DEVELOPING INNOVATIVE ASSESSMENT STRATEGY TO FOSTER CREATIVITY DEVELOPMENT IN GRAPHIC DESIGN STUDIO

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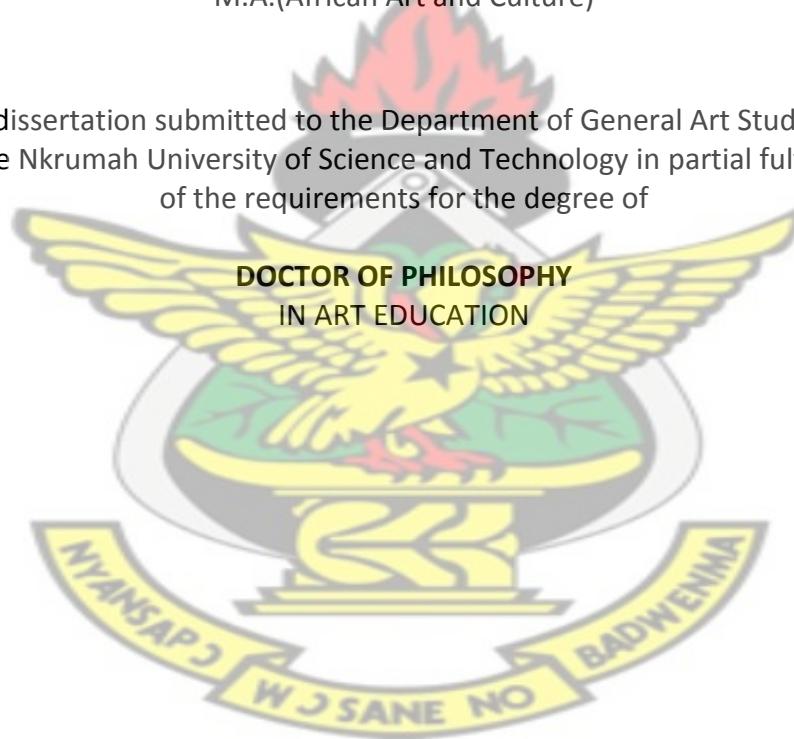
Faculty of Art, College of Art and Social Sciences

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DECLARATION

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

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ABSTRACT

This study examines the potential impact of the development and implementation of peer assessment practices in graphic design studios to improve teaching and learning as well as foster creativity development among Communication Design students in higher education. The data were collected from Communication Design students at the Kwame Nkrumah University of Science and Technology in Ghana. Anaction research which used mixed method (qualitative and quantitative methods) was adoptedto capture students' perceptions of the use of assessment rubric in peer assessment in various aspects of presentation quality and studio critique.The survey of student perceptions of peer assessment on student creativity development indicates that students seem to appreciate the social interaction and studio readiness the assessment strategy offers them in addition to the potential outgrowth professional development.Only information of one cycle of action research was used to measure students' perspectives on innovative assessment practices.The findings from this study suggest that students' assessment literacy can be improved through ongoing, sustained professional development, with the aid of an in-school professional learning community. Actualizing assessment reform at the design studio or classroom level is a long-term endeavour that would not happen as result of a single workshop. Using the opportunity provided under this research initiative, it is important to ensure that the planning, implementation, and perhaps evaluation of student professional development programmes is more systematic.

DEDICATION

I dedicate this dissertationto the Lord, who sustained me,
validated me, and taught me
the true concept of grace and patience through this process.
To my wife Juliet Frances Eshun, son Eric, daughter Mame Efua,
My beloved mother Mrs. Elizabeth Arabella Eshun and my
late father Mr. Francis Kobina Eshun of Blessed memory.

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CHAPTER ONE

INTRODUCTION

1   Introduction

The opening chapter of the dissertation outlines the background to the research. This
chapter states the reasons for undertaking the research in the area of assessment in
graphic design education. The discussions enabled the researcher to explain why
maintaining the status quo in terms of educational provision for assessment in design
was not an option, and why the study opted instead to try to influence the quality of
educational experience.

1.1   Overview

Thisstudy focused on equity of assessment of students' creative product with the
intention of providing a more positive and democratic educational experience for
design students, and ensuring that this experience is framed within principles of
social justice and equality, which also constitute two of the ontological values
underpinning the research. The basis is the consciousness of that educational growth
and development, both at a personal and professional level, goes through the process
of continuous reflection on practice, which falls in line with the action research
methodology that is required to carry out research into practice in the classroom.

1.2 Background to the Study

The Department of Communication Design had its genesis in the School of Arts and Crafts which was established as part of the then newly-established Kumasi College of Technology in 1951. It was among the five teacher-training programmes that were migrated from Achimota College to set up the Kumasi College of Technology. Therefore, in 1951, then under the Department of Art and Craft, it came to be one of the founding sections at the Kumasi College of Technology; other counterpart departments were Physical Education (P.E.), Music, the Performing Arts (Dance and Drama) and Housecraft (Home Science). The Faculty of Art is the only surviving member of this original group still at Kwame Nkrumah University Science and Technology (Pitcher, 1977).
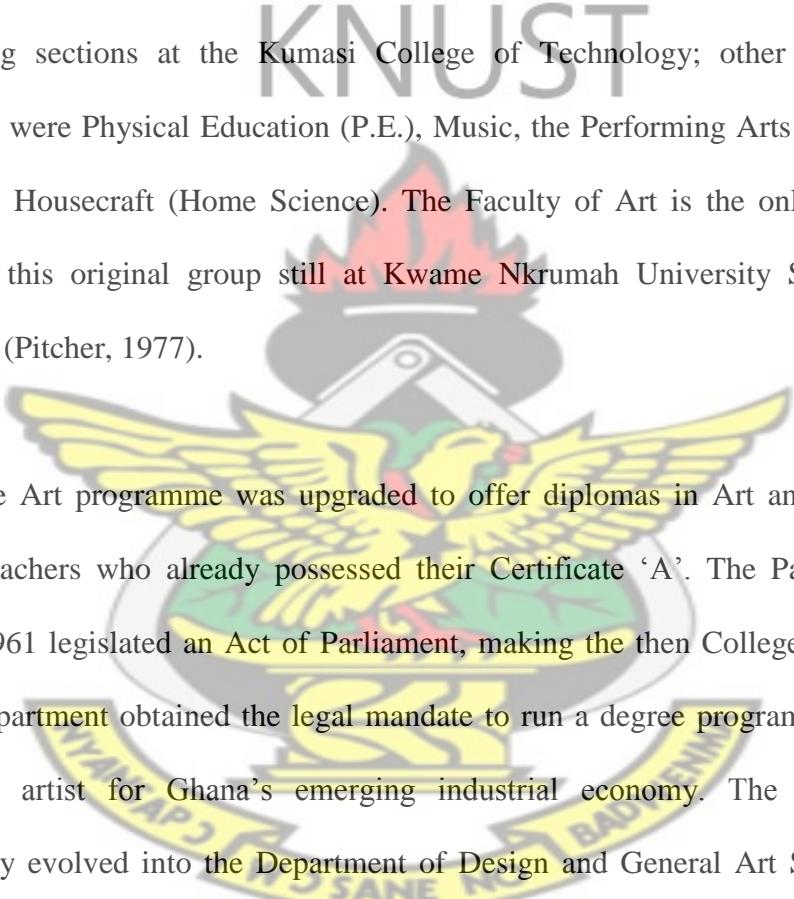
In 1955, the Art programme was upgraded to offer diplomas in Art and Crafts, to specialist teachers who already possessed their Certificate 'A'. The Parliament of Ghana in 1961 legislated an Act of Parliament, making the then College of Art and thus the Department obtained the legal mandate to run a degree programme to train professional artist for Ghana's emerging industrial economy. The Department progressively evolved into the Department of Design and General Art Studies, and became responsible for administering both the Foundation programme and the Art History Section. The Department's growth gave rise to the then Book Industry Section, which is now known as the Department of Publishing Studies.

Major reviews of the structures at the Faculty of Art, following the introduction of the collegiate system, plus rationalization inspired by many emerging directions in design

practice and design studio pedagogy, compelled the department to change its name to the Department of Communication Design. The Department of Communication Design runs a B.A. degree programme for four years. Graduates are awarded a B.A Communication Design degree.

Currently, the Department of Communication Design is one of the tertiary institutions providing professional and academic training in communication design (graphic design) and awards both Bachelor's and Masters' degrees: Bachelor of Art. (Communication Design) and Master of Communication Design respectively in Ghana. This position makes it unique, having advantage over other tertiary institutions in manpower development and training in graphic design. Though the graduates from this unique department has since its establishment to offer academic programme has contributed immensely to the development of graphic design practitioners in printing; advertising and related art industries; design industry; trade and commerce; and education in the Ghana.It has also produced most of the Department's academic staff, teachers for the secondary cycle schools.Arguably, much more could be done to improve or enhance the human resource development if problems associated with teaching and learning are innovatively approached to solving some of the department's problems.

1.3 Statement of the Problem

Today's world is saddled with multi-faceted challenges, which require appropriate and timely solutions from a well-developed human resource. Consequently Higher

Education Institutions are currently pushed to adopt best managed training and human resource development strategies to provide the needed creative solutions. To that effect, the Department of Communication Design has made countless contributions towards several individuals' personal achievements and national development to date. However, these achievements are being undermined bythe ever-increasing student population; the deteriorating physical environment, dwindling lecturer numbers.According to the Vice Chancellor's Report (2010) the Department's student-lecturer ratio currently hangs around 50:1.

This has greatly affected teaching and learning,most especially in the studio-based courses. As a result the most needed component of studio pedagogy – feedback is clearly missing from the teaching and learning process. Additionally students miss out on the learning outcomes due to lack of information on the courses.It has been observed that these challenges are amply expressed through students' lack of self-confidence and attitude towards learning (Eshun & AduAgyem, 2010); low morale among overburdened academic staff; employers' dissatisfaction of graduate performance on the job and high fall-out rate among graduate graphic designer for other jobs are just a few.It is expected that the introduction and application participatory assessment methods could help address and reverse some of problems encountered in the graphic design pedagogy in the Department of Communication Design.

1.4 Objectives of the study

The study attempts to:

1. To develop a working praxis for improving the administration and teaching Graphic Design skills.

2. To explore the impact of innovative studio assessment design on the creativity development in communication design students.

3. To adopt standards and good practices in assessment in Design education.

Reflecting on the teacher/researcher's schooldays experiences he would rather prefer to establish a participatory environment that could impact more positively on student's learning. The students encouraged to be open and supportive of one another. Engaging students in self and peer assessment during studio critiques offer both the lecturer and students opportunities to learn more from one another. Peers that are not likely to share what they know in the class are by this approach compelled to evaluate others' works and provide written feedback. From time to time the whole class is engaged in open discussions where students' works are selected and discussed for their strengths and weaknesses if there are any.

Feedback obtained from the studio critiques serve to impact on every stage of the creative process. It is assumed that students will reflect on both verbal and written feedback from peers to improve upon their creative solutions. By and large from the next stage of the process, it is clearly observed that there are great improvement in the works both aesthetically and communicative wise.

1.5 Research Questions

In order to provide a transformative teaching and learning experience for students, and for the research participants, the researcher needs to interrogate his practices to ensure that they are representative of the values he espouses. If the researcher accepts that teaching is a historically and socially constructed practice (McLaren, 1988, p. xix), then the researcher needs to explore and question what to do in order for transformation to take place. In other words, the researcher has to start the change process by changing himself, continually posing questions, as the researcher engages in teaching and collaborative research. In order to reach this goal the following research questions (RQ) have to be addressed:

1. What studio assessment practices can be used to improve teaching and learningin graphic design?

2. How can innovative assessment be used to improve student performance and professional development in graphic design?

3. What studio practices can be used to foster positive self-esteem to improve students' performances in graphic design?

4. How can studio assessment bottlenecksbe used to improve students' problem solvingskills and professional performance?

5. How do the establishment of relationship of trust with students within studio pedagogy improve student learning?

1.6 Delimitation

This study is focus on a single course – DAD 252 Graphic Design II in the Department of Communication Design. It is an exploratory and developmental study that draws data from 2nd year communication design students alone, and not from the entire Department of Communication Design.This decision stems from the fact that smaller and focused study reflects better than the teaching and learning culture characteristic of studio-based disciplines. Equally, it is important to clarify that the gender of the interviewees, their age and the length of the interview, are not considered. These factors may or may not have some influence or impact upon the outcomes of this study.

1.7 Limitations

The study would be limited to the Department of Communication Design of Kwame Nkrumah University Science and Technology provides academic training in graphic design (communication design). The Department of Communication Design, offers undergraduate and graduate programmes in communication design, leading to the awards of B.A. (Comm. Design) and M. Comm. Design respectively

The Department's programme continued to attract more undergraduate students; with an average class size of 30 students in the early 1990s, it had quadrupled to around 130 by the middle of 2000. Total enrollment at Department of Communication Design is now about 600 students, as compared to over 140 students ten years ago.

The mission of Department of Communication Design is to create student leaders that take an active role within their education and their diverse community. Consequently, the Department of Communication Designseeks to introduce many innovative interventions over the years to mitigate the challenges it faces.

Studio Setting

The entire Communication Design programmeis based on studio pedagogy. This curriculum teaches graphic design more practically instead of theoretically, allowing students to gain a deeper level of understanding and skill. Through much exploration, students are able to evolve their own unique concepts to solve design problems. Basically graphic design is centered on project based learning, hence it requires students to work individually and in teams in order to improve graphic design conceptualization. As far as graphic design curricula go, projects in graphic design are fairly hands-on activities. It also encompasses numerous uses of information communication technologies that help students practice and reinforce various graphic design concepts.

The researcher currently teaches various graphic design studio courses at different academic levels. The current curriculum of the department is partially run on block schedules. The current study is particularly set within the second year graphic design studio. For teamwork, each student is assigned a role within their team. For example, there is a resource manager, task manager, team leader and a recorder/ reporter.

Within each of these roles, students have numerous jobs to uphold throughout the project. This helps hold individuals more accountable when working as a team.

The graphic design course is mainly practical and studio pedagogy is ideal.However, due the class-size; lack of most of academic facilities such as, inadequate studio furniture.The teacher/researcher had to adapt different approach to studio research. The study began with studio and a topical presentation on the subject for the day. Specific vocabulary or introduce new graphic design concepts. Students were engaged in questions and answers break or a quick drill. Not only does this help students review previously learned concepts, but it also serves as prelude to the project for that day.

After the introduction and the lecture presentation for the day,limited samples of designs projects were shown. This action was to taken curb students who are likely to reproduce the designs, since the students attempted to believe the selection of the examples were based on teacher's preference for the colour, style, typography used in those works. Rather the students taken through group brainstorming on their project, before launching into sketching of ideas generated from the brainstorming session. Students individually continue with the development of possible solutions in order to explore various design concepts. During students' exploration period, the teacher/researcher takes time off to visit the students to discuss their design concepts and give more individual instructions. The students are given more time and space to work independently on designs concepts that look promising. The day's session ends with a fresh homework or for the students to continue with the project at the hostel.

The studio critique sessions are the most interactive and open opportunities to further interact with the students/participants. The teacher/researcher also uses the critique session to conduct the formative assessment of work-in-progress. Design studio critiques have always created anxiety among design students. Studies have shown that most lecturers or jurors use critiques to intimidate students. For this and many more reasons students' attitudestowards the critiques have been rather negative and impact adversely on student's learning.

1.8 Definition of Terms

Assessment

The act of judging or assessing a person or situation or event.

Creativity

Creativity is simply the ability to produce novel product that has significant economic importance and the outcome of a combination non-related or old or existing ideas.

Creative Behaviour

Acquired abilities and competences shown by an individual in the problem-solving process and creative production.

Communication Design

Also refers to graphic design. The two phrases are used interchangeable to refer to the same thing or action.

Critical thinking

Items that involve analysis, synthesis, and evaluation of the concepts.

Feedback

Information or statement of opinion about something, that provides an idea of whether it is successful or liked.

Innovative Classroom Environment

Will be defined as the aggregate of surrounding things or conditions in the school that positively impact on the creative development of the student.
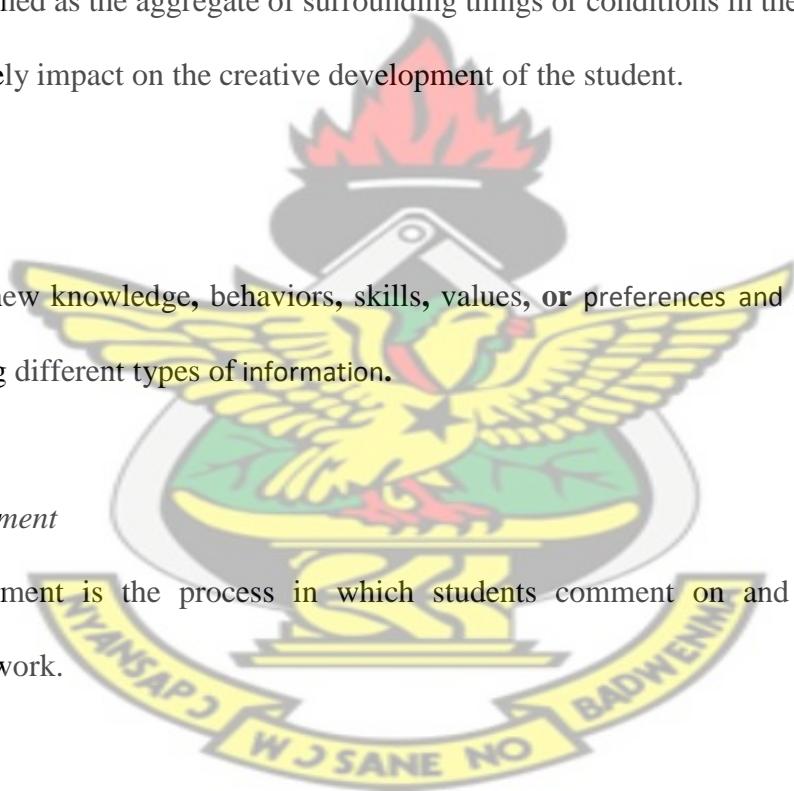
Learning

Acquiring new knowledge, behaviors, skills, values, or preferences and may involve synthesizing different types of information.

Peer assessment

Peer assessment is the process in which students comment on and judge their colleagues work.

School Culture

The whole Department ethos and support from Department management.

Self-assessment

Self-assessment in an educational setting involves students making judgments about their own work.

1.9   The Importance of the Study

The graphic design industry plays an important role in any developing and developed economy. This requires the best trained and motivated creative team to function and deliver the highest quality of creative products.

The study will:

- Reverse the current trend of lack of confidence and self–esteem of students

- Build the needed graphic design skills and competences among communication design students.

- Improve lecture–student relation and stimulate congenial teaching and learning environment.

- Enhance teaching and learning of graphic design in higher education and for that matter the university.

1.10   Organization of the rest of Text

The text of this dissertation was organized under the following chapters and content:

Chapter One: Introduction and statement of topic and outline. Topics include background to the study, statement of the problem, the social implications and relevance of the topic, new knowledge to be gained by the researcher, the research question and the terms of the study.

Chapter Two: Review of the relevant literature. Topics include an introduction to the literature, a procedure for selecting studies, the conduct of these studies and themes that emerged in them, a summary of the core findings and statements as to how the present research differs from prior research (in question, methodology and data collected).

Chapter Three: Methodology, Topic include the methods and procedures in preparing to conduct the study, in collecting data and in organizing, analyzing and synthesizing the data.

Chapter Four: Presentation and discussion of Findings, Topic include examples of data collection, data analysis, a synthesis of data, horizontalization, meaning phases, clusters themes, textual and structural descriptions and a synthesis of meanings and the essences of the experience.

Chapter Five: Summary, implications and outcomes. Sections include a summary of the study, statements about how findings differ from those in the literature review, recommendation for future studies, the identification of limitations, a discussion about implications, and the inclusion of a creative closure that speaks to the essence of the study and its inspiration for the researcher.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2. Overview

In the previous chapter an introduction and background to the research area of this study, as well as research questions were presented. In this chapter theories relevant to the research questions will be stated. It will begin by describing various types of assessment. The next section, graphic design pedagogy will be introduced. Finally, the last section will handle the intervention that can be used to improve the creativity development in graphic design.

2.1   Basic Concepts of Assessment

Assessment serves as the pivot of a triangular prism which revolves around these three bases: reflection, discussion and feedback (Wiggins, 1997; Bruner, 1986). Assessment is at the heart of the student experience says Brown and Knight(1994)who also define what students regard as important, "how they spend their time and how they come to see themselves as students and then as graduates . . . If you want to change student learning then change the methods of assessment" (Brown, 1997).

Woods (2000) postulates that meaningful assessment is based on the degree to which the goals have been achieved based using measurable criteria and on pertinent evidence whiles Rowlands (1991) argues that for assessment to have any useful, it must reflect on the people involved, the processes and any outcomes that can be identified.

In education, it is the measuring of performance and development of the student over time, the mastering of skills and knowledge, as well as motivation that is achieved from the developmental process (Dunn et al, 2004). Assessment and evaluation are used as synonyms in most or some educational literature. Trochim (2005) and Ashcroft and Palacio (1996) discuss aspects of evaluation, and Dunn, Morgan, O'Reilly and Parry (2004), Swearingen (2002) and Knight (1993) explain assessment strategies. Assessment, evaluation, and appraisal are estimating the quality or value of a task. DeRoche (1981) opines evaluation is the process used for determining the value, amount, or worth of something. "Something" refers to that which is to be evaluated - a program, a procedure, a product, an objective, or any school factor - which in the judgment of principals and teachers is worth the time and effort for data collection, analysis, and decision making.

Other scholars defined assessment as the process of obtaining information that is used to make educational decisions about students, to give feedback to the student about his or her progress, strengths, and weaknesses, to judge instructional effectiveness and curricular adequacy, and to inform policy.

Assessment dominates what students are oriented toward in their learning. Irrespective of lecturer's main goal, students often recognize what is really necessary, or at least what is sufficient, is to memorize (Gibbs, 1992). This made teachers the final evaluators of student works (Biggs, 2000; Stefani, 1998; Basturk, 2008; Majdoddin, 2010).

Assessment must reflect the professional environment in which students are likely to find themselves in the future. After assessment, the teacher is informed of what has been taught well and not so well. They inform students of what they have learned well and not learned so well. Many lecturers say that students will not take their work seriously or will not work at all if it is not assessed; whereby assessment in this case refers to awarding marks. . Good assessment cannot be made easily. However through effective assessment good judgements are made.

2.2   Forms of Assessment

Whenever assessment is discussed, it borders around either it being formative or summative; objectivity or subjectivity of the assessor; referencing (criterion-referenced, norm-referenced, and Ipsative) and even it being informal or formal (Yorke, 2005; Brew and Gibbs, 1999; Davies and Reid, 2000).

Nan (2003) quotes Robert Stakes, professor of Education at the University of Illinois, using a descriptive analogy in order to illustrate the types of assessment: "when the cook tastes the soup, that's formative; when the guests taste the soup, that's

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summative." However, dictionary.com distinguishes between assessment and evaluation. Evaluation is summative, and it's normally done after a unit of learning has been accomplished. It deals with the numeral grading system of student works and therefore final.

Dunn et al (2004) argue that formative assessment gives the student chance to improve on the same task and that feedback will be provided, enabling development. Students are also able to identify their strengths and weaknesses in terms of current knowledge and skills. It provides a consistent basis for feedback about learning to teachers and to students who received the same instruction. Assessment of learning can serve as praise or reward for students, helping them to recognize their strengths and areas that need work. Assessment helps art teachers determine existing levels at which students can achieve. If instruction is geared to knowledge or skills for which students do not have prerequisites, the educational efforts may be ineffective, and subsequent assessment is a misguided activity.

2.2.1   Formative Assessment

Cowie and Bell (1999) consider formative assessment as a two-way channel between the teacher and student to augment, recognize and take action to the learning, whiles Black and Wiliam (1998) go on to say that formative assessment is when the feedback from learning activities is actually used to adapt the teaching to meet the learner's needs. Formative assessment has to do with the involvement of students in the

assessment process. Students need to be involved both as assessors of their own learning and as resources to other students.

Formative assessment is process related, as it is conducted during the course of a task. However, it does not include the grading of the task (CMU Assessment Toolkit, 2006). It encourages participation, interaction and as a result, feedback is obtained. Evaluation allows for the student and the lecturer to monitor the development and understanding of the task at hand. According to Stufflebeam in (DeRoche, 1981), there is a relationship between formative evaluation, decision making and summative evaluation.

Furthermore, Ramaprasad (1983) describe formative assessment as feedback that helps learners become aware of any gaps that exist between their desired goal and their current knowledge, understanding, or skill and guides them through actions necessary to obtain the goal. Black et al (2004) expanded on the nature of formative assessment, emphasizing that effective teacher feedback to students included four components: questioning, feedback through grading, the formative use of summative tests and peer and self-assessment.

Of these four components peer and self-assessment are of particular interest to researchers and practitioners because more than the other three factors, peer and self-assessment are student-oriented with the teacher's role being less central to the feedback and learning process.

One of the benefits when students engage in the assessment of their own learning is to provide them with descriptive feedback as they learn. Descriptive feedback provides students with an understanding of what they are doing well, links to classroom learning, and gives specific input on how to reach the next step in the learning progression. In other words, descriptive feedback is not a grade, a sticker, or "good job!"

2.2.2 Summative Assessment
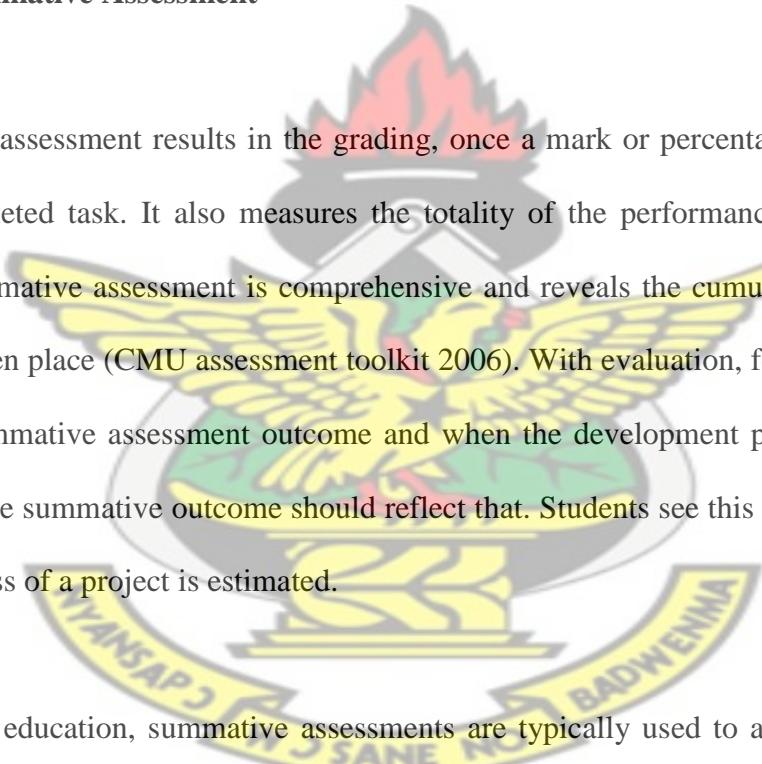
Summative assessment results in the grading, once a mark or percentage is awarded for a completed task. It also measures the totality of the performance (Dunn et al 2004). Summative assessment is comprehensive and reveals the cumulative learning that has taken place (CMU assessment toolkit 2006). With evaluation, formative feeds into the summative assessment outcome and when the development phase has been managed, the summative outcome should reflect that. Students see this as the moment when success of a project is estimated.

In terms of education, summative assessments are typically used to award the final grade of students at the end of a course. Summative assessment can be seen at the classroom level as an accountable measure that is generally used as part of the grading process. Examples of summative assessment are end-of-unit or chapter tests, benchmark or interim assessments and End-of-term or semester exams.

While summative assessment summarizes what students have learnt at the end of a period of instruction, formative assessments are ongoing and occur concurrently with instruction to provide feedback to both teachers and students and serve the purpose of guiding teaching and learning (McTighe & O'Connor, 2005).

2.3 Types of Assessment

The three main types of assessment from which we are going to base this literature are teacher, peer and self-assessment. Assessment in the classroom involves the teacher (assessor), the student (assessed) and peer students (contributors). Hence teachers are not the only stakeholders involved in evaluation or assessment. Elton (2005) reckons the central place of student in the learning process, hence the need for their involvement in the assessment process. Peer assessment can also have affective benefits, namely, rapport and trust. When teachers and students work together toward meeting goals, they develop some common values and expectations. When groups achieve their goals, that success reinforces the goals and group cohesiveness.

2.3.1 Teacher Assessment

DeVries et al., (2002) argue that the teacher's role in the learning process should not be limited to observation and assessment only, but actively engaging with the students with knowledge acquisition. Teachers also intervene when there are conflicts that arise; however, they simply facilitate the students' resolutions and self-regulation,

with an emphasis on the conflict being the students' and that they must figure things out for themselves.

Most importantly, one of the things a teacher must do when considering how to teach students is to acknowledge that each student does not learn in the same way. This means that if the teacher chooses just one style of teaching (direct instruction, collaborative learning, inquiry learning, etc.), the students will not be maximizing their learning potential. Obviously, a teacher cannot reach every student on the same level during one lesson, but implementing a variety of learning styles throughout the course allows all the students to have the chance to learn in at least one way that matches their learning style.
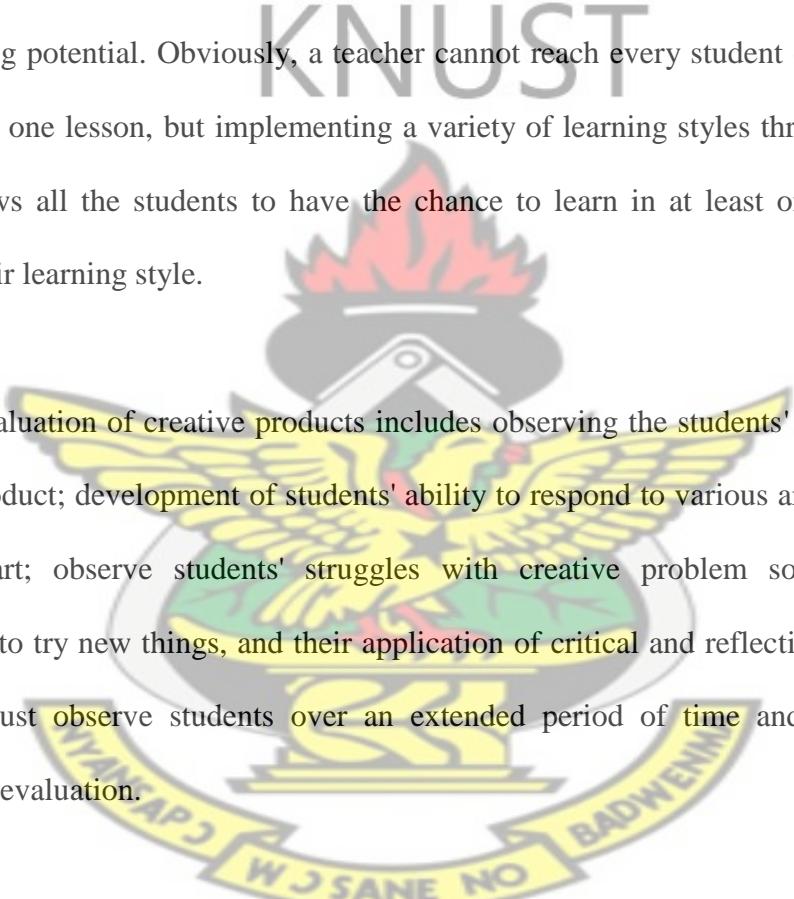
Teacher evaluation of creative products includes observing the students' process and the final product; development of students' ability to respond to various art forms and works of art; observe students' struggles with creative problem solving, their willingness to try new things, and their application of critical and reflective thinking. Teachers must observe students over an extended period of time and encourage student self-evaluation.

Teacher assessment has beneficiaries. Baker (1993) says, teacher assessment aims to help the teacher to plan the criterion, find out students understanding and learning needs, as well as encourages them to develop their techniques. Emma Snowden (2007) argues teacher planning should be able to acquire the information about the student learning skills, ensure there is understanding on the criteria being used in assessing their works.

Honest teacher feedback enhances trust in the teacher as a critic and coach. If the assessment is based on specific evidence of growth rather than global praise, it contributes to students' positive self-concepts about learning. Accurate feedback also improves subsequent realistic goal setting and performance. If a display of student artwork includes descriptions of the concepts taught that are evident in the product, the display is a form of assessment. Then, any viewer, including the student whose work is displayed, can make a judgment as to how effectively students learned, based on what can be seen and read.

2.3.2   Peer Assessment
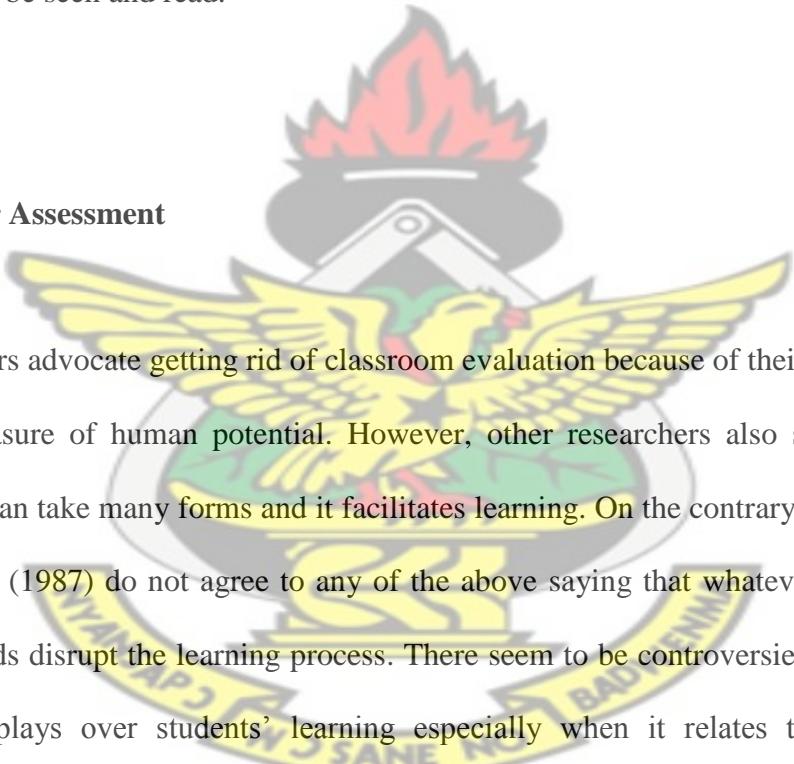
Many authors advocate getting rid of classroom evaluation because of their biased and limited measure of human potential. However, other researchers also suggest that evaluation can take many forms and it facilitates learning. On the contrary, Lowenfeld and Brittain (1987) do not agree to any of the above saying that whatever the form, these rewards disrupt the learning process. There seem to be controversies to the role evaluation plays over students' learning especially when it relates to creativity development.   Abolishing evaluation outright from the classroom is not the best option for now, on the contrary opinion; classroom evaluation is a form of motivation in design education. Evaluation must help the student know when he/she is performing in satisfactory ways and to the lecturer, the best way to handle both student and task since evaluation facilitates learning and teaching processes. (Larson and Yocom, 1951). Jarolimek and Walsh (1969) have proposed that "evaluation must

convey to the student knowledge of desired responses, expected ways of behaving and the degree to which his own performances measure up to what it is expected" in order not to diminish student interest in creativity (Lowenfeld and Brittain, 1987; Stewart, 2002).

Peer assessment is the process of students or peers grading assignments or tests based on a teacher's benchmark which helps students to gain a better understanding of the material and increases their learning skills.

Peer assessment is key in formative and summative assessment (Bostock, 2000; Prins et al., 2005; Li et al., 2008; Cestone et al., 2008; Wilson 2002;Wood, 2009; Li et al., 2010). Ballantyne et al (2002) and Bostock (2000) posit that peer assessment encourages students to become critical, independent learners as they become more familiar with the application of assessment criteria and develop a clearer concept of the topic being reviewed. Cestone et al., (2008) believe that peer assessment can promote student accountability, student responsibility towards their peers' learning; encourage excellence, skills development and deepen learning (Li et al., 2008; Ballantyne, Hughes, and Mylonas, 2002); provides increased positive feedback (Peatling, 2000; Kwok, 2008; Diefes-Dux & Verleger, 2009); supportive, advisory and corrective (Bay, 2011) with positive effects on student satisfaction (Wong & Ng, 2005; Khabiri et al., 2011) and learning effectiveness (Prins et al., 2005; Khabiri et al., 2011) in different disciplines in higher education.

2.3.3 Self-Assessment

Self-assessment is a form of diagnostic assessment which involves students assessing themselves. It measures a student immediate skills and knowledge in order to identify a suitable programme of learning. Self-assessment is considered to be a valuable learning activity (Falchikov & Boud, 1989) that encourages a deep approach to learning (Boud & McDonald, 2003). Boud (2000) defines self-assessment as involving students in "identifying standards and or criteria to apply to their work and making judgments about the extent to which they met these criteria and standards" (p. 5).
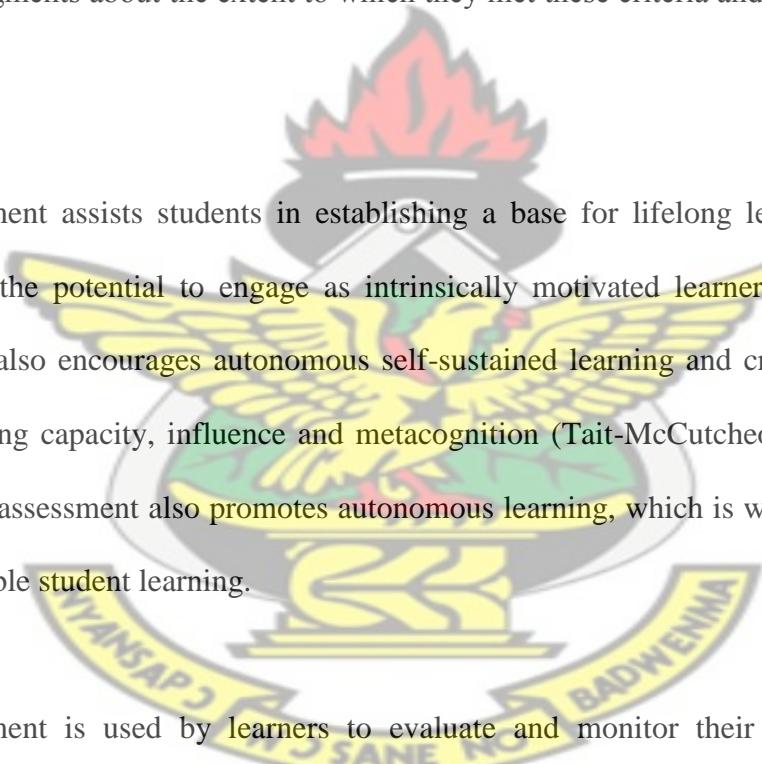
Self-assessment assists students in establishing a base for lifelong learning and in developing the potential to engage as intrinsically motivated learners in reflective practice. It also encourages autonomous self-sustained learning and critical thinking by developing capacity, influence and metacognition (Tait-McCutcheon and Sherly, 2006). Self-assessment also promotes autonomous learning, which is why it is valued for sustainable student learning.

