EVALUATION OF PORTFOLIO ASSESSMENT IN SELECTED COURSES OF THE FACULTY OF ENVIRONMENTAL DESIGN, AHMADU BELLO UNIVERSITY, ZARIA, NIGERIA

BY

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PhD /ENV-DES/8750/2010-2011

DEPARTMENT OF FINE ARTS

AHMADU BELLO UNIVERSITY,

ZARIA, NIGERIA

AUGUST, 2016

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A THESIS SUBMITTED TO SCHOOL OF POSTGRADUATE STUDIES, AHMADU BELLO UNIVERSITY, ZARIA, IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF DOCTOR OF PHILOSOPHY (PhD) IN ART EDUCATION.

DEPARTMENT OF FINE ARTS

AHMADU BELLO UNIVERSITY,

ZARIA, NIGERIA

AUGUST, 2016

DECLARATION

I declare that the work in this **Thesis** entitled "**Evaluation of Portfolio Assessment in Selected Courses of the Faculty of Environmental Design, Ahmadu Bello University, Zaria Nigeria**" has been written by me in the Department of Fine Arts. The information derived from the literature has been duly acknowledged in the text and a list of references provided. No part of this thesis was previously presented for another degree or diploma at any University.

Bello Usman, AMSAMI **August, 2016**

_____	_____	_____
Name of student	**Signature**	**Date**

CERTIFICATION

This **Thesis** entitled **"EVALUATION OF PORTFOLIO ASSESSMENT IN SELECTED COURSES OF THE FACULTY OF ENVIRONMENTAL DESIGN AHMADU BELLO UNIVERSITY, ZARIA NIGERIA",** by Bello Usman AMSAMI, meets the regulations governing the award of the degree of Doctor of Philosophy in (Art Education) of Ahmadu Bello University, Zaria, and is approved for its contribution to knowledge and literary presentation.

Professor B.K. Olorukooba Chairman Supervisory Committee	(Signature)	Date
Dr. (Mrs.) R.A Nkom Member, Supervisory Committee	(Signature)	Date
Professor M.P. Mamza Member Supervisory Commitee	(Signature)	Date
Dr. Gambo Duniya Head of Department	(Signature)	Date
Professor Kabir Bala Dean, School of Post-Graduate Studies	(Signature)	Date

DEDICATION

This **Thesis** is dedicated to my family and Parent who had sacrifice their time and rendered their support with prayers that kept me safe in all my journeys and granted me victory in pursuing my greatest projection of academic pursuit in Zaria. I am most grateful to you all.

ACKNOWLEDGEMENTS

My gratitude goes to Almighty Allah for good health, and the agility to cope with studies throughout the period of my study fellowship in Zaria. My profound gratitude goes to all my hardworking supervisors, Professor B. K. Olorukooba, Dr.(Mrs.) R.A. Nkom and Professor M.P. Mamza, for their determination and readiness to supervise and guide me in the right way which has led to success of this thesis. May I use this forum to appreciate their academic support and their precious time devoted to work on this thesis. You all have made it presentable and acceptable at the end. May God keep and protect all of them and surprise them with His abundant blessings at the appointed time. I am deeply grateful to the management of University of Maiduguri for allowing me to develop my academic career in the area of Art Education through their sponsorship. My appreciation goes to Dr. Abba Isa Tijani, Head of the Department of Fine Arts, for understanding fully the matter of study fellowship. Prof. Adamu A. Mbahi and Prof. Ahmed R. Saliu were very helpful to me in Zaria. Their tremendous contributions to the success of my programme in the school cannot be quantified with words. My thanks go to all the staff of Fine Arts Department, teaching and non-teaching staff, for the warm relationship which I enjoyed throughout my stay in Zaria. My special thanks go to Dr. Iyabo K.Tijjani, Professor Mu'azu M. Sani, Dr. Gambo Duniya, Dr. Aliyu Mohammed, Dr. Gushem Philip, Dr (Mrs) Ladi Agada and Mr. Ismaila S. Chafe for their consistent encouragement and motivation that urged me to work hard and reach this level.

I wish to also appreciate the following educators Prof. Muhammad Munkailu; Prof. Habila J. Gukas, Dr. Yunusa Mohammad, Dr. Abba Buba Dawule and Mal. Rabiu Badamasi for their courage and tremendous support. My gratitude goes to the librarians of the Fine Arts Department for love and cooperation which enabled me to use the library at all times to search

for materials needed for this project. Finally, my appreciation goes to my lovely wife and children who have missed me in the house for some years; May God blesses all of them.

ABSTRACT

The study surveyed the level of the use of Portfolios as a method of assessment in Selected Courses of the Faculty of Environmental Design, Ahmadu Bello University, Zaria. The study investigated the types of Portfolio use by lecturers and students; it also examined the lecturers' and students' understanding of the concept of Portfolio Assessment as well as determines the problems of using portfolios as a method of assessment. This is with the ultimate goal of establishing the need for Portfolio model in enhancing learning. Portfolios are being use but they do not provide rubric, self-reflection and portfolio model sheets. Lack of defined assessment scheme has been the gap the study bridges. The study used five research objectives. One thousand and one hundred (1,100) students and lecturers form population, while two hundred and ninety-three (293) served as sample size of the study. The selection was done by the use of Stratified Random Sampling technique. Experts were involved in order to scrutinize the research instruments in terms of construct and content validity. The study used Alpha Cronbach reliability Coefficient to ascertain the reliability of the research instrument that yield 0.951 which was obtained for student's questionnaire and 0.981 for lecturers' questionnaire. These results therefore confirmed that the instruments were reliable for collection of data. The responses were based on lecturers' and students' understanding of the concept of Portfolio Assessment, types and variations of portfolio assessment and problems of using portfolio assessment. The findings of the study showed that portfolios were mostly used as a folder. The findings indicated that both lecturers and students did not understand the concept of portfolio assessment which comprises rubric, guidelines; self-reflection and portfolio model sheets. The finding of the study on lecturers' knowledge of using portfolio assessment revealed that majority of them disagreed that portfolios are supposed to be used with rubric, reflection and portfolio model. The finding of the study also identified time consumption, large class or crowdedness as problems of using assessment portfolios. Provides multiple ways of assessing students' learning overtime and multiple opportunities for observation and assessment are the benefits of portfolio assessment among others.

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CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Teaching and learning play important roles in the life of human society. Education has been the means of development socially, economically, politically, morally and technologically. To achieve development, public education has been shifting to standard or outcome-based on performance-oriented systems. Within such systems, the basic purpose of all education is students' learning and assessment, and the primary purpose of all assessment is to support learning.. The support is rendered through assessment which can improve the instruction, teaching method and assessment. For instance, the Assessment Reform that began in the 1980s in North America has had numerous impacts. Most significantly, it changed the way educators think about students' capabilities, the nature of quality in learning as well as what can serve as assessment. During the educational reformation, the use of portfolios as a mode of assessment gained a lot of interest (Davies and Le Mahieu, 2003).

Portfolio is 'a flat portable case' or a large heavy envelope for carrying paper or drawings as well as design. Portfolio is created to give protection to works of the architect, fine artist, graphic and textiles designers. The works kept are usually two dimensional works. The portfolio protects the drawings and designs from effect of negligence, weathering and aging. It also stores all paper drawings or painting and design of any media (Ifeagwu, 2005).

Assessment Portfolio is the type that keeps design, painting and drawing collections but provides rubric, self-reflection and portfolio models which could be analytic or holistic. It also admits jurying that involves course examiners to assess the works of students together. That means, the assessment is not unilateral. It allows students to understand how they are being assessed.

Portfolio assessment is the procedure used to plan, collect and analyze the multiple sources of data maintained in the portfolio. The process includes student participation in the selection of work, in criteria, goal setting and through self-assessment. Students and teacher collaborate in assessing and evaluating students learning from evidence in portfolio collection, then use the information to make plan and set goals for further learning. Assessment Portfolio contain guidelines for content, criteria for evaluating process and product as well as evidence of student's reflection (Macleod and Erlandson, 2012).

Art and design teachers at all levels (9) Lower, (3)Middle and (4)Higher have traditionally used the end of lesson, a term test, semester test for parents and other stake- holders to view the works of their wards in creative arts. They use the simplest kind of judgment of "good" or "bad" or simply fix letter grades (A, B+, B, C+, and C) and arbitrary percentages to evaluate the works of the learners. Traditional Assessments are often considered as subjective (Mamza, 2006; Eisner, 2002; Mbahi, 2000; 1999, Olorukooba, 1990); because they are based on the teachers' perception of aesthetic qualities of the art products such as: shape, line, colour, balance, harmony and composition among others.

Thus the lack of the criteria or objectivity has often resulted in lack of proper monitoring of students' progress in art, and in the wrong perception that art is not a serious academic subject when compared to other school subjects. Several studies like those of English (2010), Gruber (2008) and Lorna (2003) were made in the past to correct the situation by introducing some forms of assessment in art. Mbahi (2000) and Olorukooba, (2006) observe that such attempts were usually not related to "what is taught". The emphasis is placed on learners' efforts and not achievements. They also note that it is mainly concerned with cognitive, leaving out the affective and psychomotor aspects of the learners' development. Mamza, (2001) supporting Mbahi,(2000)

maintains that this approach to assessing art works and design is often-times based on standards which have little or nothing to do with art or design and therefore cannot be regarded as contributing to the general education of learners in the field of art and design. In the Universities and tertiary institutions, the traditional portfolios are being used for assessment and in keeping students' art and design projects. The study is set out to find out if there are portfolio assessments in professional courses in Departments of the Faculty of Environmental Design, Ahmadu Bello University, Zaria.

1.2 Statement of the Problem

Traditional Portfolio techniques do not provide rubric, self-reflection, guidelines and feedback to the students in drawing and design courses. They store and safe keep designs and drawings which awaits arbitrary award of marks on students 'performance at particular time. Assessment Portfolios could provide information on the academic development of the learner from the beginning to the end. Through the use of Portfolios, students are regularly asked to examine how they succeeded or failed or improved on a task or set goals for future work. No longer is the learning just about the final product, evaluation or grade but becomes more focused on students developing metacognitive skills that will enable them to reflect upon and make adjustments in their learning in school and beyond. If assessment portfolios are maintained, they may establish uniformity and standard criteria for the lecturers' use. Do portfolio assessments really exist among lecturers in their evaluation of students in the Faculty of Environmental Design, Ahmadu Bello University, Zaria? If lecturers understand portfolio assessment they would provide the students room for expressing their full potentials. If the use of portfolio assessment is also popularized, it could be the flexible form of assessing students over a period of time. It could

also be the best way to understand the artistic and design development of the learners from the beginning to the end.

1.3 Aim and Objectives of the Study

The aim of this study is to evaluate the level of the use of assessment portfolio by the Departments in the Faculty of Environmental Design, Ahmadu Bello University, Zaria, with the view to addressing the need for a model of assessment in the portfolio.

The objectives of the study are to:

1. ascertain whether lecturers and students understand the concept of the portfolio method of assessment,

2. examine the types and variations of portfolio assessment methods used in the various Departments.

3. establish the level of lecturers' competencies and relate it to the use of portfolio assessment method

4. study lecturers' use of portfolio assessment method in assessing drawing and design performances of students.

5. identify the problems and the benefits of using portfolio method of assessment.

1.4 Research Questions

The study has the following research questions:

1. Do lecturers and students understand the concept of portfolio method of assessment?

2. What are the different types of the portfolio assessment methods used by lecturers?

3. Do lecturers have the knowledge of using portfolio assessment method?

4. Do lecturers use the portfolio assessment frequently?

5. What are the problems and benefits of using portfolio assessment?

1.5 Justification of the Study

Portfolio assessment method is thus an important assessment method which will help the teacher to explore ways of providing adequate time for other class activities like drawing and design.

It could reveal the stages of the artistic development of the students. If the teachers are encouraged to use portfolio assessment method; students would have room for expressing their full potentials (Dilmac, 2010; Birgin and Baki, 2007).

1.6 Significance of the Study

Findings of the study have possibility of helping lecturers to become familiar with portfolio assessment method as an appropriate technique for assessing design and drawing performance of students in professional courses in the Departments within the Faculty of Environmental Design of Ahmadu Bello University, Zaria. Students would also be aware that teachers are giving value more attention to their assessed works, free of bias in allocating marks for their evaluation. They will also know that all works in the portfolio are assessed. It serves as an important contribution of research towards providing guidelines for using portfolio method of assessment.

This research would also promote the use of portfolio assessment which is aimed at improving drawing techniques, skills, and competencies of students at the Faculty of Environmental Design, Ahmadu Bello University, Zaria. The findings of the study encourages the relevant departments in the faculty to think of not only the use of portfolio assessment at all times, but also would realized the strengths and weaknesses of their assessment practices, Students would understand the ways that teachers assess designs and drawing projects and assignments that they submit for grading. The outcome of the work would hopefully invite more researchers in this area of the study.

1.7 Scope of the Study

The study was on the use of portfolio assessment method as a tool to assess students' performances in the selected Departments of; Architecture, Fine Arts, Industrial Design and Urban and Regional Planning of the Faculty of Environmental Design, Ahmadu Bello University, Zaria.

The study was delimited to the following:

1. Lecturers taking the related courses on portfolio; 300 and 400 level students) of the Departments of Architecture, Fine Arts, Industrial Design as well as Urban and Regional planning;

. 2. Attention was given to the opinion, knowledge, experiences and use of portfolio assessment among the academic staff members; 300and400 level students of the selected Departments in the Faculty of Environmental Design, Ahmadu Bello University, Zaria

1.8 Definition of Operational Terms

Assessment Portfolios: it is the type that keeps collection of design, drawing or painting and also provides rubric, self-reflection and portfolio model.

Conference: it is one of the important procedures in portfolio assessment that would bring together students and teachers. It is a conversation between teacher and student a forum to discuss collaboratively the progress and an avenue to set goals for future. It takes several forms, such as individual student; several students or the whole class. Conference is conducted to enable students understand their strengths and weaknesses.

