The Impact of Educational Facilities on Teaching and Learning Drawing: What it Means to Visual Arts Education in Ghana

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Abstract:
This study examined learning environment as a major educational facility for teaching and learning drawing. The case study method was employed to make empirical inquiries into the issue from the context of the School of Applied Arts, Takoradi Polytechnic, with focus on Lecturers. Existing literature have suggested that educational facilities are more than simply buildings; they include everything within a learning environment that support a teacher's efforts to tap student potential, by providing learning environment that encourages teaching and provides learning opportunities in safe, healthy, comfortable, and cost-effective environment. Having identified and discussed how educational facilities impact on teaching and learning drawing at Takoradi Polytechnic, the study in a whole revealed that even though Takoradi Polytechnic has a beautiful imposing edifice which has numerous classrooms, the availability of educational facilities is a major challenge. The absence of some essential facilities and materials is the reason for poor drawing background and weak foundation of students at the School of Applied Arts and the contributing factor in Lecturers' inability to effectively teach the usage of all the drawing media specified in the school's curriculum. The study maintains that, lack of educational facilities to a greater extent, hinders the establishment of smooth relationship between teaching and learning since it extends to affect the class sizes and seating arrangement in classrooms. Since the provision of educational facilities appears to be an important precondition for student learning, the provision of learning environment that encourages teaching and provides learning opportunities is recommended to be factored in the design of a high performing school to help students and teachers perform at their highest level.

Keywords: Educational facilities, Drawing, Visual Arts, Teaching and learning, Ghana

1. Introduction

Learning is a complex activity that is fulfilled by student motivation, teaching resources, teachers' skill, curriculum and educational facilities (Lyons, 2001). A growing body of research has linked student achievement and behaviour to the availability of educational facilities in school. Educational facilities have been repeatedly found to have a positive relationship with quality of education. They include the site, physical equipment, recreational spaces and textbooks used for the achievement of educational objectives. The facilities are more than simply buildings; they are environments that support a teacher's efforts to tap student potential. High-performance school is designed to help students and teachers perform at their highest level by providing learning environment that encourages teaching and provides learning opportunities in safe, healthy, comfortable, and cost-effective environment. Good facilities appear to be an important precondition for student learning, provided that other conditions are present to support a strong academic programme in the school (School Construction Home, 2000; Brooks-Pilling and Wright, 2005; Udosen, n.d.).

1.1. Teaching – Learning Process

1.1.1. Teaching
Teaching is an act of "helping other people learn" (The World Book Encyclopedia, 2001). This makes teaching one of the most important ways that enable people to relate to one another as far as knowledge and skills acquisition are concerned. Teaching helps people acquire the knowledge they need to become responsible citizens, to earn a living and to lead useful rewarding lives. Teaching has the ability to impart knowledge to a group of people and show the way to something or a process (Bruner, 1994). There is also a widespread of belief that teaching is a straightforward enterprise (Wilson and Peterson, 2006). In using textbooks, teachers follow

each page, directing students in what they should read and do. If the materials are good, and everyone behaves himself or herself, so the logic goes, students will learn.

When teachers consider what students will find interesting or difficult, they need ways to access the students' minds; they need to create communities, which make learners as active constructors of knowledge, among their students. Teaching is a dynamic act, responsive to what happens in the process of interacting with students. The teacher is constantly monitoring what is taking place during instruction and acting on the basis of perceptions of what is taking place. What a teacher might do in any situation is fundamentally shaped by the set of intellectual resources the teacher can bring to that situation (lesson with students) that is, the teacher's knowledge base. This large category includes knowledge of the students, of the context, and of the content. It includes a variety of general and content-specific classroom and interactive routines (Schoenfeld, 1998).

1.1.2. Philosophy of Teaching
In this modern environment, theoretical foundations are essential for students to make informed judgments. For this reason, theory forms a major foundation of teaching and learning. However, theoretical foundation per-se is not a panacea for effective teaching and learning. The application of theory brings together complex theoretical perspectives and how they relate to the real world. The educational facilities will challenge students to raise issues of theory and how it relates to the real world.

There are six basic principles that go into teaching that are essential to all effective teachers to serve as a basic guideline in the classroom. These principles include:
   i. Discovering students' individuality;
   ii. Relating educational material to student's desire to learn;
   iii. Practical application of subject matter to real life situations;
   iv. Student's involvement in hands on activities;
   v. Classroom management;
   vi. Creating an environment for learning (Lemieux, 2003).

1.1.3. Effective Teaching
Effective teaching has to be predicated on an understanding of how students learn; the objective of the activities is to bring about learning, and there has to be insight and knowledge about learners' needs for teaching to be successful (Fry, Ketteridge, and Marshall, 2009). 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 (Butt, 2008). The key characteristics of effective teaching are as follows:
   • knowledge of basic principles and procedures (pedagogical theory);
   • planning and preparation;
   • teaching with experience (practice);
   • self-reflection and modification technique;
   • Flexibility (Adams and Pierce, n.d.).

1.1.4. Teaching Strategies
In a handbook for teaching and learning in higher education, the authors gravely lamented that it is unfortunate, but true, that some teachers teach students without having much formal knowledge of how students learn. They argued that many of them know how they learnt best, but do not necessarily consider how their students learn nor do they necessarily have the concepts to understand, explain and articulate the process they sense is happening in their students (Fry, Ketteridge, and Marshall, 2009).