Self-assessment is used by learners to evaluate and monitor their own level of knowledge, performance and understanding and to get information about their learning (Cariaga-Lo, Richards and Frye, 1992; Dickinson, 1987). Therefore, self-assessment is what the students see from their own perspectives (Oscarson, 1989). Enabling students to self-monitor their learning practice is regarded as a way to help students develop knowledge through conscious control over that knowledge or to

develop metacognitive awareness of knowledge and thought (Vygotsky, 1962 cited in Wray, 1994).

According to Wiggins (1990) "self assessment helps students internalize the standards by which their products and performances would be judged"(p. 1). In recent years there has been an increase in the number of schools offering courses that focus on emerging themes in design, such as designing for service, education and change (Poggenpohi, 2004). In these courses educators often emphasize the importance of design processes, collaboration within and among disciplines, and participation throughout projects as opposed to just the appearance of a final artifact (Poggenpohi, 2004).
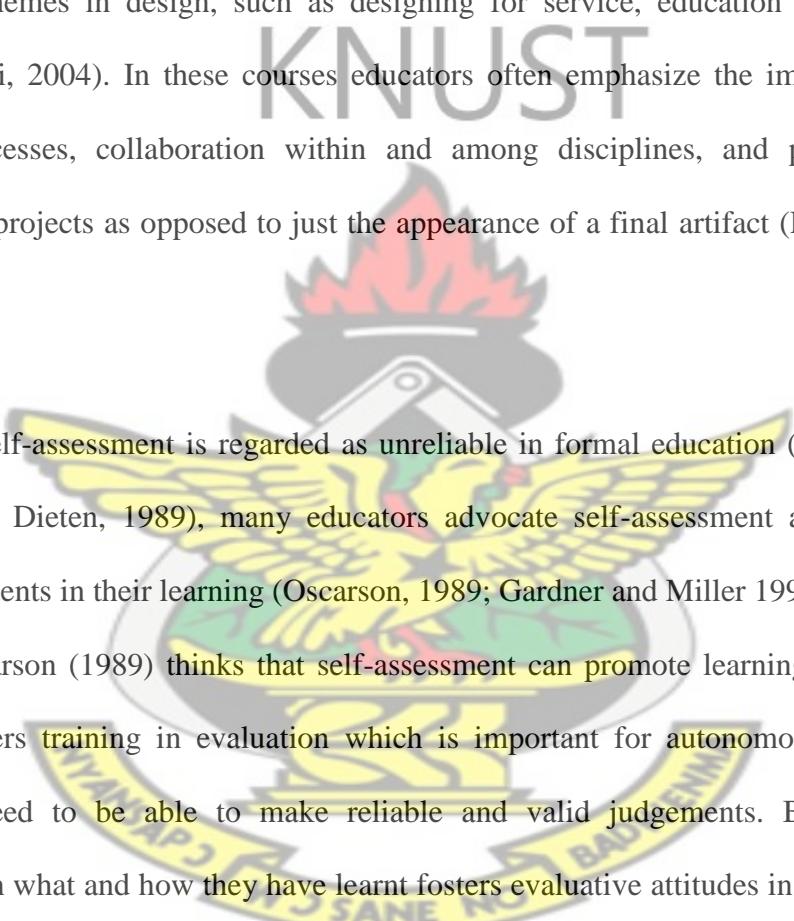
Although self-assessment is regarded as unreliable in formal education (Blue, 1988; Janssen-van Dieten, 1989), many educators advocate self-assessment as a tool to involve students in their learning (Oscarson, 1989; Gardner and Miller 1999, Baldwin, 2000). Oscarson (1989) thinks that self-assessment can promote learning because it gives learners training in evaluation which is important for autonomous learning. Learners need to be able to make reliable and valid judgements. Being asked questions on what and how they have learnt fosters evaluative attitudes in the learners and improves goal-orientation because the learners are aware of variability of language learning objectives and they are in control of their own learning situation. Therefore, Gardner and Miller (1999) suggest the use of self-assessment in self-access learning because it enables the learners to reflect on their progress. This reflection enables the learners to take more control of their learning and to be responsible.

A few studies have demonstrated that asking students to assess their performance, without further training, contributes to higher self-efficacy, greater intrinsic motivation, and stronger achievement (Hughes, Sullivan and Mosley, 1985and Schunk, 1996). Other research found achievement outcomes in programs in which self-assessment were one of many treatment elements, although its unique contribution could not be isolated. For example, Fontana and Fernandez (1994) found large achievement benefits for mathematics students aged 8-14 in a program in which in which self-assessment was one of multiple strategies for increasing student control of learning.

2.3.3.1 Reflection and Self-Assessment
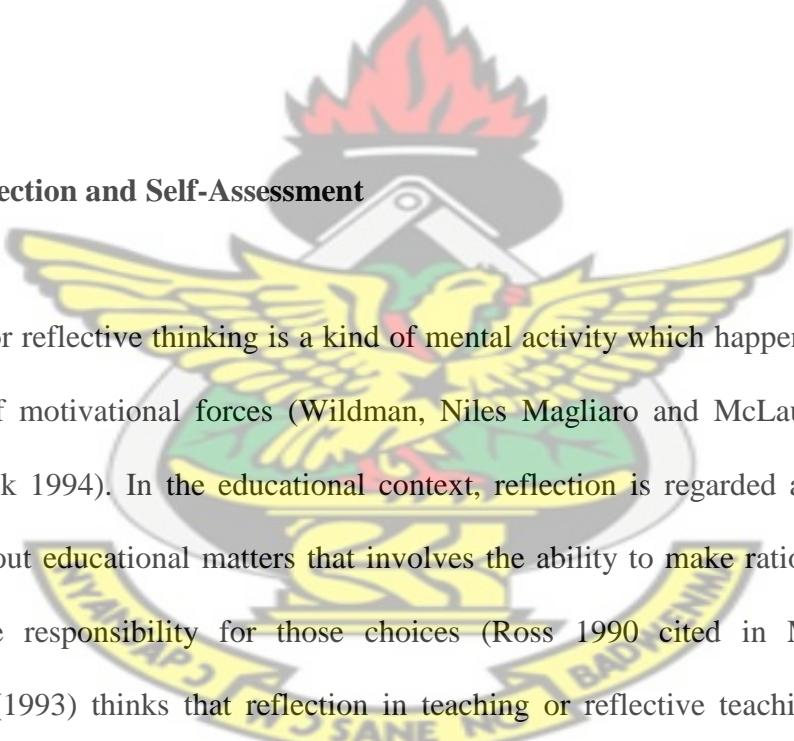
Reflection or reflective thinking is a kind of mental activity which happens under the operation of motivational forces (Wildman, Niles Magliaro and McLaughlin 1990 cited in Mok 1994). In the educational context, reflection is regarded as a way of thinking about educational matters that involves the ability to make rational choices and assume responsibility for those choices (Ross 1990 cited in Mok 1994). Korthagen (1993) thinks that reflection in teaching or reflective teaching involves teachers using their beliefs about teaching and learning to analyze the situation critically and therefore they will take more responsibility for their own actions in class. In order to develop reflective teaching, teachers or trainee teachers should have opportunities to use conscious reflection in order to understand the relationship between their own thoughts and actions (Farrell, 2001).

Since reflection is regarded as one of the important elements in teacher education, many educators agree that some form of reflection should be practiced among teachers because reflective teaching, which is an enquiry-oriented habit, helps the teachers to become adaptive and to engage in self-monitoring (Tom 1985 cited in Mok, 1994; Farrell, 2001). Reflection and self-assessment are associated in that self-assessment is a useful tool to help students reflect on their practice and understand that learning is a process, not just an event that happens and finishes (Schön 1983, Gould and Taylor 1996 cited in Baldwin 2000).

Suggested methods to enhance reflection include journal writing, classroom observation and group discussion (Ho and Richards 1993, Richards and Lockhart, 1994, McDonough, 1994; James 1996). However, writing is suggested as the best means to observe and collect evidence to help in the reflection process (Bartlett, 1990).
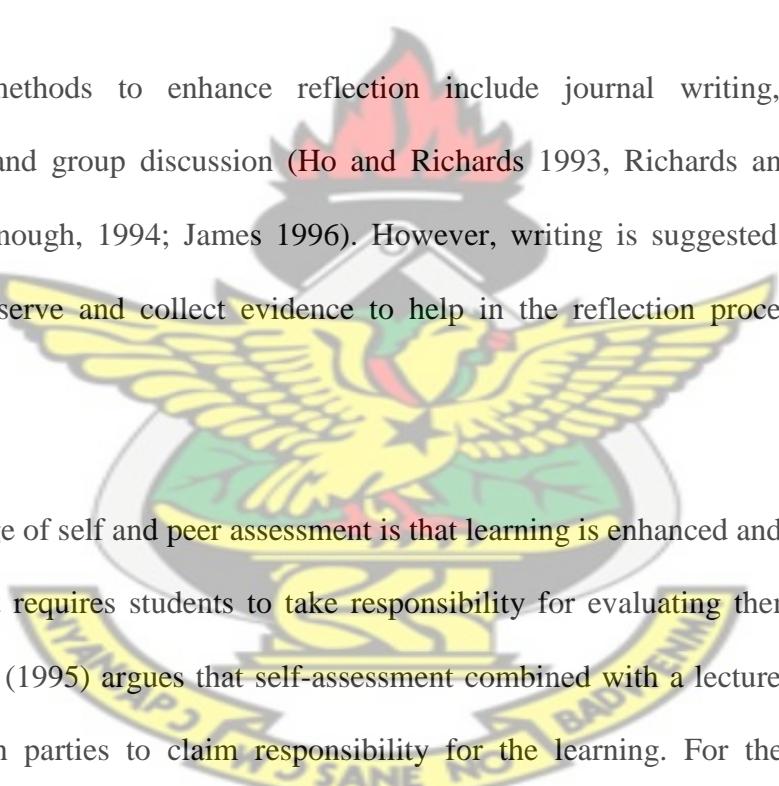
The advantage of self and peer assessment is that learning is enhanced and feedback is reflected that requires students to take responsibility for evaluating themselves and others. Boud (1995) argues that self-assessment combined with a lecturer evaluation includes both parties to claim responsibility for the learning. For the student, it promotes a good concept (esteem, image) with a positive outlook and better self-knowledge. The hopeful outcome, as a consequence is more accountability for the studies. It is observed that self and peer assessment is generally reliable, useful and valid (Knight, 1995). It was shown that students are cognizant of the responsibility during the process. However, not every step is evaluated, but the awareness exists that

all has to be accounted for in the end. Student, peer, and self-appraisals can contribute to group rapport, individual insight, and positive attitudes.

Students become active learners when they contribute to and fully participate in the learning process; especially in studio-based programmes, where constant and regular self-evaluation of the process is important and an integral part (Brew, 1999). Von Glasersfeld (1989) argued that the learner should be responsible for his/her learning, similarly social constructivism thus emphasizes the importance of the learner being actively involved in the learning process, unlike previous educational viewpoints where the responsibility rested with the instructor to teach and where the learner played a passive, receptive role. Self-assessment on the part of students should be encouraged by teachers. Black et al. (2003) suggest the following guidelines for successful implementation of student self-assessment:

1. The criteria for evaluating any learning achievements must be made transparent to students to enable them to have a clear overview both of the aims of their work and of what it means to complete it successfully. Such criteria may well be abstract—concrete examples should be used in modelling exercises to develop understandings.

2. Students should be taught the habits and skills of collaboration in peer-feedback, both because these are of intrinsic value and because peer-assessment can help develop the objectivity required for effective self-assessment.

3. Students should be encouraged to bear in mind the aims of their work and to assess their own progress to meet these aims as they proceed (p. 52-53).

There is value in providing students with an opportunity to show what they have learned and in assessing their progress through performances and products. The value of self-assessment cannot be overstated. When this kind of thinking becomes an integral part of daily classroom activities, students learn more, are more intrinsically motivated, persist in challenging tasks, and attain higher levels of confidence in their ability to learn (Kitsantas, Reiser and Doster, 2004).

2.4   Assessment Rubric

Assessment rubric is both descriptive scoring (Moskal, 2000) and instructional tool (Oakleaf, 2009; Egodawatte, 2010) considered as an effective and versatile assessment tool employed during teaching-learning process to monitor knowledge acquisition and skill development vital in professional development (Mertler, 2001). The rubrics form the foundation on which teachers make academic judgements about students' performances; measure student's achievement and progress (Egodawatte, 2010; Reynolds-Keefe, 2010). The use of rubrics has become very popular and a recognizable trend in education due to its positive impact on teaching and learning (Andrade, 2000; Dornisch and McLoughlin, 2006). This is supported by Rohrbach's (2010.) study, where she acknowledged the innovations design educators have brought in assessment of creative product. This switch is recommendable and gratifying, since Dornisch and McLoughlin (2006) posit that a credible, effective and implementable rubric is capable of reducing two major concerns associated with assessing product/performance: over-subjectively and/or inconsistently evaluation,

leading to unfairness to students, and providing feedback on or grading students which require unreasonable time.

2.4.1 Rubric Development

Eshun (2011) reckoned that "a well-constructed criterion-based assessment approach allowed the assessment to play a lead-role in the learning process"(p. 391).To create an effective and useable rubric depends primarily on a well-defined assessment criteria which is explicit and appreciated by students as well (Rust, 2002), so for these reasons, Hudson (2005) postulates that "assessment criteria need to be based around more specific indicators associated with an outcome" (p. 9), since the assessment criteria become a referent either for teachers or for pupils as noted by Pinto & Santos (2006). On rubrics development, Rudner and Schafer (2002) and Stix (1997) note that students' participation in rubric construction would motivate them and would offer them with assurance that their actions will be acknowledged. Moskal (2003) adds that the overall benefits to students who are involved in developing a rubric are more clear about what skills they need to master, develop greater confidence in their abilities and tenacious in solving problems themselves. Consequently, it has been recommended that a new partnership in the classroom is required, where both teacher and students contribute towards aligning the outcomes, pedagogy, and measurement methods (Banta et al., 2009).

Rubrics also make explicit to students how well the learning outcomes have been achieved. They are, therefore, articulated at different qualitative levels of achievement

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(Andrade, 2000; Jackson and Larkin, 2002; Davies, 2000; Elizondo-Montemayor, 2004; Andrade and Du, 2005; Pinto & Santos, 2006; Kruger, 2007).Kruger (2007) opinioned that clustered or simplified rubric could ensure consistency without repetition of the same standards and reduce administrative task of assessing considerably, thereby ensure its promotion and use in learning. Furthermore, Andrade (2000) and Kruger (2007) admit the usefulness of rubric in blurring the division between teaching and assessment, contributing significantly to both teaching and learning in classrooms. Andrade (2000) further reckons that rubrics make assessing student work quick and efficient, He extents the argument by saying that rubrics are important instructional tools that support student learning and the development of sophisticated thinking skills (Anderson and Mohrweis, 2008; Jackson and Larkin, 2002). Gasaymeh (2011) summarizes the importance rubrics by stating that "well designed rubric can be used for the purpose of instruction, motivation, and evaluation in constructivist learning environment".

Egodawatte (2010) notes that "rubrics can help teachers analyze and describe students' responses to complex tasks and determine students' levels of proficiency. In addition, rubrics give students more specific criteria detailing what is expected and what constitutes a complete response". Çıkıs and Çil (2009) opine that "agreed assessment criteria or objectives can be helpful to overcome arbitrariness, inconsistency, or subjectivity during the assessment process" (p.2016), since they determine the content of the course or condition the students' learning process; thereby serving as a regulatory device for both teaching and learning practices.

They however caution the over reliance on the criteria which is likely to be a setback in the assessment process, because of the inherent intolerance to anything outside the criteria. Cronjé (2009) warns against the use and abuse of structure and standardization when using rubric in assessment; especially when there are indications that assessment may be reduced to an almost mechanical checking of items on the list. Elizondo-Montemayor (2004) on the other hand strongly believes that assessment standardization during work-in-process was helpful and needed so that teachers and students would know what exactly the expected outcome from students and vice versa. As a consequence a hitherto effective studio learning environment is turned to strict/orthodox pedagogic environment likely to inhibit creative responses.

2.4.2 Potential Use of Rubric

Despite the potential benefits of the adoption of the assessment rubric, the use of assessment rubric for assessment delivery has not escaped critique. For instance, Sivan (2002) and Pinto and Santos (2006) argue that the exclusive use of assessment rubric may not achieve effective learning outcomes. They point out that simply following the assessment rubric during assessment does not enhance students' learning experience. They argue for the need to move beyond this basic usage to a more innovative approach that guarantees' students with ownership experience. This is also shared by Egodawatte (2010), who contend that training and guidance to the use of rubrics will reduce discrepancies and intrinsically motivate students to use rubrics for learning as well.Along similar lines, Gullo (2005) argues that an assessment rubric may lack reliability and validity: too general and difficult to use

effectively to rate quality of student's work. He further acknowledges that when too much focus is put on the quantity of criteria rather than on actual indicators of quality of the student's work, it fails to facilitate successful learning and performance.

Exclusive use of assessment rubric has also been found by Mertler (2001) to be characterized with the challenge of converting rubric scores to grades to meet assessment needs, Mertler contends that simply mapping the scores to letter-grade is not appropriate; rather the best preferred option should be by "process of logic"(p.1). As such, Moskal and Leyden (2000) recommends careful planning in the construction and the implementation of assessment rubric, given challenges associated with reliability and validity of the rubric as a scoring scheme.

Anderson and Mohrweis (2008) note thatsharing a rubric with students before an assignment is due provides the ground rules support and reminds students of the expectations for the particular dimensions of their creative product. In a typical studio-based learning scenario, students would be required to make a presentation of his/her creative work. As instructors, we would expect that a good presentation should cover the portfolio, but students also need to be aware of the importance of other dimensions of a superior critical thinking performance. For example, did the students' research, conceptualization, visualization and verbalization enhance the presentation? Did they make good use of the materials, colour, typography etc. or did their use of terminology effectively to support the presentation?

Rohrbach (2010) reports of design educators' and students' reluctance to the use of rubric in assessment in her study; however, students appreciate the clarity rubrics

offer, but prefer the less-informative feedback that is personal and poses questions. From a slightly different perspective, scholars(for example, Banta et al., 2009; Dornisch and McLoughlin, 2006)argue that the continual updating and maintenance associated with the use of rubric can be very time consuming, notwithstanding teachers are determined to implement innovative assessment. This notion is supported by the study of Egodawatte (2010), which found that

> Using an analytic scoring rubric is a more time-consuming task since the rater has to look for and separately rate each component of a performance. This level of detail is useful when the focus is on diagnosis or helping students to understand the expectations for each part of the performance. This may be especially useful for helping students to learn even though it is time-consuming (p. 78).

Other limitations of assessment rubric relate to the lack of agreement on what good assessment rubric is, and the resistance to change amongst academic staff (Haugnes and Russell, 2008). The somewhat contradictory conclusion reached by the different studies on assessment rubric can be partly explained by the type of assessment rubric practice adopted, students' learning styles, educational background, and the nature of the discipline in which assessment rubric is being applied. These factors may affect the adoption and effectiveness of assessment rubric in any design studio context.

2.5   Authentic Assessment

Despite the mixed evidence on the perceived effectiveness of assessment rubric, there is a growing consensus among contemporary assessment scholars(Boud and

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Associates, 2010) that in order to address some of the limitations associated with the exclusive use of rubric, there is a need to adopt a more innovative approach to learning. This has given rise to the notion of lifelong learning, which refers to the combination of different modes of delivery, models of teaching and styles of learning (Boud and Associates, 2010). Lifelong learning typically consists of the use of authentic assessment options and learning outcomes to complement traditional classroom learning activities. This approach to learning has been found by scholars (Boud and Associates, 2010) to enhance learning and enhance students' satisfaction. Although authentic assessment offers a great deal of scope for the combination of different assessment delivery methods, in recent times it has been the integration of teacher, self- and peer-assessments with more traditional approaches to teaching that has gained popularity in higher education.

Whilst existing research on assessment rubric has undoubtedly increased our understanding and appreciation of authentic assessment, a common concern is that mainstream studies in this area have focused largely on the adoption of authentic assessment and the challenges of its implementation in higher education (Boud and Associates, 2010). In this respect, the students' perceptions of assessment rubric, particularly in project-based learning, is a relatively neglected and little understood area of inquiry (Howell, 2011). The few existing assessment rubric studies that have explored the students' perspective have found that the perception of assessment rubric is not influenced by gender. Howell (2011), for instance, found that gender did not affect the attitude of students towards the use of rubric in assessment, with female students found to have a more positive attitude than their male counterparts.

2.6   Assessment and Creativity Development

Design education without assessment is much like a horse ridden without reins. There would be no cues to provide direction or reinforcement. The horse, unchecked, may go nowhere or wander everywhere in the process.

The studio scenario of design education facilitates formative assessment continuously during design discussions and criticism and when conducted as stated, valuable feedback is imparted. Assessment in design is an ongoing activity. Informally, this allows for discussions, active engagement and feedback of students with each other and with lecturers. Formally, it provides for the presentation and the grading of projects on completion. Students have to take the responsibility to interact, as a lack thereof will reflect in the work that is produced.

On the contrary, other researchers are signing caution that care must be taken in the application of assessment in the design classroom due to its potential to 'kill' the intrinsic motivation which is so important in the problem identification and response generation phases. Amabile (1996) argues that extrinsic motivators (such as assessment) focus on individual's attention on the reward/punishment and generate a feeling of 'being controlled' that decreases the personal satisfaction associated with completing the task (Deci, Gilmer, and Karn 1971; Deci, 1975). Therefore, in the presence of external assessment, particularly when tied to aspects of the task that the individual associates with self-expression, assessment may seem constricting and the individual may do what is required, but not more.

2.6.1 Assessing the Creative Process

The project-building process offers the teacher ample opportunities to assess the student's knowledge, skill, participation and problem-solving capabilities thus making formative assessment ideal for creative development. Assessment that places the emphasis on process allows students to develop an understanding of how they work (Davies and Reid, 2000). If a function of assessment is to capture time and attention (Brew and Gibbs, 1999) then process must be given a weighting in assessment, and learning activities must motivate students to engage in that journey. According to Jackson(2006), "It is only after a creative process has been completed that a real sense of value/worth can be gained about the results, and the quality of newness, level of significance, inventiveness/re-inventiveness can be judged"(p.11).
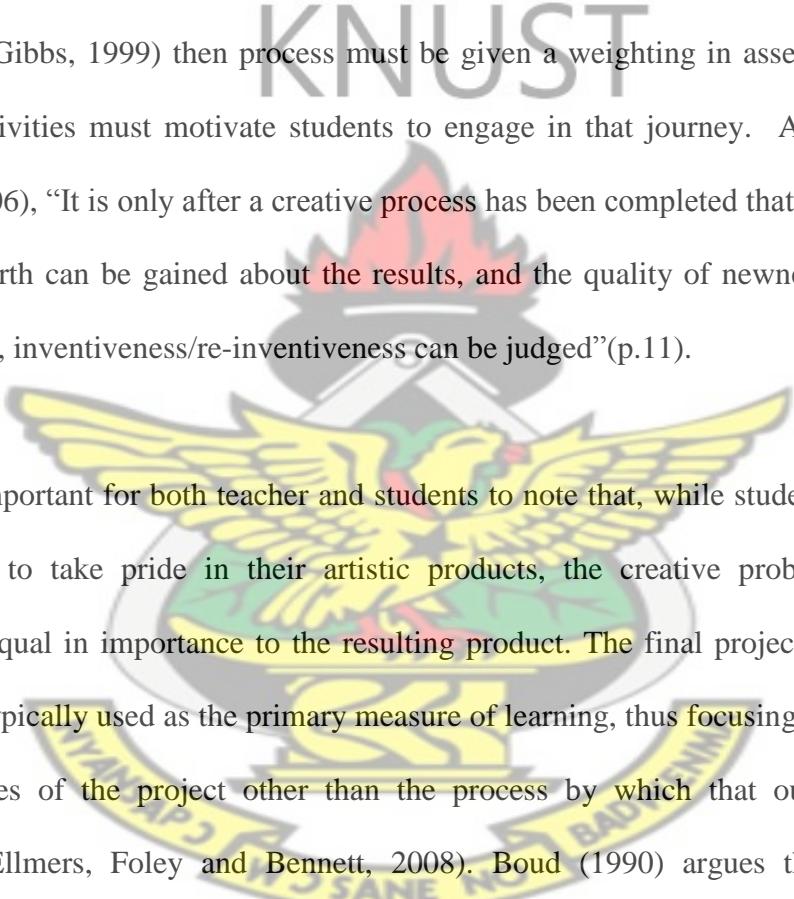
It is very important for both teacher and students to note that, while students must be encouraged to take pride in their artistic products, the creative problem-solving process is equal in importance to the resulting product. The final project product or artefact is typically used as the primary measure of learning, thus focusing students on the outcomes of the project other than the process by which that outcome was achieved (Ellmers, Foley and Bennett, 2008). Boud (1990) argues that because students focus on what is assessed, assessment drives student learning. One consequence of this has been that students are encouraged to take a surface approach to their learning, where they are planning to work to please their teacher rather than making sense of a complex world (Davies, 1996). So the question how the teacher uses the process as learning ground, depends how largely and clearly on how learning outcomes are situated in creative process.

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In order for students to be able to produce an artistic work that would be assessed by their teachers they need to understand the processes and procedures in visual art which will serve as a guide for the students to create and respond to visual art works. Many teachers do not feel confident assessing the creative processes and work of their students. This is understandable since, by its very definition, creative work is unpredictable, unusual, and surprising.

Placing emphasis on design process and collaboration among students in the new design school is paramount as opposed to interest in final product (Poggenpohi, 2004). Through the process the students learn to apply knowledge and skills throughout the project-building process, making it possible for teachers' opportunities to assess the work-in-progress, understanding, and participation from the moment students begin working. Using and adhering the process ensure that originality in creative production.

The student goes through five fundamental steps in the problem-based learning strategy in other to arrive at a meaningful solution. Divided into groups they engage in the formulation of the problem, then identify what they need to learn to solve the problem (self-directed learning), and then re-examine the problem to test whether they have discovered the appropriate facts, skills or concepts to propose a solution. If the problem is not solved, the students cycle back through the first three stages until a satisfactory solution is developed (Kvan, 2001).

The students at this point proceed to the abstraction and reflection steps. The abstraction stage involves the students articulating what they have learned and the

case is contextualised with other known cases (Ellmers, 2005). In the reflecting stage, the group discusses their approach, then reflects and critiques their learning process seeking to identify areas for future improvement.

2.6.2   Key Advantages of the Problem-Based Learning

Key advantages of the problem-based learning approach in relation to traditional learning frameworks have been highlighted by Greening (1998); Rhem (1998); Watson (2002); Pederson (2003); Ellmers (2005). These advantages include increased information retention by students, development of integrated knowledge (rather than discipline specific knowledge), development of teamwork and communication skills, higher learning motivation levels, and development of self-directed and life-long learning skills.

Unlike the problem-based learning the studio-based learning has four fundamental steps; the formulation of the problem, then exploration of solutions through action-based activity, followed by problem re-examination, and finally to jury for examination. The first three steps are recycled until a satisfactory solution is realised before proceeding to examination.

The relationship in this setting between teacher and student is framed by the master-apprentice approach (Ellmers, 2005). Schön notes that the studio-based learning framework is not infallible however and identifies two key issues to consider; stance and behaviour. Stance is the situation where the design teacher or 'master' withholds

their knowledge due to fear the student may misinterpret, abuse, or take (Schön, 1987, p. 119) that knowledge and expertise. Behaviour represents the interaction between the student and design teacher or master, where a successful learning experience is reliant on the development of an effective relationship.

Contributing factors that make studio-based learning difficult for its institution includes pressures on staff time, diminishing resources, increasing student-to-staff ratios, changing student work and study patterns, health and safety issues, and increasing reliance on computer aided design (Ellmers, 2005). Suggestions to improve studio-based learning include introducing formalised collaborative learning, redefining the design critique and jury assessment process to establish a greater positive learning experience.
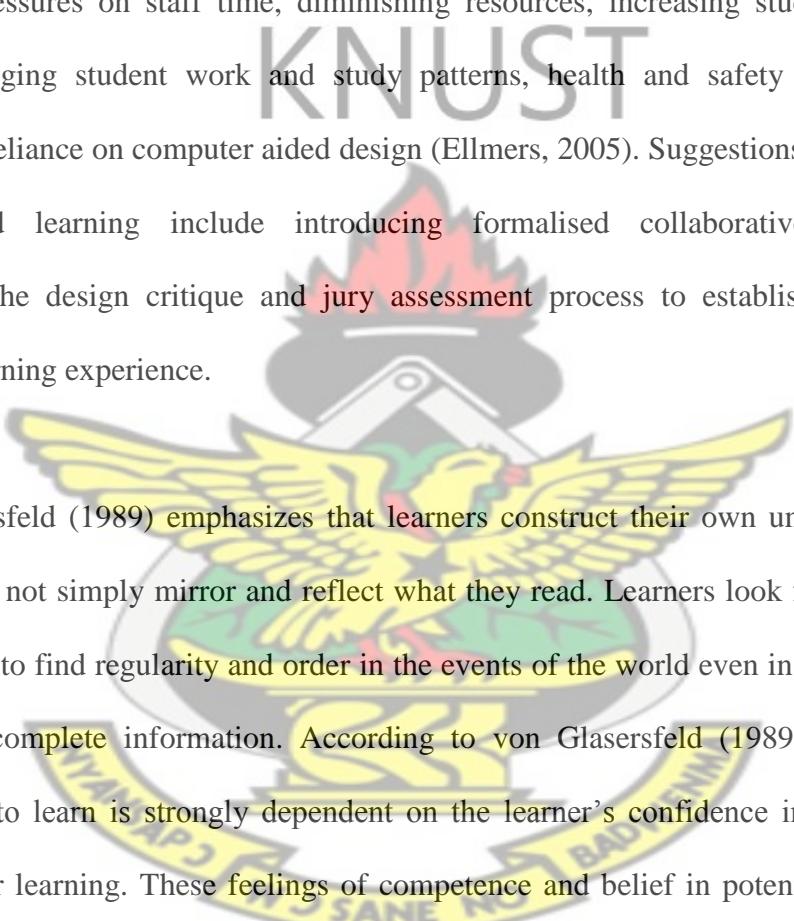
Von Glasersfeld (1989) emphasizes that learners construct their own understanding and they do not simply mirror and reflect what they read. Learners look for meaning and will try to find regularity and order in the events of the world even in the absence of full or complete information. According to von Glasersfeld (1989) sustaining motivation to learn is strongly dependent on the learner's confidence in his or her potential for learning. These feelings of competence and belief in potential to solve new problems are derived from first-hand experience of mastery of problems in the past and are much more powerful than any external acknowledgment and motivation.

2.7 Historical Overview of Graphic Design

Graphic Design comprises of a number of artistic and professional disciplines which aims at visual communication and presentation in which several methods are used in creating, combining symbols, images and/or words to come out with a visual representation of ideas and messages.

The birth of graphic design could be traced back 30,000 years to cave paintings or about 550 years to Gutenberg's invention of the printing press. Whatever the origin, the explosive development during the last decade of the nineteenth century is a good beginning point for study as explained by Arnston (1997). She goes further to say that in recent times, the use of electronic technology has revolutionized design and is affecting the structure of society itself. Style and content are affected by technology used in their creation in present day. Though the history of graphic design cannot be ignored in today's fast paced age of globalization and consumer advertising, its roots have definitely been forgotten. The dawn of the 20th century brought with it an era of inspirational evolution of human expression, and from this innovation the term 'graphic designer' emerged as a by-product. From the ancient caves of Lascaux in 13,000 B.C. to the present day billboards, these elements of creative art are all significant milestones in the history of graphic design and its related contemporaries.

2.7.1　Some Definitions of Graphic Design

Today, the term graphic design is used interchangeably with either, visual communication or communication design. This would depend largely to the degree or nearest meaning the context would be. Though the meaning would be the same, but has an alternate broader meaning that includes auditory, vocal, touch, smell and visual communication. A communication design approach is not only concerned with developing the message aside from the aesthetics in media, but also with creating new media channels to ensure the message reaches the target audience.
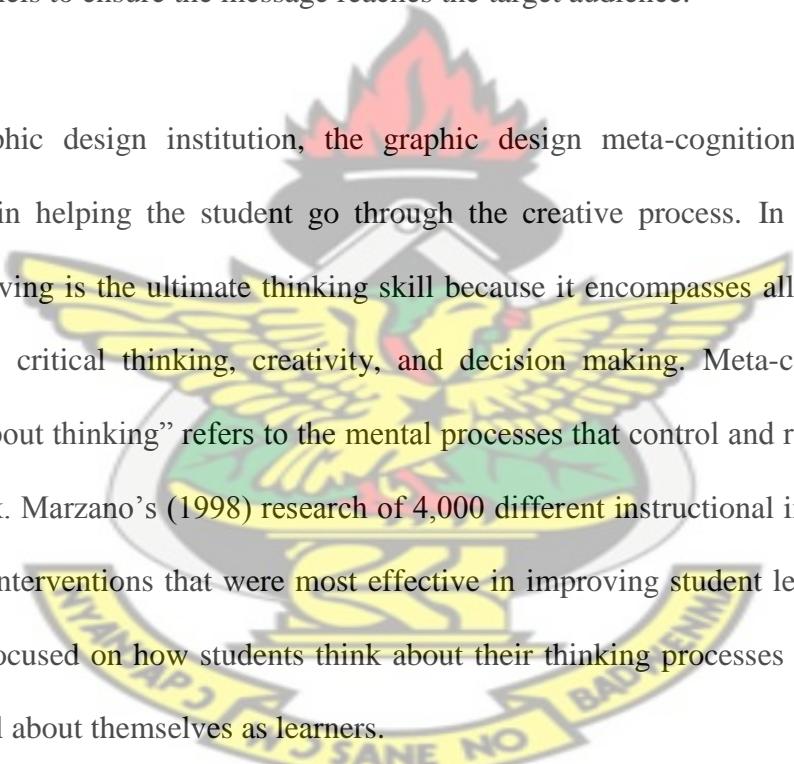
In the graphic design institution, the graphic design meta-cognition should be considered in helping the student go through the creative process. In many ways problem solving is the ultimate thinking skill because it encompasses all other kinds of thinking: critical thinking, creativity, and decision making. Meta-cognition, or "thinking about thinking" refers to the mental processes that control and regulate how people think. Marzano's (1998) research of 4,000 different instructional interventions found that interventions that were most effective in improving student learning were those that focused on how students think about their thinking processes and on how students feel about themselves as learners.

Communication design seeks to attract, inspire, create desires and motivate the people to respond to messages, with a view to making a favourable impact to the bottom line of the commissioning body, which can be either to build a brand, move sales, or for humanitarian purposes. The term communication design is often used interchangeably with visual communication and more specifically graphic design. Examples of

Communication Design include information architecture, editing, typography, illustration, web design, animation, advertising, ambient media, visual identity design, performing arts, copywriting and professional writing skills applied in the creative industries. Its process involves strategic business thinking, utilizing market research, problem-solving and creativity.

2.7.2   Graphic Design Education

Burridge, (2001) notes that

> There is now the urgency of raising the position and status of the arts in education, for many believe they have a significant role in harmonizing the world through developing citizenship and social consciousness by fostering tolerance, recognizing differences, developing diverse ways of thinking and creating a supportive social environment for learning. Design education is fluid embracing innovation and is adaptable to creative activities (p.17).

The American Institute of Graphic Artists (AIGA, 2003) guide says that graphic design is a creative process that combines art and technology to communicate ideas. The designer works with a variety of communication tools in order to convey a message from a client to a particular audience. His main tools are image and typography.

There is no well-established study as in the evolution of graphic design. However there are couples of studies and researches that have established that studio critique

and feedback in graphic design pedagogy stems out of the typical architecture studio. The term design studio has come to inherit two commonly used definitions according to the experts. It is seen as actual physical space where designing occurs and/or the conceptual and practical process of designing: one that sometimes incorporates a method of teaching centered on the activity of learning by doing.

2.7.3   Studio Pedagogy

Studio base learning, critique and feedback have its genesis from architectural design education(Ellmers, 2005).He added that the sources includes '…Quincy system dating from the late 1800's, John Dewey's work with the development of the Laboratory School in Chicago during the late 1800's, and the platoon system developed by William Wirt at the Horace Mann High School in Indiana during the early 1900's (Lackey, 1999).
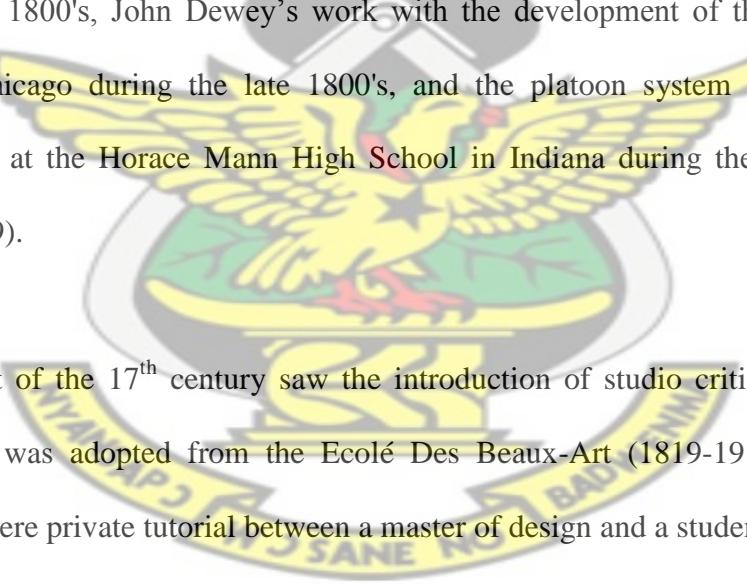
The later part of the 17th century saw the introduction of studio critique in design education. It was adopted from the Ecolé Des Beaux-Art (1819-1914) theory of education, where private tutorial between a master of design and a student.

Five educational practices were evolved for this academic structure as follows:

1.The division of students into ateliers or studios

2.The tradition of old students assisting the younger pupils

3.The teaching of design by practitioners

4.Judgment of designs by trained jury of practitioners

5.The system of 'esquisse' or the sketching of design solutions (Malecha, 1985).

In studio based learning, the learning process there is the formulating or problem, exploration of solutions through action- based activity, followed by problem re-examination (Kvan, 2001).

Ellmers (2005) holds the view that masters in the design studio withholds their knowledge due to fear that student may misunderstand, misuse, or misappropriate that knowledge and expertise and another where there is interaction between the student and design teacher or master. If an effective relationship is developed then a successful learning experience is achieved.

Walter Gropius gave design studio further prominence catapulting Bauhaus (1919-1932), into international prominence and soon became the single most important force in the design world during the period between the world wars, creating a pedagogy that is still widely accepted, and in fact became a new academism. The teaching program aimed to develop the students' personality as well as technical skills, based on craftsmanship. Broadfoot and Bennett(2003) have noted that "For some time now the effectiveness of the studio-based learning and its instruction in higher education thus universities is becoming increasing difficult since this educational institutes go through much more difficulties to sustain a vibrant studio culture in the traditional sense and traditional studio-based learning as it appears to decline particularly the jury process. And some researchers have highlighted on contributing factors of this decline which includes pressures on staff time, diminishing resources, increasing students to staff ratios, changing student work and study patterns, health and safety issues, and increasing reliance on computer aided design" (Anthony, 1991; Henderson, 2004).