Evaluation: it is a way of checking the effectiveness, by selecting the appropriate methods and learning experiences to give feedback to planner, teachers, students and the society.

Faculty of Environmental Design: it is a division of the University that controls the courses of Environmental Design. The division comprises Architecture, Building, Fine Arts, Geomatics, Industrial Design, Quantity Survey and Urban and Regional Planning.

Portfolios: It is 'a flat portable case' or a large heavy envelope for carrying paper or drawings as well as design. Portfolio is made to give protection to works of architect, fine artist, graphic and textiles designer. The works kept are usually two dimensional works. The portfolio protects the drawings and designs from effect of negligence, weathering and aging. It also stores all paper drawings or painting and design of any media.

Portfolio Assessment: it is the procedure to plan, collect and analyze data in the portfolios. It is purposely used for enhancing and monitoring learning.

Developmental Portfolio: this is the type of portfolios that indicates the individual student's progress and growth over time.

Evaluation Portfolio: it is the type of portfolio that documents achievement for grading purposes and place students appropriately.

Showcase Portfolio: this is the type that displays and documents best work produced.

Portfolio Contents: it is what an assessment portfolio contains all the time. These include:

1.Portfolio folder itself labeled with the word 'Portfolio' boldly and student's Identification number is provided.

2. lists of activities (topics) to be designed or drawn;

3.Work sheet for each design or drawing identifying the topic of the work, date of production, student's signature and teacher's signature as well.

4. Self-reflection sheet for each work.

5.Record of student-teacher conferences.

Selected Courses: these are courses selected by the study from the Departments of the Faculty of Environmental Design.

Rubric: this is a scoring guide, consisting of specific pre-established performance criteria, used in evaluating students' work on performance assessment.

Analytic Scoring Rubric: it is the first score that is given as part of the product that is sum up with the individual scores to obtain a total score. For instance, 4-point rubric can be used for grading drawing test papers of the students. it measures students' drawing performance against the pre-determined set of criteria.

Holistic Scoring Rubric: it is the one that requires the teacher to score the overall process or product as a whole, without judging the component parts separately.

Self-Reflection Sheet is a questionnaire that provides questions about the activity he or she has done. It is designed to establish if a student followed the laid down drawing or design steps. The sheet would help the teacher understand if students had followed the principles of drawing or design. The sheet is usually designed by an expert or experienced person in the field.

Portfolio Assessment Model: it is a format in used to assess students in drawing or design. The nature of Portfolio model is determined by the instructional objective. If the objective is holistic; the portfolio model will use holistic scoring style and if it is analytic it will be analytic scoring type. The Portfolio Assessment Model complements the traditional test 'as single measure that is incapable of estimating the diversity of skills, Knowledge, Process and strategies combined to determine student progress'.

Jurors: this is a team of experienced teachers in a particular field of study selected to assess the contents of the portfolios.

1.9 Theoretical Frame work

Gardner's, (1983 and 1999) theory of multiple intelligences was adopted for this study. The theory of multiple intelligences identified nine (9) different human intelligences. These intelligences are seen as human cognition and potentials in terms of people's different strengths and intelligences. The intelligences included: 1). Spatial -Visual Intelligence, 2). Verbal – Linguistics Intelligence, 3).Logical-Mathematics Intelligence, 4). Bodily-Kinesthetic Intelligence, 5). Music Intelligence, 6). Inter-personal Intelligence, 7) Intrapersonal Intelligence, 8).Naturalistic Intelligence and 9).Existential intelligence. Of these nine human intelligences, Spatial-Visual Intelligence was chosen. The rationale for selection of Spatial-Visual Intelligence was that, it is directly related to the area of the study.

The Spatial-Visual intelligence has clearly described Architecture, Fine Arts, City Planning, Building, Graphic Design, Photography and Sculpture as closely related in learning styles, roles, tasks, activities and assessment. By the framework of the theory of Gardner, (1999) the study posits that professional courses such as found in the Faculty of Environmental Design, Ahmadu Bello University, Zaria possess related learning styles, activities and assessment. The study also adopted the C.I.P.P model of curriculum implementation by Stufflebeam in Yusuf, (2012). The procedures of CIPP model are characterized by Context evaluation, Input evaluation, Process evaluation and Product evaluation. The CIPP model enables the study to understand fully the implementation of the school curriculum through assessment as well as guides the study to show how portfolio assessment is used as formative and summative aspect of evaluation at the University level. The aspect of Process Evaluation (formative) and Product Evaluation (summative) would serve as a major outline of the portfolio assessment. The nature of the assessment portfolios is characterized by the principles of the theory of Stufflebeam's (1970).

The functionalities of the assessment portfolios are in line with the principles of CIPP model. By the model of C.I.P.P assessment portfolios can be used in two categories. The Process Evaluation as one of the principles of CIPP model which is formative, guides the lecturers in using the developmental assessment portfolios. Product Evaluation is another principle of the CIPP model that supports the use of evaluation assessment portfolios. The two theories enable the study to identify its philosophy in terms of epistemology and ontology.

1.10 Research Philosophy

This is a philosophical belief about the way in which data about a phenomenon should be gathered, analyzed and used. The study is anchored to views of the positivists (positivism). Positivism believes in reality. Positivists see that reality is stable and can be observed and described from an objective view point without interfering with the phenomena being studied. They opined that phenomena should be isolated and that observation should be repeatable. Predictions can be made on the basis of the previously observed and explained realities and their interrelationships (Saunders, et al, 2012). The study observed that at every stage, man make assumptions. It could be an assumption about human knowledge, nature of realities of educational phenomena; and look for what importance or value? It is also believed that in research such assumptions would affect the research questions, methodology and interpretation of the findings (Saunders, et al, 2012). By this it is important to adhere to a particular philosophical position to accomplish a philosophical paradigm of the study. To let the teachers, students and school administrators understand the assumptions behind the study; the research philosophy has been stated as in the following:

1.11 Ontology

The term 'ontology' is seen as the nature of reality; it is something external to the social world.it is also something that exists in socially negotiated meanings that people give to it (Saunders, et al,2012). If ontology is reality; the study has identified the reality of portfolios as a means of assessment in teaching and learning. By the notion of ontology "portfolio is more than just a file folder" and the work of Mueller, (2012) 'Authentic Assessment Toolbox' has provided, the reality about the functionality of portfolios as a mode of assessment has been identified in detail. The implementation stages were also provided for teachers use in their teaching. The toolbox is a guideline for teachers who are innovative and professionally sound see page 41.

1.12 Epistemology

Epistemology describes knowledge. What is considered as knowledge is based on observable phenomena. Epistemology is knowledge and knowledge is new idea. The information about rubric, self-reflection and portfolio model as described in the Toolbox of Authentic Assessment would serve as knowledge to teachers, students and other scholars interested in portfolio assessment. The study would communicate to other researchers concerning the discovered and identified knowledge.

Theory has been used to give an opening to the study to clarify issues regarding assessment activities of professional courses. The Gardner's (1999) theory of multiple intelligences provides learning styles and assessment of professional courses as related. The study also provides new concepts which are related to portfolio assessment, which serves as knowledge (epistemology).

CHAPTER TWO

LITERATURE REVIEW

This chapter deals with review of literature that are empirical in nature which were reported by various scholars through books, dissertations, journals and theses. The following subheadings were reviewed by reading through the scholarly books, dissertations, journals and theses:

2. 1 Concept of Evaluation, Continuous and Portfolio Assessment;

2.1.1 Nature of Continuous Assessment,

2.1.2. Description of Types, Categories and Contents of Assessment portfolio

2.2 Faculty of Environmental Design and Selected Courses;

2.3 Professional Vocational Education Programme and National Policy on Education;

2.4. Concerns of Portfolio assessment in teaching;

2.5 Utilization of Portfolios as method of assessment;

2.6 Criteria for Assessment using Portfolio Method;

2.7 Problems and benefits of Portfolio Assessment;

2.8 Procedure of Utilizing Assessment Portfolio in Teaching

2.9 Previous Related Empirical Studies,

2.10 Summary and Uniqueness of the Study.

2.1 Concepts of Evaluation, Continuous and Portfolio Assessments

An evaluation in general is intended to enhance learning and foster further students' growth in achieving the objectives of the programmes. According to Yusuf, (2012) evaluation in art education is used as in other school subjects: to recognize progress and identify areas that need further learning. It is a derivative from the Latin word 'curere',

which means to run. Curriculum has been defined by different authorities; to a few it is an educational system that will help growth and development of the child. Basically, it is seen as guides, syllabi or textbooks that facilitate teaching and learning.

If inadequacies or improvements are observed, there would be replacing, redeveloping and then reappraising. So evaluation is either about proving something is working or needing improvement(Gatawa cited by Mohammed,2014). Measuring performance objectively requires observing, setting up criteria for successful performance of the behavior and not in the situational context in which the behavior is to be performed.

Olorukooba, (2006) states that evaluation is the appraisal of an outcome or achievement of particular objectives. Mohammed, (2014) sees it as a process of determining the extent to which educational objectives are being realized by the programme of curriculum and instruction. With Eisner, (2002) evaluation is the method whereby students, teachers and materials are diagnosed in order to prescribe treatments that are educationally effective. Yusuf, (2012) defined evaluation as the collection and use of information for decision-making about an educational programme or curriculum. If we take a close look at the definitions we discover everyone sees it the same way, the differences resulted from the use of semantics. All the definitions however maintained that it is a process as observed by (Yusuf, 2012).

Gatawa in Mohammed, (2014) lists the aims of curriculum evaluation as to:

1. determine the outcomes of a programme
2. help in deciding whether to accept or reject a programme
3. ascertain the need for revision of the content

4. help in future development of the curriculum necessary for continuous improvement and improve methods of teaching and assessment techniques.

Yusuf, (2012) asserts that the concept of evaluation was advanced by Scriven and Stake. Scriven in Yusuf,(2012)stressed the concepts of continuity in evaluation and emphasized the use of three different but related types of evaluation which included diagnostic, formative and summative evaluations. Gatawa in Mohammed, (2014) sees diagnostic evaluation as being useful for providing information on students' performance in order to address a perceived problem. According to Mohammed, (2014), evaluations which are focused on assessing programme quality, implementation and impact to provide feedback and information for internal improvement, without external consequences, are called formative evaluations, while evaluation which are designed to study and provide information program impact to external agencies are summative. Formative evaluation is an assessment of the worthiness of an instructional programme that is still capable of being modified. It takes place during the developmental process of a programme. The formative evaluator therefore, attempts to appraise such a programme in order to inform the programme developer on how to do away with deficiencies in instructions. Mohammed, (2014) quoted Gatawa who opined that the purpose of formative evaluation is to ensure positive outcome of summative evaluation. Summative evaluation refers to assessment of merits, focused on completed instructional sequence so as to decide on whether or not to adopt that sequence.

Mohammed, (2014) distinguishes three types of decisions for which evaluation is used.

1. To improve the curriculum; and for deciding what instructional material and methods are satisfactory and help identify where change is needed.

2. To make decisions about individuals; identifying the needs of the pupils for the sake of planning their instructions, judging pupils' merit for the purpose of selection and grouping, acquainting the pupils with their own progress and deficiencies.

3. Administrative regulations; judging how good the school system is, how good individual teachers are and so on.

Olorukooba, (1977) adds that evaluation is also used to assess the curriculum, materials, teaching strategy as well as learners' and teachers' attitude. To have a balanced curriculum, the school curriculum should serve two purposes: -

(i) Provide essential skills for the child to enable him become a useful member of his Society;

(ii) Satisfy the child's personal and immediate needs, as specified in our national policy of education,(F.M.E,2004).

The capacity of the teacher to handle a course properly is determined by his ability to use appropriate methods of instruction and also the relevant techniques of assessment which will determine their suitability. These methods and techniques must be appropriate if success will be achieved.

Dressel in Yusuf, (2012) also describe evaluation as a judgment on the impact of a programme, procedure, and the process whereby that judgment is made. Dressel explained the various ways through which such judgments can be reached. These are 1. personal, 2.subjective appraisal, 3.mutual agreement or by 4.compromise. The four basic elements considered important for evaluation are content, input, process and product. Content evaluation deals with what curriculum offers, input relates to deciding what resources and strategies are used to achieve curriculum programme goals and objectives. Process evaluation determines what effect the

curriculum programme has on the students in schools, while product examines the effect on students' overall educational attainment.

Continuous assessment is a systematic and regular method or technique of determining what a learner has gained from learning activities. These learning activities involve knowledge, thinking and reasoning (cognitive), character development (affective) and industry (psychomotor). Usuji and Okonkwo, (2003) defined the Continuous Assessment as:

> …… mechanism whereby the final grading of a student in the cognitive, affective and psychomotor domains of behaviour systematically takes account of all his performances during a given period of schooling. Such an assessment involves the use of a great variety of modes of evaluation for the purpose of guiding and improving the learning and performance of the student (p 20)

When the Nigeria Curriculum Conference was held in 1969, it was suggested that continuous assessment be introduced as a remedy to the undesirable effect of the one-shot examination of students learning and achievement. It was not possible until 1977 that a bold attempt was made to adopt it as a policy to guide evaluation strategy of students learning and achievement. It is now entrenched in the National Policy on Education 1977, revised in 1981 and 2004. The policy has gone further to make elaborations of the Continuous Assessment (CA) for the various levels of our educational system. Usuji and Okonkwo, (2003) describe it as a method of evaluating the progress and achievement of students in educational institutions. It aims to get the truest possible picture of each student's ability at the same time helping each student to develop his or her abilities to the fullest. It is a method whereby the final grading of students takes account in a systematic way of their whole performance during a given period of schooling. It indicates that the individual student would be seen and assessed in totality. It also implies that the three 'H's – Head, Heart and Hand that relate to cognitive, affective and psychomotor domains respectively,

should be taken care in the Continuous Assessment strategy. The student is looked at as a whole person.

In examining the concept of continuous assessment it could be seen as a continuous process of updating judgment about performance in relation to specific criteria which will allow a cumulative judgment to be made about performance upon these same criteria at any time.