The various teaching strategies and methodologies with their advantages, disadvantages and provided their keys to successful teaching and learning. The teaching strategies and methodologies include brainstorming, Case-Based Small-Group Discussion, Computer Simulation, Demonstration, Game, Independent Study, Large Group Discussion/ Question and Answer, Lecture/Presentation, Role Play, Self-Awareness Exercise/Test, Direct Patient Contact, One-to-One, Precepting, Role Modeling, and Standardized Patients (Wehrli and Nyquist, 2003).

Since there are many teaching strategies available by which teaching can be done, identifying the right strategy is usually a challenge to most teachers who do not have formal knowledge in teaching. Considering this, some researchers have said that selection of teaching methods should be grounded in and considered alongside an understanding of theories about learning (Fry, Ketteridge, and Marshall, 2009). Because the teaching of practical skills such as drawing involves projects and creative practical tasks, demonstrations are used to teach students to acquire manipulative skills to effectively use tools/equipment and materials to carry out practical operations (Curriculum Research and Development Division- CRDD, 2008).

1.1.5. Learning
Learning is a theoretical concept. Hence, it is not directly observable. Learning can take place if an individual behaves or reacts as a result of experience in a manner different from the way one formally behaved. Learning has no universally agreed definition. Thus, there are as many definitions as there are theories of learning. Cognitive theories of learning emphasize the thought process and the role of the mind in learning. These theories view learning as the mind's ability to acquire, process, and retain new knowledge and

information. Thus cognitive psychologists studying learning are interested in unobservable mental activities such as thinking, remembering, creating, and solving problems (Kumar, n.d).

While behavioural psychologists view that the outcome of learning is change in behaviour and emphasizes the effects of external events on the individual, other researchers consider learning to include a wide range of human behaviour characterized by the active process of acquiring new knowledge and skills, as well as creating new connections among existing knowledge and skills (Ramey, and Ramey, 2010). But experiential theories, which emphasize the role of action and experience in learning, conceptualize learning in terms of competencies generated among learners. It refers to something we all do from the moment of birth (Wirth and Perkins, 2008). Teachers often assume that because they are "teaching," students must be "learning". Students assume that, because they have read their text and memorized facts, they have learnt something (Wirth and Perkins, 2008), however, learning as a relatively permanent change in behaviour that results from practice (Atkinson, Atkinson, Smith, and Bem , 1993). Other studies have revealed that the purpose of learning has recently shifted from being able to recall information 'surface learning' to being able to find and use it 'deep learning' (Wirth and Perkins, 2008). Some researchers in their study made inference from modern cognitive psychology that learning is a constructive, not receptive, process. This theory of learning (constructivism) holds the view that understanding comes through experiences and interaction with the environment, and that the learner uses a foundation of previous knowledge to construct new understanding. Consequently, the learner has primary responsibility for constructing knowledge and understanding, not the teacher. In a constructivist classroom, the teacher is no longer the "authority" but instead is a guide or facilitator who assists students in learning (Wirth and Perkins, 2008).

Having defined learning as relatively permanent changes in behaviour, skills, knowledge, or attitudes resulting from identifiable psychological or social experiences, it is believe that teachers' perspective on learning often hinge on some major ideas (Seifert and Sutton, 2009):

- Curriculum - This defines the educational foundations and contents, their sequencing in relation to the amount of time available for the learning experiences, the characteristics of the teaching institutions, the characteristics of the learning experiences, in particular from the point of view of methods to be used, the resources for learning and teaching (e.g. Textbooks and new technologies), evaluation and teachers' profiles (Braslavsky, n.d).
- Sequencing and Readiness – In higher education, the term readiness is often replaced by a more specific term, prerequisites. Traditionally the concept referred to students' preparedness to cope with or profit from the activities and expectations of school. Before a student is admitted into a programme of study, the student must first have a background in the relevant programme.

1.1.6. Learning Styles

Students learn in many ways by seeing and hearing; reflecting and acting; reasoning logically and intuitively; memorizing and visualizing and touching. As there are variations in learning methods, teaching methods also vary. Some instructors lecture, others demonstrate or discuss; some focus on rules and others on examples; some emphasize memory and others understanding (Henriques and Felder, 1995). How much a given student learns in a class is governed in part by that student's native ability and prior preparation but also by the compatibility of his or her characteristic approach to learning and the instructor's characteristic approach to teaching. The ways in which an individual characteristically acquires, retains, and retrieves information are collectively termed the individual's learning style.

The fact still remains that, students differ and therefore may have different needs at different times. Some students are very intelligent as others seem to be rather less clever, some may be good at learning facts but rather poor at doing practical work; others can learn from books whiles others like to listen to the teacher talking and others learn best by practical experience of doing things by themselves (Dondieu, 1985).

Learning styles refer to the variations in one's ability to accumulate as well as assimilate information (Richardson, 2010). Basically, one's learning style is the method that best allows the person to gather and use knowledge in a specific manner. The simplest and most common way of identifying different learning styles is based on the senses. Each individual may possess a single style or could possess a combination of different learning styles. In most cases, the characteristics of a learning style can even be observed at a relatively young age. Once a particular learning style has been identified, one will be able to identify ways in which the person can adapt the learning process and maximize their education (VAKL Styles, 2012). Learners can be categorized based on their different learning styles as:

i. Visual Learners
ii. Auditory Learners
iii. Kinesthetic Learners (Richardson, 2010)

1.2. The Need to Teach Drawing

Dreams, sentiments, apprehensions as well as the sense of beauty and quality come to the fore as far as drawings are concerned. Drawing seems to be a wide opening through which an artist becomes conscious about him or herself and the environment in order to create visions about the world as a whole. Artists draw for varied reasons best known to them (Brooke, 2002). Some artists see drawing as superfluous ways to articulate their inner thoughts and emotions while others have the compassion to draw on their own merit or get infected when others are drawing. Again, people make drawings as relief from dullness by telling stories about themselves

or society. In opposition, some develop expressive skill to negatively influence the world. Some drawings are made for economic gains while others see it as a form of employment or a means to educate, impress or make something beautiful.