Meggs (1998)discussed the importance of the combination of lecture and studio, in the sense that, the profession graphic designer should not only be taught verbally but as well practice in other to instill into the professional the practices of the profession. His book on *'The History of Graphic Design'* has structured most approaches to the teaching of the subject in the United States (Meggs, 1998). Studio critique and feedback is a way of communicating design knowledge to students, and a way to bridge the gap from theory to practical. Critiques in the studio also help students develop their own critical faculties by instilling the process of reflecting and reacting to design intentions, which lead to their design decisions, and then reacting to the consequences of each action (Graham, 2003). Modern day technology and advancement in ICT (Information Communication Technology) has led to the establishment of what the experts call Virtual Design Studio (VDS) (Broadfoot and Bennett, 2003, pp.4-8).

Broadfoot and Bennett (2003) further outlined four conditions for effective contemporary design studio education as follows:

1.Learning by doing must be a central concept to the studio, as the fundamental concepts of designing can only be grasped in the context of doing.

2.One-to-one dialogue between teacher and student is considered essential.

3.A collaborative context for teaching and learning is another important element for effective design studios.

4.Process-focus is a central concept to an effective design studio.

The studio pedagogical activities include teacher demonstration, desk criticism (desk crits), that is, interpersonal discourse between teacher and student and the jury.

2.7.4   Process Evaluation and Critique Session

The Design studio critique and jury environment serve two functions: (i) Process evaluation and critique session and (ii) Social interaction forum. The jury is the platform where peers engage themselves in healthy discourse and debate with each other's self-image in mind to build a good studio culture resulting in learning.A design jury will be made up of all stake holders of the graphic design programme; lecturers and their assistance, students, as well as other graphic practitioners and sometimes clients or users. At the Ecole des Beaux Arts, the jury system was a closed system where the jury alone, behind closed doors, evaluated the work of the students. Students only received feedback on their project at the end of a jury, which took the form of a few written comments and a marked grade on their project. The evolution from closed to open juries occurred between 1940 and 1960 (Graham, 2003).

Milton stated emphatically that, "It is the accepted means by which student work is assessed, and an essential training ground where students learn presentation techniques that are essential for future careers" (p.1). Graham (2003) states the assumptions of Kathryn Anthony. The assumptions include: the jury is a learning experience for students, the jury improves design skills, and the jury teaches students to critically evaluate their own work.

In the design studio, jury does not mean judgment literary but criticism, that is, studio critique. Through this critique students receive feedbacks and then build up strategies to redesign their projects in order to meet the recommended result. It is very necessary to critique students' projects at every juncture of the design process rather than

critiquing at the final stage. In the normal graphic design studio, the students are allowed to present their pin ups or mounted projects in the presence of communities of practice.

2.7.5 Social Interaction Forum

Studio critique in the graphic design education could offer the best social interactions in school if resources are well-managed (Graham, 2003). Studio critique in the design education should be well managed by giving student advice on why their graphic design products do not work so that the next graphic product will be done better (Graham, 2003). The teacher does that so that the student may not feel bad or shy. This should mean that the teacher's feedback should not be harmful to the student creative thinking ability. However, the spirit of a teacher in the critique studio should be; giving praise, accept contributions, offer suggestion and so on (Delamont,1983).

According to Larson and Yacom (1951); Cole (2002) and Stein(2001), the teacher in the criticism studio should make the exercise seem essential and to determine the objective to make the student learn in order to be a successful graphic designer and to be able to receive critiques and give good critiques by giving the student attention as an individual and making the student feel an important member in the critique exercise. Though the teacher should expect that the student performs well, his/her studio critique must provide the student some intelligence and also see studio critique as a risk-taking venture. That is if a student takes the time to find something good about a graphic design work and something bad about it that he/she thinks could be

improved. Stating his/her ideas or feedback and making them optional and helping

you to decide on correct choice (Bono, 1985).

Norman et al (1994) have also expressed that the teacher could work in diverse ways

to show concern and care by patting the student frequently to make the student feel

he/she is improving. Using tone voice, positive facial expressions (smiles), body

stance, and eye contacts as a channel, is very instrumental. Wallen (1966) suggests it

is not only teaching but making teaching interesting for effective learning. The

teacher's role as far as the student's creativity is concerned is very crucial (Delamont,

1976, 1983; Linguagem and Ensino, 2003).

2.8 Fostering Creativity through Graphic Design Studio

Lowenfeld and Brittain (1987) admit that the relevance and importance of creative

development to the individual and society at large is crucial for the survival of

humankind. Cole et al (2005) argue that creativity is central element in relative to

education and societal growth they further indicated its essentiality for learning.

Creativity makes complex messages easy to understand, and the lack of it can render

simple messages obscure. It enriches lives and contributes to a better society. At the

educational level, creativity enhances academic performance. It also promotes culture

thereby providing personal, social, and educational benefits that are recognized as key

drivers of economic development. Practitioners must extend students' creativity by

supporting their curiosity, exploration, and play. Practitioners must therefore provide

students the opportunities to explore and share their thoughts, ideas and feelings

through a variety of art, movement, dance, imaginative and the play the role activities in design and technology.

The skills and knowledge of individuals can both be positive and negative for their creativity (Cook, 1998). Knowledge mostly act as increasing creativity positively, meanwhile high domain-relevant skills such as expertise, technical skills and talent may act negatively since it may limit the search for new behaviours and perspectives (Cook, 1998).

Students' creativity can be improved through creating learning situations that have more than one learning outcome and require multiple approaches to solutions, working in groups, working with mentors and cross-cultural contacts. Studies have shown that there is a relationship between creativity and an environment that is abundant in cross-cultural exchange, where collaborative work is effective, risk taking is rewarded, failure is expected, and the creative arts are pervasive and integrated into campus life".
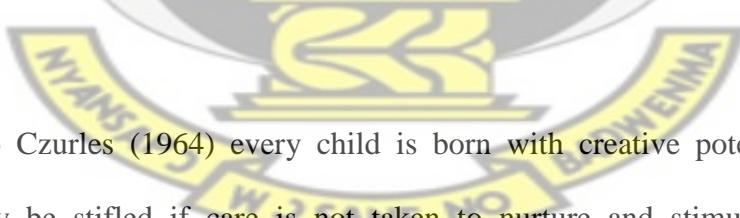
According to Czurles (1964) every child is born with creative potential, but this potential may be stifled if care is not taken to nurture and stimulate creativity. Furthermore, Lowenfeld and Brittain (1987) acknowledge one can only develop his or her creativity when motivated and given the right environment where ideas can be generated and developed upon.

In order to be creative, Thompson and Wheeler (2008) contend students need creative teachers and a supportive environment that can trigger their thinking. Lowenfeld and

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Brittain (1987) indicate creativity reigns where there is time to explore, experiment and play with ideas. Creativity offers individuals the spontaneous pleasures of play, self-expression and satisfaction. A serene creative activity, freed from the burden of necessity, compels people to express their greatest joy.

2.9   The Conceptual Framework

The purpose of this chapter is to display a conceptual framework that will allow me to explain and answer thesis area of study, based on the literature review presented in the previous chapter. The reader will also be provided with a frame of reference, which has emerged from the conceptualization and will be presented in the end of the chapter.

2.9.1   Current Research on Assessment

- A number of studies relating to assessment as applied to school art especially in the United Kingdom focus specifically on the examination type of assessment of art and the type of learning outcomes that are expected.

- Barry Jackson (1995) provides a succinct overview of the assessment of design in 'Assessment practices in art and design: a contribution to student learning?'

The research by design educators such as Allan Davies and Anna Reid, initially based on the assessment strategies has been developed specifically for creative subjects. The

articles 'Teachers' and students conceptions of the professional world' (Reid & Davies 2003) and 'Uncovering problematics in design education – learning and the design entity' (Davies & Reid 2000) touch on assessment and are amongst a number of valuable documents I reviewed.

However, relevant to my study are the following works:

- de La Harpe& Peterson's (2008) proposition of how to assess creative products

- Ehmann's (2005) study on 'Using assessment to engage graphic design students in their learning experience' which concentrates on how assessment can be used to create a positive learning experience.

- Grant Ellmers, together with Folley and Bennett, has published articles that are useful, in particular 'Graphic design education: a revised assessment approach to encourage deep learning' (Ellmers *et al.* 2008).

- Moallem's (2007) study on progressive assessment cycle.

Although the above studies differ slightly from my study they are all converging to find good and standard practices for assessing creative activities in the design studio.

I must admit that there is scarcity of published articles on assessment in this field, the research for the report *Innovative Assessment Across the Disciplines* mapped and evaluated innovative assessment; the report identified 272 published articles that were categorised as appropriate to the topic, of which only six fell under the category 'art, design and media' (Hounsell *et al.* 2007, p. 9).

2.9.2   Validity and Reliability of Peer Assessment

The validity and reliability of peer assessment in higher education have been well explored (Bostock, 2000; Prins et al., 2005; Li et al., 2008; Cestone et al., 2008; Tiew, 2010). According to Kwok(2008)peers explicitly or implicitly hold themselves mutually responsible for the successful implementation of the assessment process. Li et al (2008) note that peer assessment provided a scaffolding guide that helped the students gradually shift their roles from assessees to assessors and students find it easier to make sense of assessment criteria if they examine the work of other students alongside their own. Brew (2011) also acknowledges the significant role played by participative assessment on pedagogy.

Peer assessment is known to have positive effects on student satisfaction and learning effectiveness in different disciplines in higher education (Searby & Ewers 1997; Stanier 1997; Gatfield, 1999; Hafner & Hafner, 2003). Lin et al. (2002) pointed out that while the validity and reliability of peer assessment in higher education has been well explored; researches on the feasibility and student satisfaction on peer assessment in high schools are rare. The potential for peer assessment to promote students' learning has a key place in the ideas associated with assessment used for formative purposes. In classroom assessment for student learning, the assessment process and its results are turned into instructional interventions which are designed to increase, not just monitor, student learning, motivation and confidence (Stiggins, 2008).

In assessment used for formative purposes, peer assessment is considered 'uniquely valuable' because it motivates students to be more careful in the work they do, it amplifies the student voice in the learning process, and their learning is improved (Black et al., 2003). Peer assessment is also a valuable assessment for learning procedure because student learning is promoted as they take on the roles of teachers and examiners of each other and students find it easier to make sense of assessment criteria if they examine the work of other students alongside their own (Black & Wiliam, 2006).

Peer assessments are usually intended as formative assessment early in the learning process (Johnson, 2004). To optimize peer assessment activities they should be scheduled as soon as students begin learning a concept or skill and preferably before any skill errors are habituated (Johnson, 2004). However, in this case study, peer assessment also serves a summative purpose by aggregating student-generated scores of their peers' performances into final course grades. Because marks and grades may be viewed as threats to valid formative assessment, summative assessment purposes can distort or cancel out any learning benefits for students (Stobart, 2006). Noonan and Duncan (2005) assert that "based on principles of assessment for learning and formative assessment, it seems that the use of peer-assessment ought to be limited and not used in summative student assessment" (p. 6). In their discussion of the potential for assessment to enhance learning, Kennedy, Kin Sang, Waiming and Kwan Fok (2006) write:

> Whatever the purpose, there is no reason to prevent these summaries of
>
> learning at a point in time from abiding by the principles of formative
>
> assessment and assessment for learning. That is, these assessments can be used

as feedback to help students move from where they are to where they need to be and they can be designed in ways that reflect the principles of assessment for learning (p. 8).

2.9.3   Advantages of Peer Assessment

Many authors report peer assessment as the best way to assessing group work activities (Cheng & Warren, 1997; Conway et al., 1993; Falchikov, 1986; Gatfield, 1999; Goldfinch & Raeside, 1990). Race (1998) and Bostock (2000) argued about the usefulness of peer assessment and listed its advantages as follows:

- Peer assessment gives students a sense of belonging to the assessment process and fosters their motivation;
- Peer assessment encourages a sense of ownership of the process in a sense that students feel they are a part of the evaluation process;
- Peer assessment improves learning;
- Peer assessment makes assessment a part of the learning process;
- Peer assessment helps students identify their weak and strong points;
- Peer assessment helps students recognize assessment criteria;
- Peer assessment provides better quality feedback;
- Peer assessment gives students a wider variety of feedback (pp. 1-2)

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2.9.4   Disadvantages of Peer Assessment

It is reported that peer assessment typically generates few complaints from students whereas some students may have been unhappy in receiving the same mark as their peers when carrying out work activities (Willmot, 2005; Robinson, 2006; Freeman & McKenzie, 2002). Complaints can be dependent on how the process is managed and presented to the students. In spite of the advantages of peer assessment, it can cause potential problems which need to be taken into account. Bostock (2000) and White (2009) argued that there are some potential problems in peer assessment. They claimed that, at first sight, the validity and reliability of assessment done by students will be under question. It is not clear whether the feedback from fellow students is accurate and valuable. Indeed, students may not be qualified enough to be able to evaluate each other; students may not take the assessment process seriously. The danger is that students may be influenced by friendships and solidarity among themselves; students may not like peers' marking because of the possibility of being negatively or unfairly evaluated by their peers, or being misunderstood. Another problem that may arise here is that since teachers are not involved in the evaluation process, students may provide each other with false information.

Given the fact that peer assessment is not void of problems, Karaca (2009), and other researchers have presented some rules for peer assessment to be taken into consideration; these rules can considerably decrease the problems of peer assessment and hence make it more effective. The rules are listed below:

- Students should be presented with brief information on what they are supposed to do and what is expected of them;

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- Students need to be familiar with the purpose of the evaluation;

- Students need to know what criteria to follow;

- Teachers need to make sure that students are following the criteria clearly and appropriately;

- Students need to practice the process in stress-free environments;

- Teachers should cooperate with colleagues who have already used peer Assessment and

- Teachers should not expect peer assessment to be perfect at first attempt.

We now look at the benefits and potential drawbacks of peer assessment for academic and students.

2.9.5   Potential hindrances of Peer Assessment

One commonly cited drawback is the need to give students pre-training for peer assessment and to perfectly explain the assessment process. Students need to understand how to apply the assessment criteria (Cheng & Warren, 1997; Mathews, 1994). A training run might be useful in giving them a full explanation and the chance to understand the assessment criteria. Discussions of the criteria ahead of time might be also helpful (Juwah, 2003). The necessity of staff training is also important. Williams (2005) saw that a lot more public education and faculty training needed to be put in place for smooth running of the assessment system.

It has been argued that teacher assessment is not sufficiently valid and that students are in the better position to assess their own or each other's work (Race, 2001). The legality of peer assessment has largely been evaluated by students in different studies where majority of students find the assessment fair and improves communication, group skills and rewards work (Crockett & Peter, 2003; Strachan & Wilcox, 1996; 1998).

Pond et al. (2007) report some issues with peer assessment scheme in general. The intense attitude a student could bring in marking their peers and the influence of individual dislike were highlighted.

White (2009), in a review of student perceptions of assessment in higher education, claims that students have strong views about assessment methods and that these views affect how they approach learning. White further noticed that, when faced with peer assessment, students are worried about:

- Their own awareness of their own deficiencies in subject areas
- Not being sure of their own objectivity
- Fairness of the peer assessment process
- The influence of such factors as friendship and hostility on their assessment
- The belief that it is not their job but the teachers' to assess

One more issue is that peer assessment might be time-consuming for students (Falchikov, 1986). Encouraging students to look at the benefits the assessment would bring will be one solution to overcome this challenge.

Pond et al. (2007) discovered that group conspiracy could be a potential problem. There have been a few mentions of suspected cases, but majority of the students seem to take the assessment seriously and try to make a proper assessment (Pond et al., 2007). To reduce these inconveniences, students (in the study) were asked to defend their marks, possibly by adding written comments. One more negative point of peer assessment is the likelihood of it having a negative effect on students' personal relationship within a group.

Credibility of an assessment relates to stability of the assessment (that results will be the same for several times the assessment will be conducted). A credible assessment assesses what it meant to assess, which should be aligned to the planned learning outcomes and course content. However, the credibility has more to do with peer assessment of product rather than of performance, but validity of peer assessment can be tested in both types. Langan and Wheater (2003) report a strong relationship between teacher marks and student marks and others (Cheng and Warren, 1997) argue that they have not found enough credibility of peer assessment. Providing students with pre-training on peer assessment or introducing peer assessment early in students' academic career is important (Kwan and Leung, 1996; Stefani, 1998).

2.10   Graphic Design Studio Pedagogy

Design education should not just reflect on the teacher's style, but should be designed for students with all kinds of learning styles.Key aspects of constructivist theory pertinent to this study include; learning through experience and authentic learning

tasks, situating students in real world learning environments, case-based learning, problem solving, and reflection (Ellmers, 2005). Constructivist views learning as a process in which the learner actively constructs or builds new ideas or concepts based upon current and past knowledge or experience. Thus, learning involves constructing one's own knowledge from one's own experiences. Individuals (students) construct their own meaning through reflecting on their interaction with their surroundings. It is necessary to deploy resources to support the learning process. These principals are inherent within the learning frameworks of studio-based learning, problem-based learning and the Schön's reflective practitioner.
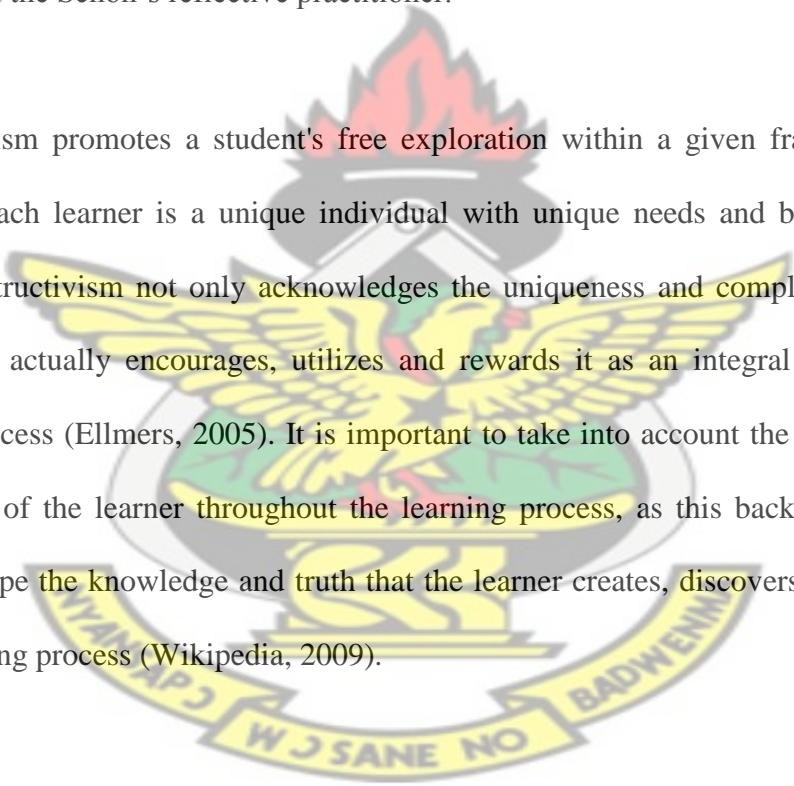
Constructivism promotes a student's free exploration within a given framework or structure. Each learner is a unique individual with unique needs and backgrounds. Social constructivism not only acknowledges the uniqueness and complexity of the learner, but actually encourages, utilizes and rewards it as an integral part of the learning process (Ellmers, 2005). It is important to take into account the background and culture of the learner throughout the learning process, as this background also helps to shape the knowledge and truth that the learner creates, discovers and attains in the learning process (Wikipedia, 2009).

Furthermore, it is argued that the responsibility of learning should reside increasingly with the learner; being actively involved in the learning process, unlike previous educational viewpoints where the responsibility rested with the instructor to teach and where the learner played a passive, receptive role.

2.10.1 Reflection in Design Education

Constandius (2009) referring from Dewey indicates that reflection is an active and deliberate cognitive process that relates to a series of similar ideas of previous knowledge. Reflective thinking should allow doubts and perplexity before possible solutions or conclusions can be drawn. One of the main elements of design education's focus is reflection. Refection is intimately bound up with action and this concept of reflection outlined by Ellmers (2005). He provides a framework for understanding and plotting the process of studio and project based learning. According to Ellmers (2005), Schon highlights reflection in two categories; reflection-in-action and reflection-on-action. Reflection-in-action occurs when the students experiences a unique situation during the development of the design solution. Reflection-on-action on the other hand involves the review of actions from the past Ellmers(2005); the process of making sense of an action after it has occurred and learning something from the experience.

Design practice is action oriented and when the student or designer knows what he is about, he employs both reflection-in-action and reflection-on-action strategies. Valkenburg and Dorst applied Schon's reflective practice theory to outline the process of design practice. *Naming-* the problem is articulated; *framing-* the context of the problem; *moving-* the actual design activity and *reflecting-* the designer assesses the design development within the context of the frame.

When this is incorporated in design learning, it bridges one student project to another which enhances learning. Ellmers (2005) suggests that Journals can be a useful

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learning strategy to encourage students to actively engage in the reflection process. An essential aspect of problem-based learning is the use of 'real-world' problems to frame the approach to learning which is very practical. When students are given an assignment, they work in small groups to discover solutions to the problems. It is through this discovery that the students identify what they know and importantly what they don't know, establishing a framework in which to approach the problem.

2.11   The Progressive Assessment Cycle

The progressive assessment cycle served as a hub to hold all assessment strategies planned together. From the initial assessment through the progress assessment to the product assessment, they are all linked by a loop, which points the interconnectivity of every step and stage to the whole.Figure 1 is a model adapted from Moallem (2007), though cumbersome, it is easy to follow and practice during a project execution phase. It shows a challenging, complex and authentic task, with investigation as the main focus of assessment of complex learning outcome. Each task bears a close relationship to real world problems in the home and workplace (professional practice) of today and tomorrow. To complete each task, sustained investment of time was required. The design task/problem was divided into smaller problems/projects that prepared students for the larger and more complex task. The assessment of projects or problems was integrated in the instructions and occurred throughout the learning process.

Authentic Assessment Cycle within a Single Project

A Real World Project or Problem
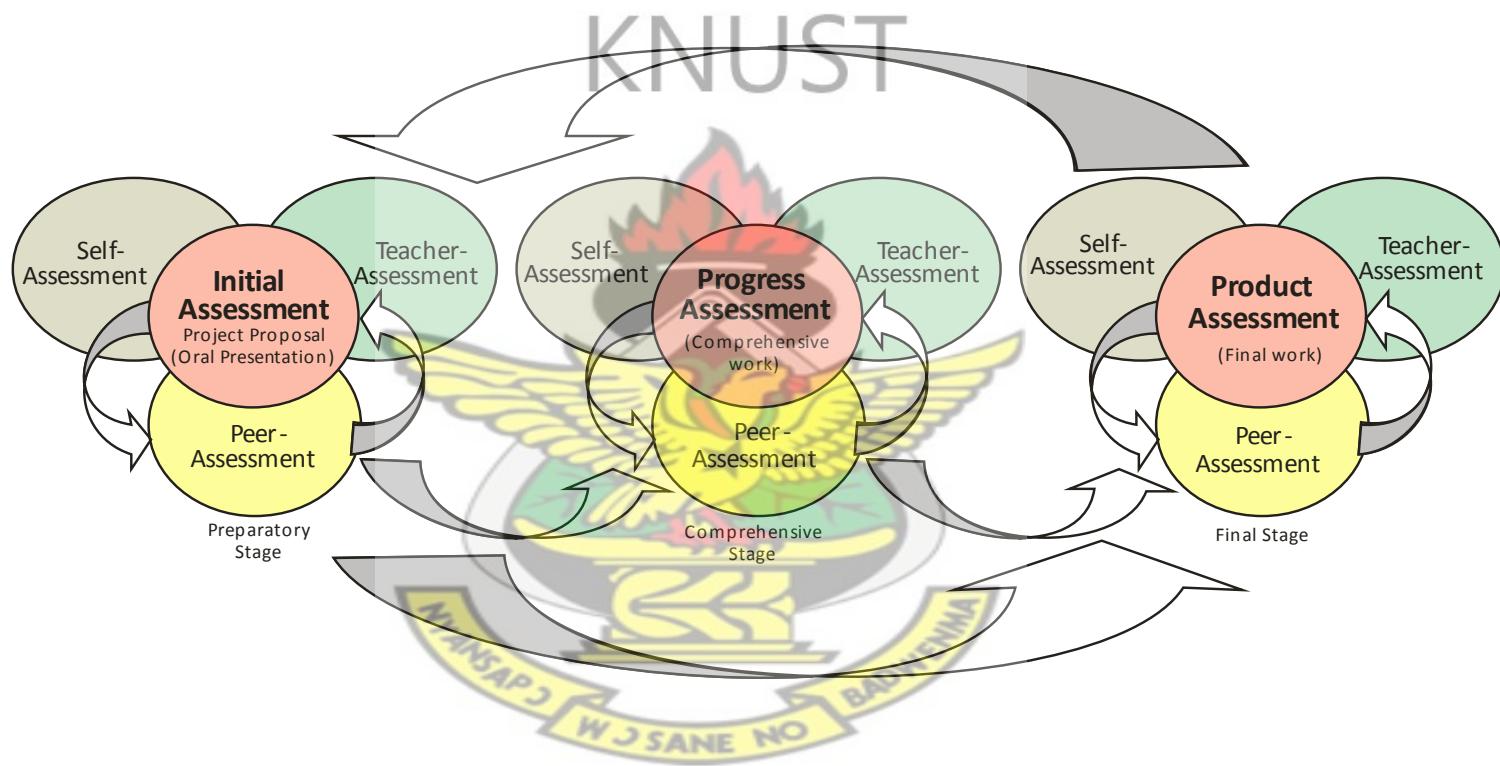
Figure 1: A Model for Assessment of Complex Learning Tasks

Source: Adopted from Moallem(2007)

Figure 1 shows, three forms or stages of assessment co-existed for each task in spite of its complexity in the studio learning environment; they are *initial assessment (Project proposal - oral presentation)*, *progress assessment (creative process)*, and *product assessment*. While each stage or form of assessment would have different purposes, the process and results of each assessment stage influence other stages directly. In all stages of assessment, students took responsibility and were involved in setting and using standards of excellence (instructional rubric) to evaluate their performance. In addition, in each stage of assessment, the teacher/expert models thinking processes and strategies, and monitored individual students performance tasks in order to assess thinking processes and to provide ongoing feedback.

Complex design projects were designed to be completed by individual students, and students were encouraged to not only share ideas and resources but also to assess each other's work dispassionately. For each instructional task the three different assessment tools under authentic assessment were used: *self-assessment*, *peer assessment* and *teacher assessment*. During all stages of assessment, the feedback provided by the peers and teacher was meant to be formative that is, it is intended to help the student assess his or her strengths and weaknesses, identify areas of needed growth and mobilize current capacity. Performances are provocation for what needed to be learned and extensions of what is learned can help push the student to the next level of skill in performance. Like what Moallem (2007) suggested, "performances also become tools for reflection on learning accomplished and learning deferred"(p. 353).

2.12 Conclusion

This chapter presented a theoretical framework for the study and reviewed current literature surrounding the issues of learning through assessment in graphic design. The foundation of teaching and learning are fast changing in the 21st century, thereby challenging educators and school administrator to evolve new teaching and learning strategies that can match the fast pace in intellectual and global world. The approach must change! It is in this light that Dunn et al (2002) are of the opinion that a standard-based referenced assessment approach paves the way for anequitable and more responsible assessment practice than norm-referencing. It isacknowledged thatassessment isat the heart of student learning and changing its practice is likely to impact on student learning achievement (Brown and Knight, 1994).

CHAPTER THREE

METHODOLOGY

The researcher adopted a mixed-method research approach for the project, by employing survey (to provide a scoping overview of practices and the views of stakeholders), case study (to provide more detailed illustrative examples from creative arts disciplines) and in-depth interviews with students (to provide an individual perspective of learning, transfer and value). The researcher used action research and feedback/corrective action to improve student learning in relation to the results of earlier study (Eshun and Adu-Agyem, 2010). The study sought to enable the teacher-researcher to tell his own stories because the voice and values of the teacher are considered to be essential in the development of educational knowledge. This chapter describes the methodology used in the study including participation, procedures, data collection, data analysis, and validation of the findings.

3.1   Overview

The current project is the first for studio teachers in Ghana. The approach to action research in this study is consistent with the work of Jack Whitehead (1993) and his colleagues McNiff, Lomax and Whitehead(1996). In 2010, when the researcher decided that his work with graphic design students was to form the nucleus of

theresearch, the researcher began collecting data from his practice. Through observation and dialogue with the students, the researcher noted instances of unjust or inequitable treatment of design students and in an effort to leave out the researcher'svalues of fairness and equality in his practice, encouraged the students to resist such bias. The researcher also tried to promote a more positive and democratic approach to education for the design students through enabling them to have a sense of ownership of their own educational process, as well as a sense of belonging in the educational system. The researcher continued with these initiatives for a period of two years. This does not mean that the researcher then discontinued his efforts on behalf of design students, merely that the researcher used the collected data for this research, as the researcher had set a three-year time frame for data collection. Throughout this time the researcher kept a reflective diary in which he documented the progress of his research, as well as his thoughts and reflections on it. Thus, in the course of data collection the researcher was able to engage in cycles of planning, acting, observing and reflecting as recommended by Carr and Kemmis (1986). The researcher also took notes of conversations with design students and teaching colleagues, which the researcher describes as 'field notes' throughout the research account.

To ensure manageability and coherence for the research, the researcher decided to divide it into three separate, but overlapping, contemporaneous phases. The data, therefore, was collected and analysed in terms of three significant aspects of my research:

1. The provision of learning support to design students with learning difficulties.

2. The exploration of design students' experiences of unfairness.

3. An after studio initiative aimed at encouraging design students to continue reflecting during the creative process.

In Chapter 5, the researcher described how, in his work of providing learning support to some of the design students, he experienced his values being denied in practice, through failing to demonstrate fairness or respect for the assessment practices of the design students. The researcher recounts how he became aware, through the process of reflection, of the tension resulting from this denial of his values, and how he subsequently changed his practice to one that recognised and accepted diversity of opinions. The learning resulting from this episode contributed to the development of the researcher's claim to knowledge, based on his living theory of practice as the recognition and acceptance of diversity in thoughts. The chapter also documents the provision of a space within the researcher's classroom for design students to explore assessment issues.

This initiative raised awareness of the unfairness inherent in a system that does not grant equal recognition to all design students, and enabled the theorising of my practice as a location of the representation of fairness of respect for all. It also provided the opportunity for integrating design students in an ethos of fairness and inclusion, without reducing credibility of the process. Through this process, the researcher was able to formulate his living theory of the practice of inclusion as the acceptance of diversity through fairness of respect for all people.

3.2   Action Research

Action research is an interventionist, collaborative approach to analyze social systems by bringing change and generating knowledge about the change (Hewitt and Little, 2005). It is based on the assumption that social systems can be studied best by altering them (Cole et al. 2005). In action research projects the researcher chooses an inside perspective and becomes actively involved with the research object (Hewitt and Little, 2005). Researcher and client work together to examine the practical problem. Based on their analysis they collaboratively develop and implement a corresponding solution, refer to Figure 2. The contact between researcher and research object can range from personal interaction to deliberate transformation of the research object. Since the researcher acts as part of the research object, the distinction between expert and subject disappears. Similar to surveys and case studies, action research is also bound to a current situation. Action research is in particular useful when processual problems in organizations such as learning and change are investigated (Creswell, 2002).
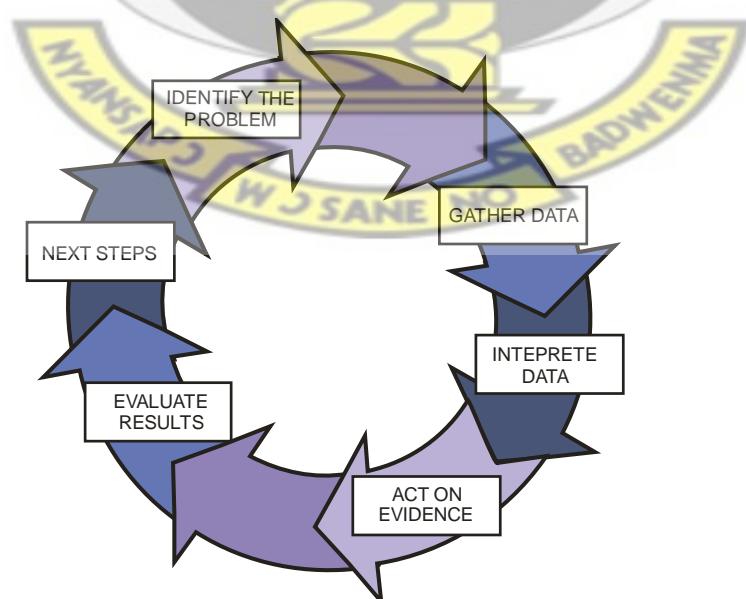
Figure 2: Action Research Cycle.Source: Adapted from Ferrance (2000)

When the researcher began the study, he intended involving a three year groups of graphic design students in the process. However, the researcher soon realised that it was not possible due to the large class-sizes. The researcher's values around inclusiveness and the importance of a sense of community, as well as the fact that he wished to improve the quality of educational provision for all graphic design students, compelled the researcher to rethink about the original plan and to reduce the focus to one year group where he served as Studio Lecturer. This decision was justified by the fact that the students were enough to provide valuable insights that enhanced the research. The author was also concerned that, since he wished to improve upon his practice, this improvement should be reflected and replicated in the whole of that practice, rather than in a specific part of it.

The researcher was conscious of the advice of research theorists regarding the danger of undertaking too large-scale a project. However, he felt that two aspects of a particular situation would provide a safeguard against this risk. Firstly, the students came to him in small groups, which were eminently manageable from a research point of view, and secondly, the researcher was focusing on specific areas for the study, such as the students' experiences of assessment and their attitudes to education, which would limit the scope of the research somewhat. The groups, then, consisted for the most part of almost hundred students, though not the same throughout the study.

3.3   Research Participants

The research is based on the researcher's work with graphic design students, whom he wished to consider as equal participants in the research process, and not as objects of the study, and so the researcher sought a form of research that would accommodate my stance on this. Kemmis and McTaggart (1988) describe the features of an action research approach, which appears to be commensurate with my requirements:

> It is not research done on other people. Action research is research by particular people on their own work, to help them improve what they do, including how they work with and for others. It does not treat people as objects for research but encourages people to work together as knowing subjects and agents of change and improvement (p. 22).

This quotation aptly describes the type of equitable and respectful ethos that the researcher hoped would form the framework for my research. In order to avoid the negative effects of a power-based relationship, which could result from doing research 'on' his students, the researcher chose instead to undertake the research 'with' the students, an approach that would regard them as co-researchers.

The researcher wished to consider the graphic design students as active agents and empowered participants during the course of the research, a hope that the researcher claimed to have fulfilled through enabling the students to articulate and critique their experiences of discrimination in the educational system. The researcher presented the data that provides evidence of this claim in earlier study Eshun and Adu-

Agyem(2010) and confirmation in subsequent study. Hopkins (1993) contends that "It is entirely within the spirit of classroom research that pupils be involved in the process of improving the teaching and learning situation in their classrooms" (p. 174).

The researcher sought after a collaborative research, in a spirit of cooperation and partnership. Many theorists, for example Hitchcock and Hughes (1995), Kemmis and McTaggart (1988) and McNiff (2002) regard collaboration among participants as an essential feature of practitioner-based research. The researcher's interpretation and implementation of a collaborative approach to the research was reflected in the recognition of his students as co-researchers. The researcher proposed to establish with all research participants a relationship based on mutual respect and reciprocity, in fulfilment of his commitment to values of social fairness and equality.
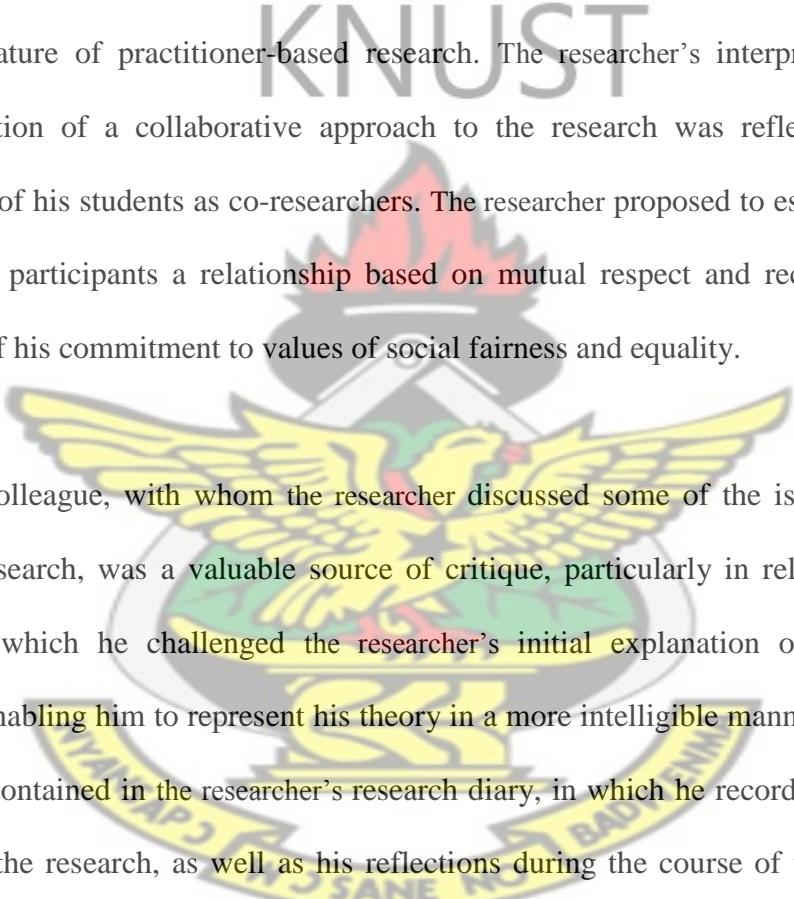
A critical colleague, with whom the researcher discussed some of the issues arising from the research, was a valuable source of critique, particularly in relation to the manner in which he challenged the researcher's initial explanation of theory of inclusion, enabling him to represent his theory in a more intelligible manner. Much of the data is contained in the researcher's research diary, in which he recorded the main features of the research, as well as his reflections during the course of the research process. Other incidents, however, such as conversations with colleagues and informal discussions with students were written down as soon as possible after the event. These are captured in the text as field notes.

3.4   Population for the Study

Population for the study was the undergraduate students (2010/11) of Department of Communication Design (DECODE), KNUST, offering bachelor's degree programme in communication design at level 200in the programme. Purposive sampling was considered to be appropriate in educational research since it provides maximum insight and understanding to the study. The sample was represented and had all the unique characteristics of the population, the students of the Department Communication Design. A total population of 700 students was used in the overall study. The population size was about 140 students for specific study under the project. Since this is an action research, all year groups that were taught by the researcher constitute part of the population. In addition, all lecturers in the department, teaching assistants and past students were used where applicable.