2.1.1 The Nature of Continuous Assessment

The nature of Continuous Assessment include systematic, comprehensive, cumulative and guidance-oriented assessment. Continuous assessment is said to be systematic because it has a definitive programme of assessment. Thus it has an operational plan which indicates or specifies what measurements are to be made of the students' performance, the time intervals when such measurements are to be made, the results to be recorded and the specific nature of the instruments or strategies to be adopted for the measurement. Usually, these are worked out in advance. It means that any school involved in Continuous Assessment programme must adopt a definite programme that should be made known to all participants especially students, teachers and even the ministry of education officials and parents who are directly involved.

A variety of assessment procedures are used in ascertaining the performance of the pupils. Such instruments include tests/examinations, assignments, projects, observations, questionnaires, interviews, socio-metric techniques etc.

Every information collected on the students during the process of continuous assessment is made use for further developments. A major reason why students are assessed within a course of study rather than waiting until the end of the school term or school year or even end of the programme, is to obtain information on the level of the student's achievement and then use such information, if need be, to assist them in good time before it becomes too late. One of the main values of

assessment in education is that it can assist to identify areas of strengths and weaknesses in students' performances, the teachers' instructional strategies and the educational programme.

Duncan and Dunn in Gofor,(2002) also identify that continuous assessment is a routine activity in a classroom that considers students' actions and reactions, discussions, interviews, comments and response to learning situations. Information drawn from it enables teachers to draw inferences regarding the students' attitudes, personal qualities, abilities and commitments.

The inferences are used in future for the benefit of learner and the entire educational system, because it is capable of revealing problems that need to be addressed instantly or later through motivation, support, challenge, encouragement, reinforcement or reprimand. Essentially it brings to light the strengths and weaknesses and special abilities of the learners as well as problems concerning teaching and learning.

Gofor, (2002) adds that the National Policy on Education has prescribed that continuous assessment should be geared towards global assessment of students learning. This is in line with Bloom's taxonomy of education, which stresses development of abilities in knowledge, attitudes and skills. For this reason, continuous assessment can therefore be said to be an educational policy platform where teachers can use variety of assessment methods to understand students' skills from time to time. For this reason, Gofor gave the following as functions of continuous assessment:

i. Formative assessment, students' self-assessment incorporated into teaching and learning;
ii. Linking assessment process and outcome in curriculum planning ;
iii. Marking class work, homework, periodic tests and examination;

iv. Developing subject portfolio to illustrate the standards applied and attained in the assessment of student's work.

Adaramaja, (2007) in support of Gofor,(2002) clarified that continuous assessment at higher education level constitutes forty percent (40%) or thirty percent(30%) of the total marks(depending on educational level). Abubakar and Naisi (2009) in support of Adaramaja, (2007) adds that continuous assessment can be used at all levels of education and in all subject areas.

Continuous assessment as elaborated by Abubakar and Naisi, allows the use of multiple assessment techniques or methods to improve the reliability of evaluation. They advocate that the use of multiple or varied assessment methods make it possible to evaluate learning in all subject areas.

The following are the assessment methods recommended by continuous assessment:

Journals, Work Samples, Dramatization, Teacher Observation, Interviews,

Reflective, Self- Evaluation Questionnaires, Peer assessment and Assessment portfolios

According to Abubakar and Naisi, (2009) continuous assessment is a platform of the implementation of educational programmes has provided room for any essential instructional methods and assessment strategies. They further elaborate on the meaning and structure of the assessment techniques that are useful for continuous assessment. Since continuous assessment is formative in nature and its purpose is mainly improvement in learning; the following assessment techniques are suggested for formative assessment:

1. **Oral Technique**: this technique is important for testing skill of listening and speaking. Oral technique comprises answering questions; talk, reading aloud and describing things.

2. **Written Technique**: it is a technique which involves exercises and home works; and written assignments are ideal for evaluating the writing skills. They can be designed according to students' level.
3. **Observation technique**: it is usually for testing the listening and speaking skills. Informal observation techniques can be used. The teacher can observe the students' use of language; while participation in the class students are required to discuss role play, stimulate and express a point of view or answer question etc. the teacher should monitor the activities and quietly observe each students' participation.
4. **Anecdotal Record**: this is note based on the teacher's observation of how students' learn. Observable behaviours can be recorded by teachers in anecdotal records. Anecdotal records provide cumulative information about students' development in learning objectives of the physical and social growth and development. By systematically collecting and analyzing anecdotal comments, teachers can evaluate students' progress and abilities to design and draw then plan appropriate instruction.
5. **Self and Peer Assessment:** these two devices are crucial to the continuous assessment process. They provide for a wider range of input to learners than one person alone, such as the teacher can give. They are the skills to be developed that learners can take with them when they leave school and then use for life –long learning. Self-assessment is any assessment that requires students to judge their own drawing skills or ability or drawing and design performance; thus self-assessment provides some idea of how students see

their own development and help them to be aware of their own learning. The opportunity is provided to the learner to reflect upon their learning and assess their own strengths and weaknesses. Peer assessment is a response in some form to other learners' work. It gives students some idea of how other students perceive their drawing or design performance providing external perspectives. It can be given by a group or individual.

6. **Pair works Assessment**: This type of assessment is any observation or scoring done for the purpose of giving students feedback while those students are working in groups, whether the group work was specifically designed for assessment purposes or occurred naturally for other pedagogical purpose. The pair work assessment helps the teacher to assess actual students' works. Students feel more relax and less threatened when tested in groups or pair.
7. **Conferences**: this usually involves students coming to the office or studio alone or in groups for brief meetings to get feedback on their works. it provides opportunity for students to understand their own learning processes and strategies and develop a better self-image, and let teachers elicit specific skills or task that students may need to review and afford teachers an opportunity to inform , mold, observe and gather information about students.

8 **Portfolio Assessment**: portfolio assessment is a folder that keeps students' two dimensional works and provides assessment scheme. The students' work usually exhibits the students' effort, progress and achievement in one or more areas. It is important that the student be a participant in the selection of his or her work. Portfolio helps a student to see all the positive growth that is taking

> place during the learning process, thus enhancing his or her esteem and nurturing further growth. Portfolio is valuable to students, parents and teachers. It presents a practical approach to assembling students' works interpreting evidence of students' performance and assessing students' performance relative to instructional objectives.

Department of Education, (2008) critically observes that the structure of continuous assessment involves assessment activities that are undertaken throughout the year, using various assessment forms, methods and tools. Such assessment activities are informal daily assessment and formal programme of assessment. The daily assessment task are planned teaching and learning activities that occur in the subject classroom; where monitoring of progress can be done through question and answer session, short assessment tasks by individual learners or homework exercises.

Teachers are expected to allow self-assessment, peer assessment and group assessment which actively involves the learners in assessment. This is important as it allows students to learn from and reflect on their own performances. Formal programme of assessment consists of tasks undertaken during school year and end-of-year examination. The mark allocated will be 25% and the end of year examination 75% of the total marks.

Continuous Assessment is also an educational plan of the National Policy of Education, (2004) which provides the platform to teachers and school administrators to implement teaching and assessment procedures in line with the operational plan. The assessment portfolios are therefore one of the assessment strategies which can be used at both process (formative) and product (summative) evaluation levels. Owolabi and Onuka, (2009) also identify the implementation of Continuous Assessment as providing prospects to the school systems which include: a).

reduction of examination malpractice, b). improvement of educational, learning outcomes attainment and c). gives feedback to students to understand their strengths and weaknesses.

2.1.2 Description of Types, Categories and Contents of Assessment Portfolio

Assessment Portfolio is a collection of student work specifically selected to tell a particular story about the student (Mueller, 2012). Student portfolios take many forms which include,, developmental, showcase and evaluation portfolios. Portfolio is not therefore the pile of student work that accumulates over a semester or year. Portfolio contains a purposefully selected subset of student work. Portfolio might contain samples of earlier and later work, often with the student commenting upon or assessing the growth. There are two forms of portfolio; which are common in art and design courses. They are known as ordinary (hard) and e-portfolio (soft).The portfolio forms are used to capture the process of learning and growth. Portfolios have most commonly been associated with the collection of art and design work. In considerate portfolio assignments students are asked to reflect on their work, to engage in self -assessment and goal setting. There are three types of portfolios which include developmental portfolio, showcase portfolio and evaluation portfolio.

2.1.3 Developmental Portfolio

It is the category of portfolio used for growth over a time to show progress to help develop process skills such as self-evaluation and identify strengths and weaknesses. This portfolio contains a checklist and all art and design works for the semester.

2.1.4 Showcase Portfolio

It is the category of portfolio that shows the best works of the student. It prepares the samples of the best works for assessment for teachers to look at. It contains a checklist and the best art and design works.

2.1.5 Evaluation Portfolio

It contains assessable art and design works, checklist, rubric, self-reflection and list of members of jury. This portfolio documents the achievement for grading purposes, progress towards standards..

2.1.6 Contents of the Evaluation Portfolio

The evaluation portfolio contains very important records of evaluation. The content of evaluation portfolio is usually the assessable collection of either drawing or design works; checklist, guidelines for student and teacher conference, conference sheet and self-reflection sheets(Al-serhani,2007). The following are the description of the content of assessment portfolio:

a. **Checklist sheet**: this is a sheet which can be used for recording the items of the portfolio, particularly the art and design works. It is design in an order with columns that features date of entry, title of entry; student's signature and teacher's signature.

b. **Guidelines for Conference Sheet:** it provides guidelines the teacher and students would follow for successful conduct of portfolio assessment.

c. **Conference Sheet:** it comprises questions that the teacher expects the student to respond to in order to direct the students.

d. **Rubrics:** these are scoring instruments used when evaluating students' performances. There are two types of rubric: 1. Analytic and 2.Holistic rubrics.

   1. Analytic Rubric: The analytic requires the teacher to score in parts separately; then sum up the parts of individual scores to obtain a total score. It is usually a four-point rating scale which provides criteria, explanation of the level of progress and score of a particular assignment.

2. **Holistic Rubric:** the holistic rubric requires the teacher to score the overall process or product as a whole without judging the component parts separately. The holistic rubric features score; grade and category of the level of the students' performances.

3. **Self-Reflection Sheet**: this is a reflection questionnaire which provides student's name and identity number. It also provides some questions the teacher expects the students involved in the class activity to answer. The reflection of the students helps the teachers to understand why and how the students perceive their experiences and ability to recollect their intuitive knowledge. Other question on how to improve the drawing and design were also formulated. See appendix P, page 145.

2.2 Faculty of Environmental Design and Professional Courses

The Faculty of Environmental Design is a unit which is composed of seven (7) Departments. The Departments are Architecture, Building, Fine Arts, Geomatics, Industrial Design, Quantity Survey as well as Urban and Regional Planning. These Departments which co-exist under the faculty, provide professional courses which would be identified under each respective department later. The Departments would be identified in terms of their inception, categories of programmes they offer and the selected courses to serve as scope of this study. To clarify more, the study is concerned with one of the core courses particularly three hundred (300) and four hundred (400) level. For this reason therefore the study would shortly identify the programme provided by each Department from undergraduate to postgraduate and narrow down to courses of design and drawing in each Department. The rationale behind is that drawing and design courses are the focus of the study and folders of portfolios basically envelope two dimensional works. The following are the professional courses according to their departments:

2.2.1 Architecture

The Department of Architecture was established in Ibadan in 1952 and later relocated to Ahmadu Bello University, Zaria in 1962. The Department provides undergraduate and postgraduate programmes which give the practical professional and research requirements (B.Sc, M,Sc and PhD Arch). (Yunusa and Garba, 2013).

The undergraduate programme is coded by Arch 100 up to Arch 400. The study would examine the design, graphic and drawing oriented courses among the following architectural courses, see Appendix C, p.117.

2.2.2 Building

Building is a Department that was carved out of the Department of Architecture in 1970. The mission of the Department is to engage in teaching, research and dissemination of highest quality knowledge in building profession. The Department basically produces a general builder who is capable of creating a link between an architect and a structural engineer as well as quantity surveyor who is an advisor that undertake the organization and execution of building projects; and those that work effectively in government establishments and the private sector. The Department provides undergraduate and postgraduate programmes (BSc Building, MSc and PhD Building (Yunusa and Garba,2013). The courses of undergraduate programme start from BLDG 100 to BLDG500. See Appendix C, p.117.

2.2.3 Fine Arts

The Department of Fine Arts was established in Ibadan in 1950. It started in Ibadan and later moved to Zaria in 1955. The objective of the Department is to advance the frontiers of learning and break new grounds through teaching, research and dissemination of knowledge of the

highest quality (Yunusa and Garba, 2013).The programme of the Department is designed to produce professional artists, art educators, art historians, art administrators, cultural officers for the man power needs of Nigeria and the world at large. The department provides undergraduate and postgraduate degree programmes (BA Fine Arts, MFA and PhD Fine Arts). See the Appendix C, p.117.

2.2.4 Geomatics

Department of Geomatics was established in 1972 as a pioneer Dsepartment in Land Surveying and Quantity Surveying at the University level in Northern Nigeria. The Department produces graduates who would play distinctive and prominent roles in the geospatial industry. The Department provides Bachelor of Science Degree in Geomatics (Bsc Geomatics). See Appendix C, p.117.

2.2.5 Industrial Design

The Department of Industrial Design was carved out of the Department of Fine Arts in 1977. The Department offers B.A Industrial Design with specializations in Ceramics, Graphics, Glass Technology and Textiles Design. The programmes under Industrial Design are aimed at producing competent, skilled and creative individuals that are capable of upholding, sustaining and linking educational experiences to the values and needs of Nigerian society (Yunusa and Garba, 2013). Each of the courses under the Industrial Design provides undergraduate degree programmes as stated above. See the Appendix C, p.117.

2.2.6 Quantity Surveying

The Department of Quantity survey started in the Land and Quantity Surveying sections in the Department of Civil Engineering. The Department of Survey gained its autonomy in 2007/2008 academic session in line with the National Universities Commission guidelines; based on the approval of the University Senate in 2007. The Department of Quantity Survey provides undergraduate programmes (100-500level). The handbook of Quantity surveying shows that there are no design or drawing courses possessed by the Department. They share the drawing course of the Department of Building (BLDG209 and 210).

2.2.7 Urban and Regional Planning

The Department of Urban and Regional Planning was established in 1972 as a pioneer Department for the training of Urban and Regional planning professionals. The Department although started with a postgraduate programme, it also offers undergraduate and graduate degrees(BURP) to complement the postgraduate degree and broaden the reach while at the same time responding to the need for the urban and regional planners in various public institutions. The Department therefore produces sound generalist professional planners who can operate effectively in the field of urban and regional planning and related activities (Yunusa and Garba, 2013), see Appendix C, p.117.

All drawing and design courses are the area of focus of the study which assumed that portfolios are commonly used either to keep design, drawing or water colour paintings or portfolios as an aspect of assessing drawing or design performance. The study under these perspectives examined students' and lecturers' understanding as well as utilization of portfolios. It also investigated the types and variation of the portfolios. The contextual issue was that what is the real function of

portfolios in the Departments of Architecture, Fine Arts, Industrial Design and Urban and Regional Planning? The study is aimed at introducing the Mueller's model regarding Portfolios. Rubric, self-reflection sheet, portfolio model must be identified in studio courses which are two dimensional in nature. The use of these attachments gives the learner confidence and sense of ownership towards the project in progress in a teaching situation.

2.3 Professional Vocational Education Programme and National Policy on Education

The National Policy on Education, (2004) has recognized the essence of professional vocational courses for the fact that it has mentioned and described them at the level of both secondary and tertiary education. The National Policy on Education in section (7) (subsections, 40-49) states that:

> ….. every state shall at least encourage one of the Technical Colleges to offer building, textiles, beauty culture, business trades as well as printing trades. That the Federal Ministry of Education and its appropriate agencies shall continue to re-structure vocational professional courses to be offered for school based and industry-based students (p28) .

It has also recognized that professional vocational courses are an integral part of technology development, a greater proportion of education expenditure shall continue to be devoted to vocational professional education at Federal and State levels. To support the educational services, the National Policy on Education, (2004) has also stated that the goals of educational services shall be to:

1.develop, assess and improve educational programmes;

2. enhance teaching and improve competence of teachers;

3.make learning experiences more meaningful for students; and

4. develop and promote effective use of innovative materials in schools.

It is also indicated in section (8) a (subsection that since tertiary education is the one given in Universities after secondary education, Colleges of Education and Polytechnics as well as Mono-technic shall provide the following:

1. contribute to national development through high level relevant manpower training;

2. develop and inculcate proper values for the survival of the individual and society;

3. develop the intellectual capabilities of individuals to understand and appreciate their local and external environments;

4.acquire both physical and intellectual skills which will enable individuals to be self-reliant and useful members of the society;

5.promote and encourage scholarship and community services;

6.forge and cement national unity;

7.promote national, international understanding and interaction.

On this ground therefore, the policy on education, (2004) requires the teachers in the Universities to undergo training on teaching and assessment from time to time. Technical based professional courses in the Universities shall have as components, exposure to relevant future working environment. It is therefore imperative that teachers in professional fields have relevant industrial and professional experience (F.R.N, 2004).

2.4 Concerns of Portfolio assessment in teaching

Critics of assessment techniques have expressed fears regarding the use of portfolio as an alternate to the old terminal assessment system. To Abubakar and Naisi,(2009) and James in Gofor,(2002) the portfolio method is good but expensive and time consuming. The implementation of portfolios as a method of assessment is clogged by absence of well trained teachers in the areas of assessment. As for them, there are variations in criteria of assessment 'from school to school' because of assessment in the classroom appears to be a private affair of the teacher. This makes comparability of records between and within schools difficult (Gofor, 2002).

Another area of concern for teachers is that portfolio assessment is parental or needs community support for such a new and unfamiliar system of assessment. Teachers using portfolios should know that change may create difficulty for parent to accept or adjust without a considerable effort to educate them as to the nature and benefits of the new system (portfolio assessment). Parent should be made aware of what is going to transpire with the new assessment method at the beginning of the school year. Parents should be invited in to discuss and view their children's portfolios with the teachers. Parents should be an essential part of this assessment process, and be included as equal partners and stakeholders (Dilmac, 2010).

The effective use of portfolios as learning and assessment tools depends on the knowledge, ability and experiences of teachers who implement them on a large scale. However, it has been reported by some scholars that most teachers do not have the knowledge and experiences about portfolio assessment methods and other alternative assessment methods. They also stated that

teachers have sufficient information regarding portfolios as a means of assessment in the in-service seminars organized by the new education programme (Birgin and Baki in Dilmac, 2010).

2.5 Utilization of Portfolios as Method of Assessment

The educational trends as time is changing also changed. There is need to create new and alternative assessment and evaluation system that take learning and knowledge, ways of thinking and learning styles into consideration. When commonly used assessment –evaluation methods are examined. It can be realized that we have a system in which the results are measured to evaluate achievement of the students, and the individual achievement results are expressed relative to group achievements. The short coming of this system is either insufficient or non-availability of all documents that would help the individual to assess his or her own standing or development. The achievement of students is expressed as a "GRADE" which usually means there was some combination of written examination and the teacher's subjective evaluation which focuses on measuring the competencies of students in terms of application, knowledge and comprehension. This has failed to measure other higher competencies (Dilmac, 2010).

Survey of teachers and other scholarly studies show that assessment practices are changing. Teachers are seeking alternatives to traditional testing methods by rethinking their assessment practices and changing their evaluation techniques. Along with this evolution in practice, have come practical questions regarding methods for assessing students' achievement. A key request has been for support in the development and implementation of assessment methods. Portfolio assessment is a method of gathering student work samples for the purpose of evaluating student knowledge and learning. The process includes student participation in the selection of work, in criteria and goal setting, and through self-assessment. Students and teachers collaborate in

assessing and evaluating student learning from evidence in the portfolio collection, and then use this information to make plans and set goals for further learning (Birgin and Baki, 2007). Portfolio assessment offers teachers, students, and parents a broad view of students' learning by providing a place to document processes in learning as well as students' final products. In addition to offering benefits for all partners, portfolio assessment promotes student involvement in, and responsibility for their own learning. For teachers, portfolio assessment:

1. Integrates assessment with instruction
2. Provides opportunities for teachers and students to collaborate
3. Provides concrete evidence for evaluation
4. Gives feedback on individual student performance
5. Can serve as a focus for student-centred conferencing
6. Provides evidence to support reports to parents

For students, Portfolio assessment:

1. develops organizational and decision making skills
2. incorporates opportunities for self –assessment and goal setting;
3. Provides evidence for revisiting and resetting goals
4. Provides opportunities for teachers and students to collaborate
5. Promotes responsibility for students own learning

6. Provides concrete evidence for evaluation

7. Set a focus for student-centred conferences.

For parent, Portfolio assessment:

1. Increases involvement in their child's learning

2. Allows them to see their children's development overtime

3. Provides direct evidence of their children's skills and learning

4. Provides concrete evidence for evaluation and goals setting

5. Set a focus for student-centred conferences.

For lecturers and teachers to utilize the assessment portfolio successfully, Birgin and Baki, (2007) in support of Bryant and Timmins, (2002) observed that ten principles play important roles pertaining portfolio assessment. The principles include the following:

1).Teachers and educational administrators must plan for and be trained in portfolio approach to assessment;

2).Sufficient resources of time and energy must be allocated to support portfolio assessment.

3).Lecturers and teachers must work as a team to plan for the implementation of portfolio assessment,

4). Parent and the public need to understand portfolio assessment.

5). Teachers role is vital as a facilitator of the portfolio process.

6).Documentation of the process and student achievement as well as the analyses of teaching and learning is critical. .

7). Portfolio assessment is a developmental process for both teachers and students.

8). Portfolio assessment provides a new perspective on learning for both teachers and students.

9). Self-evaluation of learning is an integral part of the portfolio process.

10). Collecting, selecting and reflecting on work is central to the portfolio process.

It is for this reality that Macleod and Erlandson, (2012) explained furthermore that portfolio assessment is the procedure used to plan, collect and analyze the multiple sources of data maintained in the portfolio. The process includes student participation in the selection of work, in criteria, goal setting and through self-assessment. Students and teacher collaborate in assessing and evaluating student learning from evidence in portfolio collection then use the information to make plan and set goals for further learning. Assessment Portfolio contains guidelines for content, criteria for evaluating process and product as well as evidence of student's reflection.

Leung,(2007) investigates the benefits and challenges of portfolios. Acting as a supplementary formative assessment tool, the writing portfolio was implemented for the second semester in an ESL class of 32 students in Hong Kong in 2006-2007. In addition, four key informants with different learning styles were selected based on the Perceptual Learning Style Preference Questionnaire (PLSPQ).

The study primarily employed a qualitative approach to examine the learners' experiences and perceptions of the writing portfolio programme. At the end of the programme, another questionnaire was administered to ascertain the learners' general reactions to the use of writing portfolios as an assessment tool. Also, portfolio conferences and semi-structured interviews were conducted with both four key and six non-key informants individually to obtain in-depth and contextualized views and stances. Data collection sources included (1) documents from the writing portfolios such as reflections, required essays (three timed pieces of writing and one process writing), self-chosen artifacts (50 word short stories or poems) and peer- and self-assessment forms, (2) portfolio conferences, (3) semi-structured interviews, (4) questionnaires, ncluding the Perceptual Learning Style Preference Questionnaire (PLSPQ). Findings of the study revealed that portfolio assessment was relevant and useful in the preparation for the HKASL Use of English and it seemed that portfolio assessment tended to suit students with auditory and individual learning styles. Finally, the study provided pedagogical implications for adopting writing portfolio assessment in ESL classrooms.

From the findings of the studies it was deduced that use of portfolio as means of assessment has a significant effect on learning but it demanded teachers' dedication, knowledge, time and good planning. The portfolio assessment basically should be implemented along portfolio contents which include: Conference form, Reflection sheet, Rubric, completed design or drawing. The rubric is usually the descriptions of criteria. Portfolio Assessment Model (PAM) is also important. The portfolio assessment models vary. There are analytic and holistic portfolios. Such models are used to assess design or drawing work in order to capture the diversity of skills, knowledge, processes (Al-Serhani, 2007). The nature of portfolio also determines the procedure of assessment. The holistic portfolio model is the type that identifies a grade as a whole. While

the analytic balances strengths and weaknesses on key criteria to reach an overall score for the effectiveness of a piece of design or drawing.

The Analytic Portfolio model of assessment uses a 4-point rubric which is used for grading drawing and design. It measures the students drawing or design against predetermined set of criteria. Holistic Portfolios model provides an overall quality, proficiency or understanding of specific content and skills. Holistic is typically used when the purpose of the performance assessment is summative in nature. See appendix C p.117. The criteria are determined by the type of portfolio assessment model. Holistic Scoring Rubric is for Holistic Portfolio Assessment Model whereas Analytic Scoring Rubric for Analytic Portfolio Model. The validity and reliability of the models are usually computed by members of jury to determine variety of performance levels, appropriateness and consistency.

In order to administer good assessment the purpose of using the portfolio must be clearly defined. Bryant and Timmins,(2002) identify some questions which would help the teacher to later align the curriculum, instruction and assessment. These questions include:

1. What concept, skill or knowledge is being assessed?

2. What should students know?

3. At what level should students be performing?

4. what type of knowledge is being assessed?

5.How can student prove and demonstrate what they have learnt?

6. How will one know how to assess a range of successful performance?

In support of the Bryant and Timmins,(2002)Dilmac,(2010); Al-Serhani,(2007) and Douchy,(2002) suggest the following as safety measures while using assessment portfolios. These included:

1. Provide the students with sample assessment portfolios to help them understand the format, evidence and standards required.

2. Provide students the sample of comprehensive assessment scheme(rubric, self-reflection and portfolio model sheets).

3. State the procedure of using the categories of assessment portfolios: developmental, showcase and evaluation portfolios

4. share the assessment process with the students by discussing the criteria to be used. Clarify the rubric, criteria, the grading system to help them understand the standards required. Provide students with feedback for formative purposes during stages of development of the portfolio.

5. teachers need to encourage conferences to provide avenues for discussion and critique on assessable design and drawing works contain in evaluation portfolio. This moment would make students to understand the standards through presentation during conference. This builds up a group dynamic, and creates trust, self-confidence and motivation to produce qualitative design and drawing.

2.6 Criteria for Portfolio Assessment

The criterion is usually developed in rubric. Rubric is a descriptive scoring scale used to assess students' performance along a task-specific set of criteria. Students performances are determine by set of criteria to determine the degree to which the student's performance meets the criteria. There are two types of rubrics: holistic and analytic. Holistic Rubric requires the teacher to score the overall process or product as a whole, without judging the component parts separately. In contrast, analytic rubric allows teacher scores separate, individual parts of the product or performance first, then sums the individual scores to obtain a total score (Mertler,2001).

Prior to designing of rubric in portfolio assessment, teacher must decide whether the product will be scored analytically or holistically. This decision enables him or her to identify the criteria and observable parameters for assessment. if the task of assessment is formative, teacher would use analytic rubric; and holistic rubric would be suitable for summative evaluation. Other implications include the time requirements, the nature of the task itself and the specific design or drawing performance criteria being observed. For formative evaluation, rubric with four levels of proficiency is most appropriate, thus: 1-Novice, 2-beginning; 3-satisfactory and 4-examplary.

Onwuagboke and Singh,(2015) in support of this opinion posit that:

> ……rubric is a simple assessment tool that describes levels of performance on a particular task which is used to assess outcomes in variety of performance-based contexts at all level of education. They added that fine and applied arts are subjects area which involved the product of artifacts as a measure of learners' accomplishment in the subject. This is applicable in all almost all the branches of the subject whether it is drawing, painting, sculpture, ceramics, textiles or graphics except art history or art education that are purely theoretical in nature(pp10-11).

2.7 Problems and Benefits of Portfolio Assessment

Birgin and Baki(2007) highlighted on the benefits and problems of portfolio assessment in art and design courses. Portfolio assessment as pointed by Birgin and Baki can present a wide perspective of learning process for students enables a continuous feedback for them. Besides this, it enables students to have a self assessment for their studies and learning, and progress. Portfolios are strong devices that help gain the important abilities such as self-assessment, critical thinking and monitoring one's own learning. The following are the benefits and problems of portfolio assessment:

a. It provides opportunities for students to demonstrate their strengths as well as weaknesses.
b. It gives hands-on information to the teacher on the spot.
c. It allows the child, parent, teacher and staff to evaluate the students' strengths and weaknesses.
d. It is an on-going task which provides multiple opportunities for observation and assessment.
e. It gives students sense of reflexive about their knowledge and work.

The problems of using portfolio include the following: portfolio assessment is seen as time consuming task for teachers to score students' works and to assess students' performance over time in the crowded classroom. Developing portfolio assessment criteria rubrics and determining the works in portfolio can be difficult for teachers at first. Organizing and assessing the portfolio and

giving feedback to students can be time consuming. Storing, handling, controlling the portfolio in the crowded classroom. Asking students to bring their portfolio materials to each class can be burdensome, below is a sample of procedure for portfolio assessment a teacher who is interested would read and implement for drawing and designing classes:

2.8 Procedure of Utilizing Assessment Portfolio in Teaching

(**Authentic Assessment Toolbox,** Adopted from Mueller, 2012)

The toolbox is a guideline of using portfolios as tool of assessment. Some questions were raise to guide us in using the portfolio toolbox from beginning to the end.

Purpose: What is the purpose(s) of the portfolio?

Audience: For what audience(s) will the portfolio be created?

Content: What samples of student work will be included?

Process: What processes will be engaged in during the development of the portfolio?

1. Selection of Contents
2. Reflection on Samples of Work
3. Conferencing on Student Work and Processes

Management: How will time and materials be managed in the development of the portfolio

Communication: How and when will the portfolio are shared with pertinent audiences?

Evaluation:

If the portfolio is to be used for evaluation, how and when should it be evaluated?

Student portfolios take many forms, as discussed below, so it is not easy to describe them.

> A portfolio is not the pile of student work that accumulates over a semester or year. Rather, a portfolio contains a purposefully selected subset of student work. "Purposefully" selecting student work means deciding what type of story you want the portfolio to tell. For example, do you want it to highlight or celebrate the progress a student has made? Then, the portfolio might contain samples of earlier and later work, often with the student commenting upon or assessing the growth. Do you want the portfolio to capture the process of learning and growth? Then, the student and/or teacher might select items that illustrate the development of one or more skills with reflection upon the process that led to that development, or, do you want the portfolio to showcase the final products or best work of a student? In that case, the portfolio would likely contain samples that best exemplify the student's current ability to apply relevant knowledge and skills. All decisions about a portfolio assignment begin with the type of story or purpose for the portfolio. The particular purpose(s) served, the number and type of items included, the process for selecting the items to be included, how and whether students respond to the items selected, and other decisions vary from portfolio to portfolio and serve to define what each portfolio looks like. I will describe many of the purposes and characteristics in the sections below.

Are Portfolios Authentic Assessments?

Some suggest that portfolios are not really assessments at all because they are just collections of previously completed assessments. But, if we consider assessing as gathering of information about someone or something for a purpose, then a portfolio is a type of assessment. Sometimes the portfolio is also evaluated or graded, but that is not necessary to be considered an assessment.

Are portfolios authentic assessments? Student portfolios have most commonly been associated with collections of artwork or architectural design and, to a lesser extent, collections of writing. Students in these disciplines are performing authentic tasks which capture meaningful application of knowledge and skills. Their portfolios often tell compelling stories of the growth of the students' talents and showcase their skills through a collection of authentic performances. Educators are expanding this story-telling to other disciplines such as physical education, mathematics and the social sciences to capture the variety of demonstrations of meaningful application from students within these disciplines.

Furthermore, in the more thoughtful portfolio assignments, students are asked to reflect on their work, to engage in self-assessment and goal-setting. Those are two of the most authentic skills students need to develop to successfully manage in the real world. Research has found that students in classes that emphasize improvement, progress, effort and the process of learning rather than grades and normative performance are more likely to use a variety of learning strategies and have a more positive attitude toward learning. Yet in education we have shortchanged the process of learning in favor of the products of

learning. Students are not regularly asked to examine how they succeeded or failed or improved on a task or to set goals for future work; the final product and evaluation of it receives the bulk of the attention in many classrooms. Consequently, students are not developing the metacognitive skills that will enable them to reflect upon and make adjustments in their learning in school and beyond.

Portfolios provide an excellent vehicle for consideration of process and the development of related skills. So, portfolios are frequently included with other types of authentic assessments because they move away from telling a student's story through test scores and, instead, focus on a meaningful collection of student performance and meaningful reflection and evaluation of that work.

Why use Portfolios?

The previous section identifies several valuable goals that make portfolios attractive in education. The sections that follow emphasize that identifying specific goals or purposes for assigning a portfolio is the first and most critical step in creating such an assignment. Just as identifying a standard guides the rest of the steps of developing an authentic assessment, identifying the purpose(s) for a portfolio influences all the other decisions involved in producing a portfolio assignment. Below are several of the most common purposes elaborated on how each purpose affects the other decisions in the sections?

Why might you use a portfolio assignment? Portfolios typically are created for one of the following three purposes: to show growth, to showcase current abilities, and to evaluate cumulative achievement. Some examples of such purposes include:

1. **Growth Portfolios**

a. to show growth or change over time

b. to help develop process skills such as self-evaluation and goal-setting

c. to identify strengths and weaknesses

d. to track the development of one more products/performances

2. **Showcase Portfolios**

a. to showcase end-of-year/semester accomplishments

b. to prepare a sample of best work for employment or college admission

c. to showcase student perceptions of favorite, best or most important work

d. to communicate a student's current aptitudes to future teachers

3. **Evaluation Portfolios**

a. to document achievement for grading purposes

b. to document progress towards standards

c. to place students appropriately

The growth portfolio emphasizes the process of learning whereas the showcase portfolio emphasizes the products of learning. Of course, a portfolio may tell more than one story, including more than one category above. For example, a showcase portfolio might also be

used for evaluation purposes, and a growth portfolio might also showcase "final" performances or products. What is critical is that the purpose(s) is clear throughout the process to student, teacher and any other pertinent audience.

How do you create a Portfolio Assignment?

The question above needs our attention. How to do something by thinking of it is crucial too, the answers to the questions would give us a clue in answering the above:

What is the purpose(s) of the portfolio?

As mentioned above, before you can design the portfolio assignment and before your students can begin constructing their portfolios you and your students need to be clear about the story the portfolio will be telling. Certainly, you should not assign a portfolio unless you have a compelling reason to do so. Portfolios take work to create, manage and assess. They can easily feel like busywork and a burden to you and your students if they just become folders filled with student papers. You and your students need to believe that the selection of and reflection upon their work serves one or more meaningful purposes.

For what audience(s) will the portfolio be created?

Selecting relevant audiences for a portfolio goes hand-in-hand with identifying your purposes. Who should see the evidence of a student's growth? The student, teacher and parents are good audiences to follow the story of a student's progress on a certain project or in the development of certain skills. Who should see a student's best or final work? Again, the student, teacher and parents might be good audiences for such a collection, but

other natural audiences come to mind such as class or schoolmates, external audiences such as employers or colleges, the local community or school board. As the teacher, you can dictate what audiences will be considered or you can let students have some choice in the decision.

Just as the purposes for the portfolio should guide the development of it, the selection of audiences should shape its construction. For example, for audiences outside the classroom it is helpful to include a cover page or table of contents that helps someone unfamiliar with the assignment to navigate through the portfolio and provide context for what is found inside. Students need to keep their audiences in mind as they proceed through each step of developing their portfolios. A good method for checking whether a portfolio serves the anticipated audiences is to imagine different members of those audiences viewing the portfolio. Can each of them tell why you created the portfolio? Are they able to make sense of the story you wanted to tell them? Can they navigate around and through the portfolio? Do they know why you included what you did? Have you used language suitable for those audiences?

What samples of student work will be included?

As you can imagine, the answer to the question of content is dependent on the answers to the questions of purpose and audience. What should be included? Well, what story do you want to tell? Before we consider what types of items might be appropriate for different purposes, let us make a more general point. First, hypothetically, there is no limit as to what can be included in a portfolio. Paper products such as essays, homework, letters, projects, etc. are most common. But more and more other types of media are being

included in portfolios. Audio and videotapes, CD-ROMs, two- and three-dimensional pieces of art, posters and anything else that can reflect the purposes identified can be included. Some schools are putting all the artifacts onto a CD-ROM by videotaping performances, scanning paper products, and digitizing audio. All of those files are then copied onto a student's CD-ROM for a semester or a year or to follow the student across grades as a cumulative record. Realistically, you have to decide what is manageable. But if the most meaningful evidence of the portfolio's goals cannot be captured on paper, then you may consider including other types of media.

There are a considerable number and variety of types of student work that can be selected as samples for a portfolio. Using the purposes given above for each type of portfolio, samples of work in the following tables that could be included in each type of portfolio.

What samples might be included? Some possible inclusions

a. to show growth or change over time early and later pieces of work

early and later tests/score rough drafts and final draft reflections on growth goal-setting sheets reflections on progress toward goal(s)

b. to help develop process skills

Samples which reflect growth of process skills

Self-reflection sheets accompanying samples of work

Reflection sheets from teacher or peer

Identification of strengths/weaknesses

Goal-setting sheets and reflections on progress towards goal(s)

c. to identify strengths/weaknesses

samples of work reflecting specifically identified strengths and weaknesses

reflections on strengths and weaknesses of samples goal-setting sheets reflection on progress towards goal(s)

d. to track development of one or more products or performances

obviously, drafts of the specific product or performance to be tracked

self-reflections on drafts reflection sheets from teacher or peer

Showcase Portfolios: What samples might be included?

a. To showcase end-of-year/semester accomplishments

samples of best work samples of earlier and later work to document progress

final tests or score discussion of growth over semester/year awards or other recognition

teacher or peer comments

b. to prepare a sample of best work for employment or college admission

cover letter, sample of work; reflection on process of creating sample of work

reflection on growth teacher or peer comments description of knowledge skills.

c. to showcase student perceptions of favorite, best or most important

samples of student's favorite, best or most important work drafts of that work to illustrate path taken to its final form commentary on strengths/weaknesses of work reflection on why it is favorite, best or most important reflection on what has been learned from work teacher or peer comments;

d. to communicate a student's current aptitude representative sample of current work

match of work with standards accomplished self-reflection on current aptitudes

teacher reflection on student's aptitudes identification of future goal.

Evaluation Portfolios: What samples might be included?

Some possible inclusions are:

a. to document achievement for grading samples of representative work in each subject/unit/topic to be graded samples of work documenting level of achievement on course/grade-level standards/objectives tests/scores rubrics/criteria used for evaluation of work (when applied)self-reflection on how well samples indicate attainment of course/grade-level goals/standards/objectives, teacher reflection of attainment of goals/standards identification of strengths/weaknesses.

b. to document progress towards standards list of applicable goals and standards representative samples of work aligned with respective goals/standards rubrics/criteria

used for evaluation of work self-reflection on how well samples indicate attainment of course/grade-level goals/standards/objectives teacher reflection of attainment of goals/standards analysis or evidence of progress made toward standards over course of semester/year.

c. to place students appropriately representative samples of current work

representative samples of earlier work to indicate rate of progress classroom tests/scores

external tests/evaluations match of work with standards accomplished

self-reflection on current aptitudes teacher reflection on student's aptitudes

parent reflection on student's aptitudes other professionals' reflections on student's aptitudes

Other Content

In addition to samples of student work and reflection upon that work, a portfolio might also include a table of contents or a cover letter (both typically composed by the student) to aid a reader in making sense of the purposes, processes and contents of the portfolio. This can be particularly useful if the portfolio is to be shared with external audiences unfamiliar with the coursework such as parents, other educators and community members.

Process: What processes will be engaged in during the development of the portfolio. One of the greatest attributes of the portfolio is its potential for focusing on the processes of

learning. Too often in education we emphasize the products students create or the outcomes they achieve. But we do not give sufficient attention to the processes required to create those products or outcomes, the processes involved in self-diagnosis and self-improvement, or the metacognitive processes of thinking. As a result, the products or outcomes are not as good as we or the students would like because they are often unsure how to get started, how to self-diagnose or self-correct or how to determine when a piece of work is "finished."

Although a variety of processes can be developed or explored through portfolios, the following are the most common:

i. Selection of contents of the portfolio;

ii. Reflection on the samples of work and processes

iii. Conferencing about the contents and processes.

Selection of Contents

Identifying the purpose(s) for the portfolio should drive the selection process. As listed in the tables above, different samples of student work will likely be selected for different purposes, depending on the purpose. For example, for an evaluation portfolio, the teacher might decide which samples need to be included to evaluate student progress. On the other hand, including the student in the decision-making process of determining appropriate types of samples for inclusion might be more critical for a growth portfolio to promote meaningful reflection. Finally, a showcase portfolio might be designed to include

significant input from the student on which samples best highlight achievement and progress, or the teacher might primarily make those decisions.

Furthermore, audiences beyond the teacher and student might have input into the content of the portfolio, from team or department members, principals and state committees to external agencies to parents and community members. External audiences are most likely to play a role for evaluation portfolios. However, it is important to remember there are no hard rules about portfolios. Anything can be included in a portfolio. Anyone can be involved in the processes of selection, reflection and evaluation of a portfolio. Flexibility applies to portfolios as it does to any authentic assessment. That is, you should be true to your purpose(s), but you should feel no constraints on how you meet them with a portfolio assignment.

How might the selection take place?

What we will describe below are just a few of the many possible avenues for selecting which samples will be included in a portfolio. But these examples should give you a good sense of some of the choices and some of the decisions involved.

When?

when a sample of work is completed -- at the point a piece of work is ready to be turned in (or once the work has been returned by the teacher) the student or teacher identifies that work for inclusion in the portfolio; at periodic intervals -- instead of selecting samples when they are completed, the samples can be stored so that selection might occur every

two (three, six or nine) weeks or once (twice or three times) every quarter (trimester or semester); at the end of the ... unit, quarter, semester, year, etc.

By whom?

By the student -- students are the most common selectors, particularly for portfolios that ask them to reflect on the work selected. Which work students select depends on the criteria used to choose each piece (see below).

By the teacher -- teachers may be the selector, particularly when identifying best pieces of work to showcase a student's strengths or accomplishments.by the student and teacher -- sometimes portfolio selection is a joint process involving conversation and collaboration.

By peers -- a student might be assigned a "portfolio partner" or "portfolio buddy" who assists the student in selecting appropriate pieces of work often as part of a joint process involving conversation and collaboration. A peer might also provide some reflection on a piece of work to be included in the portfolio.

by parents -- parents might also be asked to select a piece or two for inclusion that they particularly found impressive, surprising, reflective of improvement, etc.

Based on what criteria?

best work -- selection for showcase portfolios will typically focus on samples of work that illustrate students' best performance in designated areas or the culmination of progress made evidence of growth -- selection for growth portfolios will focus on identifying samples of work and work processes (e.g., drafts, notes) that best capture progress shown

on designated tasks, processes or acquisition of knowledge and skills. For example, students might be asked to choose samples of earlier and later work highlighting some skill or content area; samples of rough drafts and final drafts; work that traces the development of a particular product or performance; samples of work reflecting specifically identified strengths and weaknesses.

Evidence of achievement -- particularly for showcase and evaluation portfolios, selection focus on samples of work that illustrate current levels of competence in designated areas or particular exemplars of quality work, evidence of standards met -- similarly, selection could focus on samples of work that illustrate successfully students have met certain standards.

Favorite/most important piece -- to help develop recognition of the value of the work completed and to foster pride in that work, selection might focus on samples to which students or parents or others find a connection or with which they are particularly enamored one or more of the above -- a portfolio can include samples of work for multiple reasons and, thus, more than one of the above criteria (or others) could be used for selecting samples to be included:

Reflection on Samples of Work

Many educators who work with portfolios consider the reflection component the most critical element of a good portfolio. Simply selecting samples of work as described above can produce meaningful stories about students, and others can benefit from "reading" these stories. But the students themselves are missing significant benefits of the portfolio

process if they are not asked to reflect upon the quality and growth of their work. Mueller,(2012)stated that, "The portfolio is something that is done by the student, not to the student." Most importantly, it is something done for the student. The student needs to be directly involved in each phase of the portfolio development to learn the most from it, and the reflection phase holds the most promise for promoting student growth.

In the reflection phase students are typically asked to comment on why specific samples were selected or comment on what they liked and did not like in the samples or comment on or identify the processes involved in developing specific products or performances or describe and point to examples of how specific skills or knowledge improved (or did not) or identify strengths and weaknesses in samples of work or set goals for themselves corresponding to the strengths and weaknesses or identify strategies for reaching those goals or assess their past and current self-efficacy for a task or skill or complete a checklist or survey about their work or some combination of the above.

Reflection sheets

Probably the most common portfolio reflection task is the completion of a sheet to be attached to the sample (or samples) of work which the reflection is addressing. The possibilities for reflection questions or prompts are endless, but some examples I have seen include:

Selection questions/prompts

Why did you select this piece? Why should this sample be included in your portfolio?

How does this sample meet the criteria for selection for your portfolio?

I chose this piece because...

Growth questions/prompts

What are the strengths of this work? Weaknesses?

What would you work on more if you had additional time?\ How has your _____ (e.g., writing) changed since last year?

What do you know about _____ (e.g., the scientific method) that you did not know at the beginning of the year (or semester, etc.)?

Looking at (or thinking about) an earlier piece of similar work, how does this new piece of work compare? How is it better or worse? Where can you see progress or improvement?

How did you get "stuck" working on this task? How did you get "unstuck"?

One skill I could not perform very well but now I can is ....

From reviewing this piece I learned....

Goal-setting questions/prompts

What is one thing you can improve upon in this piece?

What is a realistic goal for the end of the quarter (semester, year)?\

What is one way you will try to improve your ____ (e.g., writing)?

One thing I still need to work on is ....

I will work toward my goal by ....

Evaluation questions/prompts

If you were a teacher and grading your work, what grade would you give it and why?

Using the appropriate rubric, give yourself a score and justify it with specific traits from the rubric.

What do you like or not like about this piece of work?

I like this piece of work because ....

Effort questions/prompts

How much time did you spend on this product/performance?

The work would have been better if I had spent more time on ....

I am pleased that I put significant effort into....

Overall portfolio questions/prompts

What would you like your _____ (e.g., parents) to know about or see in your portfolio?

Does the portfolio as a whole reveal about you as a learner (writer, thinker, etc.)?

A feature of this portfolio I particularly like is....

In this portfolio I see evidence of....

As mentioned above, students (or others) can respond to such questions or prompts when a piece of work is completed, while a work is in progress or at periodic intervals after the work has been collected. Furthermore, these questions or prompts can be answered by the student, the teacher, parents, peers or anyone else in any combination that best serves the purposes of the portfolio.

Other reflection methods

In addition to reflection sheets, teachers have devised a myriad of means of inducing reflection from students and others about the collection of work included in the portfolio. For example, those engaging in reflection can write a letter to a specific audience about the story the portfolio communicates:

write a "biography" of a piece of work tracing its development and the learning that resulted

write periodic journal entries about the progress of the portfolio

compose an imaginary new "chapter" that picks up where the story of the portfolio leaves off orally share reflections on any of the above questions/prompts.

Reflection as a process skill

Good skill development requires four steps:

Instruction and modeling of the skill; Practice of the skill; Feedback on one's practice and Reflection on the practice and feedback.

Reflection itself is a skill that enhances the process of skill development and virtually all learning in innumerable settings. The educators, for example, need to continually reflect upon what is working or not working in our teaching, how we can improve what we are doing, how we can help our students make connections to what they are learning, and much, much more. Thus, it is critical for students to learn to effectively reflect upon their learning and growth.

As a skill, reflection is not something that can be mastered in one or two attempts. Developing good reflective skills requires instruction and modeling, lots of practice, feedback and reflection. As many of you have probably encountered, when students are first asked to respond to prompts such as "I selected this piece because..." they may respond with "I think it is nice." Okay, that's a start. But we would like them to elaborate on that response. The fact that they did not initially elaborate is probably not just a result of resistance or reluctance. Students need to learn how to respond to such prompts. They need to learn how to effectively identify strengths and weaknesses, to set realistic goals for themselves and their work, and to develop meaningful strategies to address those goals. Students often have become dependent upon adults, particularly teachers, to evaluate their work. They need to learn self-assessment.

So, the reflection phase of the portfolio process should be ongoing throughout the portfolio development. Students need to engage in multiple reflective activities. Those instances of reflection become particularly focused if goal-setting is part of their

reflection. Just as instruction and assessment are more appropriately targeted if they are tied to specific standards or goals, student identification of and reflection upon strengths and weaknesses, examples of progress, and strategies for improvement will be more meaningful and purposeful if they are directed toward specific goals, particularly self-chosen goals.

Once opportunities for reflection (practice) take place, feedback to and further reflection upon student observations can be provided by conversations with others. Conferencing is one tool to promote such feedback and reflection.

Conferencing on Student Work and Processes

With 20 or 30 or more students in a classroom, one-on-one conversations between the teacher and student are difficult to regularly arrange. That is unfortunate because the give and take of face-to-face interaction can provide the teacher with valuable information about the student's thinking and progress and provide the student with meaningful feedback. Such feedback is also more likely to be processed by the student than comments written on paper.

Conferencing typically takes several forms:

Teacher/student -- sometimes teachers are able to informally meet with a few students, one at a time, as the other students work on some task in class. Other times, teachers use class time to schedule one-on-one conferences during "conference days." Some teachers are able to schedule conferences outside of class time. Typically such conferences take

only a few minutes, but they give the teacher and the student time to recap progress, ask questions, and consider suggestions or strategies for improvement.

Teacher/small group -- other teachers, often in composition classes, meet with a few students at a time to discuss issues and questions that are raised, sharing common problems and reflections across students.

` **Student/student** -- to conserve time as well as to give students the opportunity to learn how to `provide feedback along with receiving it, teachers sometimes structure peer-to-peer conferencing. The focus might be teacher-directed (e.g., "share with each other a sample of work you recently selected for your portfolio") or student-directed (e.g., students use the time to get feedback on some work for a purpose they determine).

Management: How will time and materials be managed in the development of the portfolio? As appealing as the process of students developing a portfolio can be, the physical and time constraints of such a process can be daunting. Where do you keep all the stuff? How do you keep track of it? Who gets access to it and when? Should you manage paper or create an electronic portfolio? Does some work get sent home before it is put in the portfolio? Will it come back? When will you find the time for students to participate, to reflect, to conference? What about students who join your class in the middle of the semester or year?

There is one answer to all these questions that can make the task less daunting: start small! That is good advice for many endeavors, but particularly for portfolios because there are so many factors to consider, develop and manage over a long period of time. In the final

section of this chapter (Can I do portfolios without all the fuss?) I will elaborate on how you can get your feet wet with portfolios and avoid drowning in the many decisions described below.

How you answer the many management questions below depends, in part, on how you answered earlier questions about your purpose, audience, content and process. Return to those answers to help you address the following decisions:

Management, Decisions and possible solutions: Should the portfolio building process wait until the end or should it occur as you go?

The easiest solution is to collect work samples along the way but save the selection and reflection until the end, keeping selection simple and limiting the amount of reflection.

The more involved (and more common) approach is for participants to periodically make selections and to engage in reflection throughout the process. This gives the student time to respond to identified weaknesses and to address goals set. Will the portfolios be composed of paper or stored electronically (or both)? Paper Portfolio: As you know, the most common form of portfolios is a collection of paper products such as essays, problem sets, journal entries, posters, etc. Most products produced in classrooms are still in paper form, so it makes sense to find ways to collect select from and reflect upon these items.

Hybrid Portfolio: Other forms of products are increasingly available, however, so teachers are adding videotapes, audiotapes, 3-D models, artwork and more to the containers holding the paper products.

Electronic Portfolio: Since many of the paper products are now first created in an electronic format, it makes sense to consider keeping some samples of work in that format. Storage is much easier and portability is significantly increased. Additionally, as it becomes easier to digitize almost any media it is possible to add audio and video examples of student work to the electronic portfolio. A considerable amount of work can be burned to a CD or DVD or displayed on a website. An electronic compilation can be shared with a larger audience and more easily follow a student to other grades, teachers and schools. Copies can be made and kept.

Where will the work samples and reflections be kept?

Obviously, the answer to this question depends on your answer to the previous question about storage format. The possible solutions described below will assume that you have chosen an option that includes at least some paper products.

A common model for portfolio maintenance is to have two folders for each student -- a working folder and a portfolio folder. As work samples are produced they are stored in the working folder. Students (or other selectors) would periodically review the working folder to select certain pieces to be included in the portfolio folder. Usually reflection accompanies the selection process. For example, a reflection sheet may be attached to each piece before it is placed in the portfolio.

In addition to manila or hanging folders, portfolio contents have also been stored in pizza or laundry detergent boxes, cabinets, binders and accordian folders (Rolheiser, Mueller, 2014). For older students, some teachers have the students keep the work samples. Then

they are periodically asked to select from and reflect upon the work. Students might only keep the working folders while the teacher manages the portfolio folders.

As a parent, we know, we also would like to look at our children's work before the end of the semester or year. So, some teachers send work home in carefully structured folders. One side of a two-pocket folder might be labeled "keep at home" while the other side might be labeled "return to school." The work likely to end up in the portfolio would be sent home in the "return to school" pocket.

Who will be responsible for storing them?

Typically the teachers keep the contents of the portfolio as they are usually stored in the classroom. Older students (and sometimes younger ones) are also given the responsibility of managing their portfolios in the classroom, making sure all samples make it into the appropriate folders/containers, remain there, are put back when removed, and are kept neatly organized.

As mentioned above, older students sometimes are required to keep track of their work outside the classroom, bringing it to class on certain days for reflection and other tasks.

For electronic portfolios, it usually depends on teacher preference and whether or not students have access to storage space on the network or can save samples locally, or burns them to CDs or DVD, or add them to websites.

Who will have access to it, and when?

Usually the teacher and student will have access to the working folder or the final samples. But, for some types of showcase portfolios, only the teacher might have access because she is constructing the portfolio about the student. For older students, the teacher might only have limited access as the student controls the portfolio's development. Parents might have access and input as samples of work are sent home. Other educators might also have access to final portfolios for larger evaluative purposes.

When? Typically, students and teachers contribute samples to a working folder as they are created. Access to a portfolio folder is gained on a more regular schedule as times for selection and reflection are scheduled. Parents or other educators might have access at certain intervals depending on the purpose of the portfolio and the process that has been chosen.

How will portfolio progress be tracked?

A checklist sheet is sometimes attached to the front of a folder so that the teacher or the student can keep track of when and which samples have been added, which have been removed (temporarily or permanently), when reflections have been completed, when conferences have taken place, and whether or not any other requirements have been completed.

The teacher might just keep a schedule of when selections, reflections or conferences are to take place. Older students might be required to keep track of the process to make sure all requirements are met.

What will the final product look like?

Once again, this depends on the purposes and audiences for the portfolio, as well as the type of contents to be included. Showcase portfolios will typically have a more formal and polished presentation. A cover letter or introduction along with a table of contents might be included to provide context for a potentially wide range of readers, and to give the student or teacher a chance to more fully flesh out the student's story. Growth or evaluation portfolios might have a less formal presentation, unless the evaluation is part of a high stakes assessment. If the student and teacher are the primary readers, fewer contexts are needed. However, if parents are the primary or a significant intended audience, more explanation or context will be needed.

What if students join your class in the middle of the process?

Obviously, one advantage of choosing to build the portfolio at the end of a period of time rather than build it along the way (see the first question) is that transient students can still easily participate. They have less work to consider, but they can still engage in the selection and reflection process. If selection and reflection occur as work is being produced, the new student can simply join the process in progress. Some adaptation will likely be necessary, but the student can still demonstrate growth or competence over a shorter period of time. If the portfolio is also to be evaluated, further adjustment will need to be made.

Communication: How and when will the portfolio be shared with pertinent audiences?

Why share the portfolio?

By the nature of the purposes of portfolios -- to show growth, to showcase excellence -- portfolios are meant to be shared. The samples, reflections and other contents allow or invite others to observe and celebrate students' progress and accomplishments. A portfolio should tell a story, and that story should be told.

Students should primarily be the ones telling their stories. As students reflect on the balance of their work over some period of time, there is often a great sense of pride at the growth and the accomplishment. By telling their own stories students can take ownership of the process that led to the growth and achievement. Assessment is no longer something done to them; the students are playing an active role through self-assessment.

Furthermore, others will be able to recognize and celebrate in the growth and accomplishment of the students if their work is communicated beyond the borders of the classroom. A portfolio provides a unique vehicle for capturing and communicating student learning. Parents tend to learn more about their children's abilities and propensities through a portfolio than they do through the odd assignment that makes it home and into the parents' hands. Moreover, other interested members of the school and local community can recognize and celebrate the accomplishment.

Finally, the portfolio can provide an excellent tool for accountability. Parents, educators and community members can learn a great deal about what is happening in a classroom or school or district by viewing and hearing about the contents of these stories. Perhaps more importantly, the student and teacher can uncover a vivid picture of where the student was,

where she has traveled to, how she got there and what she accomplished along the way -- a fascinating and enlightening story.

Considering the audience

Of course, deciding how to tell the story will be influenced by the intended audience. For example, presenting a collection of work to a teacher who is already familiar with much of the content will likely require a different approach than presenting that work as part of a college application.

Audiences within the classroom

In some classrooms, a portfolio is used much like other assignments as evidence of progress towards or completion of course or grade level goals and standards. In such cases, the only audience might be the teacher who evaluates all the student work. To effectively communicate with the teacher about a body of work, the student may be asked to write a brief introduction or overview capturing her perceptions of the progress (for a growth portfolio) or accomplishments (for a showcase portfolio) reflected in the collection of work. Teachers who assign portfolios not only want to see student work but want to see students reflect upon it.

As a classroom assessor, the teacher also has the benefit of communicating face-to-face with each student. Such conferences take a variety of forms and vary in their frequency. For example,

A teacher might review a portfolio at one or more intervals, and then prepare questions for the face-to-face conversation with each student;

A student might run the conference by taking the teacher through her portfolio, highlighting elements consistent with the purpose of the portfolio;

A "pre-conference" might occur in which teacher and student discusses how the portfolio should be constructed to best showcase it or best prepare it for evaluation.

Additionally, classmates can serve as an audience for a portfolio. Particularly for older students, some teachers require or encourage students to present their portfolios to each other for feedback, dialogue and modeling. For example, Pairs of students can review each other's work to provide feedback, identify strengths and weaknesses, and suggest future goals;

Sharing with each other also provides an opportunity to tell a story or just brag;

Students can always benefit from seeing good (or poor) models of work as well as models of meaningful reflection and goal-setting. As students hear themselves tell each other about the value and meaning of their work it will become more valuable and meaningful to them.

Audiences within the family and school community

As many of us have experienced with our own children, parents sometimes only receive a small, fragmented picture of their children's school work. Some work never makes it home, some is lost, some is hidden, etc. It can be even harder for parents to construct a

coherent picture out of that work to get a real sense of student growth or accomplishment or progress toward a set of standards. Portfolios provide an opportunity to give parents a fuller glimpse of the processes and products and progress of their children's learning. Many teachers intentionally involve the parents in the development of the portfolio or make parents an audience or both.

For example, to involve parents in the process, teachers make sure parents view most student work on a consistent basis; for example, some teachers require students to get much of their work signed by parents to be returned to school; some teachers send work home in a two-pocket folder in which one pocket contains work that can stay home and the other pocket contains work that can be viewed by parents but should be returned to school, each pocket carefully labeled as such; some teachers use a three-pocket folder in which the third pocket is a place parents can pass along notes or comments or questions; teachers also invite parents to provide feedback or ask questions about student work; for example, a reflection sheet, perhaps similar to the ones students complete, can be attached to some of the pieces of work sent home inviting parents to make comments, ask questions or provide evaluation, parents might be invited to provide a summary reflection of work they have seen so far; or simply identify one or two pieces of work or aspects of their children's work that they most like or are most surprised about.

To share the portfolio with parents, many schools host Portfolio Nights, at which students often guide their parent or parents through the story of their work. Having the Night at school allows the student to more easily share the variety of two- and three-dimensional work they have created. After teacher evaluation of the portfolio (if that is done), the

complete portfolio might be sent home for the parents to view and possibly respond to. This might occur once at the end of the process or periodically along the way.

A Portfolio Night also provides an opportunity for other members of the school or larger community to view student portfolios. The portfolios may simply be on display to be sampled, or students might guide other audiences through their work. Similarly, during the school day students can share their portfolios with students from other classes or with school personnel.

Audiences beyond the classroom, school and family

An external audience for student work can serve to motivate students to give more attention to and take more seriously their performance. First, it may give more legitimacy to assigned work. If the work is to be externally reviewed, it suggests that it is not simply "busy work" that provides a grade but that it is something authentic valued outside the walls of the classroom. Second, some students may take more care in their work when they believe a new, different, and perhaps expert audience will be viewing it.

To extend the audience beyond the classroom, school and family, teachers have adopted a variety of approaches, including expanding the audience at Portfolio Nights to include a larger community, perhaps even authors, or scientists or other professionals relevant to the work in the portfolio; inviting professionals or experts in a particular field to come listen to presentations of the portfolios; inviting professionals or experts to serve as one of the reviewers or evaluators of the portfolios; encourage or require students to share their work

with a larger audience through the Web or other media. Publishing on the Web also allows students to solicit comments or questions.

Preparing the student to share

Just as we do not expect children to write or speak well without considerable instruction and practice, it is not reasonable to expect students to effortlessly and effectively share their stories without some help. Teachers have devised a number of strategies to prepare students to communicate with the target audience. Some such strategies include pairing up students in class ("portfolio partners") to practice presenting their work to each other; pairing up the author of the portfolio with an older student a few grades above. The younger student would practice presenting her work as if she is presenting it to the intended audience (e.g., parents at a Portfolio Night). Both students can benefit as the older student provides feedback and encouragement and may increase her own self-efficacy for the task through modeling and tutoring the younger student.

Providing models.

Teachers provide models of good portfolios that illustrate how the product itself can effectively communicate with an audience through the way it is constructed. Teachers can also model the process of communication by walking through how he or she would share a portfolio with a specific audience.

Evaluation: If the portfolio is to be used for evaluation, how and when should it be evaluated?

As with all of the elements of portfolios described above, how and when evaluation is addressed varies widely across teachers, schools and districts. Take, for example,

Evaluation and Grading:

Evaluation refers to the act of making a judgment about something. Grading takes that process one step further by assigning a grade to that judgment. Evaluation may be sufficient for a portfolio assignment. What is (are) the purpose(s) of the portfolio? If the purpose is to demonstrate growth, the teacher could make judgments about the evidence of progress and provide those judgments as feedback to the student or make note of them for her own records. Similarly, the student could self-assess progress shown or not shown, goals met or not met. No grade needs to be assigned. On a larger scale, an evaluation of the contents within the portfolio or of the entire package may be conducted by external bodies (e.g., community members, other educators, state boards) for the purpose of judging completion of certain standards or requirements. Although the evaluation is serious, and graduation might even hinge on it, no classroom grade may be assigned.

On the other hand, the work within the portfolio and the process of assembling and reflecting upon the portfolio may comprise such a significant portion of a student's work in a grade or class that the teacher deems it appropriate to assign a value to it and incorporate it into the student's final grade. Alternatively, some teachers assign grades because they believe without grades there would not be sufficient incentive for some students to complete the portfolio. Ahh, but …

What to Grade

Some teachers choose not to grade the portfolio because they have already assigned grades to the contents selected for inclusion.

The metacognitive and organizational elements. But the portfolio is more than just a collection of student work. Depending on its purpose, students might have also included reflections on growth, on strengths and weaknesses, on goals that were or are to be set, on why certain samples tell a certain story about them, or on why the contents reflect sufficient progress to indicate completion of designated standards. Some of the process skills may also be part of the teacher's or school's or district's standards. So, the portfolio provides some evidence of attainment of those standards. Any or all of these elements can be evaluated and/or graded.

Completion. Some portfolios are graded simply on whether or not the portfolio was completed.

Everything. Other teachers evaluate the entire package: the selected samples of student work as well as the reflection, organization and presentation of the portfolio.

How to Grade/Evaluate

Most of the portfolio assignments have been evaluated or graded with a rubric. A great deal of personal judgment goes into evaluating a complex product such as a portfolio. Thus, applying a rubric, a tool which can provide some clarity and consistency to the evaluation of such products, to the judgment of quality of the story being told and the

elements making up that story makes sense. Moreover, if the portfolio is to be evaluated my multiple judges, application of a rubric increases the likelihood of consistency among the judges.

Examples of Portfolio Rubrics

What might a portfolio rubric look like? If the focus of the grading is primarily on whether the samples of student work within the portfolio demonstrate certain competencies, the criteria within the rubric will target those competencies. For example,

Evaluating competencies:

Electrical and computer engineering portfolio rubric or, Completing requirements-

Sophomore honors program portfolio rubric - to gain admission.

Meeting standards- State of Idaho portfolio rubric.

Evaluating the portfolio as a whole-Senior exit portfolio rubric - very detailed criteria and

Electronic portfolio rubric - very detailed criteria.

Who evaluates ?

The more we can involve students in the assessment process, the more likely they will take ownership of it, be engaged in it, and find it worthwhile. So, it makes sense to involve students in the evaluation process of their portfolios as well. They have likely engaged in some self-assessment in the reflection or goal-setting components of the portfolio.

Additionally, students are capable of evaluating how well their portfolio elements meet standards, requirements, or competencies, for their own portfolios or those of their peers. Furthermore, older peers could make excellent judges of the work of younger students. Cross-grade peer tutoring has demonstrated how well the older and younger students respond to such interactions.

Obviously, the classroom teacher, other educators, review board members, community members, etc. can all serve as judges of student work. If multiple judges are used, particularly if they are not directly familiar with the student work or assignments, training on a rubric should be provided before evaluation proceeds. The evaluators should be familiar with and clear on the criteria and the levels of performance within the rubric. A calibration session, in which the judges evaluate some sample portfolios and then share ratings to reach some consensus on what each criteria and level of performance within the rubric means, can provide a good opportunity for judges to achieve some competence and consistency in applying a rubric

Can I do Portfolios without all the Fuss?

Portfolios do typically require considerable work, particularly if conferencing is involved. But with most anything, including assessment, We recommend that you start small. The following describes just one possible way to get started.

Step 1. Depending on the age of your students and other considerations, have students' select two pieces of their work over the course of a quarter (or three or four over a semester). Decide (with your students or without) upon one or more criteria by which the

selection will be guided (e.g., their best work). To limit management time, don't wait for the end of the quarter for students to make those selections. Otherwise, all their work will have to be collected along the way. Instead, if you want to keep it simple, tell your students ahead of time that they will be selecting two or more pieces matching certain criteria, and that you will ask them to do it at the point each sample is completed.

Step 2. At the time a student selects a sample to be included in his portfolio, require the student to complete a brief reflection sheet and attach it to the sample.

Step 3. Depending on the age of your students, ask your student to save that sample and the attached reflection sheet until the end of the quarter or semester, or collect it and store it yourself at that point.

Step 4. At the end of the quarter or semester, ask your students to reflect upon the samples one additional time by describing what they liked best about their work, or by identifying strengths and weaknesses, or by setting one or two goals for the future. Adopted from Mueller, (2012).

Criteria for Assessment using Portfolio Method

Teaching and learning process at any level is tasking and needs accountability. How do teachers measure what students draw, write or design? How do teachers assess all learners in the classroom as they produce drawn or designed pieces while offering motivation and encouragement in the learning process? Doing all this prove to be so challenging without appropriate measurement tools. Certain criteria must be used to measure performance or learning skills. Such criteria are rubric. Rubric is any sets of criteria that describe the

development in an activity, process or product. Rubrics are also tools that help multiple instructors come to similar conclusion about construction of higher-level conceptual knowledge, performance skills and attitude. There are two types of rubric-analytic and holistic. Analytic breaks scores down by individual criteria (student gets score for each criterion measured in the assessment task). Holistic rubric provides one score for the whole product or presentation, usually describing multiple criteria. Student must meet all criteria for a certain level to receive that score; otherwise the score drops down a level (Mueller, 2012).

The criteria (rubric) should have the following qualities:

1. Clear criteria;
2. Rich description language;
3. Focus on positive attainment;
4. Universal validity and reliability;
5. Differentiation of performance, product and effort; as well as
6. Concluding thoughts.

For a portfolio to assess properly there should be assessment criteria. Assessment criterion allows student to recognize and select work that is considered high quality. It allows and encourages discussions among teachers, students and others concerning the outcomes. Assessment criteria which have been used to determine quality of the students' performances

Should be clear and easy to understand. Rubric should be used in order determine quality of the evidence in portfolio and make reliable and valid assessment (Birgin and Baki,2007; Davis and Ponnamperuma,2005 and Mccollister,2002).

They added that portfolio assessment is supposed to be characterized by four (4)levels of assessment on learner, thus included "knows" –factual recall of knowledge; 'knows-how'-application of knowledge; 'shows how'-simulated examination situated where competence is assessed; and 'does'-assessment of performance in a real life setting. Classroom art and design teachers are often required to use multiple methods of assessment to evaluate students' works.

The assessment implementation and procedure are done according to the following:

1.Collection of evidence of achievement of learning outcome;

` 2.Reflection of learning

3, evaluation of evidence

4. Defense of evidence

5. Assessment of decision

For example, the National Board for Professional teaching Standards (2001:p.61) expect qualified art design teachers to regularly monitor, analyze, and evaluate their teaching and students' progress. It is the art and design teachers' responsibility to help student to reflect on their own learning and monitor their progress. Criteria can serve to guide and stimulate artistic, design skills and intellectual assessment. Rubric should contain criteria that describe varying levels of competency or success. It is a scoring device for many assessment approaches. It may articulate qualities that are present in finished work or

within a process. It can inform both students' ways of progress and teachers' ways of improvement. See appendix (J) for a sample.

Problems and Benefits of Portfolios as method of assessment

Various studies show that there is need to use alternative assessment methods to improve teaching and learning to enhance accountability in the industry of education and assure quality control on part of teachers and school administrators. But experiences have shown that a lot of constraints hurdles the accomplishment of authentic assessment (Dilmac, 2010).

Problems;

The implementation of assessment h as been problematic as a result of the following:

a. like any other form of qualitative data, data from portfolio assessment can be difficult to analyze. Checklist and observation list can facilitate analyses regarding process. Use of computer can facilitate feedback to students. Problem of student's performance should be followed by teachers continuously and they should be required to present their works.

b. Developing portfolio assessment criteria, rubric and determining the works in portfolios can be difficult for teachers at first. Moreover, organizing and assessing the portfolio and giving feedback to students can be time consuming

c. Main problem of using portfolio is to store, to handle and to control portfolio in crowded classroom; collection or retrieval of works from each class is burdensome. Computer can be used (e-portfolio) to store, handle and control.

d. parent- teacher community support is needed for portfolio system. Parents are accustom to receiving of letter or report card at the end of term or semester of regarding designated grading or result. Adjustment to such change of assessment may seem difficult for parents without a considerable effort to educate them regarding nature of the new assessment system.

e. it has low reliability scores but use of rubric can overcome it.

f. use of portfolio demand on teachers professional development; time to learn portfolio, preparation of time to create new materials and lesson to produce and refine portfolios teachers need time to review and comment on students' work. Teachers who are willing to use portfolio should be educated adequately by experts of portfolio application processes.

Benefits:

a. Portfolio provides multiple ways of assessing students learning overtime,

b. it allows student, parents, teacher and staff to evaluate the students' strengths and weaknesses;

c. it provides multiple opportunities for observation and assessment;

d. it provide room for more realistic evaluation of academic content than pencil and paper tests ;

e. it encourages students to develop some abilities needed to become independent, self-directed learners;

f. it allows parents to see themselves as partners in learning process;

g. it enables students to express themselves in a comfortable way and assess their own learning and growth as learners;

h. it encourages students to think of creative ways to share what they are learning;

i. it encourages teachers to change their instructional practice ;and

j. it increases support to students from their parents and enhances communication among teachers, parents and students.

2.9 Previous Related Empirical Studies

Barnabas, (2015) evaluated the influence of home and school environments on the artistic creativity of primary school children in Kaduna. The scope of the study included home and environments. Home environment according to the study involved parents, children, relations and neighbours. While school environment included teachers, pupils, non-teaching staff members, peer group, school building and school community. The study was hinged to Eisner's view on influence of home and school. The study used descriptive survey as research method. The study used 52,856 teachers and 665,706 pupils as population of the study. Stratified random sampling technique was used to determine its sample size. The study sampled 384 pupils and 381 teachers. Descriptive statistics was used for data analysis.

The findings of the study revealed that home environment with well displayed art materials for children have significant influence on their interest in artistic creativity. School environments in Kaduna State are not quite conducive for artistic creativity, because of inadequate art material, equipment and facilities that promote children's interest in art. Home community has less influence on children's artistic creativity, because the society is not well informed of the value of art in schools. Cultural activities have influence on children's artistic creativity as the result of what they see or observe in art and craft or art festival in their communities. Peer group activities

have significant influence on children's artistic creativity if children are given full freedom to relate or share their experiences with their peers.

The study of Ugodulunwa and Wakjissa, (2015) investigated the use of portfolio assessment technique in the teaching of map sketching and location in geography in Jos, Nigeria. It adopted a quasi-experimental design. Two schools were selected using a table of random numbers from a population of 51 schools in Jos South and were assigned to each of the experimental and control groups. The experimental group consisted of 49 students while the control group had 52 students. Three hypotheses were formulated for the study. Hypotheses (1) one and three (3)were tested using t-test for correlated samples statistics while t-test was used for independent samples. The instrument used for data collection was a Geography Achievement Test titled: (GAT). The two groups were given a pre-test after which the experimental group was taught map sketching and location using portfolio assessment technique. The discussion method was employed to teach the control group. The same test was later administered on the two groups.

The findings of the study revealed that portfolio assessment helped in improving students' performance in map sketching and location, where the experimental group recorded higher mean gain scores of 33.32 as against1.65 gain scores recorded for the control group. Results of the t-test analysis revealed that a significant mean difference existed between the GAT pre-test and post-test mean scores of the experimental group. Gender was found not to have significant effect on the post-test GAT of the experimental group. The study recommended that teachers and schools should employ portfolio assessment technique in teaching Geography to help improve performance in secondary school geography.

Jaji, (2014) conducted a survey on Evaluation of Undergraduate Sculpture Curriculum in selected Nigerian Universities. Sculpture Curricula was evaluated to see whether their implementation is consonance with National Universities Commission (NUC) Minimum Academic Standard (MAS). A total of seven Universities were purposively sampled to sampled to reduce the lopsidedness associated with the citing Universities offering Sculpture in the country. The respondents were from the Sculpture lecturers and specializing Sculpture students of 2009/2010 academic session year in Nigerian Universities. Descriptive statistics was used collect the data through lecturers and students questionnaires which each contained 29 items. Findings of the study showed awareness and adequacy of the content of curriculum as well as compliance scored a total percentage of 73%, effectiveness of instructional strategy was 84%; availability of materials, equipment and facilities scored 43% while personnel level had 64%.

Alwkarat, (2012) studied 'Graduate Students' Attitude towards the use of E-portfolios in the University of Jordan. The study used survey research and sampled ninety (90) students. Questionnaire was used as research instrument. The findings of the study revealed students positive attitude towards the use of assessment portfolio. A mean of responses of 3.97 was found. The highest mean score of 4.05 was found for awareness followed by the e-portfolio that represents a shift from traditional method of learning and evaluation to new methods based on the content of the e-portfolio. The results of the independent t-test that was used to test for the significant difference in the attitudes of 300 and 400 level students revealed the attitude of 400 level students was significantly more positive than those of 300 levels.

Cassidy and Schwitter, (2007) in a survey on Portfolio assessment in an undergraduate Web Technology Unit. The study focuses on whether portfolio assessment provides better opportunities for feedback to students and whether portfolio assessment improves the learning

experience in the class. The study also looked at whether portfolio assessment generated excessive workload on teachers. The findings were: (1) most students received timely feedback which assisted them in their learning. (2) Most students discovered that they enjoyed freedom of learning and learned at their own pace. (3)Portfolio was seen as a good way of assessing students. (4) Some indicated that portfolio assessment has improved their final submissions of work.

Owolabi and Onuka,(2009) studied 'the challenges and prospects of Continuous Assessment implementation in Nigeria; the study was directed at the teachers and students of secondary schools in Ilorin, the capital city of Kwara state, located in the central region of Nigeria. Two hundred and fourty respondents comprising one hundred and twenty teachers and one hundred and twenty students were respectively sampled in the study. Two questionnaires, one for teachers and one for students, were developed and used for data collection, which were analyzed using percentages. Findings show that the greatest challenges of implementing Continuous Assessment in Nigerian secondary schools include poor test administration procedures, poor handling of scores and feedback to students, poor coverage of instructional contents by test contents, large classes, inadequate time for test and lack of knowledge and skills of the appropriate evaluation techniques. Respondents suggested that time should be given to implementation of Continuous Assessment. Teachers should be adequately trained in techniques of evaluation, modern technology for its conduct and recording should be provided for teachers. It was discovered that Nigerians know that Continuous Assessment possesses some prospects if properly implemented. These include reducing examination malpractices, improving educational and learning outcomes attainment among others. It was recommended that teachers should be given relevant training on

modern evaluation techniques and schools provided enabling environment for Continuous Assessment to work.

Birgin and Baki, (2007) in a survey studied 'use of Portfolio to assess students' Mathematics performance.' The study is survey aimed at examining the status of assessment practices in Mathematics education in the Faculty of Education, Firat University, Turkey. The study was conducted to popularize the use of portfolio assessment in Mathematics education. The result of the study indicated that portfolio has a potential which enables students to learn during assessment. The study recommended the use of portfolio at primary school level and the teachers be trained through workshops to become familiar with the use of portfolios.

Tezci and Dikici, (2006) conducted a study on the effect of digital portfolio assessment process on students's writing and drawing performances. The study used quasi-experimental method as research design, a non-equivalent design to examine the experimental and control groups. The population was fifty-two (52) students. Seventeen (17) respondents constituted the experimental group while thirty-five (35) the control group. Digital Portfolio assessment was used on experimental while traditional assessment on control group. Results of the study showed no significant differences ($p \geq 05$) was found on drawing and writing performance pretest scores of the groups. Whereas significant differences were found in favour of experimental group in the post-test scores of both groups. The finding thus showed that portfolio assessment approach is effective in assessing abilities of students in drawing and writing.

Sharp, (2002) conducted a survey on 'Use of Portfolios in the Classroom in Chemical Engineering, Vanderbilt University, Nashville'. The scope of the study included Engineering design, Informatics and Concepts of Illustrations. The research questions were (1) what are

assessment portfolio? (2) How were assessment portfolios used in the class?(3) How effective was assessment portfolios? (4) Which of the engineering courses can use assessment portfolios? The finding of the study revealed that portfolios can assess Engineering and Informatics students' performance. It also indicated that use of assessment portfolios gives more benefits than drawbacks. The study recommended that academic staff from experienced cadre to professor can use portfolio assessment. The methods of evaluation with assessment portfolio depends on the plan of the lecturer. It can be fully integrated into the curriculum as records of classroom performance. It can be implemented mid-semester, end of semester or even throughout. Moreover competency matrices are seen as the best criteria with scoring guidelines.

Aly, (2000) conducted descriptive study which investigated the impact of using portfolio assessment on freshmen in writing composition. The participants were freshman first year students at the Faculty of Education, University of Cairo. The data collection instruments are the performance checklist, paragraph writing and informational texts. After successfully completing a predetermined number of course assignments, the students were asked to select three pieces of writing to compile a portfolio for final assessment. Ninety-five 95% of the students completed portfolios. The findings showed that the students had positive attitudes towards the use of portfolio. The study also concluded that portfolio strategy improved students' ability to recognize the strengths and weaknesses in their writings.

Similarly Julius, (2000) examined students' use of portfolios in order to monitor their progress and evaluate their learning. The study examined elementary pupils' perception of portfolios by collecting data from 22 pupils and their teachers from two third grade classrooms. Data collection included pupils and teacher interviews, observations of pupils-teacher conferences, portfolio artifacts, teachers' logs and consultation with teachers. Portfolios were found to be

contributing student ability to reflect upon their work and to the development of their sense of ownership in the classroom. Result of the study revealed that students monitor their progress, they can make judgment based on physical features, and choice was a factor in the portfolio process.

2.10 Summary of Reviewed Literature

Barnabas, (2015) evaluated the influence of home and school environment on artistic creativity of school children. Quasi-experimental research method was used to examine the influences of home and school environment. The study was a correlational survey which used 384 pupils and 381 teachers as sample size. Descriptive statistics was used to interpret the data collected. The finding revealed that home and school environment had significant influence on artistic creativity of school children. Ugodulunwa and Wakjissa,(2015) investigated the use of portfolio assessment technique in teaching map sketching and location in geography in Jos south. The study used 102 secondary school students as sample size. Fifty students were used for experimental group, while fifty two for control group. The findings showed that portfolio assessment helped in improving students' performance in Map sketching and location, where the experimental group recorded a higher mean gain scores of 3.32 as against 1.65 gain scores for the control group.

Alwkarat, (2012) studied graduate students attitude towards the use of E-portfolio in the University of Jordan. The study used descriptive research as methodology. Ninety students were used as sample of the study and questionnaire was used for collection of data. The findings revealed that graduate students' attitude was positive with a mean of all responses 3.97. as gain score which was significant. Al-Serhani, (2007) investigated the effect of the portfolio

sassessment strategy in order to assess writing performance of English as Foreign Language third year students. The purpose of the study was to determine whether a specific portfolio model was effective in helping the students to improve their English writing performance in general and writing product skills and process. Quasi-experimental design was used in order to examine the experimental and control groups. The targeted population consisted of 63 female students. The control group students (N=30) received traditional classroom instruction whereas the experimental group (N=33) received treatment of portfolio assessment strategy. Descriptive Statistics, independent samples T-test and Spearman rank order coefficient of Correlation were used for data analysis. The findings of the post administration showed a remarkable improvement in English writing performance of the portfolio group students in general and in their writing product skills in particular as compared with non-portfolio group. Baion were sed on these finding some recommendation were made.

Cassidy and schwitter, (2007) studied portfolio assessment in an Undergraduate Web Technology Unit. The study focused on whether portfolio assessment provides better opportunities for feedback to students and to learning in the class. The study used survey and it found that most students received timely feedback which assisted them in their learning. Most students discovered that they enjoyed freedom of learning; that they learnt at their pace. