ltd.*

- Silvano, A. (1993). *Creativity: the Magic Synthesis*. U.S.A: Basic Books (A division of HarperCollins Publishers).
- Simonton, D.K. (1999). Creativity from a Historimetric Perspective in R.J. Sternberg (ed)*Handbook of Creativity*, pp. 133-177. London: Cambridge University Press.
- Stanfield, N.F. (1996). *Art for African School*. London: Evans Brothers Limited.
- Starko, A.J. (2007).*Creativity in the Classroom- schools of curious delight (4<sup>th</sup> Ed)*, New York: Routhledge, Taylor & Francis Group.
- Sternberg. R. J. and Lubart, T. (1996). Investing in Creativity. *American Psychologist* 15(7), 677- 688.
- Sternberg, R.J &Lubart, T. I. (1995) *Defying the Crowd: Cultivating Creativity in a Culture of conformity*.USA: Free Press.
- Sternberg, R..J. &Lubart, T. (1995).An investment approach to creativity.In S.M. Tamakloe, E. K., Amedahe, F. K., & Atta, E. T. (1996).*Principles and Methods of Teaching*. Accra: Black Mask Ltd.
- Torrance, E.P. (1998). *The Torrance Tests of Creative Thinking Norms-Technical Manual Figural (streamlined) Forms A & B*. Bensenville, IL: Scholastic Testing Services.
- Traylor, D. (2011). The Influence of creativity of learning in students. 200 Brickstone square Andover: Helium In Unworthy, J.M. (1999). A Respond to “what Elementary Generalist Teachers Need to know to Teach Art well”.*The*

*Journal of the National Art Education Association, Vol. 54, No. 6, November, 2001, pp.6- 11. Goshen College.*

Treffinger, D.J., Isaksen, S.G., Dorval, K.B. 2000. *Creative Problem Solving - An Introduction*, 3.ed. Prufrock Press, Waco, USA,

Villalba, E. (2008). *On Creativity: Towards an Understanding of Creativity and its Measurements*. London: JRC European.

Von Oech, R. (1990). *A Whack on the Side of the Head*. New York: Warner Books.

Wallach, M.A. and Kogan, N. (1995). *Modes of Thinking in your children. A study of the Creativity- intelligence Distinction*. New York: Holt, Rinerhart & Winston.

Wiggins, R.A. and Wiggins, J. (2008). Primary Music Education in the absence of specialists. *International Journal of Education & the Arts*, 9(12). Retrieved September 06, 2011 from Ijea Web site: <http://www.ijea.org/V9n/2/>.

World Book, Inc. (2008). *The New World Encyclopedia*. Chicago: World Books.

**APPENDIX A:**

**TUTORS' INTERVIEW GUIDE**

**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**COLLEGE OF ART AND SOCIAL SCIENCE**

**FACULTY OF FINE ART**

**DEPARTMENT OF GENERAL ART STUDIES**

**TOPIC: AN OVERVIEW OF TEACHING AND LEARNING OF CREATIVITY IN THE TEACHER EDUCATION CURRICULUM: A CASE STUDY OF BEREKUM COLLEGE OF EDUCATION.**

*This questionnaire is designed to petition for information for the above project. The information collected would be kept as highly confidential as possible. The researcher will highly appreciate your response.*

**Section A**

1. Gender. Male [  ] F [  ]
2. Age 20-30 [  ] 31-40 [  ] 41-50[  ] 51-59[  ]
3. Educational level. Diploma [  ] 1<sup>st</sup> Degree [  ] 2<sup>nd</sup> Degree [  ]  
Other [  ]  
If other state.....
4. Work experience 1-10yrs [  ] 11-20yrs[  ] 21-30yrs[  ] 31-40yrs.  
[  ] Other [  ]  
If other state.....

5. Marital Status. Single [ ] Married [ ] Divorced [ ] Separated [ ]  
Widow [ ] Other [ ]

6. Do you teach with a lesson plan?  
.....

7. Do you regularly do practical works?  
.....

8. Where do you do it?  
.....

9. Why have you not been doing practical works in the classroom?  
.....

10. What teaching methods have you been using during lesson presentation  
.....

11. Do you prepare lesson notes to teach? If no, give reasons.  
.....

12. Have students been taking keen interest in creative works? What are some of the reasons for this?

13. (a) What are students' attitudes towards creative art subjects?

(b) If you enter the class to teach, why it is that some teachers teach poorly?

14. Do you think parents encourage their wards to take creative Arts as their elective subjects?

15. Please, don't you think how some teachers impart knowledge and skills to learners can also affect students' ability to learn?

16. What do you think are some of the problems that militate against students' inability to perform well in creativity?
17. What are some of the strategies that can address the teaching and learning of creativity in Teacher Education Curriculum?
18. How would you develop the creativity among students?
19. How does society regard Art as a creative entity?
20. What methods have you been using most?



**APPENDIX B:**

**QUESTIONNAIRE FOR STUDENTS**

**AN OVERVIEW OF TEACHING AND LEARNING OF CREATIVITY IN THE TEACHER EDUCATION CURRICULUM: A CASE STUDY OF BEREKUM COLLEGE OF EDUCATION.**

Instructions: Tick the applicable ones.

1a) Have you been exposed to Art subjects in Basic school? Yes  No

b) Why?  Give reasons.

2a) Were you taught any creative arts when you were in the Senior High School?

Yes  No

b) Give reasons.....  
.....  
.....

3. Do you have interest in the studying of creative Arts? Yes  No

4. Do you your parents recognize Arts as good subject as beneficial to you in future?

Yes  No

5. How do you assess teachers who teach creative Arts?  Good  Poor

6. Do teaches motivate you to draw imaginatively?  Yes  No

7. Do you want to study Art as your elective subject in the second year?

Yes     No

8. Have you been interacting with tools and materials in Creative arts subjects?

Yes No                       

9. Have your parents ever bought art book for you to study at home?

Yes     No           

10. Do your colleagues who are in another area recognize you when dealing with creative activities?

Yes No                       



## APPENDIX C

### PRE-TEST QUESTIONS

QUIZ – 20<sup>TH</sup> JANUARY, 2011

1. In your own words, define creativity.
2. State two of the creative process.
3. Give two examples of creative products.
4. Why is the product chosen in Question 3, creative?
5. a) What is uncreative about copying items from your colleagues?  
b) What do you understand by creative attitude?
6. Give two uncreative attitudes you have witnessed on campus.
7. What is critical thinking?
8. Give two social issues that hamper creativity.
9. What is critical thinking?
10. Give two examples of creative activities.

## APPENDIX D

### POST- TEST QUESTIONS

#### SECTION A

Answer all questions (50 marks)

1. In your own words, define creativity. I
2. State two of the creative process. S
3. Give two examples of creative products. G
4. Why is the product chosen in Question 3 creative? W
5. What is uncreative about copying items from your colleagues? W
6. What do you understand by creative attitude? W
7. Give two uncreative attitudes you have identified on campus? G
8. What is critical thinking? W
9. Give two social issues that hamper creativity. G
10. Give two examples of creative activities. G

**SECTION B (50 marks)**

1.

D

Draw any natural object found in your environment using all the drawing techniques available.

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**APPENDIX E**

**INTERVIEW SCHEDULE FOR TUTORS**

1. 17<sup>th</sup> December, 2010 at 9.00 am- Miss Barnie Agnes.
2. 17<sup>th</sup> December, 2010 at 3.00 pm- Mr. Kewa Clifford.
3. 13<sup>th</sup> January, 2011 at 4.00 pm- Mrs. Gyamfi Vida.
4. 16<sup>th</sup> January, 2011 at 4.00 pm- Mr. Boateng Charles.

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## APPENDIX F

### ARTEFACTS FROM FIELD TRIP



**Plate 7.**Kente Slippers



**Plate 8.** Fatia Fata Nkrumah



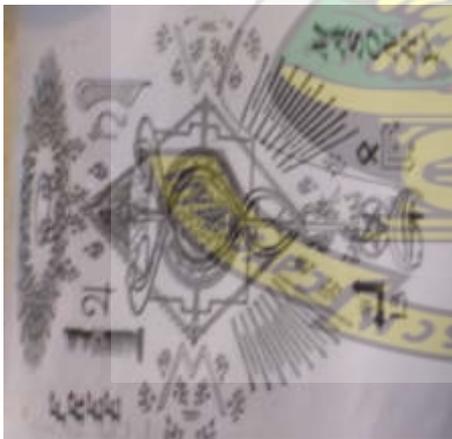
**Plate 9.** Mrs. Kuffour

**Plate 10.** Tikoro Nko Agyina

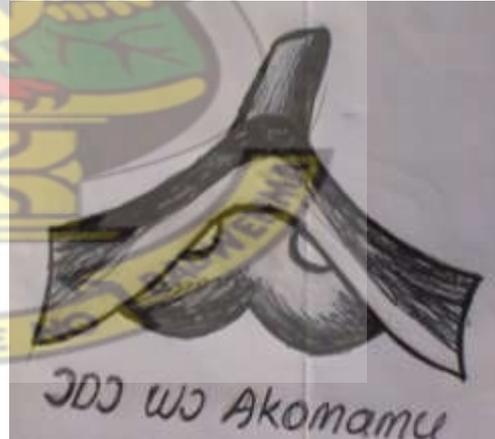
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**APPENDIX G**

**SAMPLES OF STUDENTS' WORKS**



**Plate 2a.** Students' Logo



**Plate 2b.** Students' Logo



**Plate 11.** Students' Logo

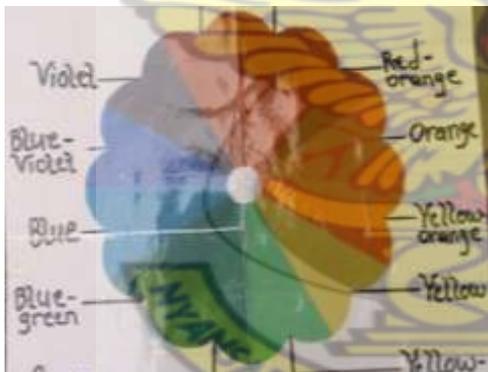


**Plate 12.** Students' Logo



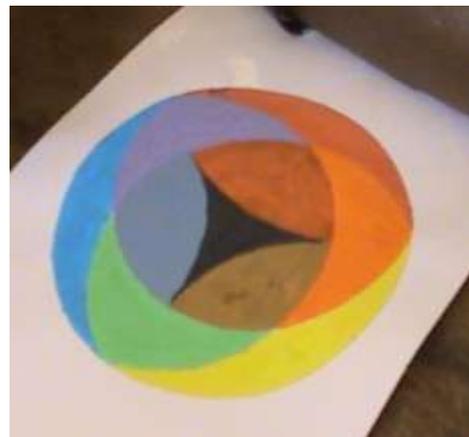
**Plate 13.** Truncated bi- Pyramid

**Plate 14.** German Ball



**Plate 15.** Colour wheel arranged with paper

**Plate 16.** Colour wheel with sand



**Plate 17.**Designed Principles

**Plate 4b.** Colour wheel with crescent

Design.

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**Appendix H**

Teacher A

Lesson Topic: Basic Design (Elements of Design)

Tutor wrote Elements of Design on the marker board and asked students to define the meaning of it. He then discussed the concept of elements of Design to students and gave examples as line, dot texture, colours, shape, space, mass, volume and weight. Students were asked to give examples of the elements of design in man-made and nature. An assignment given for students to take home was draw twenty types of lines.

Participation of Students

Two students raised their hands to answer questions asked by the tutor. Six students dozed off in class and others sat down quietly as if they did not hear what was going on.

Teacher B

Lesson topic: Techniques of Drawing

Presentation: Teacher asked students to explain the meaning of drawing. He further asked students to state the techniques of drawing as observation and recording the use of geometrical shapes and forms, contour drawing and shading techniques. The tutor verbally told students to a leaf and look at it critically and represent the images or ideas on paper. He even asked them to use hand lens to see how lines and dots are arranged on the leaf. He then drew a leaf on the maker board using demonstration method of teaching.

Students Participation

Some students rushed down to their halls for pencils and pieces of drawing paper because they were not aware of the lesson through it were a period for Art lesson. Students drew leaves on their pieces of paper and submitted them after thirty minutes.

Teacher C

Lesson Topic: Concept of Creativity

Presentation: teacher creativity on the board and started lecturing. That is, she started explaining what creativity is as something new and has not existed before. Creativity involves originality, imagination and flexibility.

Teacher then, gave examples of creative items such as cars, bicycles, mobile phone, soap, milk tins, clothes, sandals and others. Teacher asked students to define creativity in their own words and list about twenty creative items as class assignment.

Students' Participation

Students did their best to write down the meaning of creativity with their own words and state examples of items associated with original ideas or things, especially in an artistic context.

Teacher D

Lesson Topic: Creative Process

Presentation: Teacher explained creative item as relevant previous knowledge. Teacher asked students to open their handouts that had been distributed to them. He called one of the students to read so that he explained further to them. After discussing the steps to creativity, he asked students to imagine any shape they like and develop ideas around it to generate a motif of their own. Teacher used a square to make a motif. Part of the square was twisted, elongated, disregarded, chopped off, and the corners curved.

Participation of Students

Students tried to do something on paper. Some students sat there looking onto what others were doing. Others tried to look through the handouts to see whether they could get an image and copy from.