3.4.1   Study Participants

The study participants (n=140) was drawn from Communication Design second year students in the Department of Communication Design, Kwame Nkrumah University of Science & Technology. Kumasi, Ghana. Purposive sampling method was used because of the nature of the study. The sample comprised sixty-nine male (64%) and thirty-nine female students (36%). Their age ranged from 18 to 23 years. The setting was a typical graphic design environment. These students had pre-university tuition in visual art at senior high school level. Their creative studios were their only opportunities to be exposed to the technicalities in graphic design. English language is

the main language of communication. All the cohorts were Ghanaians and grew in Ghana and had gone through the Ghanaian educational system (basic and secondary education).

3.5   Data Collection Instruments

In order to assess students' change in attitudes about peer assessment in graphic design studio overtime, the researcher garnered primary data collected from the participants. Observations from different levels, interviews of students, lecturers and teaching assistants and secondary data sources such as documentary evidences captured in documents like notes from dairies, lecture notes, syllabi, curriculum, research papers, periodicals and thesis reports constituted the primary data. Information from textbooks, video and TV documentaries, magazines, newspapers, reports, journals, newsletter and the World Wide Web resources constituted the secondary data explored.

Surveys: *Questionnaires*

A face-to-face questionnaire was used. An identical Likert 5-scale questionnaire (Appendix D) with twelve statements indicating the responses of 'strongly agree', 'agree', 'no opinion', 'disagree' and 'strongly disagree' was used to collect students' perceptions of assessment criteria in the beginning and at the end of the project. This allowed respondents to provide a wide range of responses. Another Likert 5-scale

questionnaire (Appendix E) was used to collect students' overall opinions about the assessor's competences. All questionnaires were conducted in class so that the instructor could give a clear explanation to students and clarify all queries raised. In addition 100% return rate could be ensured.

Focus Group

The researcher surveyed all the participants at the beginning of the school year. The seven focus students with various graphic design abilities and varying attitudes towards graphic design voluntarily offered themselves for the interview. The researcher also surveyed all participants at the end of the semester in order to examine student attitudes and their self-confidence about using peer assessment in graphic design. The researcher searched for any trends or changes in attitudes overtime. This provided him with valuable feedback on what students like and dislike about using peer assessment in graphic design studio, and how the researcher could help them to be successful.

Student Interviews:

Student interviews offer great ways to delve deep into the minds of the students. Based on the results of the surveys, the researcher interviewed 23 students, 12 girls and 11 boys of various graphic design abilities, who had varying attitudes about graphic design. The researcher also conducted group interviews with the focus

students as well. The researcher designed a set of interview questions that focus around students' experiences in graphic design class as well as their previous experience learning graphic design (See Appendix J). The investigator interviewed students periodically throughout the semester in order to get some feedback on the various studio activities they were doing. Speaking with students about their feelings and experiences provided me with qualitative data and student quotes that helped offer my action research paper a powerful student voice. Students were also interviewed to assess their understanding of various graphic design concepts they explored with images and text.

Student Observations, Anecdotal Records and Field Notes:

The researcher kept a journal for field notes and observations of students in a variety of learning contexts in the classroom and studio, focusing on peer interactions, academic language being used, students' general attitudes towards graphic design, their participation, their engagement level in a particular task and the roles they assume within their partnerships and/or teams. Observing various student behaviours and interactions and recording their conversations during peer assessment allowed me to explore different patterns, or trends that occurred within a variety of learning contexts. This helped the researcher to assess the levels of student engagement throughout various learning activities, such as graphic design studio learning and so forth.

Student Portfolio:

By collecting and analyzing student work samples (Appendix K), the researcher was able to assess both the quality of their work and their acquired knowledge of a particular graphic design concept. This also served as an indicator for their engagement level in a specific task. The researcher gathered worked samples prior to design project, during the creative process and after. Students were asked key questions before designing a communicative visual and then had them revisit similar questions after designing, for example a poster to see how their learning had progressed.

Validation of the Findings

Throughout the study, the researcher sought to gather data from many sources and to find ways of triangulating the evidences. The researcher having analysedhis work and reflected on it, drew up findings based on the criteria as mentioned in this chapter. The researcher had a good supportive validation group for the duration of the study. It consisted of two groups of second year undergraduate communication design students. The researcher then shared his findings with his critical colleague and validation group. When the groups had agreed with the researcher that the findings were true, the researcher then presented them as evidence that an improvement had come to his practice.

3.6   Administration of Instruments

Surveys: Data collection was an ongoing endeavour for the researcher throughout the action research project. The quantitative data that was collected from the students' surveys was analysed using SPSS 16.0. When analyzing the students' surveys, the researcher colour coded the results of the surveys according to different categories or trends that emerged. The researcher also made note of various themes that emerged within the surveys.

Student observations: During student observations the researcher focused on student engagement levels and participation over time and made the necessary remarks and notes in the teacher's journal and some were captured by way of photography. The researcher compared the results of different scenarios and task comments between the different contexts. This was done on several different occasions.

Student Interviews: Interviewing focus students provided the researcher with valuable feedback about their experiences in studio. The researcher carefully monitored their attitudes, engagement and progress in the studio throughout the semester. The author also pulled student quotes that correspond with both qualitative and quantitative data collected, looking for themes, trends and connections between attitude, engagement and achievement. These quotes added depth and student voice to the research and findings.

Student Observations, Anecdotal and Field Notes: The researcher transcribed relevant parts of the audio recordings gathered from students' conversations and interviews.

The researcher also transcribed audio tape recordings of students "on" verses "off" task behaviors and dialogues and compared results from the same group, across a variety of learning contexts. These observations were done over two semesters.

Student Portfolio, and Journal Entries: The researcher analyzed portfolio, sketch pads and student work samples in order to assess whether or not the objectives of the lesson were met. By looking at student work, the researcher could see whether or not students mastered the concepts being taught and positively using feedback to improve the works or if they needed more help. This helped to guide the researcher's instruction in the studio. Evaluating the impact of the activities also allowed him to make connections between student achievement and skill acquisition. The author also compared their mastery of skills across the board. Since the author had students giving him feedback on various graphic design concepts, including a self-assessment of how well they mastered a particular concept while working a project. The researcherwas able to judge how effective certain peer assessments were in teaching design concepts and skills.

3.7 Data Collection Procedures

In the first week, students learned how to construct and use a rubric. They received a written and empty template. Teacher discussed the merits of the rubric. Students received a text and prepared their own rubric format for the graphic design. The categories were familiar and relevant to the students' needs. The topic was of interest

for most of the students in class. The writer provided a battery of criteria for students to use if necessary. Students practiced the use of the rubric in two 45-minute lessons.

In week two, students learned how to use rubric for assessment. They received sampled graphic designs that were relevant to the course objectives to assess. They assessed for use of colour, use of typography, use of layout, image and other design qualities such as the aesthetics and originality in the design. The teacher asked students to scrutinize design for information on colours, typography, images and layout. Students did these exercises practically and in writing. Students showed a sense of satisfaction in finding the information. The teacher used the rubric created by the students for graphic design practice (DAD, 252). The design task was of interest to students. The teacher/researcher used live world events to make the designing interesting. The students found the poster design on the "Reggae 2012" (International Reggae Contest 2012) interesting working on. Teacher evaluated students by using positive language and adding written feedback to his students' work.

In week three, students learned how to enrich their vocabulary by using a Vocabulary Word Map Chart. The teacher/researcher encouraged the students to keep a notebook or file with the new words they encounter in their reading. Students used group study approach for prepare for presentation. They made a list of the new words. They used MS PowerPoint and added each new word to a slide. Next, students learned a few techniques on how to critique and reduce anxiety before and during studio critique. The materials for the lesson were prepared text and practical.

In week four, the teacher/researcher taught the students how to do brainstorming exercises on finding the main and supporting ideas. Students learned how to analyze a graphic design project, find the problem, and the solution in the design. Teacher provided students with design brief that had problems and solutions in them. Students worked in groups of five students, reading the text to each other, and finding the problems and solutions. They then found the main and supporting ideas in each of the paragraphs. Teachers evaluated students for finishing the task and collaborating with their peers.

In week five, the students learned about the composition and the layout of the texts. They learned the functions of each design element: Image, typography, colour and layout. The teacher/researcher prepared two sets of design trials with at least three design concepts that clearly showed a distinction between each of the concepts. Teacher prepared a set ofobjectives, so that each concept was on its own. Teacher handed them design briefs. Students had to put the design brief in the right perspective with appropriate manipulation of the design elements the typography first, image, second, layout, third and the colour last. This brainstorming idea helped students understand the function of each of the design elements. By the end of the week, students coped with tight design schedule and the challenge to develop communicative material.

In week six, the students prepared to present the proposed design solutions for studio critique and assessment. Students received feed-forward for two peer assessors on how to improve on their concept for effective communication. The teacher/researcher contributed to the process by reviewing the design solution with the student (see

Appendixes L & J). Students chose the ones they wanted to use or effect in the next stage of the work. The procedure was to offer the student the opportunity to have second and third opinion about his/her design solution. Students worked in pairs (assessor and assessee). Each assessor reviewed the other's design solution and shared the ideas. Teachers evaluated the students for carrying out the task and team collaboration.

In week seven, the students sat in groups of five and prepared charts and graphic organizers to use on their second design task. They received a design brief and applied the techniques they learned. They used the charts and graphic organizers they prepared to make the reading text easier to understand. Then, they prepared questions for the other teams to do. Students practiced relaxation techniques on each other in their teams. The teacher/researcher evaluated students for doing the task and for team collaboration. Students said how many times they could use the mind map to research into the problem easily, without making a mistake and going on to 11. The students followed the design process again.

In week eight, the students practiced design reviews and simulated a test situation. The material consisted poster designs. Students did individual, class and computer work. Teacher/researcher reviewed the students' design sketch pads. Students had the options of listening to the feedbacks and discussing their works with the teacher. This helped the students who found it easier to listen. Students read to each other and took the peer assessment in pairs.

In week nine, third project was initiated and it followed the iterate design process – research – thumbnails sketching – roughs – comprehensive – final product.

In week 10, thestudents presented the semester's portfolio for final teacher's assessment and review of student's performance throughout the semester. The teacher/researcherevaluated students for their scores on the design competencies.

In the final week, the students took a "peer assessment survey for graphic design students". Teacher/researcher could use either the class survey (see Appendix A, Figure 4). Students took the survey once again to find out how they felt. The class discussed the importance of surveys. After the students completed the questionnaires, they expressed how they felt then in comparison to how they felt before. What tools did they have now? Students prepared a list of the strategies they now possessed. The teacher/researcher gave positive feedback in both designing and speaking throughout the studios. The teacher assessed the students for collaborating and finishing the tasks.

Developing and Implementing Assessment Strategies

A pilot test was conducted to refine the assessment instrument and to conduct rater training (peer assessment training). In the pilot test, two groups of students totaling 140 completed the design activity in a manner identical to the larger study. Following the pilot study, raters and students debriefed the experience. Based on the results, refinements were made to the directions given to students and to the design constraints.

With such insight into the projects the researcher began the schedule as shown in Table 1.

Table 1: Project Schedule

1st Cycle	
Date	**Activities**
August 2010 - September 2010:	Education on Alternative Assessment
September 2010 - November 2010:	Implementation of Studio Procedure
November 2010- December 2010:	Implementation of Alternative Assessment on Design Studio Projects Data Collection Evaluation of Project
January 2011 – February 2011	Writing Final Report
2nd Cycle	
January 2011:	Development of Instructional Rubric
February 2011 -April 2011:	Implementation of Studio Procedure
April 2011- May 2011:	Implementation of Alternative Assessment on Design Studio Projects
May 2011:	Data Collection
June 2011	Evaluation of Project

Beginning/ End of Year Assignment: The entire group of second year communication design students comes from the Department of Communication Design. Although their faces are familiar, the researcher was teaching them for the first time since they were admitted to the department's undergraduate programme. In order for the

researcher to embark on the journey of answering his research questions, it was necessary for him to get an idea of students' attitudes about peer assessment in graphic design, as well as their previous experience learning graphic design. The researcher had the students create illustrated graphic design analogies comparing themselves to an object when thinking about how they perceive themselves as a professional graphic designer. This helped the researcher to get to know their feelings towards graphic design as well as how they towards peers involved in assessment as they began the class.

3.8   Ethical Considerations
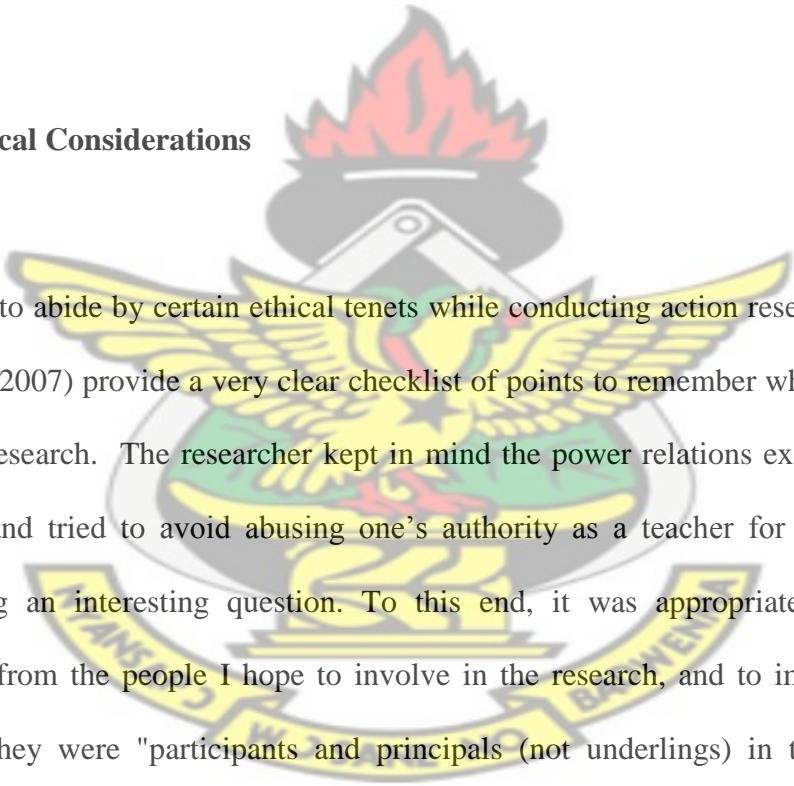
It is crucial to abide by certain ethical tenets while conducting action research. Nolen and Putten (2007) provide a very clear checklist of points to remember when carrying out action research. The researcher kept in mind the power relations existing in the classroom and tried to avoid abusing one's authority as a teacher for the sake of investigating an interesting question. To this end, it was appropriate in getting permission from the people I hope to involve in the research, and to impress upon them that they were "participants and principals (not underlings) in the research (McNiff et al. 1996; Lomax, 1994). To consider my students as potential colleagues and partners in the study thereby showing respect and consideration I would wish to show my students - the kind I wish I had received as a young student myself (Nolen and Putten, 2007, p. 402). I made sure to preface my research by first obtaining their consent.

Human subjects are entitled to their privacy and to the truth. It is essential to promise them confidentiality - never to reveal a participant's name without their permission or to reveal anything of a personal or sensitive nature (Nolen and Putten, 2007). Fictitious names are discouraged as they may belong to somebody else and for this reason it is preferable to use initials or numbers. Never interview a person without their permission and always check that they agree with the transcriptions or edit accordingly before they are published. Again, I have had no problem in that area except where tape recordings were muffled or difficult to understand, in which case I have asked the interviewee to try to recall or explain what he/she was saying at that point in the interview.
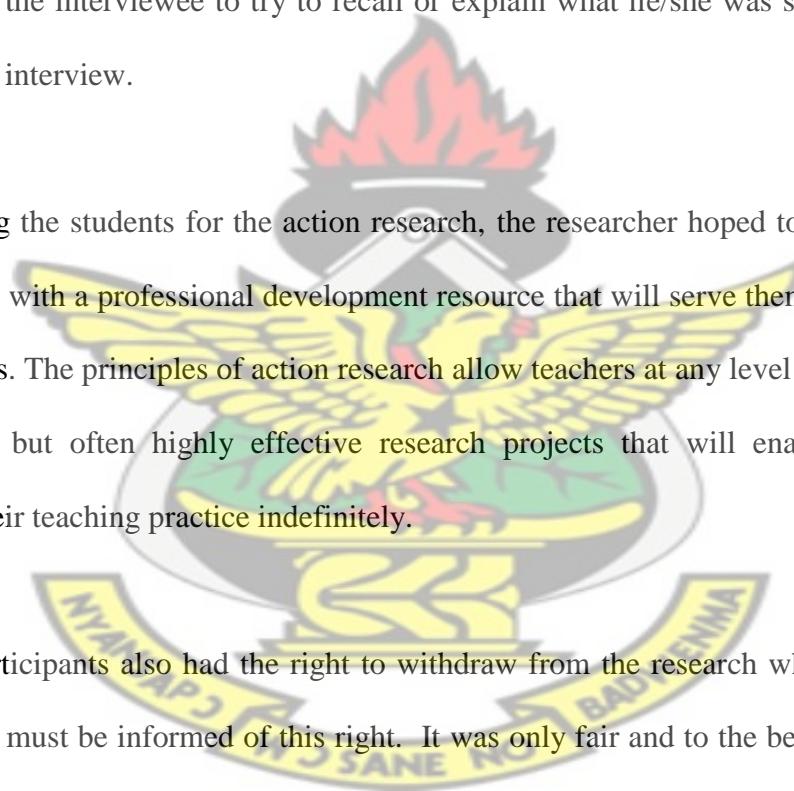
In preparing the students for the action research, the researcher hoped to provide the participants with a professional development resource that will serve them throughout their careers. The principles of action research allow teachers at any level to undertake small-scale but often highly effective research projects that will enable them to improve their teaching practice indefinitely.

Finally, participants also had the right to withdraw from the research whenever they wished and must be informed of this right. It was only fair and to the benefit of their continued interest in the research "to keep them involved and informed" (McNiff et al. 1996). The subjects were kept informed and, hopefully, involved in the research and their participation in it. At least, by the end of the research, the same students were still involved in the enquiry although it required them to be interviewed in their free time. They were under no obligation to do this.

3.9   Data Analysis Plan

Instrument

To address the aims of this study, the author used a self-report questionnaire survey in collecting data. The underlying rationale was that this approach is particularly useful for research that aims to collect data relating to utility and ease of use of themarking criteria provided in the studio, peer assessing using the rubric and the review of the criteria before work on assignments. Participation in the survey was voluntary, and participants were assured of the confidentiality of their responses. A five–point Likert scale survey was used to investigate university students' perceptions towards assessment rubric. The author conducted a pilot study of the questionnaire on twenty students. Based on the feedback received, the author made the necessary modifications in the wording and relevance of some questions.

The final questionnaire that was used consisted of closed-ended questions, and was mainly structured in five-point Likert-type scales as follows: strongly disagree (1), disagree (2), neutral (3), agree (4) and strongly agree (5). The main reason for using Likert-type scales rather than single items was that individual items have considerable random measurement error when measuring psychological attributes (that is, they tend to be less reliable, less accurate and less valid). The questionnaire began with some general questions about the participant's demographic information (age, gender, academic level) and then moved into a more detailed consideration of the frequency and use of assessment rubric.

The participants of this study consisted of second-year full-time undergraduate students enrolled on a graphic design module at Kwame Nkrumah University of Science & Technology. Kumasi, Ghana. This 28-week module is compulsory. The module has four pieces of formative assessment (per each semester) and runs throughout the full academic year. It is assessed by a combination of coursework (60%) and end-of-semester examination (40%). The module is delivered by a weekly four-hour studio/lecture. Most of the material used in the module is presented in lecture, including lecture materials for each topic, design briefs and relevant internet resources. Students are continually reminded and encouraged during theory sessions to make use of assessment criteria/rubric to enhance their learning.

3.9.1   Reliability Scales

The Cronbach's α internal consistency reliability estimates for Assessment criteria component was consistently high at 0.824. The Cronbach's α for rubric component was also consistently high at 0.818and another high record foruse of rubricsubscalescores of 0.830.   Cronbach's α shows extremely high internal consistency in reliability estimates of 0.92 (see Table 2).

Table 2: Cronbach's α Internal Consistency Reliability scales

AR Components	Cronbach's α Internal Consistency reliability Estimates	No. of Items
Assessment criteria	.824	5
Rubric	.831	7
Use of Rubric	.830	5
AR Component Combined	**.924**	17

Table 3a:Cronbach's α Internal Consistency Reliability Estimate for AR items

Item	AR Components	α
	Assessment criteria	
1	I have used assessment criteria in enhancing my learning experience	.771
2	Assessment criteria helped me in getting proactively involved with learning on the course	.774
3	Assessment criteria helped me to understand the course material through multiple sources of learning	.766
4	Assessment criteria helps me to become independent learners by doing more work on my own	.828
5	Assessment criteria helps me to control my pace of learning by going fast or slow	.804
	Rubric	
6	Assessment criteria helps explaining the subject more clearly	.782
7	Students are more interactive as the result of using assessment Rubric	.801
`8	I have no problem in operating the assessment Rubric	.785
9	I do not need any training to teach me how to use the assessment Rubric	.826
10	I find assessment Rubric in full working order whenever I want to use them	.766
11	My learning process has improvement since the implementation of Assessment Rubric	.784
12	If there is something unclear with the criteria than technical support is immediately available	.811

Table 3b:Cronbach's α Internal Consistency Reliability Estimate for AR items

Item	AR Components	α
	Use of Rubric	
13	I know how to use Assessment Rubric available in my graphic design studio	.802
14	Assessment Rubric helped me in preparing for the studio critique/lecture	.806
15	Assessment Rubric helps me to stimulate my problem solving skills through visual experiences	.771
16	Assessment Rubric helps me to further develop and stimulate my communications skill	.780
17	Students can understand and grasp the concepts more easily and effectively as result of using assessment Rubric	.818

3.9.2 Data Analysis and Results

The completed questionnaires were edited by the author and the data were duly coded for analysis using the SPSS software. The following statistical analyses were performed:

(i) One-way frequency (counts) and percentage tables on variables of interest.

(ii) Multiple response tables showing the joint frequencies (counts) and percentages of two independent categorical variables.

(iii) Graphical representations

(iv) Internal consistency reliability estimates

(v) Normality test

(vi) Comparison of mean/median scores on the attitude, importance and perception response scales.

CHAPTER FOUR

PRESENTATION AND DISCUSSION OF FINDINGS

This chapter of thesis presents the various interventions introduced in the graphic design studio to use assessment for learning. The chapter has four key intervention stages: re-aligning graphic design course; developing assessment criteria andassessment rubric; developing assessment strategies for graphic design studio and data collection.
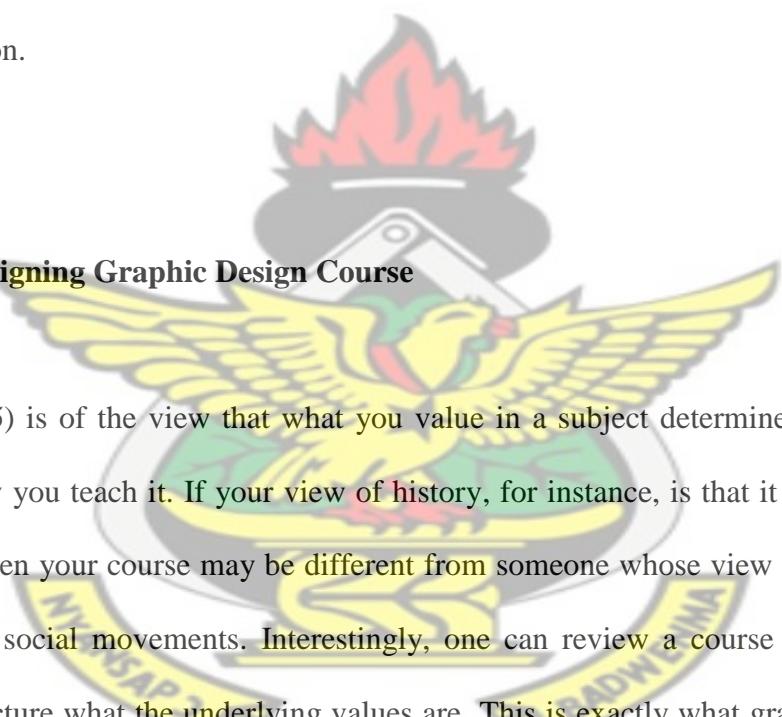
4. 1   Re-aligning Graphic Design Course

Brown (1995) is of the view that what you value in a subject determines in a large measure how you teach it. If your view of history, for instance, is that it is a method of enquiry then your course may be different from someone whose view of history is a serious of social movements. Interestingly, one can review a course and deduce from its structure what the underlying values are. This is exactly what graphic design pedagogy seems to address in this study. These may differ from the values expressed by the course designer. A useful check is what assignments and assessments are used in the course and how they are marked.

It is well noted that curriculum and course content design are fundamentals for professional training. They are vital elements that orchestrate the teaching and

learning activities of any learning institution.

4.1.1 Context of the Study

The Graphic Design course (DAD 251/2) is a required course for junior students of the Department of Communication Design. The course has a special significance in the entire curriculum because it is the introduction course before opting for a major as communication design students, and aims to provide students with the technical skills of graphic design, use of application software and design evaluation. The instructor (researcher), with the help of the teaching assistant, designed the course outline (Appendix A) in such a way that students would construct their own knowledge and skills by experiencing real-life situations. Project-based learning approach and portfolio assessment were thought to be the underlying frameworks that would suit the course best. It was a three credit course, which lasted 14 weeks. The course outline and weekly schedule is presented in Appendices A and B.

When defining the goals of the course, the instructor emphasized his desire to modify the students' concepts of graphic design development, instead of teachingspecific knowledge. Within the first two weeks of the course, students were introduced to the key concepts of alternative assessment and the semester-project. The instructor and the teaching assistant along with the students decided to develop assessment rubric for the content of graphic design course. The selected course, Graphic Design, is also a required course for all the students of the Department. This course is also a three-credit 14-week-long course, taken by second-year university students. The

participants had already been introduced to this course in their previous year under Visual Communication course, and the selected course had been delivered by the instructor many times, the content seemed to be appropriate for the projects.

4.1.2   Approaches adopted by this study

There are several approaches for developing creativity. The first approach emphasizes on student-centred learning, where learning means actively constructing knowledge and skills on the basis of prior knowledge, embedded in contexts that are authentic and offer ample opportunities for social interaction (Brown, Collins, &Duguid, 1989). Here, is simply reversing the role of teachers and students – changing teacher activities in conventional classroom to student activities. In relation to the various processes of thought and experience, creativity was summarized by Ryhammer and Brolin (1999) as including the following:

- thinking in opposites, analogies and metaphors
- intuition
- inspiration
- problem finding
- problem solving.

Second approach has to do with, the teacher acting as a facilitator by giving direct instruction in the thinking skills and processes required. This aims at helping student to have a deeper understanding of what is being taught. Third is the assessment approach, which students make judgment based on well-structured criteria. This can

promote student involvement, responsibility and excellence, focus attention on skills and learning, and provide increased feedback (Weaver and Cottrell, 1986). Quality of presentation is also taken into consideration in assessing student's performance since it increases student's attentiveness when they are assessing themselves.

However, in the present communication design context, larger class size, time constraints and staff-student ratio do not support creative thinking. The curriculum is very tight and rigid. The present study reveals the importance of creative learning activities that can be developed for students in the department. Also, another aim of this study is to infuse peer assessment methods into the design classroom/studio.

4.1.3   Learning Objectives

Based on the literature review of Guilford, 1967; deBono, 1970; Smith and Carlsson, 1990; Finke et al, 1992; Dunbar, 1997; Dacay and Lennon, 1998; Amabile, 1998 and other related literature, the following learning objectives are proposed for creative development. They involve both the cognitive and affective learning objectives. The students will be able to:

1.   Think critically, identify graphic design issues and formulate solutions to graphic design problems.

2.   Use computers and information technology effectively to address graphic design problems.

3.   Function effectively in a teamwork environment.

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4. Apply and demonstrate knowledge in basic layout design, general colour theory, typography and images/illustrations to solving graphic design problems in their creative products.

5. Use and demonstrate their knowledge and comprehension of basic graphic design principles, concepts, and theories through their oral presentation.

6. Evaluate and synthesize information and ideas from a variety of sources and formats.

7. Competently collect, analyze, organize, evaluate, and present visual data.

8. Understand, analyze, and evaluate original research literature in support of current research projects.

9. Compete effectively for entry level employment and/or placement in graduate or professional training facilities.

4.1.4   Rationale for designing and selecting the activities

In order to fulfill the above learning objectives, a set of rationales for designing the graphic design studio activities were suggested. These creative learning activities suggested by this study needed to suit the Department of Communication Design context. Although collaborative learning is of importance in higher education in general, the context of communication design offers a well-grounded rationale for

implementing collaborative learning, peer and self-assessment. First, collaborative learning fosters reflection. Reflection skills are conditional for making reliable judgments about peers' work; also peer assessment can also be helpful in fostering reflection skills.

Second, graphic designers have to work together, learn from each other and become a member of a learning organization. One of the main aspects is developing a professional attitude towards the work and ideas of other designers in the school. This requires training in skills that transcend the basic know-how of a certain content domain. The peer assessment skill is one of such skills.

Third, as prospective graphic designers, student designers have to learn how to make critical judgments about the performance of peers. The student designers will be assessors in their own studios. Another reason is thatafter students leave higher education, they are likely to be heavily reliant on the judgment of their peers to estimate how effective their performances in the school are (Brown, Rust, & Gibbs, 1994).Training in peer assessment skills stimulates that this mutual influence takes place at a professional level.

4.1.5 Method

This study aims at developing a set of learning activities and studio practices that foster student's creativity development and can be infused into communication design curricula of KNUST. First, based on creativity literature in western countries, a set of

creative learning objectives is developed. For developing and choosing suitable strategies and activities, a set of rationales that suit KNUST context is suggested. Based on these rationales and learning objectives, a set of learning strategies with some exemplar activities in communication design content are developed. After the exemplars of activities are developed, they are tried-out in the second year studio in the department.

Step 1: Learning activities developed

Following the methods described in the previous sections, a number of creative learning activities were developed for this study. They are listed in Table 4. According to their major learning objectives designed to achieve. Besides the major objectives indicated in the table, these activities may also enhance other cognitive and affective objectives.

Adopting the rationales described, this study develops the learning activities in the following ways. First, it starts with the social interaction between teacher and students, like questioning, explanation of tasks, giving examples and demonstration in class. Formerly, teachers provide and students receive but now students are asked to do these tasks. In short, the first method has to do with students are playing active role in perfecting their learning.

Table 4: Suggested list of learning activities for fostering creativity

Major learning objectives	Learning activities
1. Critical thinking ability	Creative problem-solving, open ended enquiry.
2. Presentation	Appreciating the language aesthetics, assessing student's performance and appearance.
3. Communication	Clarity of information, coherence and managing questions.
4. Fluency	Brainstorm multiple ideas, problems and solutions.
5. Flexibility	Building upon previous knowledge.
6. Imagination	Thinking into the impossible, future and outside the box.
7. Sensitivity/socialization	Using the five senses to identify problems, discover changes and intuitive.
8. Assessment	Feedback from learning activities is actually used to adapt the teaching to meet the learner's needs.

Secondly, giving students the freedom to explore, experiment and guide themselves in the problem-finding and problem-solving processes. In the past, teachers come up with the ideas and project and students do the task, but now teachers ask students to come up with both the problem and find possible solutions to the problem. Students are giving open ended problems to start the problem-solving work. The tasks have

some level of difficulties to provide the acceptable challenges and to also encourage students to take sensible risks. To achieve this, the original creative problem solving and open inquiry model are simplified through vigorous research and several sketches.

Thirdly, this study purposely induces divergent thinking process in nearly all tasks suggested. In the past teachers were contended with one or few correct ideas in students work, but now teachers encourage the expression of fluency, flexibility, novelty, elaboration and even originality in students work. For every task, a large number of ideas and sketches are requested to stimulate fluency. The tasks require as many ideas as possible, scrutinizing them and finally choosing the best works. Since the idea generation time offers students the opportunity to come up with many ideas from many different directions and further work on the ideas, it also stimulates students' flexibility and elaboration. In short, the tasks can foster divergent thinking abilities and improve student's skills in learning.

The last method used by this study for designing activities was brainstorming. Here for each kind of tasks, a large number of possible ideas were brainstormed and the only ideas that fulfilled most of the tasks were finally chosen. During this stage, students are encouraged to use their imagination, sensitivity and their divergent thinking abilities like fluency, flexibility, novelty and elaboration to discover problems and find possible solutions to the problems. This gives more room for creative thinking.

After reading the methods mentioned above and the exemplars suggested in the next section, one could say that, peer assessment provides a variation of feedbacks to meet the learner's needs. The learning activities suggested in this study is to equip students with the necessary knowledge to be critical in their thinking processes.

Step 2: Developing Studio Practices

By the end of October 2010,the researcher had selected four creative activities for the second year graphic design studio. These activities were grouped under two work modes: group (collaborative) work and independent study and three assessment modes: group assessment (oral presentation), self/peer assessment (Independent graphic design study) and teacher assessment.

1. Group Presentation
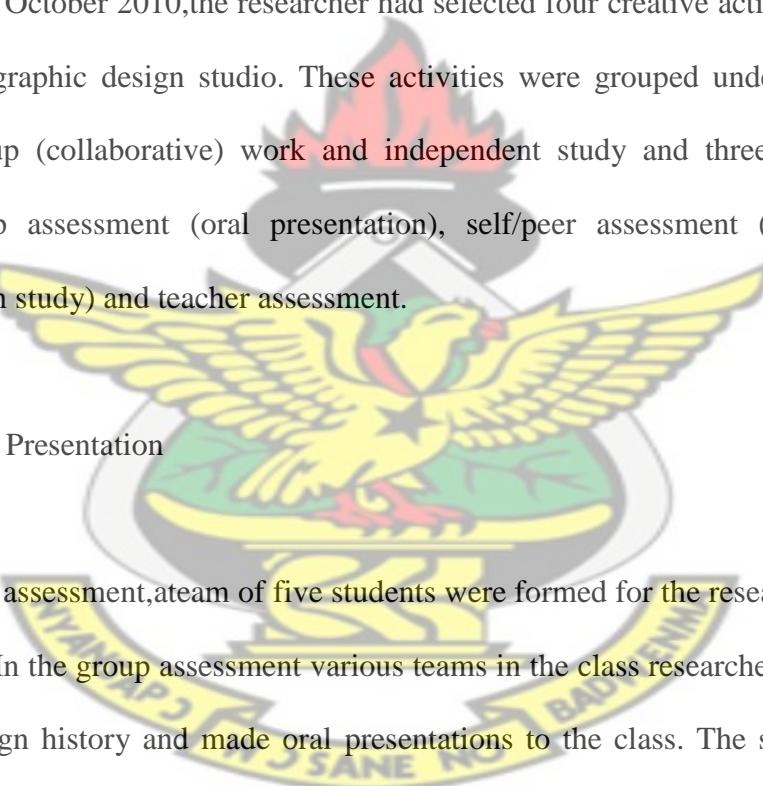
For the group assessment,ateam of five students were formed for the research and oral presentation. In the group assessment various teams in the class researched on various topics in design history and made oral presentations to the class. The study was to provide students with the adequate knowledge in oral presentation, design trends and the various art styles and how they impact conceptualization. The researcher provided the students criterion-referenced rubric to assist in the assessment of their oral presentation and studio critique in the studio. The groups presented in turns, during a presentation, the non-presenting students were required to assess the performance and content of the presentation per the criterion-referenced rubric. After each presentation

the class was given the opportunity to ask questions and comment on the presentation. Verbal and written feedbacks were given to the teams. Scores from each student for each presentation were collated, summed and the mean found for each sub-criteria for the group.

2. Collaborative Work

Collaborative learning is an important aspect of the training of peer assessment skills. The term 'collaborative learning' refers to an instructional method in which students work together in small groups toward a common goal. The students are responsible for each other's learning as well as their own. Thus, the success of one student helps other students to be successful. According to Gokhale (1995), "there is persuasive evidence that cooperative teams achieve higher levels of thought and retain information longer than students who work quietly as individuals"(p.1).The shared learning gives students an opportunity to engage in discussion, take responsibility for their own learning, and thus become critical thinkers (Totten, Sills, Digby, & Russ, 1991).

3. Independent Study

Under the second part, a great level of interdependency in assessing creative projects was expected. Every student played two roles; as an assessor to another and assessee to another. In the studio projects, students were given three design briefs to work on (each project followed after the other, refer to Figure 2). The projects were based on design history and layout design studies. Two principal stages in the design process

(comprehensive and final stages) were selected for the implementation of peer assessment for the special reason that students would have independently solved initial design challenges and have come to the point where they required second opinion (peer feedback). It is rightly so also in professional practice to meet the client when you have to some extent solved the design problem.

The critique my students do in my studio could be improved in terms of detail, scope and the use of conventions. The researcher feels strongly that critique is an important skill for design students to develop. The researcher surveyed students' attitudes towards critique. They need to have a more positive and productive attitude towards critique work. With the right perspective and tools, all students can find success and enjoyment in putting their thoughts through critique.

In order to bring my studio practice and student success closer to my values about critique, I set goals and an action plan to accomplish this. I wanted to:

• increase enthusiasm for critique through co-creation

• teach the importance of critique through peer assessment

• increase the detail students put into their critique through peer assessment

• encourage and foster creativity in critique through peer assessment

• use corrective action in the form of strengths, weaknesses, and next steps.

The researcher decided to start by modeling the critique process within a peer assessment studio session with his students. The process took several days but it showed students that the critique process cannot be rushed. The researcher also felt it would create enthusiasm if the researcher could model the joy and fun of critique.

4. The Creative Process

The researcher planned to develop ways to improve critique by coaching students to build on knowledge that was already there and use their oral ability as a starting point to written responses. The researcher planned to motivate students and encourage them to help each other to feel more confident about their verbal expression. This would be accomplished through the following strategies:

• use a process approach to solve design problems

• use corrective feed-forward with students

• explicitly teach problem-solving steps and strategies

• clearly outline evaluation expectations

• teach the required graphic design terminology

• replicate assessment circumstances in the studio.

Project Cycle

Figure 3 shows two forms or stages of assessment (formative and summative) coexisted for each task in spite of its complexity in the studio learning environment; and they include *group assessment (Project proposal - oral presentation)*, *self/peer assessment (creative process* and *product assessment)*. While each stage of the creative process provided opportunities to use one or form of assessment or other to improve learning and skill acquisition. Consequently, the process and results of each assessment stage influence the next stage directly. In all stages of assessment, students played active roles.
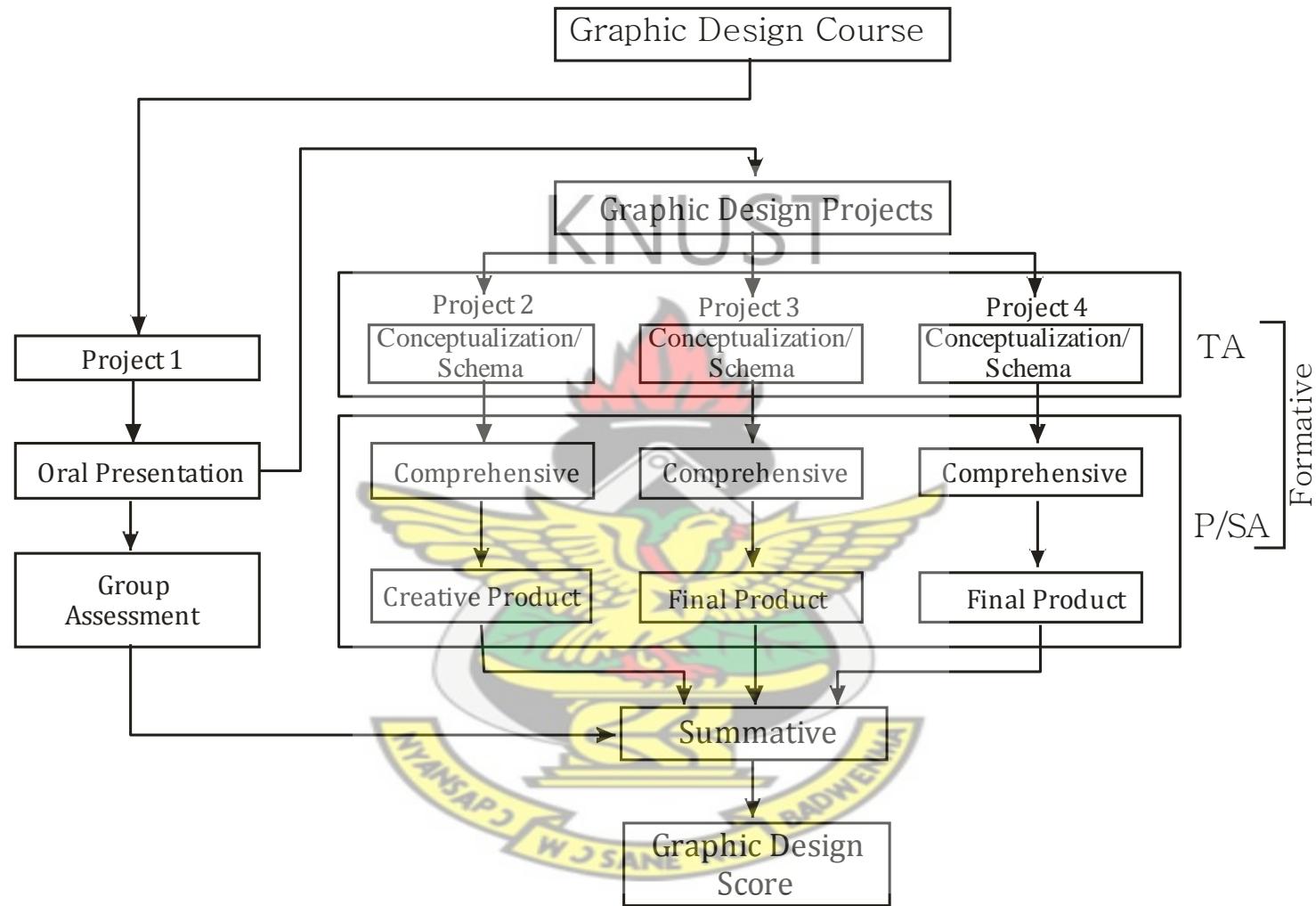
Figure 3: Graphic Design Course Scheme

Step 3: Implementation of the creative activities in classroom

Some suggested activities were tried-out in the second year class in the department. These activities were packed together and conducted by the students in two parts: peer assessment (group work) and peer assessment (Independent study). In the first instance which was a group work, the researcher made some presentations to the class on the various layout designs to prepare students for the task ahead. Then research topics on design styles and poster design were given to small teams (maximum 6 students in a group) to research on and presented to the class. The design styles include Constructivism, Futurism, Dadaism, Cubism, Art Nouveau, Plakastil, Suprematism, Bauhaus, Art Deco, De Stijl, and New Typographic style to provide students with the adequate knowledge in the design trend and the various art styles.

After the research presentations on the design styles, students were instructed to do some studio activities bearing in mind the ideas from the various design styles and the knowledge in layout design, to come up with their own concepts to depict the design styles. The works were categorized into the various design styles and mounted in class for specialize groups to meet and talk about the works. There was social interaction between groups members from which the categorized works were evaluated by specialize groups with the assessment criteria provided by the teacher. The assessment criteria include aesthetics, originality and appropriateness of topic and the use of other medium. The groups selected the comments using outstanding works for further commentary and presented their general overview of the works to the class. Finally, the class were given the opportunity to pass their comments on the general overview

of specialize group's about the works and the groups submitted their comments to the teacher for study.

4.1.6   Findings and Discussion

The phase aimed at breaking away from the traditional teacher-centered summative assessment to encouraging and adopting new learning strategies which provide variety of feedbacks to meet the learner's need through peer-assessment and self-reflection practices. The objective for the phase was to identify the gap between students' perception of active learning, their practices and developing workable mechanisms for self reflection and peer assessment practices in order to enhance active learning in schools. The phase also tended to make students responsible and actively involved in their learning processes.

The first approach was developing a course outline to guide students on what they will do and how to do them. This outline described briefly what was expected from students week by week. Second isthe purpose of peer assessment. The purpose of peer assessment was that students are empowered to assess peers. This required that the student made arrangements in which he or she agreed with students of similar status about the design and appropriate criteria of specific study tasks and performances. The student took the responsibility to make critical judgments about the performances of peer using the appropriate criteria provided.

The third approach was choosing the format of assessment. The task for alternative assessment was broken down into separate skills and these skills were assessed one after the other, before being recombined and practiced as a complete task. In this phase, such skills in the assessment format includes, presentation, depth of content, concept development, originality and style, aesthetic appeal, use of colour and the use of typography. This way, students were simultaneously and systematically guided in their assessment skills and content related skills. The purpose of this task for analysis in this phase was writing an assessment report about the performance of a peer at the end of the course. Writing the assessment report was the final peer assessment task.
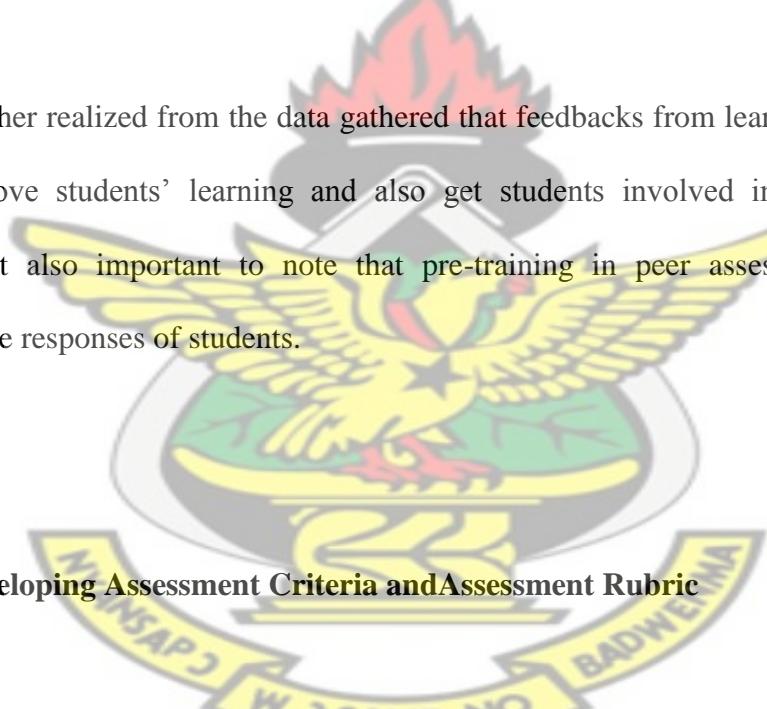
The researcher realized from the data gathered that feedbacks from learning activities helps improve students' learning and also get students involved in the learning activities. It also important to note that pre-training in peer assessment cannot influence the responses of students.

4.2:   Developing Assessment Criteria andAssessment Rubric
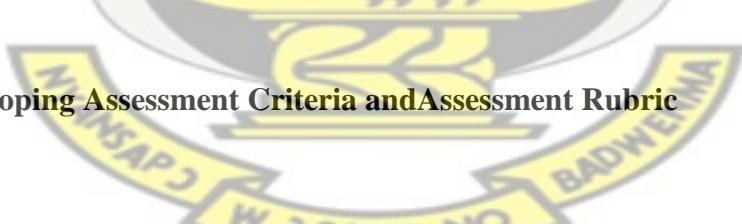
Theresearchershowed how through facilitating and engaging the students in decision making in the studio new paths of knowing were created, the researcher enabled the students to take ownership of that learning process, which resulted in an improvement in their learning, as well as the emergence of confident attitude in students' approach to studio learning. In the process, the researcher came to the realization of the value of enabling students to contribute to their own learning, as opposed to presenting them with a body of ready-made facts to be assimilated.

4.2.1 Rationale

The researcher's concern heightened because the students entered the second year with little knowledge of basic graphic design language used in art and design criticism. In other years, the researcher felt students have had lots of practice in solving design problems, yet competence in graphic design language was low. The researcher had given his students daily problems to solve but was not as methodical as it should have been in the approach to helping the students improve on their design critique. The researcher would like to bring them up to a more consistent undergraduate level,but because of their graphic design language and terminology skills they had difficulty and were in dire need of some confidence enhancement. The researcher felt that focusing on the oral habits and patterns would improve the language and terminology awareness and then hopefully the student's ability to communicate ideas more effectively. Throughout the years, the researcher had noted that flaws in written work are also reflected in the way student spoke during studio critiques.

When we are unable to communicate a thought clearly, we are at a serious disadvantage. This applies to all aspects of life. Communication problems in the tertiary level are addressed with enthusiasm. However, our students are not always exposed to proper language use throughout their daily life and consequently they develop sloppy habits that reflect negatively on them. In making the connection between oral and written language for the students through the use of assessment rubric, the researcher hoped to bring them to a higher level of functioning where they would be more comfortable with the language and terminology and will be able to

function at a more independent level when they are peer assessing. Without significant improvement in their language and terminology skills, their future will include many struggles, one of them being the inability critique a design and communicate as a professional.

4.2.2 Activities used in developing Rubric

The researcher decided to try a two-fold approach to help change the way he taught graphic design. First, the researcher started by developing an assessment criteria and rubric for design projects. The other strategy was to teach directly using the rubric in self andpeer assessment of the students' creative products.

Developing the Instructional Rubric

To develop the instructional rubric, first, the researchermodelled the rubric, went over how it was done and asked questions as he went along.Finally the researcher adapted the Andrade's (2000, p. 5) model of developing a rubric:

1. *Look at models*

2. *List criteria*

3. *Pack and unpack criteria*

4. *Articulate levels of quality*

5. *Create a draft rubric*

6. *Revise the draft*

7. *Printing of rubrics*

1. *Look at models*

First, the researcher collected baseline samples of rubrics he could lay hands on from wherever source possible e.g. the internet, library sources, etc. The researcherreviewed these samples to ascertain their validity and reliability when applied to graphic design assessment. Although he could not find one that fits perfectly, they provided bases for future work. The researcher made some notes from them to build strong points for the class discussion. He took samples to class and asked students what makes one good and the other one weak. Their responses during the discussion were recorded for referencing.

2. *List criteria*

The researcher briefed the class about the next activity toward establishing instructional rubric. He assured them that their contribution and participation was very important in creating a democratic classroom culture; where students are part of the decision making process more especially about how they should be assess. Students were divided into groups of 5, and each group was given the opportunity to select a name for the group. The groups were given copies of different rubrics the researcher had generated for evaluating graphic design products. Each group entered into discussion mode to consider the rubric samples, the groups generated a list of 'what counts' or should be included in the final rubric during the discussion of the models. After 30 minutes of group discussion, each group's scribe was given time to present

the group's submissions on each category one after the other. When the class felt they shared and agreed to the group's contribution, it was added onto the chart on the board. Each group shared their solutions with the class.

Where the class missed out on important areas, the researcher drew their attention to it and explained further the importance of that component. The students were able to ask questions pertinent to the development of the rubric; answers were given to all concerns raised. Together with the students, we went through the tall list of criteria again to look for duplications and irrelevant ones that have found their way in.

3. *Pack and unpack criteria*

The researcher went through the endless list of criteria, many of which were related or even overlapped. The researcher took time to combine some of the criteria, to avoid creating large categories and complicated ones, the researcher also made sure the most important criteria were not buried but emphasized by being conspicuous. For example, the students' most difficult areas under typography were separated and considered as stand-alone criteria.

4. *Articulate levels of quality*

Next on the discussion table were the levels of quality. Drawing again on students' comments during their group's discussion of good and poor models, different samples were scrutinized and amended to reflect the kind of projects we undertake. The students debated at length on choice of number of levels and were more sensitive when it came to the descriptions. They preferred descriptions that are commonly

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associated with the professional development and industry. An example is substituting "Most Satisfactory" with "Designer demonstrates advanced skills in design effectiveness, layout, imaging, typography and innovative." Another example is "Unsatisfactory" with "Designer does not meet the standard in design, layout, imaging, typography and communication"

5. *Create a draft rubric*

Back in the office, the researcher created rubrics out of the different criteria developed by the class for the various activities identified as examinable and expanded on the levels of quality for the rubrics. The researcher reorganized them under the following:

1. Rubric for oral presentation   -   group oral presentation

2. Rubric for Self/Peer assessment   -   graphic design product

3. Rubric for Peer Assessment   -   graphic design product

4. Instructor's Assessment Rubric   -   graphic design process/
                                                  product

Table 5: Rubric Development Chart

Appendix	Rubric	Purpose	Type of Assessment
A	Oral Presentation	Oral presentation	Group/Peer
B	Graphic design	Graphic design product	Self/Peer
C	Graphic design	Graphic design product	Peer
D	Graphic design	Graphic design process/product	Teacher/Instructor

6. Revise the drafts

In the next studio, the researcher presented the final draft of the rubrics to the students and asked for their comments. The researcher was open for more comments and contrary views, and possibly to amend or revise the rubrics again.

7. Copying/Printing

Finally the second revised drafts were printed out to check for errors. Several copies of the approved rubrics were made ready for subsequent studios. In spite of the thoroughness, the researcher always looked for more comments during the usages of the rubrics. Although, we had to acquaint ourselves with the different projects and how the rubrics would be applied to capture all the important learning outcomes.

4.2.3   Trial Use of Assessment Rubric

As a class, after the generation of the rubrics and the researcher needed to teach the students how to examine and evaluate using the different instructional rubrics in graphic design studio and provide feedback for students' work-in-progress. It was also an opportunity for the students to evaluate the rubrics to find out whether therubrics help the students to identify the key and grey areas of the rubric. The students were encouraged and motivated to see for the very first time instructional rubric being used in their graphic design studio critique.

To perform the two tasks of evaluating the effectiveness of the rubrics and how to use the rubrics in studio critique, the class formed smaller study groups with each group

consisting of maximum six students and minimum four students. The students were allowed to choose their group members. The researcher introduced the students to how to go about using the criteria and the ratings. Three different poster designs of varying qualities (weak, moderate and very high standard) were used to explain the ratings and communicate strengths and weakness in a graphic design.

The researcher had the students helphim mark the sampleposters with the rubric. Although they were familiar with rubrics it was their first attempt at evaluation. Each pair (assessor and assessee) in the study group had a poster to assess with the test rubric. After ten minutes of assessment, the partner who played the role of assessor was replaced by another study group. This provided the second opinion badly needed in peer assessment to limit bias. Having gone through the exercise the second time, they regrouped with their peer evaluators and discussed how they could improve thedesigns. They had an opportunity to make corrections for improvement.

The graphic design projects were evaluatedagain and then another chance was provided for improvement. The cumulative activity was aposter design assignment and an oral presentation. The students had to explain why they gave amark and provide the presenting student with suggestions for improvement. This was doneimmediately. The researcher then had brief sessions with each pair - the assessor and assessee for 3 minutes and we looked at how they hadevaluated themselves (they had to give themselves a mark on the evaluation sheet prior topresentation), how the class evaluated them, and how teacher/researcher evaluated them. The researchermoderated where it was necessary to calm aggrieved student. I was excited and wantedto continue on with this type of teaching.Next, the study group considered

the rubrics with the aim of looking for ways to improve upon them in our subsequent design studios.

4.2.4   Concluding Remarks

The research helped the students feel better about what they were doing, saved me time, and promoted my personal growth and that of the students. The researcher realised that the students' level of confidence and overall excitement improved and they had transferred some of the responsibility for learning. This increased not only their participation but the quality of the work they handed in. The teacher/researcher had never felt better about teaching before.
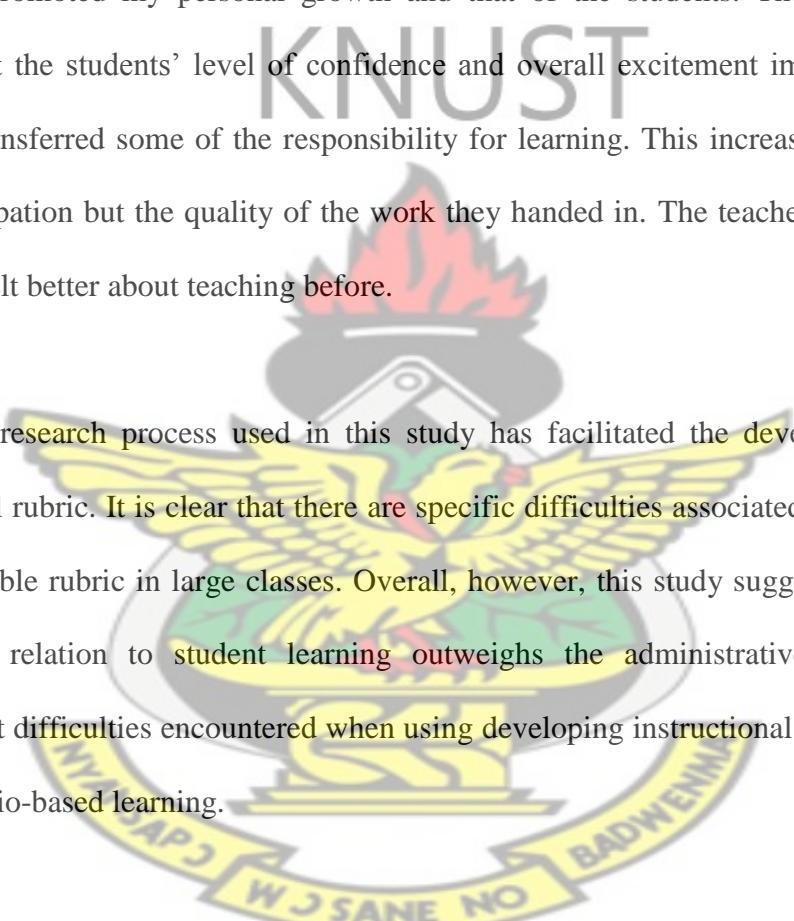
The action research process used in this study has facilitated the development of instructional rubric. It is clear that there are specific difficulties associated coming up with a credible rubric in large classes. Overall, however, this study suggests that the benefits in relation to student learning outweighs the administrative and staff commitment difficulties encountered when using developing instructional rubric to be used in studio-based learning.

The researcher was amazed at how hard the students worked on the use of rubric and how they tried to be fair and honest with their peers when they were conferencing and evaluating each other's graphic design. Some studentsthe researcherobserved over a period originally received a low grade on his comprehensive design. It was incomplete and had few details. Many of the text and layout items were not there originally.   His   finished   poster   design   received   a   higher   grade.   The

researcherwondered at this point how this activity would affect how the student would do on the final design and subsequent assignments. The researcher wrote in his journal the following entry:"I noted that developing a rubric was worth the time spent. The marks and scores proved the instructional rubric and peer assessment really worked. It has been observed that a well-constructed criterion-based rubric allowed the assessment to play a lead-role in the learning process". Asconfirmed by Boud and Falchikov (2005), when designing assessments for constructive alignment, it is useful to consider that assessment should not only be aligned to immediate learning outcomes, but also with what is expected for long-term, "longer lasting" learning.

The researcher found that the students were now more aware of what is being marked graphic design and what exactly the teacher would be looking for, because creating the rubric together allowedthe studentsto be more aware and also providedthem with further opportunities to model the correct responses. Marking has also become much easier because we have already created the marking rubric and the class participated in the marking wherever possible. Another benefit was that the students were more aware of the assessment process and knew exactly what the learning outcomes should be. There were still many areas on which teacher/researcher needed to work, but, with persistence and by using the ideas and suggestions gleaned from this past year, the researcheris hopeful and curious to see where his action research will be a year from today. It would be interesting to see how much more journaling, self-reflection, and self-evaluation the researcher will try. Already some ideas that were not put into practice; they would be tried next year.

In conclusion, the most significant benefits were achieved through developing well-aligned assessment criteria. The studio critiques provide a congenial environment for instructors to provide timely and constructive feedback to the students as well students to their peers. Such efforts go a long way to ensuring that an assessment is effective in enabling the skills and attributes associated with long lasting and ongoing learning.

4.3   Assessment Strategies for Graphic Design Studio

In this section, the researcherhasendeavoured to demonstrate his attempt to live according to his values of fairness and equality. The researcher's reflection on his actions, in fulfillment of the action research methodology, raised the researcher's awareness of occasions where his values were not reflected in his practice. In the management of these situations, the researcher indicated his capacity for incorporating change and improvement in his practice, so that it became a practice that was commensurate with his espoused values of academic respect, and equal opportunities for learners.

4.3.1 Rationale for designing and selecting the activities

In order to fulfill the above learning objectives, a set of rationales for designing the peer assessment in creative development activities to suit the Department of Communication Design context were suggested as follows:

- Treats assessment as part of learning, so mistakes are seen as opportunities rather than a sign of failure

- Reduces the amount of teacher assessment but improves the quality.

- Provides more accurate feedback about processes such as collaborative working (students are often in a better position than teachers to judge individual contributions)

- Helps students to develop insight into their own performance by assessing the work of others

Besides fulfilling the requirements of creative learning, the design of the activities also needed to cope with the various constraints in the existing Department of Communication Design context at KNUST. Encouraging these activities would not only enhance creative thinking but also knowledge and understanding. Emphasis should be put on toying with ideas and the processes in reaching toward the final product. Teachers should pay more attention at the various stages of the creative process rather than the final output of student's works. The activities allow students the freedom to express their ideas in verbal, written and graphical ways. Quality of presentation is also taken into consideration in assessing student's performance since it increases student's attentiveness when they are assessing themselves.

4.3.2 Innovative Graphic Design Studio Activities

By the end of October 2010,the researcher had selected two activities for the second year graphic design studio. They were group study on brainstorming presentations and

independent studio work. These activities were to be assessed using different assessment modes i.e. Group/self/teacher assessment (Oral presentation) and Peer/self/teacher assessment (Independent Graphic design study).

Authentic Assessment Practice

Under the second part, a great level of interdependency in assessing creative projects was expected. Every student played two roles; as an assessor to another and as an assessee to another. In the studio projects, students were given three design briefs to work on (each project followed after the other). The projects were based on design history and layout design studies. Two principal stages in the design process (comprehensive and final stages) were selected for the implementation of peer assessment for the special reason that students would have independently solved initial design challenges and have come to the point where they required second opinions (peer feedback) see Fig 2. It is rightly so also in professional practice to meet the client when you have to some extent solved the design problem.

The studio critique could be improved in terms of detail, scope and the use of conventions. The researcher feels strongly that how to critique a work of art or design is an important studio skill every art and design student needs to develop. The researcher has observed and monitored students' attitudes towards critique over the past couple of years and has not been enthused. They need to have a more positive and productive attitude towards critique. With the right perspective and tools, all students can find success and enjoyment in putting their thoughts through critique.

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In order to bring the researcher studio practice and student success closer to his values about critique, he sets goals and an action plan to accomplish this, the researcher wanted to:

- increase enthusiasm for critique through peer assessment

- teach the importance of critique through peer assessment

- increase the detail students put into their critique through peer assessment

- encourage and foster creativity in critique through peer assessment

- use corrective action in the form of strengths, weaknesses, and next steps.

The researcher designed a modelfor the critique process within a peer assessment studio sessions with the students. The process took several days but it showed students that the critique process cannot be rushed. The researcher also felt it would create enthusiasm if students were involved in the process.

The researcher developed ways to improve studio critique by coaching students to build on knowledge that was already there and use their oral ability as a starting point to written responses. The researcher motivated students and encourage them to help each other to feel more confident about their verbal expression. This would be accomplished through the following strategies:

- use a process approach to solve design problems

- use corrective feedback with students

- explicitly teach problem-solving steps and strategies

- clearly outline evaluation expectations

- teach the required graphic design terminology

- replicate assessment circumstances in the studio.

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4.3.3   Provision of Assessment Rubric

The investigator provided the students criterion-referenced rubrics to assist in the assessment of their oral presentation and studio critique in the studio. The groups presented in turns, during a presentation, the non-presenting students were required to assess the performance and content of the presentation per the criterion-referenced rubric. After each presentation the class was given the opportunity to ask questions and comment on the presentation. Verbal and written feedbacks were given to the teams. Scores from each student for each presentation were collated, summed and the mean found for each sub-criteria for the group.

4.3.4   Peer Assessment Procedure

The investigator's draft procedural guidelinewas adopted fromWadhwa, Schulz & Mann (2006), Kearney and Perkins' (2011) Authentic Self & Peer Assessment for Learning (AASL) model and Salamon's (2008) Assessment models. These models were modified to suit each studio projectwith some revisions. These guidelines outlined the timeline for the procedure, students and instructor's responsibilities, and processes for submitting, distributing and moderating work. Information relating to the rationale and procedure for implementing peer assessment was presented to students by the instructor.

The peer assessment procedure involved series of steps that helped to sustainthe process over time and application. The steps have been discussed below:

Step 1: Development of Instructional Rubric

Most students thought they did not have the time to use rubrics; however, once they saw the development of the rubrics and the little time it took to write them with the studentsthey were hooked to it. By the end of the semester, the students were using the vocabulary of the rubrics. It gave them a clear idea of what the teacher expected of them. The students realized it was their responsibility to meet the criteria laid out by them. They were being accountable for their work and teachers and students were engaged in their learning, not merely compliant.
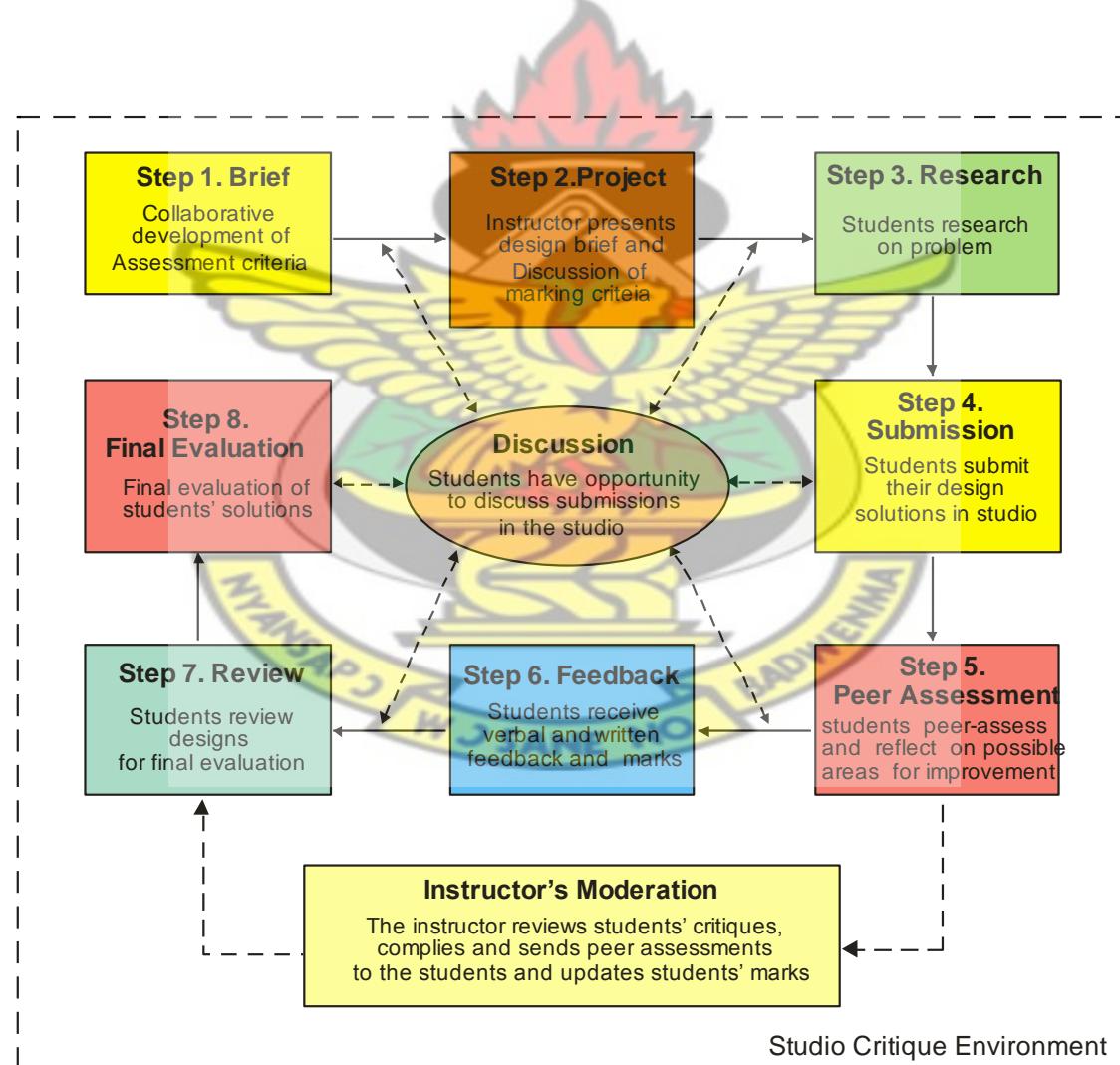
Figure 3: Peer Assessment Delivery Method
Source: Adapted fromWadhwa, Schulz & Mann (2006)

Step 2: Design Brief and Instruction Rubric Presentation

Using the LCD projector the investigator showed students the design brief for the project and actual rubrics for the provisional assessment. Although they were familiar with rubrics since they contributed to its creation, we had a lengthy discussion on what each category meant and how to apply it. When we took up the practice assessment together, the investigator modeled responses based on the rubric and clearly explainedthe reasons behind those actions. The design brief and assessment rubric were given out to the students.

Students need to be prepared and equipped to critique design works independently. The investigator gradually withdrew his support and guidanceby the third project.He also gradually removed the conferencing optionso that the students could solve the critique problems more independently.

Step 3: Research

Before the students started, the whole design process,the investigatormodeled how to brainstorm on topics, develop a chosen theme, and develop an outline for a text, image and colour. Together, we brainstormed all the things that go into making of a good piece of design(see Plate 1). Next, the investigator needed to teach the students how to examine existing designs and their reading as sources of good ideas and their thinking through the needs of an audience,The students were tosee like a designer and read like an audience.The students were encouraged to recognize and emulate good

concepts, typography, and colour. Our independent design study provided good opportunities for the students. The thinking within the drawing lesson, especially for high needs students, provided a model for discussion. The participants took time to share ideas and note good design. Talk, in critique, is key to establishing good communication, behaviours, and patterns within the critique.

After struggling with the brainstorming process(see Plate 2), the researcher noticed students were interested in mind-mapping technique so he developed some shortcuts. The investigator talked about the designs to the students and the participants used this to discover making judgments on the basis of evidence (audience response) and improve creativity. They were given an opportunity to re-write their responses (feedback). Students completed several responses to the design briefs this way.

Plate1: Group brainstorming session

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Plate2: Using the mind-mapping technique in the studio

Step 4: Project Submission

In the next studio, the students exhibited their design projects on the studio wall panels. The students were delighted to see the visuals their peers were able to generate from the brainstorming activities. The participants took some time to appreciate the students' efforts; there was much excitement and it was always fun to see some unusual solutions. The exhibition of students' works always served as a source of motivation and many weak students always drew inspirations from the more challenging concepts.Plates 3a &b show students appreciating peers' works.

The evidence that the investigator collated pointed to the fact that exhibition made the learning more 'real' for the students. The investigator also found out that the students gained self-confidence and they were enthusiastic about their work. The students

seemed to have gained more self-esteem. The students began to show signs of being easily motivated also. They often pleaded for a 'to go and do it again'. Interestingly, the investigator found evidence to show that his role as a facilitator in the whole process was of key importance. For example, when some students differed on the appropriateness of some visual, it was the teacher/investigator intervention that kept the discussiongoing.

Plate 3a: Students viewing some of the displayed works

Plate 3b: Students viewing some of the displayed works

Step 5: Evaluation Stages

The researcher later involved the students in rubric-based peer and self-evaluation using the rubric put together by the students. The researcher also encouraged them to use the more precise terminology, "I evaluated…," rather than, "I gave...." During this activity, students took turns discussing their solutions between the pair. Most of my students find it difficult to explain their solutions when solving design problems. In order to help them organize their ideas verbally and in written form, the researcher suggested that they follow the steps they have been taught – comment on each of the categories under the rubric from top down.

The evaluation stages offered the students opportunities to interact, question and examine the design solutions offered by the assessee. The assessors were randomly selected to present their assessments and feedback on their assessed piece to the class. The class discussed the assessor's feedback, where necessary interventions were made and the marks moderated. The peer-moderated criteria sheets were returned to students, while the individual peer-assessed criteria sheets were retained and used to inform the action research process. Final peer-assessed criteria sheets were all submitted to the instructor.

Plate 4: Students interacting during the studio critique.

The researcher gave the students the chance to communicate orally, following the categories in the instructional rubric, and gradually remove the dependence on the rubric. The researcher began by having students use the rubric to critique their assessee's work. The researcher emphasized the need to use proper terminology, and to explain in detail, assuming the class knows absolutely nothing about the theme of the work. The participants did well with the peer assessment and oral presentations as compared to previous critiques we did without using instructional rubric. The participantsrelated the written feedbacks to the designer's explanations. The teacher/researcher allowed the students the opportunity to work in pairs, sharing their strategies to solve design problems. When they had written their responses individually, the researcher asked them to switch rubric with a partner and discuss the clarity of their explanations and ask the question, "Could I use this feedback to get better results?" or "Does this explanation make sense?" Students were then given an opportunity to revise their own work. Students still fared better orally.

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Plate 5: Assessee explaining her concept to the peer assessor

Step 6: Feedback

The teacher/researcher realized that students needed feedback to improve. The feedback must be immediate, instructive, and formative so that student can have ample opportunity to improve before they are assessed in a summative manner. The researcher gave students feedback on how they could improve on their responses, through conferencing and writing responses on their rubric sheets. Some students were receptive to advice and responsive while others demonstrated no effort to incorporate these suggestions. This formative assessment is a positive approach because attempts are part of the process and can be improved before the summative evaluation.

Plate 6: Assessor commenting on assessee's design during critique

The students were asked to attach the assessment sheet to each of their comprehensives to make it easy for them to identify their strengths, weaknesses, and how to improve upon it. The researcher also told them that the mark on their project would be written in pencil and would not be final until they decided it should be. They would have a chance to improve on their grades and the researcher would help by going overdifficult areas in which they needed to improve. As a result of the researcher's reflections on this matter, he developed an increased awareness of the use of assessment for learning and realized that there were many instances where it sharpened the student's language use.

Step 7: Review

Having a review session within the creative process must surely be nearly as good as the final evaluation session. The teacher/researcher was very impressed when most of

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the students completed their week's homework. The students were given enough time to begin the work in their brainstorming small groups. The designs showed that giving a brief and expecting the students to solve design problem was going to take some work and the outcome exceptional. Most of the class saw progress and were delighted to show their design solutions to their peers.

The teacher/researcher introduced "Ask me" sessions so that the students would have an opportunity to present their projects to the class and answer any questions on them. In so doing, the students showed signs of gaining confidence when speaking to an audience, using a clear voice maintaining eye contact. The teacher/researcher found evidence on numerous occasions that the studio critiques were helping the students to reach out to the world outside of the studio. Lack of response is a very common occurrence in design studio too and the students and the teacher/researcher met with it to a certain extent in all our projects. Students did not seem to be bothered about the long silence between one presentation and the other. The teacher/researcher would present this lack of response from his students as evidence that some aspects of studio critique can lower self-esteem, despite my attempt at improvement in practice.The teacher/researcher found indications that his intervention and interpretation were pivotal aspect of the peer assessment. When communications were going bad between partners, the teacher/researcher had to find a way of calming the students. He also had to modify some of the project works the class did so that it would be suitable for the abilities of the students and their curriculum.

After the peer assessment session, the whole class then met to discuss what they had done. The feedback to the students was crucial to the learning process.

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Step 8: Final Evaluation

An important feature of the final evaluation phase was that it offered the possibility of providing design students with the potential for their own empowerment. Through participating in group discussions, they could voice their opinions on educational and design issues of concern to them, and indicate the conditions that could affect their future participation in the studio practice. In the assessment process, then, design students were enabled to construct their own knowledge. This situation represented a change in epistemological focus that contrasted with their usual positioning within the educational system as receivers of the knowledge transmitted by the dominant personality – the teacher, which usually reflects the cultural values of the students. The teacher/researcher suggests that their participation as knowledge creators helped to contribute to their empowerment, on the foundation of the interconnectivity of power and knowledge.

Student learning did improve this year but it was not solely the teacher/researcher's doing. It was the vision everyone in the class developed toward the commitment to higher levels of achievement. By the end of the month, the students were able to, in some way, identify basic typographic faults and colour harmonization, know the difference between layouts and space usage, and make inferences using appropriate samples in their answers. The students were also being exposed to a variety of literature on design history.

Step 9: Self Evaluation

The student is given the opportunity to contribute to his/her assessment by also commenting on his/her design either to object to the criticism of the peers; although he /she might not be necessarily right or fair to oneself or the assessor. Very often that leads to the next step of the process, which involves teacher, the assessor and assessee to dialogue. The teacher's role changes to become a model or arbiter.

Step 10: Instructor Moderation

The instructor kept the facilitator's role and intervened whenever parties disagreed on facts. The use of re-mark was not encouraged for a simple reason – abuse. It seems that despite their fears, students were reasonably accurate in interpreting criteria and conducting evaluation. I came to the realisation, therefore, that, in the event of a conflict between the assessor and the assessee, the teacher/researcher should try to ensure that the assessor and assessee were understood the importance sharing and giving feedback. To adopt any other stance would result in a denial of my values of social fairness and equality for all.

4.3.6 Assigning of Assessors

The most interesting part of peer assessment is assigning of assessors. It is where students show the entire tendencies one can think of. The process requires tactfulness.

Assessee needs trust from the assessor, the assessor should show maturity and capacity to be fair and ability to offer credible feedback comparable to what the teacher can provide. The initial attempt has helped to develop a mechanism for assigning assessors and assessee so as to remove the many challenges likely to arise. The teacher/researcher's first model was based on using sociometricmatrixarrangement. It was conducted using students' 'irregular' triads the teacher/researcher developed for his studio. The distribution was based on earlier socio-metric matrix exercise "Who your friend is?" conducted on the class. I identified three groups of students in the class; a) the popular and most friendly students, which researcher represented on the hexagon; b) normal students, which are represented on the pentagon and c) reserved students, which are represented on the triangle. The teacher/researcher marched the students according to the data earlier garnered. Each student became an assessor/assessee to a different student in a different group refer to Figure 4.

In structuring the triads, which involved the "assessor" and "assessee", the teacher/researcher took care to ensure that "buddies" did not get away with what they wanted. In extreme situations the teacher/researcher assigned some of the students to the teaching assistant for assessment. While not compulsory, moderation is an integral aspect of responsible assessment practice and was deemed necessary to help students justify their comments and marks. Assessment pieces were mounted on studio panels in the studio for every student to have a look at the project before peer assessment.
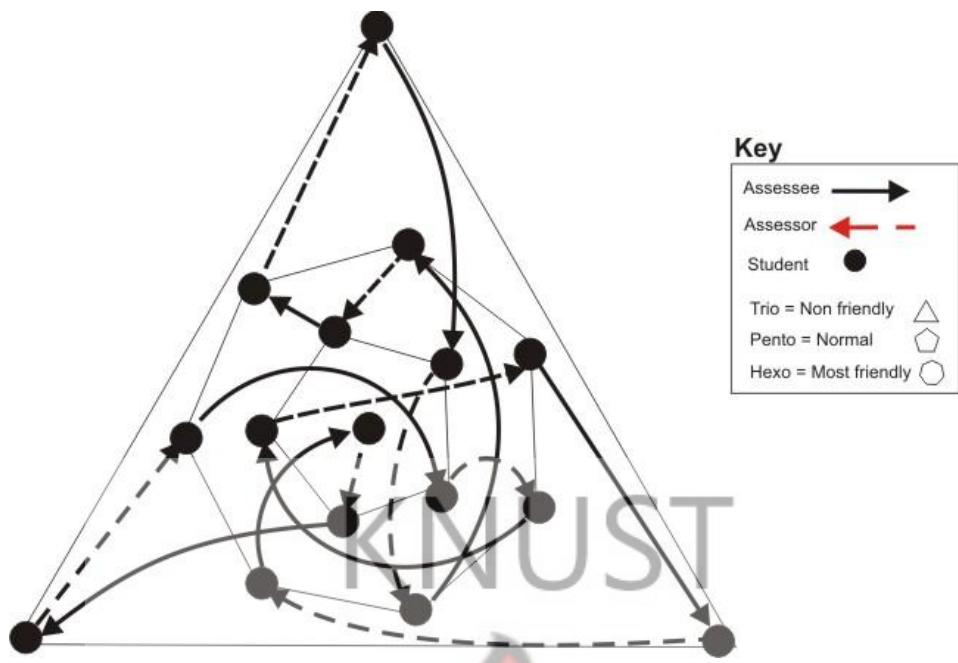
Figure 5: Assigning of assessor to assessee and vice visa

4.3.7 Concluding Remarks

In this session, the teacher/researcher has explained how he has succeeded in transforming his studio into a space for the recognition and acceptance of assessment for learning. The teacher/researcher has also demonstrated how he has enabled communication design students to engage in dialogue on issues relating to their creativity development.The teacher/researcher has encouraged them to adopt a critical stance in studio critique and positive attitude towards it, and has posited the possibility of cooperative learning. The teacher/researcher does not mean to suggest that he has accomplished all that he wished to achieve in the area of fair assessment and equality for communication design students in the design educational system. The teacher/researcher submits, rather, that he has begun the process. There is still much

to be achieved at an institutional level, in terms of more widespread recognition and acceptance of authentic assessment in art and design education.

In the context of this analysis, the teacher/researcher would suggest that what occurred in the assessment process was an example of social transformation, which, if replicated in other such studios, could have a major effect on more widespread student participation. The teacher/researcher would argue that there is some justification for suggesting the successful student involvement in the assessment process, which was unique in our school culture in terms of student involvement, influenced studio practice. The teacher/researcher would also claim justification in foreseeing wider social implications, in terms of social transformation in the lives of both teacher and students. In the next chapter, as the teacher/researcher outlines the findings from his research, to provide the evidence to support the claims that havebeen made here.

4.4 Quantitative Section - Results

In this chapter, the investigator endeavoured to demonstrate his attempts to live according to his values of social justice and equality. The investigator's reflection on his actions, in fulfillment of action research methodology, raised his awareness of occasions where his values were not reflected in his practice. The researcher demonstrated capacity for incorporating change and improvement into practice, so that it became a practice that was commensurate with his espoused values of academic respect for equal opportunities for learners.

This study investigated students' experiences in peer assessment to drive studio teaching and learning environment. The students were surveyed after the second semesters.The students were required to complete the self-administered questionnaire it over aftera selected studio session; participation in the survey and the interview were voluntary.

Students' Opinions Regarding the Assessment Criteria

Table 6 shows nearly 90% of the respondents agreed that assessment criteria in enhancedtheir learning experiences. In response to Q2, about 85% of the students used peer-assessment to be proactively involved in learning on the course. Also, about 78% of the studentsused assessment rubric to understand the course material through multiple sources of learning (Q3); while 66.35% became independent learners through the use of peer assessment (Q 4). In response to Q5, 65% of the learners used the assessment rubric to control the pace of their learning by going fast or slow.

Table 6: Perceptions on the use of assessment criteria

Items/Statements	SA/A (%)	N (%)	SD (%)	Mean	Std. Dev.
Q1. I have used assessment criteria in enhancing my learning experience	86.11	8.33	5.56	1.74	.876
Q2. Assessment criteria helped me in getting proactively involved in learning the course	85.18	12.04	2.78	1.68	.823
Q3. Assessment criteria helped me to understand the course material through multiple sources of learning	78.30	16.98	4.72	1.98	.905
Q4. Assessment criteria helped me to become independent learner by doing more work on my own	66.35	24.30	9.35	2.18	1.003
Q5. Assessment criteria helped me to control my pace of learning by going fast or slow	65.74	25.93	8.34	2.21	.973

N =108, SA/A: Strongly Agree/Agree, N: Neutral, SD/D: Strongly Disagree/Disagree

Students' Opinions Regarding the Assessment Rubric

Table 7 shows that majority of the students (89.81%) responded that they were more interactive as a result of using assessment rubric (Q7). Interestingly, relatively fewer students (66%) indicated that they have no problem in operating the assessment rubric (Q8).Responding to Q9, a minority (27%) indicated that they do not need training in peer assessment, in contrast to the majority 73% preferring prior training in peer assessment. Over half (58%) of the students indicated that peer assessment was fully operational supporting earlier response that prior training would help solve many of the initial problems. Finally 75% of the students would actually admit their learning process has seen improvement since the implementation of assessment rubric (Q11). In response to Q12, almost half (52%) of the students indicated that there was adequate support for those who encountered any problem apart from technical. It would be observed that a sizeable percentage of neutrals were scored for Q10 and Q12, it may be due to students' apathy towards new introductions in studio activities.

Cronbach's coefficient was .818, again indicating very high reliability of survey items in measuring opinions around the rubric.

Table 7: Perceptions on the use of rubric

Items/Statements	SA/A (%)	N (%)	SD (%)	Mean	Std. Dev.
Q6. Assessment rubric helps explain the subject more clearly	76.64	14.95	8.41	1.98	.976
Q7. Students are more interactive as a result of using assessment rubric	89.81	5.56	4.63	1.58	.930
Q8. I have no problem in operating the assessment rubric in studio	66.66	24.07	9.26	2.20	.930
Q9. I do not need any training to teach me how to use the assessment rubric	27.10	28.97	43.93	3.22	1.155
Q10. I find assessment rubric in full working order whenever I want to use them	58.34	31.48	10.19	2.31	.950
Q11. My learning process has improvement since the implementation of assessment rubric	75.93	16.67	7.41	2.04	.935
Q12. If there is something unclear with the rubric support is immediately available	52.78	31.48	15.74	2.48	1.035

N =108, SA/A: Strongly Agree/Agree, N: Neutral, SD/D: Strongly Disagree/Disagree

Student Opinions regarding the effectiveness of Assessment Rubric

Table 8 shows that almost 80% of students responded that they know how to use the assessment rubric available in the graphic design studio (Q13). In responding to Q14, a little over 58% indicated that assessment rubric helped them in preparing for the studio critique/lecture as compared to a third who were neutral. About 31% were silent to the question. About 76% of respondents admitted that assessment rubric helped in explaining the subject more clearly, compared to less than a tenth which

completely disagreed with the statement. The majority (83%) of the students mentioned that assessment rubric helped them to stimulate their problem solving skills through visual experiences they had actually learnt from others by looking at their work. In responding to Q 16, 86% of the respondents strongly agree or agree that assessment rubric helps them to further develop and stimulate their communication skill, compared to less than 5% who disagree. About 75% of the students indicated that assessment rubric makes their learning more interesting. Overall, the results indicate that the students have quite positive learning experience and attitudes towards the use of assessment rubric. Cronbach's coefficient was .830, again indicating very high reliability of survey items in measuring opinions around the use of rubric.

Table 8: Perceptions on the effectiveness of Assessment Rubric

Items/Statements	SA/A (%)	N (%)	SD (%)	Mean	Std. Dev.
Q13. I know how to use assessment rubric available in my graphic design studio	79.44	16.82	3.74	2.05	.761
Q14. Assessment rubric helped me in preparing for the studio critique-/lecture	58.34	31.48	10.19	1.79	.902
Q15. Assessment rubric helps me to stimulate my problem solving skills through visual experiences.	83.33	9.26	7.41	1.89	.919
Q16. Assessment rubric helps me to further develop and stimulate my communication skills.	87.03	9.26	3.70	1.69	.855
Q17. Students can understand and grasp the concepts more easily and effectively as result of using assessment rubric.	74.07	16.67	9.26	2.08	.967

N =108, SA/A: Strongly Agree/Agree, N: Neutral, SD/D: Strongly Disagree/Disagree

4.5   Qualitative Section – Results

The research was intended to be exploratory and qualitative in nature in order to uncover the range of student attitudes towards and perceptions of reflection and the reasons why certain students adopted particular attitudes. The purpose of the research was to generate a hypothesis that could be developed and tested through further research, rather than to reach definitive, statistically valid conclusions.

Semi-structured interviews were chosen as the primary source of data since they could give an insight into students' perceptions; highlight unexpected issues; and give the students the opportunity to describe their experiences in their own terms. The students who volunteered for the interview were all in the current second (degree) year at the Department of Communication Design, Kwame Nkrumah University of Science and Technology. They had all been using the assessment rubric and participate in the peer assessment in the graphic design studio during the previous first semester (2011/2012), and therefore the interviews focused on that particular task. As statistical validity was not an issue the sample of students was selected by the researcher so that subjects showed a balanced range of attitudes towards reflection. Willing participants from the entire cohort of 106 were asked whether their experience of participating in peer assessment was positive or negative and nine were selected so that three showed a positive attitude, three were ambivalent and three showed a negative attitude. Six of the nine participants were female, and interestingly it proved impossible to find a willing male participant who showed a positive attitude. Interviews were also conducted with three members of staff who did not use peer assessment or assessment rubric in their studio courses. It was known that these staffs were supportive of the

process of learning journals and therefore the interviews tended to focus more on the project's rationale and outcomes rather than their attitudes.

The interviews were focused, structured, narrative and of a limited length. The questions in the interview were intended to be non-leading and were tested and refined prior to the interviews taking place. A list of questions was drawn up and reduced to give what were considered to be the most productive questions. Attention was placed on the interview technique with the use of active listening and focusing on allowing the students to speak freely in order to elicit their perceptions. The interview script was tested with Student A as a pilot study and then refined further to ensure that the interviews remained focused and relevant to the research question. The eventual set of interview prompts covered the following broad areas:

- Perceptions of the purpose of the peer assessment.

- Impressions about their peers' attitude during the assessment process.

- Perceptions of the benefits of peer assessment.

- Perceptions of their role in the assessment process.

- Perceptions of their teacher's role in the assessment process.

- Perceptions of the challenges in the peer assessment process.

The interviews were transcribed and key substantive statements were highlighted (Gillham, 2000). It was then possible to use an open coding technique (Flick, 1998) to cluster the substantive statements into themes which could be used to build further theory. Given the nature of the sample it was not possible to perform a statistically valid quantitative analysis based on the number of times a particular issue was raised

by the student, but it was still possible to highlight those themes for which there was a degree of consensus.

4.5.1   Analysis of Interviews

The principal themes that emerged from the interviews could be categorized into four major categories. This included issues to do with the perceived rationale for using peer assessment, references to the impact on the way the peer assessment were conducted as a result of them being compulsory, perception of bias and the nature of the tuition, guidance and support provided by the teacher. A second set of comments related to the student as an individual, specifically in terms of any benefits that the student might have encountered, their attitude towards assessment criteria and, of particular interest to the researcher, whether attitudes towards reflection changed as a result of using peer assessment.

Perceptions of peer assessment

The focus group students commented on their own progress towards greater independence and responsibility for their learning during the interview. When asked specifically about peer assessment many were able to articulate exactly the kind of progress they felt they had made. Some were about technical skills and comprehension strategies:

"I've learned strategies to help me work and learn faster. It has helped build my confidence in being honest and also express my opinion freely." – Student C

"I think it is a good way of going about studio critique. First I was reluctant in doing research, but now I find it easy. It has also helped me in my public speaking." – Student A

"I personally think it helps us to learn from our colleagues. From the assessment, it helps me to know about what is important in a graphic design. Peer assessment helps me to prepare adequately for all studio project given because I know the criteria." – Student E

Some revisited the early views about the importance of others in making progress with designing:

"It makes me confident and takes away fear and pressure. I am able to ask questions from my peers." – Student A

"I think I've improved in designing. Peers have helped me… I'm more confident now. I know." – Student B

"Peer assessment really helps us to bring new ideas to the work, especially when peers comment on your work." – Student E

Many commented on their preferences in peer assessment:

"Peer assessment is fun. It is a good attempt. It involves me in the decision-making process in the class/studio. The process helps both the assessor and the assessee. My confidence has increased and I can now assess or judge other students' works." – Student D

"It equips me with skills in assessment" – Student A

In evaluating the peer assessment project, the students were able to comment even more specifically about how to promote successful peer assessment. This project had been very effective, both socially and in terms of graphic design progress. The weaker students' designing improved and the good students showed high motivation to work as mentors:

> "Before, I didn't understand the criteria – things that our teachers told us – but after the peer assessment scheme… at first I thought it was teaching but now I know it's about friendship too."– Student A.

Perceptions of learning

Although some students viewed the learning quite negatively, on the whole many students perceived the benefits of peer assessment. Some reported that the peer assessment gave students a sense of achievement and pride. Student B commented on benefits of:

> "It made me feel a bit confident of my design…I realized that I had actually done quite a

lot of work and seen some improvement in my typography." – Student B

Other students suggested:

> "I realised that I'd actually done well; I thought that it encouraged me to actually do more research work, to sort of keep doing well and trying different ideas." – Student A

> "…realising what you'd achieved and seeing the summary." – Student D

This sensation of confidence and achievement often came as a surprise to the students, possibly since those that raised the issue wouldn't have described themselves as best students and had only participated in the exercise because they felt that it was compulsory. Other benefits highlighted in the interviews included the development of life-long skills:

"Today, I look and talk about design with an open mind, been appreciative other's perspectives." – Student C

"I am a bit tolerant now, I listen to assessor feedback and applied what will improve my work." – Student D

It suggests that by participating in the peer assessment, students learned to focus their work in a reflective manner and organize their thoughts: making some students feel more in control. Some had this to say:

"I use peer feed-forward to improve on my design." – Student D

"Listening to my peer is more easier than the teacher, since we share many things in common" – Student A

"I reflect often more on the comments given by my assessor" – Student G

"Often I receive positive comments from both the teacher and the peer and the comments turn to similar. This makes it easier for me to know exactly what I should do to improve on my work." – Student C

Most of the students who showed this degree of self-motivation were able to demonstrate some form of positive outcome of using the peer assessment such as those described at the start of this sub section.

Other students found that the peer assessment was a good support tool and was beneficial, especially when things were not going well academically. Several interviewees volunteered information as to how the peer assessment had provided a place to 'vent' emotions and opinions. Despite some students openly claiming that the peer assessment had not given any great benefit and that many would not havedone the peer assessment if it had been optional to them, almost all the students demonstrated an understanding and awareness of reflection in the way that they discussed their peer assessment during the interviews. This awareness suggests that the students may be reflective, but this is not something that is encouraged through the traditional assessment. This is evident in remarks such as:

> "We hardly knew what went into our assessment; let alone what we're doing right." – Student F

> "In my mind I understand things far more if I reflect about them… " –
> Student B

> "Graphic design is very demanding…at time you even fail to pause to reflect on what is right to be done." – Student E

> "Sketching your thoughts down makes you recollect some comments passed by peers and makes you understand your thought process well." – Student F

> "The process is boring and drudgery considering the tall list of criteria one would have to assess.' – Student J

Not all participants were initially convinced of the benefits of using in studio critique.

Some participants began the peer assessment with scepticism, believing it to be poor use of their time. This attitude may have been a result of their own personal pre-conceptions; unenthusiastic staff attitudes and the low academic weighting the peer assessment had been allocated in terms of the contribution towards the students' final mark. Whilst a few remained entirely disengaged with the peer assessment and its benefits, there were several students whose attitudes had changed and are now actively using peer assessment in a reflective manner and finding them highly supportive in developing their graphic design education:

> "Personally, I think the peer assessment in the studio critique is a wonderful and novel idea that has ever happened in my entire education let alone graphic design." – Student C

Student D, seemingly speaking on behalf of the student group as a whole suggested that a number of individuals' views of peer assessment had changed:

> "We hated it for the very first time it was introduced in the design studio. We thought it was like dumping the teachers' work and responsibility on the poor students, on the side and we weren't sure whether it was being assessed so we were reluctant to sort of start it…But in the end I think it did turn in peoples' minds into being something quite sort of useful." – Student C

Even so there remained a group of students who felt that they had achieved no real benefitfrom the peer assessment. Their attitudes towards the process were generally negative:

> "From the very beginning I asked the rationale behind that exercise." – Student M

"I feel like I mainly do that for the teacher." – Student J

"It is hell to go through that sheet of paper with a tall list." – Student F

"It's a big waste of time…" – Student K

This diverse range of views supports my earlier suspicions that some students were more inclined to reflect than others. Furthermore the more 'reflective' interviewees tended to recognize that not all of their peers shared the same inclination as themselves. For instancestudent B suggested that:

"I want change…and trying the peer assessment for the very first sapped my energy. I think some people felt they were forced to participate which resulted in it been unpopular because people don't like, necessarily having to analyze everything thatthey do." - Student H

Perceptions of student attitudes

When questioned about the assessment process a number of attitudes became apparent. A number of students already had some misgivings:

''I think that most students are serious about the assessment process, while a few others are passive and not committed." – Student A

"A couple of the students are lazy and refuse to engage the assessee in detail discussion. They are snappy about the process and award grade without doing due diligent on the assessee's work." – Student C

"I realised that lack of cooperation on the part of some assessor be detrimental to the whole process." – Student G

They also noted the improved attitudes of the weaker students and the effects on creativebehaviour:

"I have become a smarter guy, I don't wait for someone to tell me about the expectations." – Student A

"I think assessing buddies is good because my integrity was on the line. I have to approve my virtues and justify my confidence." – Student G

"I can now stand to be counted; I make sureadequately prepare for the studio because I will require to assess a peer." – Student G

'Thank you for helping me learn to talk about design, and now I can look forward to be a good design critic." – Student B

Interview and observational data add to the evidence about the importance of talking aboutdesign: the peer assessment project, particularly, indicated the value of giving students the opportunity to develop a language to talk about design – a meta-language. The second year focus group students confidently used technical terminology about design strategies thus extending and enhancing their capacity to make reasoned and thoughtful judgements about the processes of design and communication.

The importance of talk

Building on their preliminary work about students' design, the originator extended his focus in phase two to give more explicit attention to speaking and listening as a means of supporting studio critique. He also aimed to extend the work beyond year 1 and 2. In the junior year, this prompted a thorough review of planning specifically to

incorporate forms of speaking and listening which would directly support the teaching of graphic design.

The teacher was positive about the effects on himself and the students:

"I've improved the tasks and can see the clear objectives of what we want to do. I can see the positive aspects of it." – Student A

"Because I've seen the improvement it has encouraged me to do more. I feel more confident." – Student B

"You can experiment a bit more." – Student C

"It's added a new dimension because it fits with the Strategy's speaking and listening focus…this integrated approach of speaking and listening as an automatic part of literacy work is now part of my normal planning and teaching." – Student H

Student interviews showed that even the assessee had developed a sense of how partnered talk helped with their peer assessment:

"When you're talking it makes you have more ideas and if you have a partner assessor it makes you feel more confident." – Student B

"When you're working… when you're designing it's like you're learning as well at the same time. You always have to talk to yourself and your friend about something new."

"I can freely express myself without looking at my shoulders." – Student E

By second semester, there was even more conviction about how talk contributes to learning and critiquing:

"I like the way I've used the technical words in my interaction." – Student A

"It does a lot… if you explain to others you understand it." – Student G

"Yes it can, when you're talking to yourself… telling yourself how to do it."

– Student J

By the end of the project, all of the focus group students' interviews referred to satisfaction about peer assessment and they were much more able to talk precisely about how to design. Their comments reveal genuine shifts in understanding. Overall, they became much more assured with the language of graphic design:

"I've started to use more terminology in providing feedback." –

Student B

"I've got better at communicating my ideas and explaining what I think."

– Student G

When asked what advice they would give other design students, they were quick in pointing to planning design strategies and visual aspects of the imagination were important.
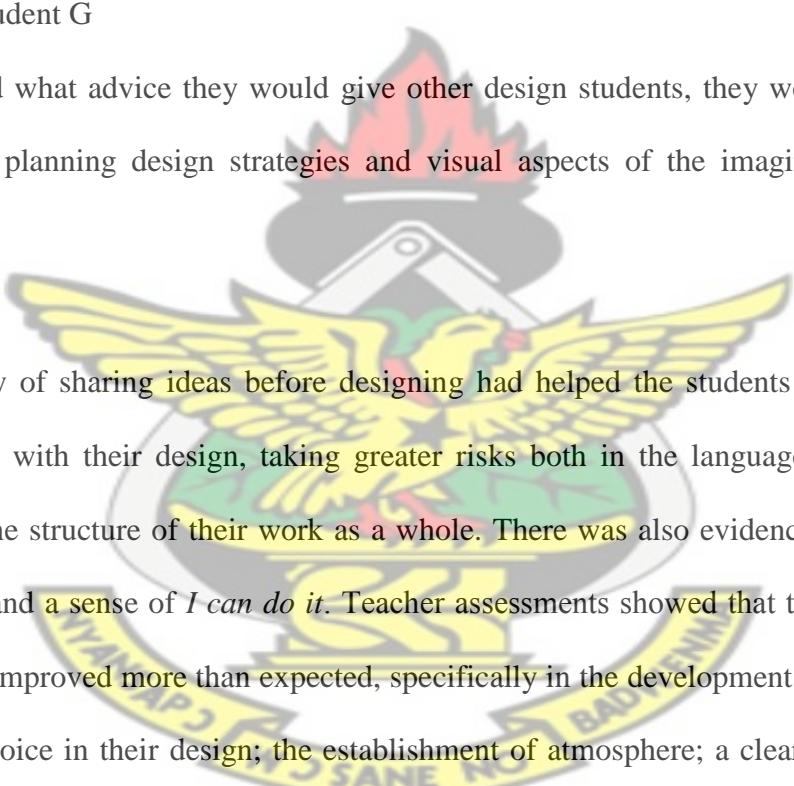
The security of sharing ideas before designing had helped the students to be more adventurous with their design, taking greater risks both in the language they were using and the structure of their work as a whole. There was also evidence of greater enjoyment and a sense of *I can do it*. Teacher assessments showed that the students' design had improved more than expected, specifically in the development of pace and individual voice in their design; the establishment of atmosphere; a clearer structure and improved communicating skills.

Assessing progress in graphic design

During initial interviews the students were generally negative about their own design and peer assessment. In common with students, in these initial interviews they

mentioned list of category, punctuality and lack of enthusiasm in the programme as factors that slowed down their interest in studio critique but they also said that they were often worried about getting the painstaking exercise of the assessment process.

By the end of the first phase of this project, case study evidence indicated progression in design for all the students evolved. In all two classes the focus groups of students achieved a higher standard of work during visual literacy activities involving graphic design. After a semester's work, there was also a marked shift in their attitudes. Observations of the students during studio showed them as enthusiastic, engaged and achieving in line with, or above, teacher's expectations. When interviewed about the following graphic design elements: texts, layout, colour and imagery, the students commented:

> "My typography improved considerably over the last semester." – Student A
>
> "The assessment helped me to understand the use of colour to effectively communicate my intentions." – Student D
>
> "Peer assessment helps my designing because it gives me more information, it makes it (texts) more understandable." – Student G
>
> "My confidence level in graphic design has reached an unprecedented level of late, thanks to peer assessment." – Student C
>
> "Now I can go to sleep and wake knowing the expectation of each design task…the rubric is an amazing tool." – Student F

Evidence for peer assessment leading to better design: effects on designers and designing

The teacher commented that there had been improvements in design without using assessment, but with it progress had been more noticeable. Attitudes and motivation had improved and the students' confidence had increased. Progress was also been evident in the students' language to describe design (critique) before and after the work. One of the interview questions was specifically designed to measure development of critique skills: *Does the assessment criteria help you in your learning and how?*

Examples from the students show that responses to this question in the initial interviews were mostly concerned with concentration, technicalities or the physical aspects of design execution:

"Take my time and keep practising at home" – Student A

"Use the guidelines properly. Always rely on the criteria to know what to do and say about a design." – Student B

"Yes, it helps me in my learning. The criteria help me to look for key things to consider.… I use it to deepen my understanding helps me to better criticize and provide better feed-forward." – Student B

"I use the criteria as guidelines. Try to satisfy all the areas considered under the categories." – Student D

At the end of the project, the students were noticeably more able to talk about design specifically and in greater detail:

"Teach them how to appreciate a design, provide useful comments." – Student A

"Most of the times the peers' feedback or comments are similar to that of the teacher." – Student E

The students were also aware of the link between assessment and learning:

"You get ideas about things from assessment … so you can come up with novel concepts…' – Student B

"The assessment criteria help me to improve on my work… I am mindful and always make sure to satisfy most if not all the items under each category." – Student G.

Perceptions of bias

It was clear from the student interviews that how the students approached peer assessment was influenced by their perceptions of bias within the studio which they were working. The interviews also suggested that there was a notion that students felt under pressure to satisfy their buddies:

"It was just having to write them down something in a way that someone would be happy…." – Student C

It was apparent from the interview data that those students who understood the purpose of the peer assessment seemed to benefit from the exercise to a greater extent than those who didn't. Sadly there were perceptions from the student interviews that other students, who had negative pre-conceptions of the use of assessment for learning, were promoting negative attitudes amongst the students. In one case a student advised another student not to complete the assessment rubric:

"One of the things that affected me about the peer assessment was [another] student'scomments about it like 'what's the point doing the teacher's work for him." – Student F

This student was presenting a contradictory argument to that of the peer which can do more than cause confusion in the minds of students. This danger is likely to occur in studio practice situations where peer learning plays an important role in design teaching.

Others had a more overt reaction; these students tended to be negative towards the peer assessment, possibly because they felt that their privacy was being invaded. It may be that they felt unable to use their peer assessment to reflect on important, personal issues:

"My sketchbook and my learning are absolutely personal to me and I don't feelcomfortable with sharing that with someone apart the teacher." – Student E

"I was willing to show others my design solutions and seek their input to improve on my initial concept…I was very, very clear in my mind…."
– Student C

4.6   Thematic Portfolio Review

The portfolios of the students in the focus group were thoroughly examined to see the following:

1) how the assessors have learnt to write feed-forward.

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2) how assessees worked to incorporate the assessors' and instructor's comment in their work.

3) To ascertain the level of development within a project.

Please refer to Students Gallery and Assessor's comments at Appendix M

The peer assessors used the rubrics developed by the students with the help of the instructor (refer to Phase 1). They also judged, at each level on a criterion, whether the portfolio demonstrated a performance that was slightly below, on a par with, or slightly above the average described in the rubric. As a result, the level on each criterion was assessed on a four-grade scale.

The investigator compared the assessments of the assessors and the co-assessors, applying all criteria on seven portfolios from the second year. The material studied consisted of thematic *portfolios* whose contents, in addition to a final product, included sketches and drafts, reflections in logbooks, models used as sources of inspiration and a 10-15 minute videotape interview with each student. The portfolios documented the students' work over a period of 12 hours. During this time, the students worked within a poster design theme of a divergent nature, that is, a theme that could be approached in a variety of ways, which was selected by the instructor.

One of the methods the researcher used to study the reliability of assessments was to calculate the average score with which the judgments of the assessor and the co-assessor differed by a one step. The researcher considered a difference of one step on a four-grade scale to be acceptable, particularly as the rubric's manual contained

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verbal descriptions of only four levels of performance. Even in cases where a difference of two gives a different standard, the researcher regarded this outcome as fully acceptable. After all, the researcher concurs with Lindstrom (n.d) that "judgments contain a subjective element that defies precise verbal description; they presuppose that the teacher uses his professional judgement in interpreting criteria, levels and the content of portfolios."

1) how the assessors have learnt to write feedback

I thoroughly scrutinized the peer assessment sheets to look use of technical language, grammar, choice comments and assessor's painstaking effort to provide written feed-forward to the assessee. I have continually argued that knowing the level and the motivation of my student to critique another student's work is very important, and every effort should be put in helping the student. It is positive and required researcher's continuous support to the students to help them overcome their weakness. I also observed during the peer assessment that the pairs were interlocked in fruitful discussion which is unprecedented in recent studio schedule. This could be attributed to encouragement I gave with regards to learning to articulate the opinions using the technical language. The assessment sheet if anything at all provided them with some criteria to talk about. It could also be inferred from the interview I conducted about the students increasing confidence and self-esteem in expressing their design concepts.

In addition, the researcher insisted the students should discuss their thoughts in pairs and groups. The instructor also brought interesting student responses up for studio

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discussion, in order to encourage students to give thoughtful responses. The purpose of this instrument was to let the students "think aloud," which provided both the instructor and the students with true data about the students' learning outcomes. After analyzing the students' feedback, if the instructor felt that the students had failed to understand a certain point, he or she could try another teaching strategy for the next class to teach that particular point again. To achieve this goal, the researcher collected the students' feedback and sorted it into topics. For example, some students could not use the design terms appropriately. Others said that they had difficulty guessing meaning of new vocabulary from context. A third group said that they encountered difficulty in finding ways in writing feedback.

The researcher admits that the journey can be long and trying but with determination and gradual implementation students will be more than willing to write and provide feed-forward. One thing the researcher noticed was when the students realized that the instructor would assess the comments, they put in some effort. It was also noticed on the field that the assessee's insistence that the assessor provide written comment was helpful.The researcher has included some students' comments with the works in the Students Gallery Appendix M.

2) Growth in students' creativity development

It is evident in the students' portfolios (Appendix M) that there are signs of understanding in some aspect of creativity development. It must be noted that creative behaviour is acquired over a period through deliberate agenda to increase cognitive and divergent thinking skills. Through the series of creative activities during the

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project, students have shown mastery in some specific areas such as the use of art media and techniques, use of and application of computer technologies. It is also evident when the various stages of the project are compared, for example, between the comprehensive and final stages. Some of the students clearly demonstrated through their works growth levels of competences in use of typography, colour, layout and image.

It was also noted that in application of comments expressed by the assessors both peers and instructor, the assessee work improved tremendously showing functional redirection, exploration and integration of influences. Whilst some of the students' works showed synthesis of art history or criticism experience, others show lack of it.

Overall there were considerable signs to show that peers contributed in no small way helping them improve on their lot. The environment created the peer assessment process was unique to them; to them the experience was phenomenal. They have been part of the decision making process. Unlike the casual unsolicited peer comment about a work, this exercise was more less a supervised and obligated situation where you were encouraged to "co-create". From the portfolio it was also clear that students worked towards satisfying the criteria, which improved their aesthetic quality and originality of the works. From the portfolio, it could be deduced that there were instances that assessees ignored the feedbackand tried something on their own. Some succeeded while others faced more difficult challenges.

To make the portfolio review easier and smoother, the researcherdeveloped a portfolio rating scale (Appendix K) to help me review the works of the focus group. The scores

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were totaled to look for ratio of students who improved remarkably over low achievers.

4.7   Discussion

The study posted a remarkable positive impact of the use of criteria and rubric in students' learning in school and the potential of equipping them for life-long learning after school. From the study, it could be deduced strongly that the provision of assessment rubric to students could enhance their learning experience in the studio. Students remarkedthat using rubric to prepare for studio critique and lectures, improved on their problem-solving skills, helped in their communication skills and use to understand and grasp the design concepts easily and effectively. These findings harmonize with Ehmann's (2005) study findings.

The students in the study report using the criteria to become independent learners and self-initiated work in addition to using the criteria to regulate their learning. These findings corroborate many aspects of Andrade and Du (2005) study report in such areas as academic self-regulation, goal-setting and planning. Again, the findings also validate impact of rubric in learning described by Andrade and Du (2005), when the students overwhelmingly approved the use of rubric in the graphic design studio and claimed it helped them improve on their practical skills, learning and the understanding of the subject and prepare adequately for lectures and studio. The students' comments about the use of rubric were positive, and this is consistent with Andrade and Du (2005) findings.

Overall, the results indicate that the students have quite positive attitudes toward using assessment rubric for peer assessment. This supports the findings of Ballantyneet al. (2002) claiming that students improve in interpersonal and negotiation skills through peer assessment. This is consistent with the teacher's observation that the students who were engaged in the exercise exhibited more enthusiasm than other students when they were engaged in the exercise. This supports Ballantyne et al.'s (2002) claim that inexperience could be partly overcome by introducing practice sessions or prior peer assessment training at the beginning of the semester this is very necessary to forestall any challenge. As also observed from classroom activities and casual comments passed by some students, some felt they were doing the teacher's job for him or peers were incompetent when it comes to assessment. The assessment criteria gave them the lead in learning and executing their graphic design projects (Venables and Summit, 2003).

From the analysis of the questionnaires, this study has identified several conditions that are critical to the successful implementation of assessment rubric in graphic design studio. It is best to provide peer assessment lessons in the beginning of the school year to allow students to build up their competencies in using assessment rubric. Incorporate practice sessions to familiarize students with the process of assessment. These sessions should include access to exemplars of 'good', 'average' and 'poor' work plus feedback on students' performance as assessors. Early introduction of assessment rubric is vital for smooth implementation of peer assessment in higher education. When first-year students gain experience in using assessment criteria for learning and rubric for assessment, they will be more comfortable in using this technique in subsequent years of studies. This project shows

that if rubric is introduced to first-year students, it stands a greater chance of succeeding; hence the process needs to be structured very carefully and implemented thoroughly to deepen its appreciation.

The introduction of instructor moderation will be a valuable addition to the development of the rubric. This will address students' concerns relating to the perceived "skewness" of the criteria to their benefit and lack of enthusiasm in participating developing and effective rubric that aligns the curriculum, learning outcomes and assessment of the learning process. Consequently, this will enable instructors to monitor the nature and quality of students' learning processes and outcomes. Touching on reliability and validity of the use of rubric, the students unanimously agree that prior training is very crucial to the successful use of the rubric. This lends credence to Lovorn and Rezaei (2011) claim that training session had a significant positive impact on raters' ability to implement the rubric. In addition student should be prevailed upon to understand the significance of adopting a reflective approach to the use of rubric, not a judgemental approach. Otherwise, they might simply focus on ticking inappropriately, without seeing how they can improve on their own work based on what they see in the work of their peers. Finally, the extent of the use of rubric in peer assessment needs to be carefully controlled across an academic programme.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.   Overview

This chapter discusses the findings of the research as the researcher draws together the various strands, insights and elements that emerged in the research process. The researcher examines the impact and relevance of these issues in relation to the claim that the assessment has influenced in a positive way the educational opportunities of communication design students. The researcher demonstrates how this improvement at the micro-political level of his studio has had repercussions at the macro level of the school in terms of the achievement of personal and social transformation. The researcher draws on his embodied values of fair assessment and equality to provide the living standards of judgement against which to test the validity of his claim to have improved his educational practice as well as the circumstances of the students. Finally, the researcher shows how through engagement with more emancipatory pedagogies, the researcher was able to promote a more equitable situation within the educational system for design students.

The author aimed to discuss the findings in terms ofsix main categories which are:

1. Research activities

2. Assessment

3. Instructional rubrics

4. Feedback

5. Communication

6. Teaching method

Having outlined these categories and discussed their content, The author explains their significance in terms of enabling him to make his claim to knowledge, and to show how his living theory of practice has the potential to contribute to new practices as well as to new theory.

5.1 Research activity

Action research gave the author an opportunity to expand his assessment processes. The investigator photographed and videotaped students working in pairs and groups explaining how they solved problems. The investigator walked around asking prompting questions. When the investigator viewed the tape later, he was able to listen to his own questioning strategies and encouragement of students and could directly see how the students were responding to the investigator's advice. Corrective feedback was an advantageous process for writing strengths, weaknesses, and next steps for the report journal.

Upon reflection on the experience, the investigator looked forward, with anticipation, to incorporating these ideas into his teaching practice. The investigator will begin early to help the students feel comfortable and confident in graphic design. The investigator will definitely begin the new year by reviewing problem-solving strategies including more problem-solving in the graphic design course. The

investigator believes that graphic design and design language should be taught simultaneously, particularly at the beginning of the year one. If students improve their written communication in Language, then we can work on their critique skills in graphic design studio.

5.1.1 Assessment

The investigator believes the biggest difference in his teaching practice is assessing the students in a more formative manner. Rather than conclude that they "don't get it" and include it as a weakness on his record, however, the investigator continued to help them by offering corrective feedback and providing further opportunities to improve their results before the summative evaluation.
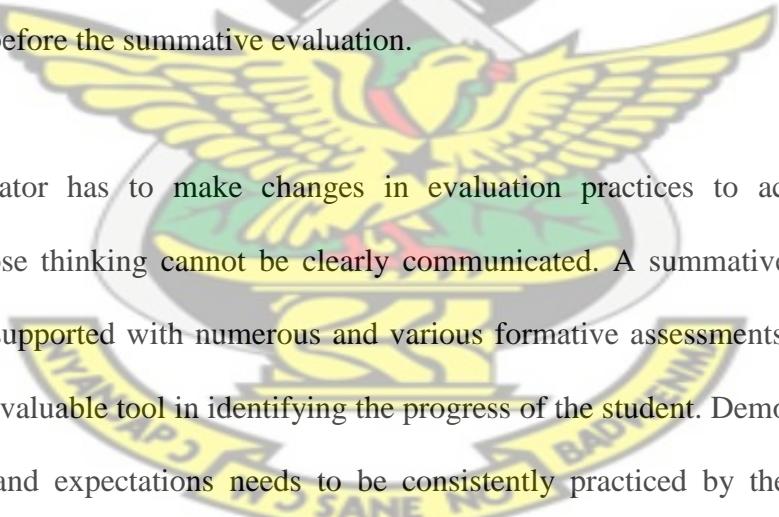
The investigator has to make changes in evaluation practices to accommodate students whose thinking cannot be clearly communicated. A summative evaluation needs to be supported with numerous and various formative assessments. Anecdotal records are a valuable tool in identifying the progress of the student. Demonstration of the process and expectations needs to be consistently practiced by the teacher to establish better understanding of the concepts. This gives the student a more concrete view of where they fit in and what they need to do to improve. The investigator plans to modify the assessment so that the mark book reflects corrective feedback and allows students the chance to change the mark when a new skill has been achieved. Summative assessment will be avoided until the end of semester. The investigator wants to assess collaboratively with students and provide each with a mark book so

that their grades and formative comments are available to them throughout the year. This will allow them to do personal goal setting.

Students greeted the assessment process approach to graphic design with enthusiasm. The class was unanimous in agreeing this not only made studio critique more fun but it actually did help their graphic design understanding. A few said it helped them to clarify their ideas and make their visual responses better.

"I liked peer assessment with others about my graphic design solution because I got to see what otherpeople thought of my work before I handed it in". –Student X

Initially, the researcher also found out that many students did not seem mature enough to take peer assessment seriously. They quickly looked at each other's design project and decided they are good enough, even if they did not make sense. Peer assessor gave few low grades for errors and ineffective designs and then the assessee handed in the design without even fixing those mistakes. On some occasions, the researcherreturned the works several times until the corrections werefixed. In future, the researcher would like to give the students peer evaluation feedback sheets asking specific questions about the writing.

5.1.2 Instructional Rubric

After giving them the instructional rubric and the prompt, students were more successful. They continued to work slowly and they took care to avoid errors. They

liked the instructional rubric because it showed them how much they needed to do and it made their design concept stronger. The prompt meant they didn't have as much difficulty deciding what they wanted to design. The researcher observed that students were not anxious or preoccupied during creative process because they had an idea and a plan. Formerly, design responses were uninspiring and unimaginative and students seemed to have reverted back to their old habits of copying or using internet images.

5.1.3 Feedback

The researcher noted that his own practice of corrective feedback to students had improved that year. The researcher feels more confident pointing to students' strengths, weaknesses, and stepwise comments with marks being optional. This formative approach helped students to see how they could improve as opposed to just receiving a mark and ignoring the comments. The researcher still used summative evaluation but with corrective feedback in mind and to give students opportunities to improve their work after they had received the feedback.

5.1.4 Communication

All of the students studied in the research were hesitant to participate orally in class, and needed encouragement and prompting to do so. Even personal discussions with them were one sided, with the teacher/adult always leading the train of thought. It seems these students have had little practice expressing their ideas up to this point in

their lives and that little encouragement has been provided in the area of relating ideas to each other. Things are accepted at face value.

For them, asking questions (who, what, when, why, where, how) would need a great deal of demonstration, encouragement and practice. Students had difficulty showing and explaining their work. Unfortunately these skills were needed in the junior years and these students were just beginning to be aware of them. Questioning and thinking skills should have been taught earlier in order to prepare the student for the increased demands of the higher education curriculum.
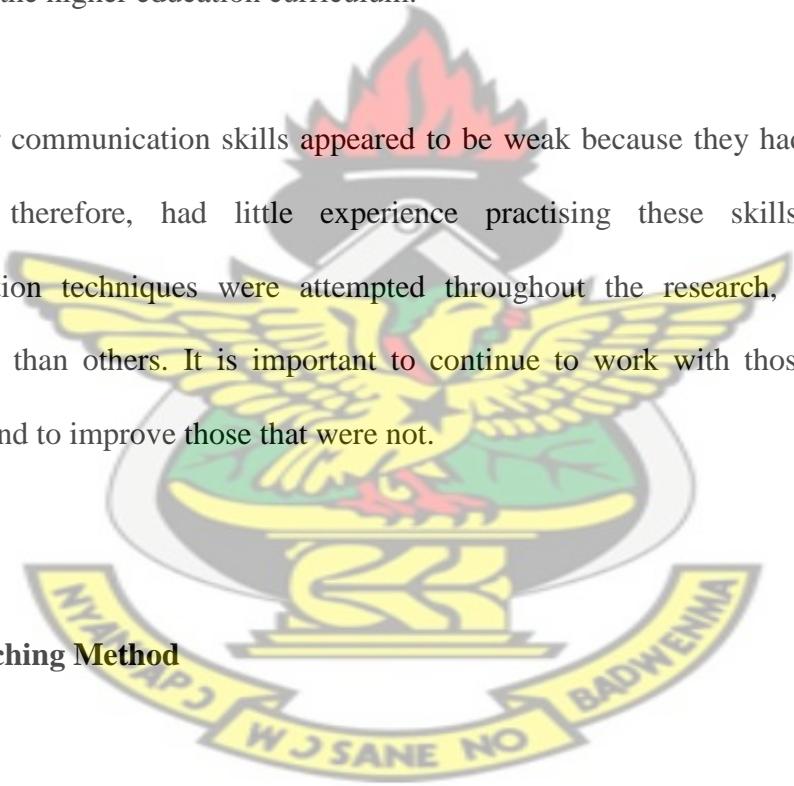
So far, their communication skills appeared to be weak because they had so little to share and therefore, had little experience practising these skills. Different communication techniques were attempted throughout the research, some more successfully than others. It is important to continue to work with those that were successful and to improve those that were not.

5.1.5 Teaching Method

Until the end of the academic year 2011, the researcherdid not have the concrete results as to whether the method of teaching graphic design had been effective in increasing the scores. However, the researcher observed the students working on their design problems, and was amazed at the use of graphic design language. The studentstook great pride in being able to come up with great visual concepts that communicated well. The researcher was certain that the class's attitude to graphic

design had certainly improved. On the whole, the students were eager learners, always willing to try, and they displayed both confidence and competence in their approach to graphic design.

The researcher noticed that his students always seemed more interested in shortcuts to design because they could not draw/sketch more quickly. It was an issue of foundational setback and it helped to explain why initiative towards writing was low. After the brainstorming and feedback sessions, students were more willing to design. They had a basis of comparison between what they did and what they could do. The researcher used this leverage to prove to them that they could all be successful if they did not rush through the creative process. The students have now completed several responses to design problems and have been very successful. The researcher has also realized the importance of giving students opportunities to improve. There was some evidence of improvement. In the weekly design project, students demonstrated increased organization and creativity. The researcher started to seeingimaginative works. However, the researcher found that the weekly design activity helped the top students improve faster more than the weak ones.

The investigator planned to implement shared studio sessions to generate more enthusiasm. By allowing students to share their stories, this, the investigator believes would continue to improve students' confidenceand good effort. The investigatorwould also introduce additional stages to the design process that will encourage students to develop their own creativity for poster design by brainstorming independently (using a graphic organizer developed by Buzan, 1988). A format for writing feed-forward would be developed that replicates the assessment process so

students could conference with peers during the process and revising stages before submitting their work for assessment. The investigator wants students to become more aware of the expectations and develop their goal setting skills.

The investigator was excited about his way of teaching graphic design problem solving skills, since the results clearly showed in the visual responses the students gave. The investigator would focus more on the process that the students use, rather than the product and give more corrective feedback, both oral and written. The investigator was satisfied seeing students smile when told about their great solutions. The investigator's assessment method has changed since the students had another chance to try an assignment, after corrective feedback had been given.

The investigator asked students how much time they spent on design problems;one student commented that she had great difficulty with the problem but that she had persisted until she was able to understand. The results from last semester's projects, administered between October and November, indicated the students were developing a clearer understanding of how to approach a design problem and solve it. The investigator noted that their solutions clearly indicated improvements in their thinking. The researcher felthe had prepared the students to achieve to the best of their ability on the poster designs.

The researcher has seen incredible growth in the students' graphic design communication. Though there werestill some grounds to cover it is believed that thestudents have become much more confident in solving graphic design problems and have found graphic design to be more enjoyable and less frustrating. By using the

action research project, the researcher was encouraged to ask questions of his own teaching and then develop ways to solve these questions. Through discussion with thestudents and peers,the researcher believesthe implementation of some assessment techniques helped students to see evaluation as part of everyday studio activities.

The researcher had the students give feedback on graphic design this year. These students had earlier in their studio had challenges with developing visual concepts, however, made some encouraging statements about their own learning.

"I find it easier if I have discussed the problem during brainstorming session rather than having to do everything in my head and alone." – Student X

"Problem-solving is my favorite part of graphic design because it is both fun and challenging." – Student K

"I have improved in problem solving. When I first started I was bad at it. Now it's myfavourite part of graphic design. I don't know how I improved, I just did." – Student P

Lastly, the researcher plans to share his research in a professional development workshop in order to gain more insight into other classrooms/studios and the procedures that are working well for my colleagues. Hopefully, what the researcher has learned will be an asset to their programmes as well.

5.2   Conclusion

This studio assessment experience astonished the researcher for a number of reasons. It was positive to notice that when the students were confronted with the reality of

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participating in the assessment process, they understood better than the researcher expected; also there were quite positive aspects the wealth and multiplicity of the defined criteria; the care in the accomplishment of the design task – the design process, and the sense of responsibility on involving students in their own assessment. Despite the fact that the students lacked the skills using the rubric in peer assessment when the study was conducted, the result was very satisfactory. Therefore, it will be an interesting project to track the attitudes of this group of students as they progress to higher levels. While the size of the population and duration of this study was modest in educational research terms, it does provide some pioneer experience for instructors in graphic design in higher education, who also intend to attempt an authentic approach in assessment.

The action research process used in this study has facilitated the development of procedures for the implementing of assessment rubric in large classes. It is clear that there are specific difficulties associated with running peer assessment using assessment rubric in large classes. Overall, however, this study suggests that the benefits in relation to student learning outweigh the administrative and staff commitment difficulties encountered when using assessment rubric in peer assessment in large groups. It can be concluded that given suitable training and facilities, graphic design educators concerned about enhancing their tertiary institution teaching and learning can benefit from being more aware of rubrics and how this tool can be effectively used in assessing and improving students' skills in critique, oral communication, technology and problem solving skills.

The study has begun to identify and document what constitutes possibility in peer assessment in the learning experiences of communication design students and how teachers foster inclusiveness as an aspect of creativity development and life-long learning. Though its many features require close examination and the methods used to implement it deserve wider use in developing teachers' understanding of design students thinking and actions in studio critique. The researcher-teacher in this study clearly valued the chance to reflect upon his practice, to share his insights with others and to engage with innovative research techniques.

There is the need to recognize that school graduates are likely to need working with to give them skills and confidence in their skills, to become independent, reflective, deep active learners (Boud and Associates, 2010). Increased students numbers in an under resourced and slowly changing art & design academic environment, makes it difficult for teachers to work effectively with individual students, in the way that an art instructor works, despite the fact that more students now need individual attention to enable them to grow in a higher education environment. However, making an effort, as described in this research, may be a worthwhile start.
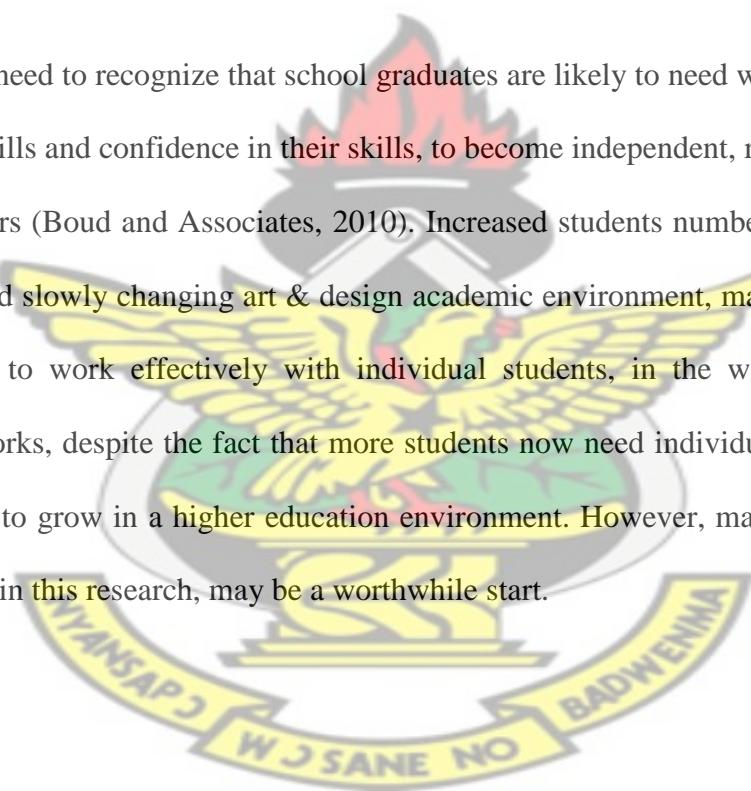
5.3   Implications for Learning

When students take on the role of teacher and partners for learning, the possibilities for learning relationships multiply. Students engage with their peers in ways that adults cannot, and tapping into this breaks down barriers, motivates and stimulates emotional connections that allow learning to take place.

The researcher is using peer support as a means to develop learning and, in this way, the focus on promoting peer support in studio activities.The concept of peer jurors in the studio assessment is to encourage and tap into group expertise during studio activities. The proposed jurors would have undertaken a thorough study in specific topic and it is assumed that they have better informed view on the subject than their colleagues in class.

Advantages

Some of the advantages experienced could be seen under the following:

- Helps students to develop insight into their own performance by assessing the work of others.

- Develops lifelong skills of evaluation and analysis.

- Supports independent and autonomous learning.

- Gives students a sense of ownership and thus increases motivation.

- Treats assessment as part of learning, so mistakes are seen as opportunities rather than a sign of failure.

- Uses external evaluation to provide a model for internal self-assessment of a student's own learning (metacognition), encouraging deep, rather than surface, learning.

- Promotes a 'community of scholarship'.

- Reduces the amount of teacher assessment but improves the quality.

- Provides time for reflection or discussion with a critical friend and this can help individuals to 'stand back from' their own work and make sense of others' comments.

- Increases students' attentiveness for activities such as presentations or group performances by peers (when they are assessing them).

- Provides more accurate feedback about processes such as collaborative working (students are often in a better position than teachers to judge individual contributions).

- Helps to clarify assessment criteria.

- Gives students a wider range of feedback

Possible issues

- Validity of student assessment (this is addressed by providing clear learning objectives and marking criteria; having more than one assessor for each piece of work; building in teacher moderation).

- Debate about whether peer assessment should be used for formative assessment only, or can be used summatively.

- Students may allow friendships, rivalry etc., to affect their objectivity.

- Involving students in assessment practices may increase an obsession with grades.

5.4   Educational Significance and Implications

The study indicates that introducing students to action research can help them develop professionally through reflection, inquiry into practice, and connecting theory and practice. The researcher's analysis of the final reports, reflections, and feedback from

students indicate undergraduate students in graphic design are quite capable of selecting and carrying out design (creative) projects beneficial to them. They enjoy choosing design elements of significance to themselves, and derive satisfaction from the implementation and analysis of their creative projects. When teachers learn they are capable of transforming student learning by researching their own practice, their conceptual understanding of teaching and learning changes. The connection between teacher growth and student-growth becomes explicit. These results clearly point to the benefits of design education programmes providing authentic opportunities for design students to explore and expand their practice in order to meet professional needs.
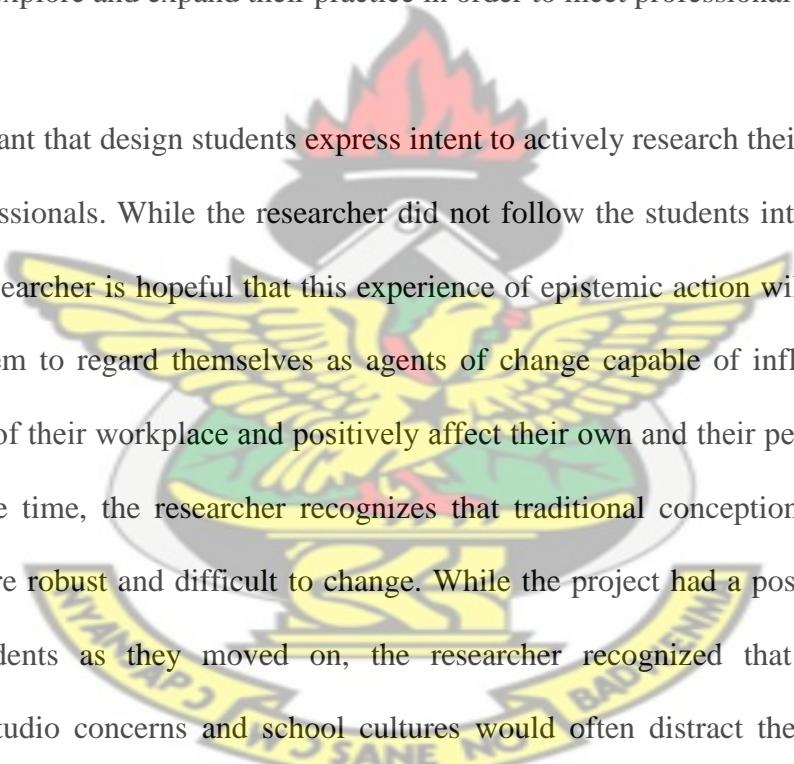
It is significant that design students express intent to actively research their practice as future professionals. While the researcher did not follow the students into their third year, the researcher is hopeful that this experience of epistemic action will encourage some of them to regard themselves as agents of change capable of influencing the parameters of their workplace and positively affect their own and their peers' growth. At the same time, the researcher recognizes that traditional conceptions of design education are robust and difficult to change. While the project had a positive impact on his students as they moved on, the researcher recognized that day-to-day classroom/studio concerns and school cultures would often distract them from the systematic reflection and ongoing experimentation necessary to become adaptive experts. It is crucial that dispositions towards reflective practice and inquiry into practice be supported in the school environment during the school years, if the researcher hopes to link pre-work and in-service practice. Doing so will ultimately create communities around educational issues focused on positive educational change.

Teachers willing to model, being adaptive experts by explicitly researching and reflecting on art and design education practices can individually influence many students. However, significant change requires institutional commitment to growth-inducing art and design education experiences through which students can research and reflect on their practice in authentic classroom/studio situations.

As educators, we grow professionally through the endeavours of our students by consciously examining our teaching practice through action research and self-study, and by reflectively engaging in interdisciplinary and collaborative teaching. Teachers also need support from their institution and from colleagues who form a community of learners if they are to continue growing professionally over the years of their career. Working together, we can enhance the profession of teaching, improve student learning, and – given time – contribute to the betterment of society as a whole.

5.5   Recommendations

Throughout the research, the researcher found out that assessment is broader than awarding grades to students. The grade you get in exams in the traditional teacher-centered summative assessment can have a long term effect on one's performance. Therefore the researcher recommends the following:

1. Teachers should conduct assessment needs surveys to find out their students' needs, prior knowledge, design abilities, and feelings on studio critique. The result of the questionnaires will provide teachers with information on how students feel about assessments.

2. Teachers would benefit from conducting personal interviews to gain an added perspective on how students feel about studio assessments.

3. Students may have different creative abilities. Teachers should speak to other teachers to find out how they (students) score in creative courses. Students who are not effective designers will need additional practice in graphic design.

4. Students have different learning styles. It is important for teachers/instructors to learn about each student's learning preferences in advance to make sure that these needs are met during the studio critiques and assessment to enhance learning. Teachers should cater for all the learning styles: Kinesthetic, visual, and auditory. They should be aware of multiple intelligences: Visual/spatial, verbal/linguistic, logical/mathematical, bodily/kinesthetic, musical/rhythmic, interpersonal, and intrapersonal intelligence.

5. Teachers need training on how to make the assessment for learning meaningful to engage students. The assessments should integrate into studio practices.

6. The author has had ample experience in conducting inspirational exercises before evaluations but other art and design teachers have not. Teachers have expressed the need to learn and practice these techniques. They can practice them on each other prior to carrying them out in their own classes.

7. There is very little research on whether assessment strategies lowered creative skills in graphic design students. The author encourages graphic design teachers or educators to conduct a study on the effect of applying peer assessment skills in art and design studios. In addition, further research is necessary to document the relationship between these creative skills and assessment skills.

8. Peer assessment components such as rubric and feedback are tools that seem to work. However, further research is necessary to prove the claim that they affect student learning and teacher instruction. There may be conclusive evidence to support the idea that they have a strong influence on both. The author hopes to conduct research on the subject and encourages others to do the same.

9. The author did not have students with learning disorders. However, teachers should find out whether any of the students have limitations with regards to creativity development. These students need special attention and individual programs on the creative strategies.

10. Teachers should involve students in the assessment process.

11. During the assessment process, the teacher should be available to guide and facilitate the use of the assessment criteria in the assessment process.

12. There should be an atmosphere for feedbacks from students in the department on the learning activities at the end of every semester so that measures would be adopted by teachers to meet their learning needs.

13. Teachers must focus on the processes undertaken rather than the final output of works when it comes to grading of students' works.

14. The teacher's interventions in contentious situations could calm down tension between students and enhance the confidence building process.

5.6   Final Reflection

When the researcher first began the PhD programme, he had no idea what he wanted to focus the research on. It was when looking through his life and what he has come to settle on that the researcher realized he wanted to center the project on making design fun, yet challenging for his students. After perusing through his undergraduate life in the art school, the researcher realized the gaps in learning, provision of feedback and use of feedback by students in their creative development. It was quite amusing to find how difficult the challenge had been and how we have been left with little guidance and over reliance on the teacher for every bit of knowledge. The researcher noticed that while graphic design was always his strongest and favourite course, he had to depend solely on the teacher to survive – pleasing the teacher with the works that appeal to, since he was the sole assessor. This was when the thought of becoming a teacher myself to implement a programme centered on open and democratic class culture, where student voice plays an important role in decision making process. The researcher thought that it was peculiar that he associated graphic design with creativity and the design process offers ample opportunities for learning.

The idea of making the work we do in graphic design studio more fun was the direction that the researcher knew he wanted to take the project. the researcher wanted to adjust his teaching and curriculum, and ignite a flame of passion for graphic design within his students. This action research project could not have come at a better time in his teaching career. The researcher now realises that over the past couple of years, he has felt disillusioned as a teacher. There was the need for change, a change that

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could rekindle hope in design students about their future. He needed to be inspired to make a change within his practice.

When looking back to previous years of teaching, the researcher now realized how teacher-centered his classroom/studio was. The researcher was doing much more talking than the students throughout a typical class/studio period. One of the biggest impactof this action research project on his teaching is that his class has become tremendously more student-centered, where students are leading discussions and teaching each other through exploring various design concepts, with me acting as more of a facilitator rather than the sole "teacher." This was not even something that the researcher intentionally sought to change. The researcher began the school year excited to teach through graphic design, yet had no idea how his teaching and view of learning would transform so dramatically.

The changes the researcher has introduced and implemented have been positive. The researcher believed the students learned how to learn and felt more confident as learners after this strategy was implemented. The researcher thinks that any art teacher for that matter can put this learning strategy into practice, especially with struggling learners of art and design. Even the students have realised that things can be learnt in many different ways more especially from peers and that something that can seem boring and difficult can be dealt with and become something easy, interesting and appealing. Many of the students expressed their interest in the assessment model and wanted to have it often in their graphic design studio. Moreover, after one such assessment activity, the researcher passed a sheet of paper to the students to see how and what had they liked about the activity, and the results are amazing. Some of them

have written very interesting comments that should be analysed and taken into account very carefully by the teacher/researcher; for instance, comments such as "Peer assessment is an innovative idea" or "Peer assessment is good and should be encouraged" or "Peer assessment a step in the right direction" or "It give us the opportunity to explain ourselves".

In the researcher's opinion, apart from offering them motivating and interesting materials and including them in the studio critique, making the students feel part of the process of learning, both by interacting with them when explaining and asking for their opinions in a questionnaire is very positive for them, for the development of their learning awareness and to feel motivated as they see that what they think and what they say also counts.

It is factual that even though the assessment activity has worked well, some students asked for more training time to be well prepared to undertake such roles, and the researcher is aware that the semester schedule cannot provide adequate training session except on the "on-the-job training"; however, the graphic design projects the researcher has created could present real and solid opportunities to the students. The researcher introduced a studio project, with two distinct objectives: (1) to help students with skills in graphic design and (2) the introduction of the new assessment strategy to facilitate the development of life-long skills needed after school if done properly. In brief, with this project the researcher has changed the method from deductive to inductive, the researcher has given the students a purpose to work, the researcher has offered them authentic opportunities which were relevant to their interests and career.

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The researcher has included them in the process of learning. By doing this, the students have been more motivated and the initial problem of lack of interest and being off-task has been significantly reduced as projects wear on.

The use of peer assessment in studio critique increased the students' engagement and involvement throughout their learning. Peer assessment created a classroom culture where students are more comfortable sharing their thinking about graphic design concepts, whether right or wrong. Whether it was with a partner, teams of students or with the class as whole, students realized that this was a norm in our studio community. Unlike previous years, students did not challenge this idea, but instead, they seemed to embrace it. Peer assessment helped to create this culture because so much of our time together, students were learning about difficult graphic design concepts through live projects. Not only did the amount of graphic design talk increase dramatically, but also while designing, students were more relaxed and less anxious about making mistakes. This helped students see that graphic design can be fun and provided them with more confidence. The researcher is satisfied with this transformation of both students' attitudes as well studio culture and believe that this change in students' attitudes may carry them throughout their remaining experiences learning graphic design. I cannot imagine my studio any other way.

This transformation of the researcher's studio culture, curriculum and teaching as a whole, he believes will continue to evolve throughout the researcher's future years of teaching. The researcheris determined to continue to teach graphic design through "assessment for learning". After reflecting on each assessment that we had in the studio, the researcher has learnt which assessment strategies are more effective than

others and which ones students have enjoyed, as well as which ones have failed. One thing that the researcher would like to add to his studio for next year is having his students keep a assessment journal in which they reflect on the various peer assessment records and their feelings about their performance in graphic design and design sketch pads. The researcher wants them to feel that they can design freely about whatever idea that comes to mind in their design sketch pads. This can be a place for them to safely sketch their ideas and feelings without any judgment from the teacher or peers. Through many of the surveys students filled out after peer assessment activities, the researcher always questioned whether students wrote honest responses, or whether they wrote what they thought their teacher/researcher wanted to hear. The researcher thinks this reflective journal will help to make students feel more comfortable with being honest about their feelings and ideas. While students wrote and reflected about their thoughts on various graphic design projects and themselves as design students, they did not keep these written responses together or record their contributions in the studio. By keeping a journal throughout the semester and year that is more reflective, and not necessarily centered around the learning of different graphic design concepts, students can reread their comments in order to reflect upon their own journey as a design students throughout the school year and learn more about themselves.

This process of collecting data for the action research project has really helped the researcher to refine his teaching for the years to come. Requiring the researcher to reflect more on his practice and take copious notes on the ways students respond to various experiences in the classroom/studio has transformed my practice. The researcher has become a more reflective teacher who uses research to drive

hisinstruction. This continuous growth in his teaching practice will not only continue to inspire the researcher in future teaching, but the researcher also hope it reaches out to other teachers that felt they were in need of some inspiration as well. By continuing to share my experiences and findings throughout my project with other educators, the researcher hopes to help change an exponential amount of students" attitudes about the way they view art and design in general and themselves as artist and designers. Let the art and design revolution begin!

5.7   Students' Attitudes towards Reflection

It was recognized from the experience of the researcher as a course tutor and former student, as well as through end of year teaching evaluations, that many students found using peer assessment (assessment for learning) beneficial, whilst others were often more negative about them (sometimes considerably so) and struggled to see the purpose of completing the peer assessment. The aim of the investigation reported here was to gain an understanding of the range of student attitudes towards their use of peer assessment as a form of reflective practice and to uncover some of the reasons for those differences. Particular interest was given to whether there were different conceptions between staff and students, how aware students were of the purpose and potential benefits of the assessment for learning and whether students with particular attitudes found the peer assessment more beneficial. Ellmers (2006) had previously conducted research in the field of design education that suggested that in terms of their approaches towards reflection, students could be categorized into those who adopted a reflective approach and those who were more inclined to adopt an uncritical

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approach informed by what they saw as common sense. Research by Ellmers (2006) suggests that within graphic design approximately 40% of students were uncertain or dismissive of the value of reflection.

5.8   Further Research

The investigator'srole as teacher-educator and researcher will continue the iterative process of improving his practice and enhancing the action research project design for the next cohort of graphic design students. The researcher will continue to utilize this strategy in his future classes and studios in order to improve student's study skills and prepare them for college and the working world.
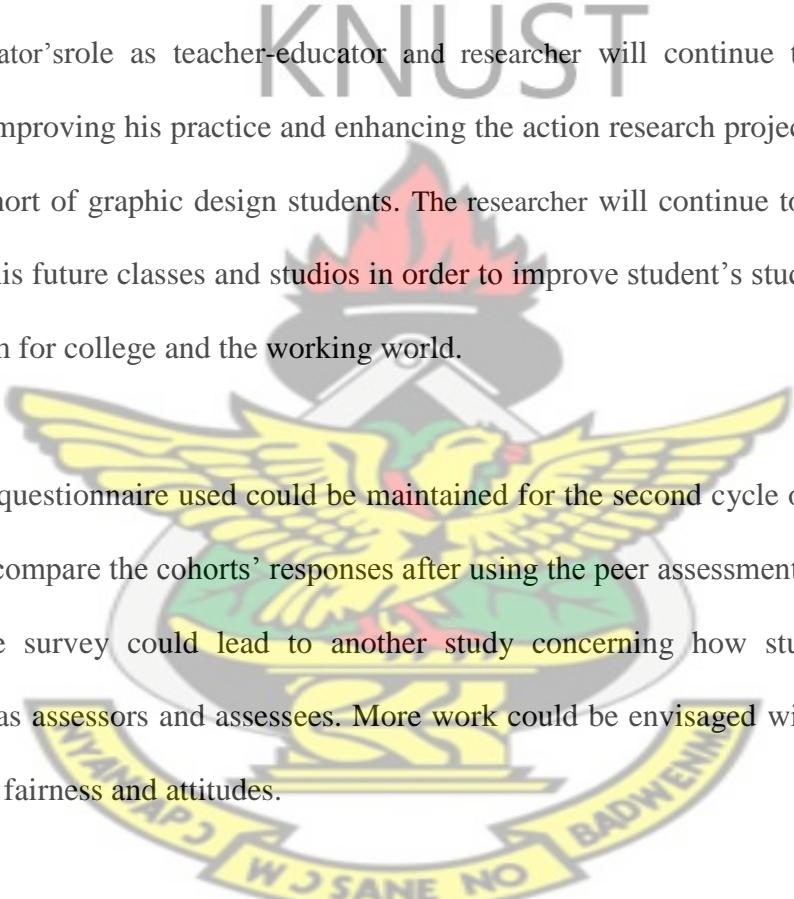
The survey questionnaire used could be maintained for the second cycle of the action research to compare the cohorts' responses after using the peer assessment a couple of times.   The survey could lead to another study concerning how students view themselves as assessors and assessees. More work could be envisaged with regard to establishing fairness and attitudes.

Looking beyond the implementation issues to larger issues, the researcher has identified other ways in which he may be able to build on the success of the first efforts. While the researcher has generally established good relationships with the students, the he needs to make connections with administrators and other lecturers to define ways in which the studio-based action research project could be more meaningful to their departments. The researcher would also benefit by sharing

information with the community of teacher-educators within KNUST as to how to employ action research in their classes/studios.

5.9 Plans for Dissemination

The author plans to present the findings of the study to creative arts teachers, lecturers of Faculty of Art and to the entire academic community of KNUST. The process has already begun at the Faculty of Informatics and Design, Cape Peninsula University of Technology (CPUT), Cape Town on 18th May, 2011. A second presentation was also made on May 30, 2011 at the Department of Graphic Design, CPUT Cape Town Campus for faculty members. A third presentation was delivered at Design, Development Research (DDR 2011) conference on September 29, 2011, Cape Town, South Africa.

Students can cope with anxiety by learning to relax and practice skills on how to lower stress. Teachers can help by learning to relax, too. The survey results from Eshun and Adu-Agyem (2010) showed that students were also concerned about their studio critique performance and peer attitude towards their creative product. Instructors should realize that their actions directly influence their students' egos. The author plans to speak to students so that they become aware of how they can help.

The teachers and colleagues who have heard the presentation are yet to ask for training on how to apply peer assessment techniques in their classes/studios. The

author hopes to conduct teacher-training workshops on how to teach these skills and encourage teachers apply action research projects in their classes/studios.

The author has published an article based on the action research project in Design, Development and Research (DDR), 2011 Conference Proceedings. The article reviewed the research material on the relationship between rubric and peer assessment on Graphic Design studio.

The author intends to continue with the study by training other teachers to implement the 12-week program on peer assessment strategies and publishing the results in professional journals.
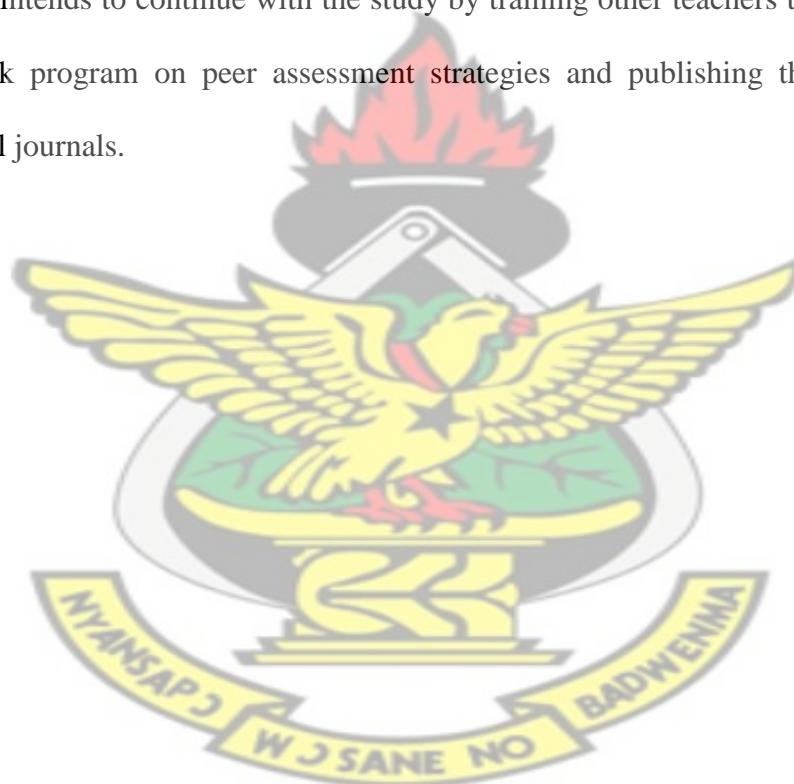
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KNUST

DAD 251/2 Course Outline

COURSE OUTLINE

Course Title: Graphics Design 1 &2
Course Code: DAD 251 (2)
Semester: 2nd
Contact Number: Phone: 0249120625
Credit Hours: 3 hours
Class Sessions: Mondays 8:00 am – 12:30 pm

Wednesday 10.30 am – 6.00 pm

Course Description

This course is an introduction to the cultural significance of the visual arts, including media, processes, techniques, traditions, and terminology.

This course advances the university's mission in that it explores human experience, emphasizes experiential learning, and prepares students for professional careers. These ends are achieved by focusing on the development of critical thinking skills, creative thinking skills, computer skills, and advanced writing skills necessary for success in the field of graphic design.

Course Objectives:

- Analyze readings in order to develop critical thinking skills
- Acquire visual literacy and improve analytical critical thinking skills regarding works of art.
- Understand the terminology of visual arts.
- Develop an appreciation of art and artistic traditions within the context of a global perspective.
- Continue to enjoy the visual arts as a source of enrichment.
- Read actively in order to write creative responses to readings
- Collaborate on documents with your classmates

EVALUATION PROCEDURES:

The evaluation will fall into these categories:

- **In-class jury.** Generally, we will spend about half of our time each class in critique and appreciation. The hands-on assignments will measure knowledge of style and vocabulary. You will be expected to complete the hands-on assignments and meet the deadline (usually before a class). On many exercises, you will have the opportunity to correct your mistakes, provided you can explain why something was wrong and how you would fix it. This is designed to let you learn by correcting your own mistakes.

- **End of semester:** You will be required to take end of semester examination based on readings, previous discussions, and **general knowledge quizzes.** These quizzes will be based on the major lecture notes and practical. In addition, the quizzes will contain general knowledge including questions from Web sites that provide the kinds of knowledge required of media professionals.

- **Class participation:** Your evaluation in this area will depend on how well you relate our readings and previous discussions to the day's topic.

Here is the approximate value of the different elements of your final grade:

- Each project takes 30%
- End of semester examination 30%
- Attendence/Participation: 10%

Critiques

Critiques are a vital part of learning design. There is much to be learned from reviewing the work of your colleagues: learn from their designs' strengths and weaknesses. Critiques also provide the opportunity to put your concept into words, and to help you learn how to speak intelligently and knowledgeably about your designs. Additionally, the instructor and your classmates may bring fresh insights and perspectives to your work that provides valuable feedback.

Course Schedule

Week 1	No Class
Week 2	FIRST DAY OF CLASS Introduction
Week 3	Visit to the Museum
Week 4	Presentation
Week 5	Idea Development (Brainstorming)
Week 6	Graphic Design Project 1(Brainstorming)
Week 7	Assessment of Project 1(Comprehensive)

Week 8 Assessment of Project 1(Final)

Week 9 Graphic Design Project 2(Brainstorming)

Week 10   Assessment of Project 2(Comprehensive)

Week 11   Assessment of Project 2(Final)

Week 12   Final Submission
Week 13   Revision
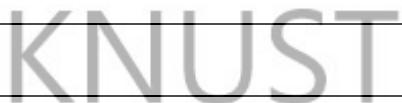
Week 14   Final Exam Date: Not available

The above schedule is tentative. Changes will probably be made as necessary during the semester and it is the student's responsibility to be aware of any changes, particularly if the student misses class.
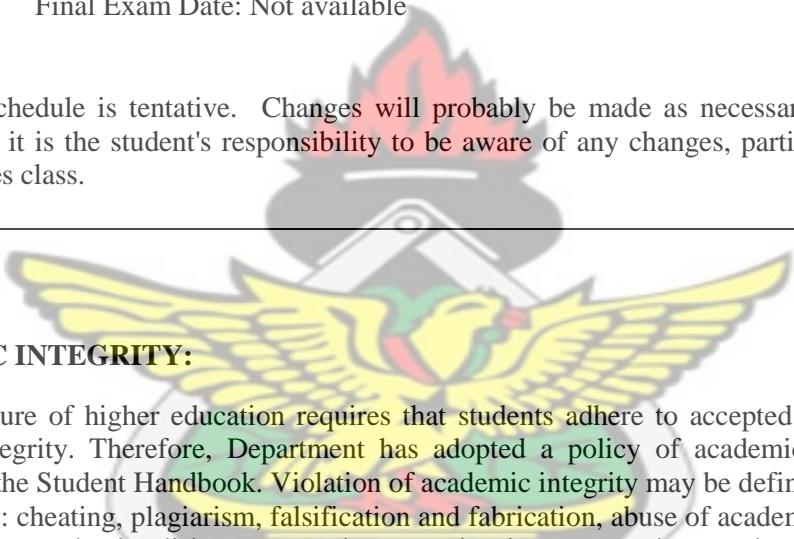
ACADEMIC INTEGRITY:

The very nature of higher education requires that students adhere to accepted standards of academic integrity. Therefore, Department has adopted a policy of academic conduct as described in the Student Handbook. Violation of academic integrity may be defined to include the following: cheating, plagiarism, falsification and fabrication, abuse of academic materials, complicity in academic dishonesty, and personal misrepresentation. It is the student's responsibility to be aware of the behaviors that constitute academic dishonesty. Sanctions for violating the standards of academic integrity may include warning, probation, suspension, and/or failure of the course or assignment at the discretion of the instructor.
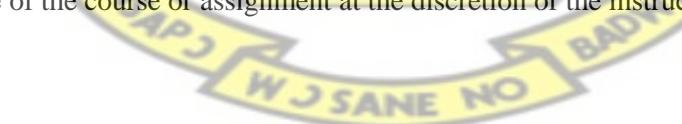
Appendix B:

Weekly Course Schedule

Week	Topic/Tasks	Studio Assignment
1	First Day of Class	Discussion of Year 1 activities
2	Introduction of Alternative Assessment	Designing, Revising and Exploring the Use of Rubric
3	Visit to the Museum (Poster Design Exhibition.)	Discussion of Experiences from Pilot Study
4	Oral Presentations on Poster Design	Presentation and Evaluation of Presentations
5	Brief Discussion on the Graphic Design Project 1	Searching for the Content from Different Resources. Idea Development (Brainstorming)
6	Assessment of Project 1(Comprehensive)	Studio Critique/Assessment
7	Presentation of Project 1	Studio Critique/Assessment
8	Brief Discussion on the Graphic Design Project 2	Searching for the Content from Different Resources. Idea Development (Brainstorming)
9	Assessment of Project 2(Comprehensive)	Studio Critique/Assessment
10	Presentation of Project 2	Studio Critique/Assessment
11	Presentation of Final Posters Discussion about the Overall Course	Submissions of Portfolios
12	Revision	
13	Final Exam Date: Not available	
14	Final Exam Date: Not available	

Appendix C

Group Comments on Rubric Development

The following group comments were captured to help me improve on the rubrics:

Team A

"The new rubric is straighter forward and breaks assessing down to understanding."

"The criteria under which we are assessed in the new rubric will make it easy for us."

"The old rubric was a bit complex and though assessment was achieved it was always with some difficulty."

The new rubric will make it easier for us when we are doing our design projects, because we understand it better."

Team B

"It is very good but the space for the assessor's remarks is too small, it should still be maintained in the new one."

"It will be effective enough to improve upon the design creative ability as well as rendering techniques."

"The item 'Background colour and effect' will also be helpful to build and explore more about designing."

Team C

"We think the rubric is simpler than the first on. This will make the assessment easier and effective."

"The new rubric is very clear and easy to understand and I believe it will make the communication between the peer, assessor and teacher very easy and effective."

"Points are quite straight-forward and would help reduce the psychological stress of having to look out for so many aspects of the design."

Team D

"It's very simple and gives accurate approach for analyzing projects."

"There should be space for assessor's remarks."

"It's really good because it provides opportunity for the assessee to be assessed by two peers."

Team E

"The new standard clearly explains itself."

"Understanding of the new standard is easy."

"There were no repetition of standards in the new one."

"The item 'Creativity and innovation" of the new one is very interesting and motivating."

"Assessors will not be confused as to what a particular standard means for example: comparing the old item 'Photograph/Illustration' to the new item 'Image(s) are well rendered and composed'. You noticed that the new one is more meaning and well-defined."

Team F

"This rubric must have peer remarks."

"Its not really necessary to add column provided for 'Student is a risk-taker'."

"This rubric is more elaborate and self-explanatory than the previous one."

"Assessee's remarks should be inclusive in the rubric."

Team G

"The new one is more complex a s compared to the old one because, the old one is self-explanatory."

"The additional standard of the old one gives it a plus."

"The old one helps the student to reflect on his or her process of designing."

"The old one enables us to know the teacher's view as compared to the peer assessor."

Student observations: During student observations I focused on student engagement levels and participation over time. I conducted this observation and made the necessary remarks and notes in the teacher's journal and some were captured by way

of photography. I compared the results of different scenarios and task comments between the different contexts. I did this on several different occasions.

Student Interviews: Interviewing my focus students provided me with valuable feedback about their experiences in development of rubric. I carefully monitored their attitudes, engagement and progress in the studio throughout the period we developed the assessment rubric. I also pulled student quotes that correspond with both qualitative and quantitative data collected, looking for themes, trends and connections between attitude, engagement and achievement. These quotes added depth and student voice to my research and findings. I transcribed and/or logged the interviews on the following weekend.

Some of the students comments captured in the interview:
"Text seems to be very crowded" – student D

" Numbers see m to be too close to each other" – Student B

"Remarks column for assessor is missing in the new format, thi remark is very necessary since it encourages improvement in the works done." – Student G

"General appearance of the sheet is not attractive." Student A

"The new assessment sheet is better than the old version in terms of different assessors assessing. This I think would create variety and information being shared." – Student A

"From my point view, I think the new assessment sheet is better since it demands everything the designer started with, where he or she got ideas among others." – Student F

"Subjectively speaking, assessment on the new one would be quite interesting and more educative, because we have ideas coming from two assessors which is better than one." – Student B

"I think the new assessment sheet is the best for now, due to the changes or elements added to the rubric. Secondly, I like the way the sheet has been made for different assessors to input their objections." Student C

Appendix D: Group Assessment Rubric for Oral Presentation

GROUP ORAL PRESENTATION

Department of Communication Design
KNUST

Course: _____ Year: _____ Date: _____

Group: _____

TOPIC: _____

DIRECTIONS: This form is designed to help you evaluate oral presentations. Read each statement below. Then indicate from the following rating scale the score which best reflects your assessment of the group's work.

	Ratings	Group 1				Group 2				Group 3				Group 4				Group 5				Group 6				Group 7				Group 8				Group 9				Group 10			
CONTENT		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1. The topic of the presentation meets the requirements of the assignment.																																									
2. The presentation seems to be well researched																																									
ORGANIZATION																																									
3. The presenter delivers ideas in a clear and concise manner, without depending too much on notes.																																									
4. The presenter speaks loudly and clearly enough to be heard by the audience.																																									
5. The students maintain eye contact with the audience.																																									
6. Overall, the presentation has demonstrated full effort of the students' potential.																																									
DELIVERY																																									
7. The presentation is well organized and easy to understand.																																									
8. The presenter has adequately prepared all required materials/props ahead of time.																																									
9. The students seem to have a clear understanding of their topic.																																									
10. The students had presented their project with enthusiasm and clarity.																																									
Group's Total Score																																									

Ratings: 4 - Excellent
3 - Very Good
2 - Good
1 - Fair

Appendix E

Basic Graphic Design Rubric

Name: _____

Semester: _____ Project: _____ Project No.:

Date: _____

Stage of Work: COMPREHENSIVE STAGE

Scale:
4 –Demonstrates mastery   3 – Demonstrates high skills
2 – Demonstrates Proficient   1 - Needs Improvement

STANDARD Description of criteria	ASSESSOR 1					ASSESSOR 2					AVE SCORE
	1	2	3	4	TOTAL	1	2	3	4	TOTAL	
#1: Research • Research capabilities • Mind mapping • Scrap/Reference Material • Referencing/Bibliography											
#2: Creativity and Ideation • Original and Innovative ideas • Fluency of idea generation • Flexibility of ideas											
#3: Colour, Layout, and Composition • Colour symbolism/psychology • Colour harmony • Colour contrast • Appropriate Photograh/Illustration • Quality of photo/illustration • Line/Word Spacing • Legibility • Placement of text and composition • Type Appropriateness • Type hierarchy • Layout is well planned • Visual hierarchy (Focal points) • Use of design principles											
#4: : Technical Skill/Oral Presentation • Overall achievement • Well-crafted and presented • Exploration of materials and media • Use of appropriate terminology • Ability to orally communicate ideas											
				TOTALS					TOTALS		

BACK

Comprehensive

Assessor's Remarks: _____

_____

_____

_____

Assessor's Remarks: _____

_____

_____

_____

Assessor's Signature:………………………………….......   Assessor's Signature:………………………………………….....

Final Work

Assessor's Remarks: _____

_____

_____

_____

Assessor's Remarks: _____

_____

_____

_____

Assessor's Signature:………………………………….....   Assessor's Signature:………………………………….....

Appendix F

Graphic Design Instructional Rubric

Department of Communication Design
KNUST

Name: _____ **Peer Assessor:** _____

Semester: _____ **Project:** _____ **Project No.:** _____

Comprehensive Due Date: _____

Final work Due Date: _____

Scale:
4 –Demonstrates mastery   3 – Demonstrates high skills
2 – Demonstrates Proficient   1 - Needs Improvement

STANDARD Description of criteria	COMPREHENSIVE								FINAL WORK							
	PEER				TEACHER				PEER				TEACHER			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
#1: Communication and Expression																
• Clarity of message																
• Aesthetic qualities (attractiveness)																
• Appropriateness of theme/concept																
• Thoughtfulness of concept																
• Overall effectiveness																
#2: Design, Layout, and Composition																
• Colour symbolism/psychology																
• Colour harmony																
• Photograh/Illustration																
• Readability																
• Line/Word Spacing																
• Legibility																
• Placement of text																
• Type Appropriateness																
• Layout is well planned																
• Visual hierarchy of design elements																
• Use of design elements																
• Emphasis/Contrast																
#3: Methods, Tools, and Techniques																
• Neatness																
• Exploration of materials and media																
• Well-crafted and presented																
• Artistic and rendering skills																
#4: Creativity and Innovation																
• Innovative design																
• Original concept																
• Dynamic/exciting design																
• Contemporary design style																
TOTALS																
#5: SELF REFLECTION																
• I thoroughly and carefully completed all assigned work.	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
• I thoroughly and carefully reviewed the earlier feedback.	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
• I consistently cared for all materials and equipment.	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
• Demonstrated focus and set goals.	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

BACK

Assessor's Remarks: _____

_____

_____

_____

Teacher's Remarks: _____

_____

_____

_____

Student's Signature:...

Assessor's Signature:..

Instructor's Signature ....

Appendix G: Rubric Explanation for Graphic Design

Appendix G

Graphic Design Assessment Rubric Explanation

	Below expectation 1	Needs improvement 2	Basic Demonstrates proficiency 3	Proficient Demonstrates high skills 4	Advanced Demonstrates mastery 5
Oral presentation	No eye contact, lack of cohesion in the essay, student mumbles, not comfortable, student jumps around.	No gestures, signs of tension and timid. Little movement, voice is low, student incorrectly pronounces terms,	Voice is clear, pronounces most words correctly. Student is at ease, answers questions, logical sequence of presentation.	Uses clear voice, precise pronunciation, holds attention, student is relaxed. Self-confident with no mistakes	Well composed, self – confident, eye contact with audience, show strong positive signs. Order , no misspellings.
Impact	Message is absent or Contradictory and dramatically weakens the work overall.	Message is Slightly confusing and could be improved.	Message is clear but fails to go beyond something simple or obvious.	Message is clear and compelling. It may not be as subtle as it could be.	Message is bold, compelling and possibly multilayered. It goes beyond the obvious.
Image	Image size is inappropriate. Not original image	Image unrelated to content, pixilated and of poor quality.	Image(s) helps audience understand the topic. Images are clear and proper size	Image(s) helps to explain the theme, are of good quality and are consistent.	Excellent image. Fits the theme and context. Original image Good cropping and high rendition effect.
Layout	Work lacks clear entry point and sight-lines and as a result has a chaotic look.	An absence of clear alignment creates a cluttered overall look.	Elements are generally lined up appropriately – centered, left or right.	Elements are effectively lined up so that the overall look represents order.	At least one bold line helps to organize the work, clearly guiding reader through the message.
Design principle	Elements are scattered or separated, creating a chaotic look. Lack of contrast.	Work overall is disjointed. Problems with proximity create confusion as to what is and isn't connected.	Proximity between text and graphics. Contrast and white space are both evident. Repetition is evident.	Proximity between elements. It is clear what is connected. Use of light & dark gives prominence. Repetition is evident.	Proximity, emphasis and contrast clearly seen White space is used strategically. Repetition is often subtle.
Colour	Colour choices weaken the work in dramatic ways.	Colour choices clash at times and/or clutter the work.	Colours are mostly effective although there may be minor clashing.	Colours contrast well and are used appropriately and. Not cluttered	Colour palette enhances the meaning of the work. Colour harmony.
Typography	Typography choices weaken the work in dramatic ways.	Font choices and/or effects create distractions.	Typography is generally effective, although font choice, size and effects may create minor distractions.	Typography choices are appropriate without an excessive number of fonts or effects.	Fonts and effects help to create a strong verbal-visual connection within the work. All font sizes and spacing are appropriate.
Technical/ Craftsmanship	Imperfections are highly distracting and take away from the overall effectiveness.	Imperfections in the work are noticeable and distracting.	Work has imperfections that create minor distractions.	Work may have slight imperfections, but they are not immediately obvious.	Work has no evident imperfections. Work is clean and neat.

Appendix H:

Instructor's Assessment/Feedback Sheet

Appendix H   **INSTRUCTOR'S ASSESSMENT RUBRIC**

Course: Student name:

Year: Graphic Design Project:

Date:

Please tick appropriate space under each category

DESIGN PROBLEM SOLVING ASSESSMENT				
Inadequate (1)	Adequate (2)	Commendable(3)	Highly comm.(4)	
PROBLEM FINDING (Task definition)				
				The student makes a plan or draws a preliminary sketch.
FACT FINDING (Information seeking and locating resources)				
				The student brainstorms ideas in and do mind map order to have several solutions from which to choose. Show reference materials.
SOLUTION FINDING (Synthesis: putting all the information together)				
				The student is willing to try new things and make changes in his/her design.
				The student asks questions when he/she does not understand.
				The student listens to instructor's suggestions for improvement.
				The student works hard to finish project or task.
EVALUATING				
				The student looks for things he/she can improve.
PORTFOLIO ASSESSMENT RATING SCALE				
				Variety of design forms, techniques and media explored are consistent with problems addressed.
				Growth in complexity of ideas: depth with issue, form or concept and presentation.
				Aesthetic quality, individuality and originality beyond criteria.
MAX SCORE (40)				

Instructor's Remarks

_____

_____

_____

_____

Adapted from Designing Assessment in Art, NAEP

Appendix I

Student Survey Questionnaire

Peer Assessment Criteria Survey

Section 1: Demographics

*(Please highlight **bold** your answer/option)*

Gender: Male   Female   Group: A   B

Please indicate your response for each of the following statements by writing **X** in the rectangle.

1- Strongly Agree 2- Agree 3- Neutral 4- Disagree 5- Strongly Disagree	1	2	3	4	5
I know how to use assessment Criteria available in my graphic design studio					
I have used assessment criteria in enhancing my learning experience					
Assessment criteria helped me in getting proactively involved with learning on the course					
Assessment criteria helped me in preparing for the jury/lecture					
Assessment criteria helped me to understand the course material through multiple sources of learning					
Assessment criteria helps explaining the subject more clearly					
Assessment criteria helps me to become independent learners by doing more work on my own					
Assessment criteria helps me to control my pace of learning by going fast or slow					
Assessment criteria helps me to stimulate my problem solving skills through visual experiences					
Assessment criteria helps me to further develop and stimulate my communications skill					
My learning process has improvement since the implementation of Assessment criteria					
Students are more interactive as the result of using Assessment criteria					
Students can understand and grasp the concepts more easily and effectively as result of using assessment criteria					
I have no problem in operating the class room assessment criteria					
If there is something unclear with the criteria than technical support is immediately available					
I do not need any training to teach me how to use the assessment criteria					
I find assessment criteria in full working order whenever I want to use them					

Thank you for your support and co-operation.

Appendix J

Interview Questions

1. What is your opinion on the use of peer assessment in graphic design studio critique?

2. What do you consider as an obstacle towards the full implementation of the peer assessment in graphic design studio critique?

3. As an assessee, what is the best way of selecting an assessor?

4. In your opinion what is the general students' attitude during peer assessment?

5. Do you consider the feedback from peers useful and do you reflect on them when improving on your work?

6. Should the student be involve in the assessment process and how?

7. Are there any lessons to be learnt in peer assessment process?

8. Does the assessment criteria help you in your learning and how?

9. What should the role of the teacher be in the studio critique?

10. How do you see the teacher's feedback and comments?

11. How often do you receive teacher's feedback and comments?

Eric Francis Eshun, 2010

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Appendix K

PORTFOLIO ASSESSMENT RATING SCALE

PORTFOLIO ASSESSMENT RATING SCALE												
	Variety of art media and techniques explored are consistent with problems addressed.											
		Growth in level of competence in presentation, typography, layout and image.										
			Shows functional redirection, exploration, integration of influences.									
				Growth in complexity of ideas: depth with issue, form or concept.								
					Shows synthesis of art history or criticism experience.							
						Authenticity of problem(s) addressed.						
							Improved effectiveness in visual communication				
								Criteria of the problem are met.				
									Aesthetic quality beyond criteria.			
										Individuality, originality.		
											TOTAL	
Student												**Generic Coding**
1.												**4** = high
2.												**3** = good
3.												2 = low
4.												1 = below
5.												0 = fail
6.												
7.												
8.												
9.												
10												
11.												
12.												
13.												
14.												
15.												
16.												
17.												

Adapted from Designing Assessment in Art, NAEP

Appendix M:

Students'Portfolios

Exhibit 01
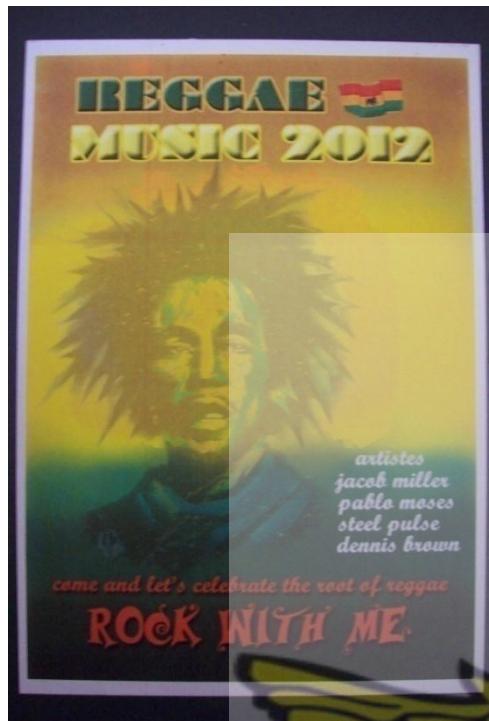
Plate 7a: Roughs   Plate 7b: Comprehensives

Plate 7c**:** Final

Exhibit 01's Peer Assessor(s) and Instructor Comments

Plate 7d: Peer Assessor's Comments

Plate 7e: Instructor's Comments

Ex 1₂

Assessor's Remarks: The layout is well planned but the colour is looks faded so needs to work on that and the picture used cannot be seen well.

Teacher's Remarks: _____

Student's Signature: _____

Assessor's Signature: _____

Teacher's Signature: _____

Ex 1₂

INSTRUCTOR'S ASSESSMENT RUBRIC

Graphic Design Project:

Year: SECOND   Course: GRAPHIC DESIGN

DESIGN PROBLEM SOLVING ASSESSMENT			
Inadequate (1)	Adequate (2)	Commendable(3)	
PROBLEM FINDING (Task definition)			
	✓		The student makes a plan or draws a preliminary sketch.
FACT FINDING (Information seeking and locating resources)			
	✓		The student brainstorms ideas in order to have several solutions from which to choose.
SOLUTION FINDING (Synthesis: putting all the information together)			
		✓	The student is willing to try new things and make changes in his/her art.
		✓	The student asks questions when he/she does not understand.
			The student listens to instructor's suggestions for improvement.
			The student works hard to finish project or task.
EVALUATING			
			The student looks for things he/she can improve.
PORTFOLIO ASSESSMENT RATING SCALE			
			Variety of art forms and media explored are consistent with problems addressed.
			Growth in complexity of ideas: depth with issue, form or concept and presentation.
			Aesthetic quality, individuality and originality beyond criteria.

MAX SCORE (60)

Instructor's Remarks

Reconsider your Concept and Layout. Provide a theme that is catchy and strong.

✓ 8m

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Exhibit 02

Plate 8a: Rough

Plate 8b: Comprehensives

Plate 8c:Final

Exhibit 02's Peer Assessor(s) and Instructor Comments

Plate 8d: Peer Assessor's Comments   Plate 8e: Instructor's Comments

Ex 1

Assessor's Remarks: Consider simplicity, layout is very bad, Ongwha/ image and must be improved upon. There is still room for improvement.

Teacher's Remarks:

Student's Signature:

Assessor's Signature:

Teacher's Signature:

MILLAH ABDUL RASHEED   Ex 1

INSTRUCTOR'S ASSESSMENT RUBRIC

Graphic Design Project: POSTER FOR REGGAE

Year: 2   Course: GRAPHIC DESIGN

DESIGN PROBLEM SOLVING ASSESSMENT			
Inadequate (1)	Adequate (2)	Commendable(3)	
PROBLEM FINDING (Task definition)			
	✓		The student makes a plan or draws a preliminary sketch.
FACT FINDING (Information seeking and locating resources)			
	✓		The student brainstorms ideas in order to have several solutions from which to choose.
SOLUTION FINDING (Synthesis: putting all the information together)			
	✓		The student is willing to try new things and make changes in his/her art.
	✓		The student asks questions when he/she does not understand.
			The student listens to instructor's suggestions for improvement.
			The student works hard to finish project or task.
EVALUATING			
			The student looks for things he/she can improve.
PORTFOLIO ASSESSMENT RATING SCALE			
			Variety of art forms and media explored are consistent with problems addressed.
			Growth in complexity of ideas: depth with issue, form or concept and presentation.
			Aesthetic quality, individuality and originality beyond criteria.
MAX SCORE (60)			

Instructor's Remarks
Weak background, the work lack the impact it needs work on the organization of the elements. Get a theme for the poster.

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Exhibit 03


Plate 9a: Rough

Plate 9b:Comprehensives   Plate 9c:Finals

Exhibit 03's Peer Assessor(s) and Instructor Comments

Plate 9d: Peer Assessor's Comments
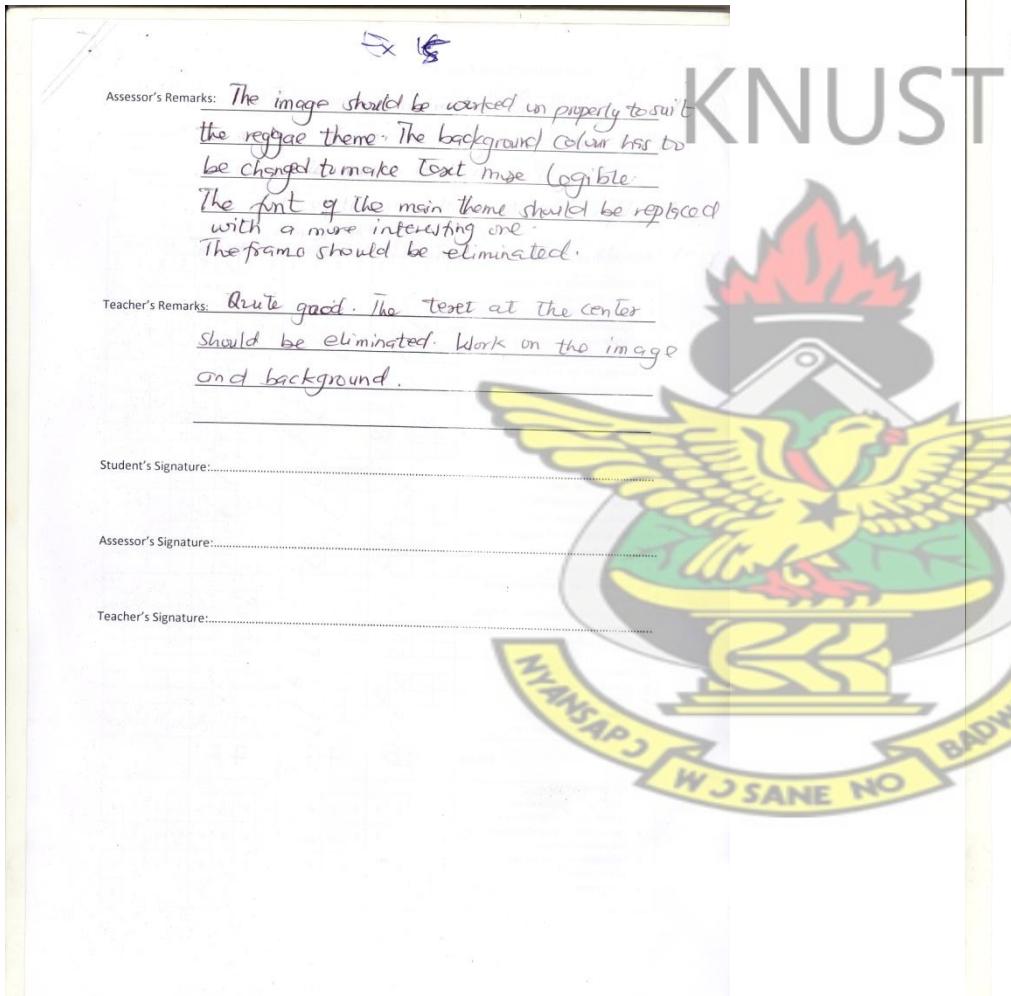
Plate 9e: Instructor's Comments

Assessor's Remarks: The image should be worked on properly to suit the reggae theme. The background colour has to be changed to make text more legible. The font of the main theme should be replaced with a more interesting one. The frame should be eliminated.

Teacher's Remarks: Quite good. The text at the center should be eliminated. Work on the image and background.

Student's Signature: ....

Assessor's Signature: ....

Teacher's Signature: ....

ESSIEN – SEPAH JANET   Ey 15

INSTRUCTOR'S ASSESSMENT RUBRIC

Graphic Design Project:

Year: 2   Course: GRAPHIC DESIGN

DESIGN PROBLEM SOLVING ASSESSMENT			
Inadequate (1)	Adequate (2)	Commendable(3)	
PROBLEM FINDING (Task definition)			
			The student makes a plan or draws a preliminary sketch.
FACT FINDING (Information seeking and locating resources)			
	✓		The student brainstorms ideas in order to have several solutions from which to choose.
SOLUTION FINDING (Synthesis: putting all the information together)			
	✓		The student is willing to try new things and make changes in his/her art.
	✓		The student asks questions when he/she does not understand.
			The student listens to instructor's suggestions for improvement.
			The student works hard to finish project or task.
EVALUATING			
			The student looks for things he/she can improve.
PORTFOLIO ASSESSMENT RATING SCALE			
			Variety of art forms and media explored are consistent with problems addressed.
			Growth in complexity of ideas: depth with issue, form or concept and presentation.
			Aesthetic quality, individuality and originality beyond criteria.

MAX SCORE (60)

Instructor's Remarks

Improve on the design concept and layout. Have a strong vibe and theme to promote the music

228
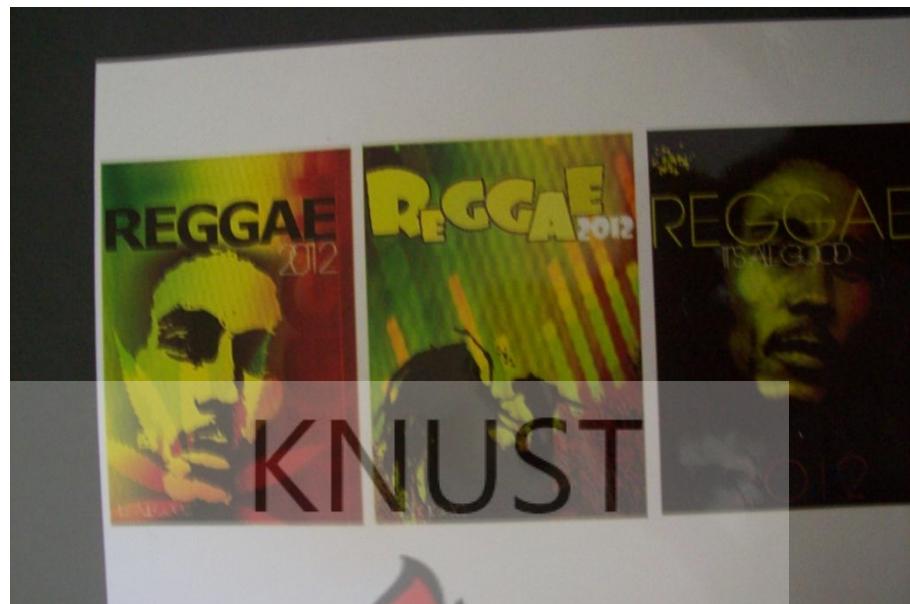
Exhibit 04

Plate 10a: Roughs

Plate 10b: Comprehensive   Plate 10c: Final

Exhibit 04's Peer Assessor(s) and Instructor Comments

Plate 10d: Peer Assessor's Comments   Plate 10e: Instructor's Comments
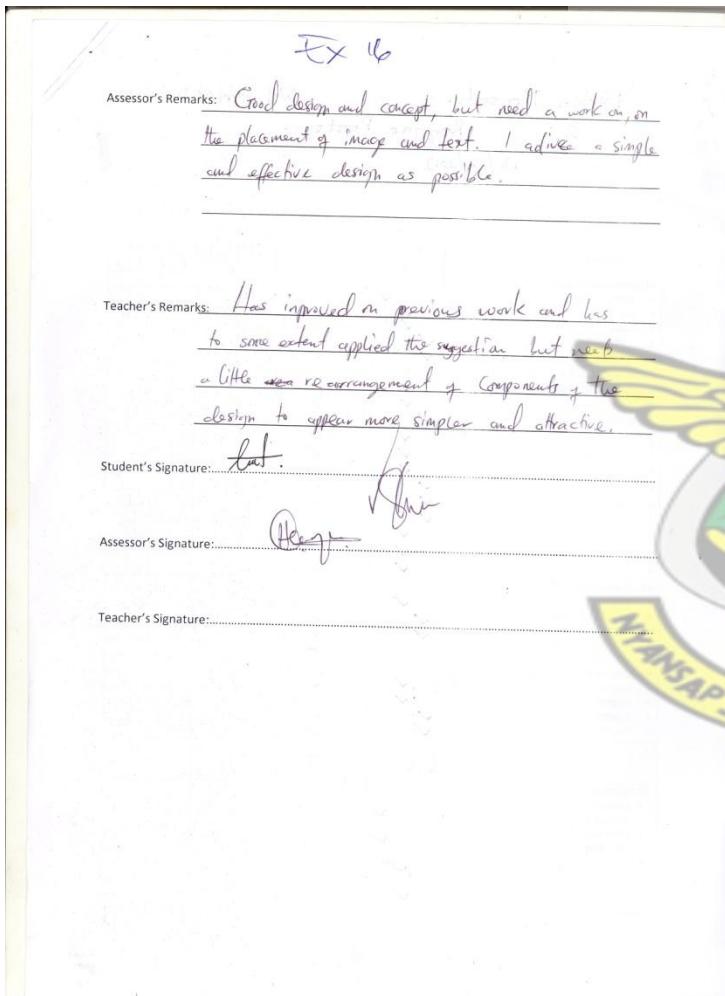
Peer Assessor's page (Plate 10d):

Ex 16

Assessor's Remarks: Good design and concept, but need a work on, on the placement of image and text. I advice a simple and effective design as possible.

Teacher's Remarks: Has improved on previous work and has to some extent applied the suggestion but needs a little re arrangement of components of the design to appear more simpler and attractive.

Student's Signature:

Assessor's Signature:

Teacher's Signature:

Instructor's page (Plate 10e):

Mensah Evelyn.   Ev 16

KNUST

INSTRUCTOR'S ASSESSMENT RUBRIC

Graphic Design Project:

Year: Course:

DESIGN PROBLEM SOLVING ASSESSMENT			
Inadequate (1)	Adequate (2)	Commendable(3)	
PROBLEM FINDING (Task definition)			
	✓		The student makes a plan or draws a preliminary sketch.
FACT FINDING (Information seeking and **locating resources**)			
	✓		The student brainstorms ideas in order to have several solutions from which to choose.
SOLUTION FINDING (Synthesis: putting all **the information together**)			
	✓		The student is willing to try new things and make changes in his/her art.
	✓		The student asks questions when he/she does not understand.
			The student listens to instructor's suggestions for improvement.
			The student works hard to finish project or task.
EVALUATING			
			The student looks for things he/she can improve.
PORTFOLIO ASSESSMENT RATING SCALE			
			Variety of art forms and media explored are consistent with problems addressed.
			Growth in complexity of ideas: depth with issue, form or concept and presentation.
			Aesthetic quality, individuality and originality beyond criteria.
MAX SCORE (60)			

Instructor's Remarks: Improve on the background and title of the poster.

25/02/12

Exhibit 05

Plate 11a:Roughs

Plate 11b: Comprehensive
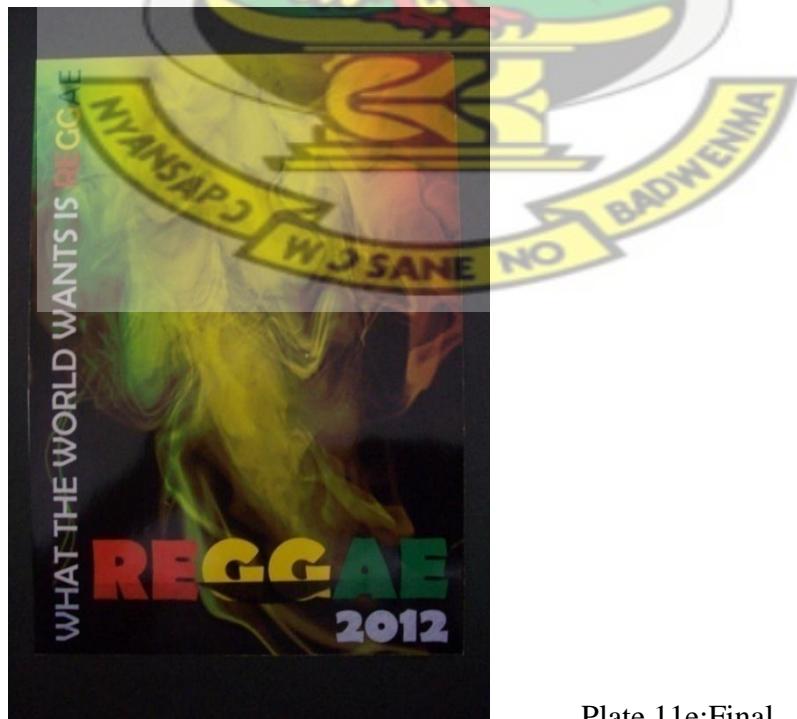
Plate 11e:Final

Exhibit 05's Peer Assessor(s) and Instructor Comments

Plate 11d: Peer Assessor's Comments   Plate 11e: Instructor's Comments

Exhibit 06


Plate 12a: Roughs

Plate 12b:Comprehensive

Plate 12c: Final

Exhibit 06's Peer Assessor(s) and Instructor Comments

Plate 12d: Peer Assessor's Comments   Plate 12e: Instructor's Comments
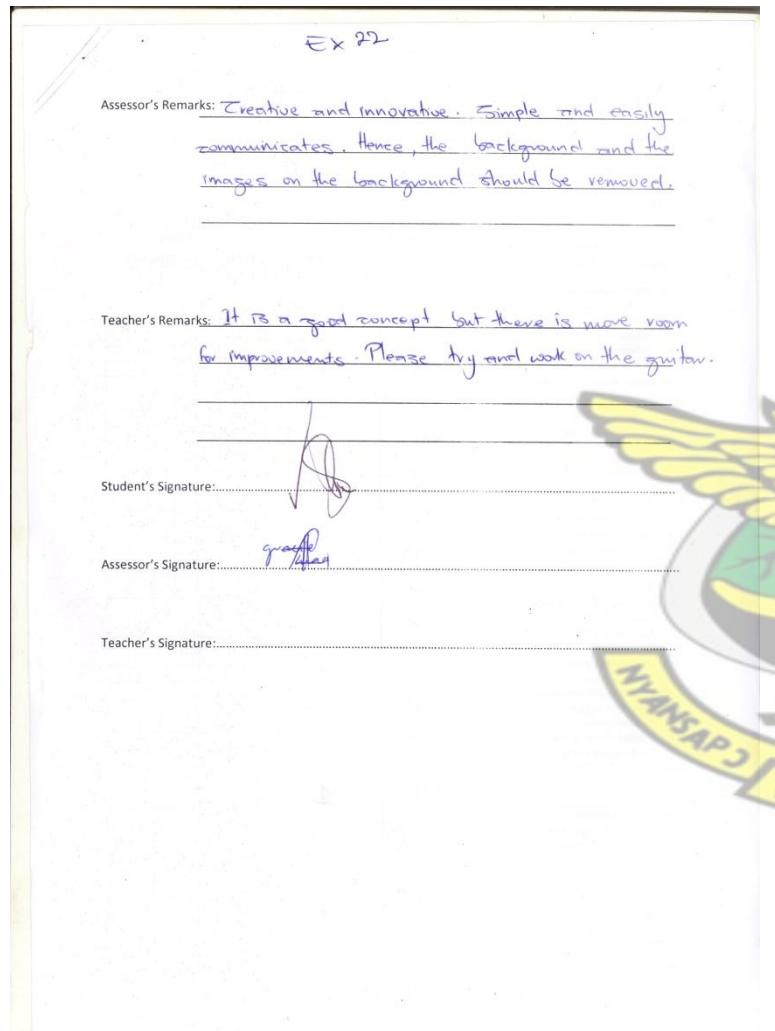
Ex 22

Assessor's Remarks: Creative and innovative. Simple and easily communicates. Hence, the background and the images on the background should be removed.

Teacher's Remarks: It is a good concept but there is more room for improvements. Please try and work on the guitar.

Student's Signature:...................

Assessor's Signature:...................

Teacher's Signature:...................

OPPONG ESTHER BIMPONGMAA

Ex 22

INSTRUCTOR'S ASSESSMENT RUBRIC

Graphic Design Project:

Year: Course:

DESIGN PROBLEM SOLVING ASSESSMENT			
Inadequate (1)	Adequate (2)	Commendable(3)	
PROBLEM FINDING (Task definition)			
	✓		The student makes a plan or draws a preliminary sketch.
FACT FINDING (Information seeking and locating resources)			
	✓		The student brainstorms ideas in order to have several solutions from which to choose.
SOLUTION FINDING (Synthesis: putting all the information together)			
		✓	The student is willing to try new things and make changes in his/her art.
		✓	The student asks questions when he/she does not understand.
			The student listens to instructor's suggestions for improvement.
			The student works hard to finish project or task.
EVALUATING			
			The student looks for things he/she can improve.
PORTFOLIO ASSESSMENT RATING SCALE			
			Variety of art forms and media explored are consistent with problems addressed.
			Growth in complexity of ideas: depth with issue, form or concept and presentation.
			Aesthetic quality, individuality and originality beyond criteria.
MAX SCORE (60)			

Instructor's Remarks

Good layout, colour and type. Needs to work on the theme

Exhibit 07

Plate 13a:Rough

Plate 13b:Comprehensive

Plate 13c: Final

Exhibit 07's Peer Assessor(s) and Instructor Comments

Plate 13d: Peer Assessor's Comments   Plate 13e: Instructor's Comments

KNUST