1.3. Teaching Drawing
It has been rightly asserted that the power to draw moderately well can be attained by all (Polak and Quiltee, n.d). The class -teacher, at least, must work on this assumption. Where the student's powers of eye, mind, and hand are so happily adjusted as to result in a natural aptitude for drawing, the teacher's task is light and much of his teaching superfluous. Unfortunately such instances are exceptional. An observant or intelligent student may be lacking in muscular control, a dexterous student may exhibit weakness in the power of observation, while others may be deficient in all the essential gifts. General practice is usually relied on for the cultivation of the power of drawing, but the practical teacher, at some time or other, will be impelled to devise exercises for strengthening particular functions of the hand and eye.
Within certain limits, technical exercises are as useful in drawing as in any other art. Care must, however, be taken to make these exercises interesting and not so protracted as to create distaste for the subject or destroy spontaneous effort. In drawing classes teachers must not insist on extreme precision in drawing. Exercises such as imaginary drawing, for the purpose of sharpening the observation, or for manipulative training, may be practiced for a few minutes at the beginning of a drawing lesson and gradually discontinued as progress is made. In order that the utmost value may be extracted from students in a drawing class special attention should be given to the backward of students, and great care must be taken to see that the exercises are not performed in a perfunctory manner.

1.4. Tools and Materials for Drawing
In this study, it is important to note the assertion made by some researchers that, quality artworks cannot be done with inadequate or improper art materials. Therefore, blended-pencil techniques require the right tools to create the look of work. Many students blame themselves for being untalented but most of the time their tools and materials keep them from doing a good job. All media have their own properties and advantages. Drawing in the beginning stages is about exploration, discovery and recording; in that regard, to be adventurous, a beginner needs tools that will allow him or her to step forward tentatively to try several routs and finally affirm the best of discoveries (Woods, 2003).

1.5. Environment for Learning Drawing
Being approachable and fair creates an environment for learning and a healthy student teacher bond. Teachers need to be seen as real people. Students are often afraid to approach teachers for help or questions because they do not have a personable appearance. If your students cannot approach you, or are afraid of you, you are not doing your job as a teacher. Teachers have to be available to help and mentor students. Teaching the subject matters, what we teach is simply a single facet of teaching; the teacher's job is to be there for the students and to help them gain a respect for their subject matter but also a teacher has to be someone a student can seek help from. These principles make up a majority of the philosophy of teaching. Teachers should look to the students as their missions, their focus and quite honestly their purpose for living. They should consider every student is an opportunity to make a difference in someone's life; the reality is that a teacher will make a difference in all their students' lives but the challenge is that the difference must be a positive one (Lemieux, 2003).

1.5.1. Classroom
To succeed as a teacher, the combination of enjoyment and usefulness is a "gold standard" of teaching. The concept of learning in classrooms is that, it raises issues of usefulness or transfer, which is the ability to use knowledge or skill in situations beyond the ones in which they are acquired. Learning to draw is one of the major goals of the curriculum that is meant to help in improving students psychomotor skills, in as much as learning can be made fun and easier for learners (Seifert and Sutton, 2009).
The one thing that most researchers have agreed upon is that teaching brings about 'permanent change'. This change comes about through the experience of the learner as proved by their behaviour, even though some researchers agree that there is no clear definition of learning. However, the underlining principle remains that learning can be conscious or unconscious. As a man lives through his life time, there are so many activities in the environment that one learns by just seeing or hearing without involving one's self that is involuntary. On the other hand, there could be a conscious effort for one to attain knowledge or learn through structural means such as formal education with teachers serving as facilitators.
This structural means of formal education takes place in a structured classroom. In this classroom, students' behaviour is always an issue at every level. Proper classroom management is however needed through the proper use of both positive and negative reinforcement. Good behaviour needs to be praised and bad one needs to be punished. An effective teacher needs to be able to incorporate both forms of reinforcement into the classroom. Teachers need to set a line where basic behaviour guidelines should be expected and when they are not met, the teacher must respond negatively. Students should be rewarded for good work done.
Classroom management has been defined broadly as any action a teacher takes to create an environment that supports and facilitates both academic and social-emotional learning (Oliver, Wehby, and Reschly, 2011). Good classroom management includes proactive and preventative teacher behaviours that minimize student misbehaviour and promote engagement in learning activities, and the strategic and respectful actions that eliminate or minimize disruption when they arise to restore the learning environment (UNSW, 2014).

- Seating Arrangement **-** Seating arrangements are very important in classroom for interaction, atmosphere, and behaviour and a way to maintain order and control in classroom management (Konzier, n.d). Seating arrangements vary according to the type of lesson, age of students and nature of activity (Smith and Laslett, 2002). As there are probably infinite number of arrangements, the three styles common for use in the classroom are the traditional or rows and columns, horseshoe (semi-circle or U-shape) and modular (cluster, groups/pairs) (McCorskey and McVetta, Denton, 1992). In view of the fact that teaching drawing involves projects, creative practical tasks and demonstrations to acquire manipulative skills to effectively use tools/equipment and materials (Curriculum Research and Development Division- CRDD, 2008), the semi-circle is the most appropriate seating style for teaching and learning drawing, this arrangement works well when the teacher gives demonstration at the front of the classroom (Denton, 1992). This is because the classroom arrangement should allow the lecturer/instructor to observe the participation of the entire classroom from one point. However, seating arrangement can be changed to accommodate different instructional activities of drawing.
- Class size **-** In a report submitted to the Department for Education, England, class size is defined as the number of students in a class with one teacher (Research Report DFE-RR169, 2011). The definition of large class size by UNESCO gives an indication that there is no standard definition for class size. The organization, which is the leading definer of class size, provides that, though, a large class has no "exact size." The report claims that learning occurs in proportion to class size, that, the smaller the class, the more students learn. Conversely, the organization further argues that class size does not automatically correlate with student learning (UNESCO, 2006). With regards to the teaching and learning of drawing, from a psychological viewpoint, what matters is the number of students who are physically present with the teacher and the teaching resources available for a lesson (Ehrenberg, Brewer, Gamoran, and Williams, 2001). However, the measurement of class size for drawing is not as straightforward as it might seem. It can vary considerably at different times during a school day and school year, because of students' mobility, students' absenteeism, or truancy.

1.5.2. Drawing Studio

The term studio is from the Latin word *"Studium"* which means "a study" (Your dictionary, 2015). Studio is used in art to describe an establishment where an art is taught or studied. Drawing is a studio art specialty. This is because studio arts provide opportunities for students to engage in a focused and in-depth study in a particular visual expression area. In studio drawing, students engage in the study of image development, context, and elements and principles of design while developing knowledge and skills in relation to the materials, process, and technologies particular to the visual drawing expressions (School District No. 73 Business Company - SD73BC, 2013).

Some researchers have established that there are no hard and fast rules about the way to organize drawing studio. However, a studio should be able to reach everything comfortably and conveniently, with minimum effort. There should be mobility in the set-up, for easy adaptation of different subjects as well as sitting and standing working positions (Gair, 1999).

2. Methods and Materials

2.1. Research Context and Participants

The study employed the case study method to make empirical inquiries into the research topic from the context of the School of Applied Arts, Takoradi Polytechnic, with focus on the Lecturers as the target population. In this case, the researchers were interested in generalizing the conclusions (Castillo, 2009).

2.2. Population and Sampling

In all, a population of 86 Lecturers was drawn from among the five Sections that constitute the Commercial Arts programme in the following distributions, as indicated in Table 1:

Programme	Number of Lecturers
Graphic Design	20
Textile Design	20
Fashion Design	20
Painting	8
Ceramic	7
Sculpture	11
Total	86

Table 1: Sample of target population

The accessible population, which also formed the study population, were however the population of Lecturers which the researchers got to work with. This population was the subset of the target population. It is from the accessible population that the researchers drew their samples (Castillo, 2009). The accessible population in this study, as shown in Table 2, was made up of all Lecturers who teach Drawing in the School of Applied Arts.

Programme	Number of Lecturers
Graphic Design	3
Textile Design	2
Painting	2
Ceramic	1
Sculpture	2
Total	10

Table 2: Sample of accessible population

Sampling was carried out to select a part of the accessible population for the express purpose of obtaining descriptions or properties and characteristics of the whole population (Kumekpor, 2002). Due to the large sizes of populations, researchers often cannot test every individual in the population because it is too expensive and time-consuming (Castillo, 2009). This is why the researchers relied on sampling techniques to draw their samples. Probability sampling method was used through purposive sampling to select the Lecturers from the five Sections of the Commercial Arts department at the School of Applied Arts. The sampled respondents were selected with a purpose that they hold the information the researchers needed for the study (Trochim, 2006).

2.3. Instruments for Data Collection
Data for the study were derived from the activities of interviews, and classroom observations. In all, 17 lessons were observed for data collection from the five sections that constitutes the Commercial Arts Department. The researchers made personal contacts with the Lecturers during the interview sessions. Semi-structured interview guides were used. Copies of the interview guides were given to the respondents a week earlier before the actual time for the interview. This was to give the respondents prior notice on the information needed so that they would be well prepared to give the necessary information. During the interviews, the researchers also conducted informal interviews where necessary.

2.4. Data Analysis and Presentation
A descriptive statistics was employed in the data analysis. This is because the description of data collected in a research is the simplest way of interpretation verbal data in a less subjective manner and yet maintain the richness of its context. The description is also an important component for both the researchers and the readers to make meaningful inferences (Schreiber, 2008; Chi, 1997).

3. Results and Discussions

3.1. Availability of Educational Facilities
The study revealed that even though Takoradi Polytechnic has a beautiful imposing edifice which has numerous classrooms, the availability of facilities and materials such as; easel, pedestal, focus light, projectors, mattresses for recline poses and manikins to facilitate the teaching and learning of some of the practical aspects of drawing is a major challenge that hinders the establishment of smooth relationship between teaching and learning. This was revealed during the interview sessions where it came to light that the facilities available for teaching and learning the drawing course were inadequate. This challenge is, in fact, not peculiar to only the teaching and learning of drawing but it is a mirror of the broader picture. From the researchers' observation and data gathered from the interviews, the Lecturers confirmed that lecture-rooms were improvised as drawing studios for drawing activities. It was, however, observed that whenever these lecture-rooms were used as drawing studios, they were ill equipped with studio facilities. Generally, in all the classes visited, tables and chairs were converted into drawing easels as shown in Fig. 1.

Figure 1: Students in drawing class
Source: Field work

The study further revealed that there was no comfort, convenience and mobility in the classrooms where the students practiced their drawing lesson. Although there is no hard and fast rule about the way to organize a drawing studio, a studio should however be able to reach everything comfortably and conveniently, with minimum effort. There should be mobility in the set-up, for easy adaptation for different subjects as well as sitting and standing working positions (Gair, 1999).

Incredibly, the problem of educational facilities does not pertain to only Takoradi Polytechnic but it exists in most African schools. In a related study, it was reported that students at the Visual Arts Department of Cross River University of Technology, Calabar, demonstrated for at least a week leaving the Department locked up in protest as they demanded art materials. The students refused to take their examinations at the Arts Department because of poor facilities and lack of art materials. The study revealed that, for students and instructors, facilities such as conducive environment are necessary for effective learning (Enamhe, 2013). Some studies maintain that learning can occur through one's interaction with one's environment. Therefore, facilities such as a studio with good lighting, water, and all material are requirements in an art studio to facilitate students learning outcome (Enamhe, 2013; Owoeye and Yara, 2011).

3.2. Impact of Educational Facilities on Classroom Management, Student Behaviour and Learning Outcome
Even though some research has proven that good classroom management includes proactive and preventative teacher behaviours that minimize student misbehaviour and promote engagement in learning activities, and the strategic and respectful actions that eliminate or minimize disruption when they arise to restore the learning environment (UNSW, 2014), it was observed during some of the drawing lessons that, some students were making or receiving calls when drawing activities were in session. This misbehaviour tends to minimize student engagement in drawing activities, and causes disruption within a learning environment. In some cases students who were asked by Lecturers/Instructors to pose for the class engaged in a brawl with some colleagues.

Figure 2: A student making call in class
Source: Field work

There was massive noise making among the students, especially, in the large classes such as the Graphic Design class. Some students were made to stand in front of the class as punishment when they reported late to class. In most cases, the late comers disrupted learners from the drawing exercises being carried out. From the observation, it was revealed that class control is a challenge in the classes with large class-size. This situation reveals that students' behaviour is always an issue at every level (Lemieux, 2003). This becomes worse when there is lack of adequate educational facilities that provides a learning environment that encourages teaching and provides learning opportunities in safe, healthy, comfortable, and cost-effective environment (Udosen, n.d.).

It has been argued that large class size is a contextual variable that has generally adverse effects on student learning, mediated primarily by lowering students' level of engagement (active involvement) with the course instructor, with classmates, and with the subject matter (Cuseo, n.d.).

Some studies conclude that, in general, smaller class sizes and lower student-faculty ratios are helpful to students' engagement and success. It is therefore important for lecturers to take cognizance of the fact that, teaching the number of students in a class has some correlation with the impact the teaching has on the students' learning outcomes (Horning, 2007).

3.3. Impact of Educational Facilities on Classroom Space Usage
It was again witnessed that the larger class, especially, Graphics Design class has three sections, namely, A, B and C. It was observed that the number was discouraging, in that, the space that allows free flow of the Lecturers'/Instructors' movement to supervise students were impeded. This is because students lumped themselves at areas which make movement almost impossible.

Also, some Lecturers/Instructors placed student models at the middle of the class without prior demonstration as to how to go about the drawing activities and issue instruction for students to draw. A casual interview with one of the Lecturers/Instructors revealed that since the basics of the lessons have been taught, it was not necessary to explain the lesson to the students. The other classes with small

class size were effectively supervised. That is, Lecturers/Instructors assisted students to shade according to their directives and also demonstrated on the white marker board.

3.4. Impact of Lack of Educational Facilities on Class-Size
The study also revealed that the problem of lack of facilities extents to affect the class sizes and seating arrangement in some of the classrooms observed. Practically, it was observed that the number of students in the drawing class was overwhelmingly great, especially in the Graphic Design class as compared to the other classes of the Commercial Art programme shown in Table 3.
Table 3: Class sizes in the various Commercial Arts Departments

Classroom observed	Class size
Graphic Design class	324
Textile Design class	63
Painting class	15
Ceramic class	7
Sculpture class	16
Total	**425**

Table 3
Source: field survey

During the observation, it was observed that in the Graphic Design class has an overwhelmingly large class such that the number of students in each drawing session did not allow for appropriate seating arrangement. Therefore, students were unable to observe the full figure models during drawing exercises. The inability of the students to have proper observation of the model compelled them to resort to the use of gadgets like mobile phones and cameras to capture the models and objects for drawing instead of observing the model to drawing at the same time. In this exercise, some of the students missed the ability to co-ordinate the hands and eyes to draw simultaneously. The use of these gadgets affects the students' ability to observe and draw instantly. Interestingly, in Fig. 3, the students were asked to draw the male and female student models standing in the middle of the class. Since there was no any "Pedestal or Platform" available for the models stand on, this made it difficult for some of the students to observe the model with ease. In this case, the researchers observed that most of the students were found standing on chairs to catch a glimpse of the models while others were seen drawing for and others from their colleagues. The students who struggled to see the model were found exaggerating some parts of the models, especially the lower parts, in their drawings. This was why some researchers believed that seating location preference is very important for interaction, atmosphere, and behaviour. They said seating proximity to the model can encourage attentive behaviour, drawing engagement and participation (Meeks, Knott, James, Williams, Vassar and Wren, 2013).
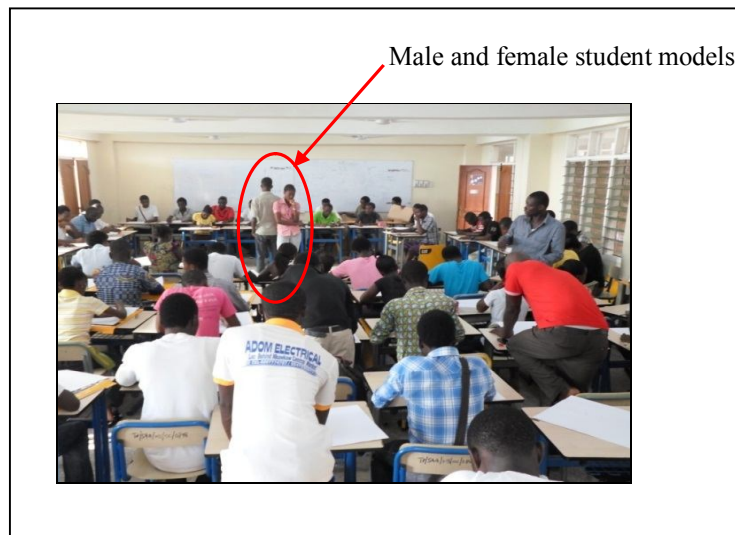

Figure 3: Drawing exercise in a large class size (Graphics Design class)
Source: Field work

3.5. Instructional Media and Their Mode of Application
In one of the lessons observed in the painting class, a Lecturer distributed printout pictures of a chicken to the students while he demonstrated how to observe and draw the chicken accurately on a white marker board. In other lessons, the students were asked to observe and draw from a human limb made from casted Plaster of Paris (P.O.P). Similarly, in five of the lesson observed, there was no demonstration of the drawing activities for students.

3.6. Students' Exposure to Drawing Media/Materials
In all the drawing lessons observed, the only tools and materials used by the students were sketch pads, drawing papers and pencils. According to the Commercial Art curriculum, the aim of the Drawing Course is to help students acquire skills in drawing. It suggests that it is important for students to understand the characteristics of the different kinds of media used for drawing such as pencils, oil/pastel/poster colours, Gouache, Tempera and Charcoal before they can design creatively.

Figure 4: Student using pencil to execute class work
Source: Field work

Paradoxically, the interviews and observations revealed that the only media used by students for in their drawing were paper and pencil as indicated in Fig. 4. Some Lecturers/Instructors interviewed argued that the rates of absorption of students differ; therefore, exploring with the varied tools and materials takes time.

3.7. Impact of Lack of Facilities and Materials in Teaching and Learning Drawing
One important observation that was made was the fact that the absence of some essential facilities and materials is a contributing factor in Lecturers' inability to effectively teach the usage of all the drawing media specified in the school's curriculum. Even though, it is stated the curriculum that students should be able to handle effectively different kinds of media used for drawing including pencils, oil/pastel/poster colours, gouache, tempera, charcoal, only 10% out of the Lecturers claimed that they are able to teach the students the use all the media stated in the curriculum.
It was observed that even the facilities that were available were in poor condition and some were also not suitable for their use. One may wonder the kind of graduates that would be produced by a school which has no requisite facilities and materials to teach its students in this era of product orientation where most schools are investing in their students, to make them globally vendible, believing that the kind of input made in the students determines the output of these students based on the Garbage In, Gabage Out (GIGO) principle.

Figure 5: Ceramic students drawing with Pencil
Source: Field work

Figure 6: Graphics Design students drawing with pencils
Source: Field work

According to the Lecturers, the adverse effect of lack of facilities and materials is the reason for poor drawing background and weak foundation of students at the School of Applied Arts.

4. Summary, Conclusions and Recommendations

Existing literature have suggested that educational facilities are more than simply buildings; they include everything within a learning environment that support a teacher's efforts to tap student potential, by providing learning environment that encourages teaching and provides learning opportunities in safe, healthy, comfortable, and cost-effective environment. However, a growing body of research has linked student achievement and behaviour to the availability of educational facilities in school. These facilities include the site, physical equipment, recreational spaces and textbooks used for the achievement of educational objectives (School Construction Home, 2000; Brooks-Pilling and Wright, 2005; Udosen, n.d.).

Having identified and discussed how educational facilities impact on teaching and learning drawing at Takoradi Polytechnic, the study in a whole revealed that even though Takoradi Polytechnic has a beautiful imposing edifice with numerous classrooms, the availability of educational facilities, in the form of providing a learning environment that support teachers' efforts to tap student potential and facilitate the teaching and learning of the practical aspects of drawing, is a major challenge not only to the teaching and learning drawing but to the aspects of Visual Arts.

The study maintains that, lack of educational facilities to a greater extent, hinders the establishment of smooth relationship between teaching and learning since it extends to affect the class sizes and seating arrangement in classrooms.

Since the provision of educational facilities appears to be an important precondition for student learning, the provision of learning environment that encourages teaching and provides learning opportunities is recommended to be factored in the design of a high performing school to help students and teachers perform at their highest level.

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6. References

i. Gair. (1999). Artist manual: The complete guide to painting and drawing material and their use. London: Haper Collins Publishers.
ii. H. Schoenfeld. (1998). Toward a theory of teaching-in-context. Issues in Education, 4(1), 1-94. Retrieved May 12, 2012, from https://gse.soe.berkeley.edu/faculty/AHSchoenfeld/tic.pdf
iii. Horning. (2007). The Definitive Article on Class Size. Writing Program Administration, 31(1-2). Retrieved August 6, 2014, from http://wpacouncil.org/archives/31n1-2/31n1-2horning.pdf
iv. Kumar. (n.d.). Educational Psychology. Retrieved August 14, 2014, from http://www.hillagric.ac.in/edu/coa/AgriEcoExtEduRSocio/Reading_Material/Ext-121-Educational-Psychology.pdf
v. Enamhe. (2013). The role of Arts Education in Nigeria. African Journal of Teacher Education, 3(1). Retrieved October 11, 2014, from http://gir.uoguelph.ca/index.php/ajote/article/view/1963/2934
vi. Woods. (2003). Life drawing: A journey to self expression. Ramsbury: The Crowood Press Ltd.
vii. A. George, A. Bright , T. Hurlbert, E. C. Linke, G. St. Clair, and J. Stein. (2006, July). Scholarly use of information: Graduate students' information seeking behaviour. Retrieved Jan. 2011, 14, from www.informationr.net/ir/11-4/paper272.html
viii. Braslavsky. (n.d). The curriculum. Retrieved August 9, 2014, from http://www.ibe.unesco.org/fileadmin/user_upload/archive/AIDS/doc/cecilia_e.pdf
ix. J. Smith and R. Laslett. (2002). Effective classroom management. (Taylor & Francis e-Library) Retrieved August 12, 2014, from staff.unila.ac.id/junaidi/files/2014/.../effective-classroom-management.pdf
x. K. Dondieu. (1985). Guide Notes to the study of the Development of Education in Ghana for Students in Teacher Training Colleges. Sunyani: Brong-Ahafo Printers.
xi. M. Adams and R. L. Pierce. (n.d.). Characteristics of effective teaching. Retrieved August 9, 2014, from Adams, C. M. & Pierce R. L. (n.d.). Characteristics of ewww.lingofest.com/.../Characteristics%20of%20effective%20teaching.pdf
xii. C.T. Ramey and S.L. Ramey. (2010). Head Start: Strategies to improve outcomes for children living in poverty. In R. H. Barnett (Ed.), Investing in Young Children: New Directions in Federal and Early Childhood Policy. (pp. 59-67). Washington, DC: Brookings Institution Press.
xiii. Curriculum Research and Development Division- CRDD. (2008). Teaching Syllabus for Graphic Design. NJ, Englewood Cliffs: Educational Technology Publications.
xiv. G. Butt. (2008). Lesson planning (3 ed.). London: Continuum International Publishing Group the tower building.
xv. G. Wehrli and J.G. Nyquist. (2003). Creating an Educational Curriculum for Learners at Any Level. AABB Conference.
xvi. H. Fry, S. Ketteridge and S. Marshall. (2009). A Handbook for Teaching and Learning in Higher Education. Abingdon: Routledge, Taylor and Francis Group. Retrieved August 9, 2014, from

http://biblioteca.ucv.cl/site/colecciones/manuales_u/A%20Handbook%20for%20Teaching%20and%20Learning%20in%20Higher%20Education%20Enhancing%20academic%20and%20Practice.pdf

xvii.   H. Julien. (2008). Content Analysis. In L. M. Given (Ed.), The SAGE encyclopedia of qualitative research methods (Vol. 1 & 2, p. 121). United States of America: SAGE Publications, Inc.

xviii.   J. B. Lyons. (2001, August 3). Do School Facilities Really Impact A Child's Education? Retrieved November 20, 2014, from sdpl.coe.uga.edu/articlesandpapers/lyons.html

xix.   J. B. Schreiber. (2008). Desriptive Statistics. In L. M. Given (Ed.), The SAGE encyclopedia of qualitative research methods (Vol. 1&2, p. 209). United States of America: SAGE Publications, Inc.

xx.   J. C. McCorskey and R. W. McVetta . (n.d). Communication Education, Volume 27. Retrieved August 5, 2014, from http://www.jamescmccroskey.com/publications/082.pdf

xxi.   J. Cuseo. (n.d.). The empirical case against large class size: adverse effects on the teaching, learning, and retention of first year students .

xxii.   J. J. Castillo. (2009). Research Population. Retrieved May 6, 2012, from http://www.experiment-resources.com/research-population.html#ixzz1vAp0d2kc

xxiii.   J. S. Bruner. (1994). The process of education. Harvard: USA.

xxiv.   J.S. Owoeye and P. O. Yara. (2011). School Facilities and Academic Achievement of Secondary School Agricultural Science in Ekiti State, Nigeria. Asian Social Science, 7(7). Retrieved from ccsenet.org/journal/index.php/ass/article/download/11224/7985

xxv.   K. R. Wirth and D. Perkins. (2008). Learning to learn, 16. Retrieved September 7, 2012, from http://www.macalester.edu/geology/wirth/learning.pdf

xxvi.   K. Seifert and R. Sutton. (2009). Educational psychology. Retrieved March 13, 2013, from http://www.saylor.org/site/wp-content/uploads/2012/06/Educational-Psychology.pdf

xxvii.   M. D. Meeks, T. L. Knott, K. D. James, F. Williams, J. A. Vassar and A. O. Wren. (2013). The Impact of Seating Location and Seating Type on Student Performance. Education sciences, 3, 375-386. doi:10.3390/educsci3040375

xxviii. M. G. Konzier. (n.d). Traditional Classroom Seating. Retrieved August 5, 2014, from http://www.ehow.com/info_8673261_traditional-classroom-seating.html

xxix.   M. T. H. Chi. (1997). Quantifying qualitative analyses of verbal data: A practical guide. The Journal of the Learning Sciences, 6(3), 271-313. Retrieved January 14, 2011, from chilab.asu.edu/papers/Verbaldata.pdf

xxx.   N. P. Udosen. (n.d.). Importance of school plant to the Teaching-learning process. Retrieved February 16, 2015, from https://namse.wordpress.com/2012/08/01/importance-of-school-plant-to-the-teaching-learning-process/

xxxi.   P. Denton . (1992). Seating Arrangement for better classroom management. (Adventist Education) Retrieved August 7, 2014, from wyzx.szyt.edu.cn/admin/SlHot_Editor/.../2010111813224542.doc

xxxii.   R. C. Richardson. (2010). Understanding your learning style. Retrieved January 14, 2013, from http://www.roe11.k12.il.us/GES%20Stuff/Day%203/Understanding%20Your%20Learning%20Styles.pdf

xxxiii. Research Report DFE-RR169. (2011). Class Size and education in England evidence report. (n.d). (Research Report, Department for Education) Retrieved August 6, 2014, from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/183364/DFE-RR169.pdf

xxxiv.   R. G. Ehrenberg, D. J. Brewer, A. Gamoran and D. J. Willms. (2001). Class size and student achievement. Psychological science in the public interest, 2(1). Retrieved from www.psychologicalscience.org/journals/pspi/pdf/pspi2_1.pdf?origin... (20/10/14)

xxxv.   R. Lemieux. (2003). Teaching and learning phylosophy. Retrieved January 14, 2013, from http://filebox.vt.edu/r/rlemieux/Portfolio/Documents/philosophy%20paper.pdf

xxxvi.   R. M. Henriques and E. R. Felder. (1995). Learning and teaching styles in foreign and second language education. Foreign Language Annals, 28(1), 21-31.

xxxvii. R. M. Oliver, J. H. Wehby, and D. J. Reschly. (2011). Teacher classroom management practices: Effects on disruptive or aggressive student behavior. Campbell Systematic Reviews. doi:10.4073/csr.2011.4

xxxviii. R.L. Atkinson, R.C. Atkinson, E.E. Smith, and D. J. Bem . (1993). Introduction to Psychology (11 ed.). Fort Worth, TX: Harcourt Brace Jovanovich College Publishers.

xxxix.   S. Brooke. (2002). Drawing as Expression, Techniques and Concepts. New Jersey, USA: Pearson Education, Inc.

xl.   S. M. Wilson and P. L. Peterson. (2006). Learning to learn. Retrieved September 7, 2012, from from http://www.macalester.edu/geology/wirth/learning.pdf

xli.   S. Polak and H.C. Quiltee. (n.d.). The value of Drawing. Retrieved January 12, 2013, from http://archive.org/stream/teachingofdrawin00pola/teachingofdrawin00pola_djvu.txt

xlii.   School Construction Home. (2000, April 3). Archived Information: Impact of Inadequate School Facilities on Student Learning . (Department of Education, United States of America) Retrieved November 16, 2014

xliii.   School District No. 73 Business Company - SD73BC. (2013).Studio Arts 12: Ceramics And Sculpture. (LearnNowBC) Retrieved February 14, 2015, from https://www.learnnowbc.ca/course_finder/CourseSectionDetails.aspx?id=8280

xliv.   Seating Arrangements. (n.d). (Tesolclass) Retrieved August 12, 2014, from http://www.tesolclass.com/classroom-management/classroom-seating-arrangements/

xlv.   T. Brooks-Pilling and C. L. Wright . (2005, September). Building Schools that Support Learning. (FacilitiesNet) Retrieved November 16, 2014

xlvi.   T.K.B. Kumekpor. (2002). Research Methods and Techniques of Social Research. Accra: SonLife Press & Services.

xlvii. The World Book Encyclopedia. (2001). Teaching. In The World Book Encyclopedia. Onyx: USA.

xlviii. UNESCO. (2006). Practical Tips for Teaching Large Classes: A Teacher's Guide. (C. Haddad, Editor, & UNESCO Asia and Pacific Regional Bureau for Education) Retrieved from unesdoc.unesco.org/images/0014/001488/148867e.pdf

xlix.   UNSW. (2014). Managing the Classroom Environment. (Faculty of Arts and Social Sciences, School of Education) Retrieved August 2, 2014, from
https://education.arts.unsw.edu.au/media/EDUCFile/1_EDST4084_Managing_the_Classroom_Environment_S1_2014_NEW.pdf

l.   VAKL Styles. (2012). Designing effective projects: Thinking skills frameworks learning styles. (Intel Corporation) Retrieved January 14, 2013, from lehttp://download.intel.com/education/Common/ph/Resources/DEP/skills/Styles.pdf

li.   W.M.K. Trochim. (2006). Research Methods Knowledge Base. Retrieved May 6, 2012, from
http://www.socialresearchmethods.net/kb/sampnon.php

lii.   Your dictionary. (2015). (LoveToKnow, Corp.) Retrieved February 14, 2015, from http://www.yourdictionary.com/studio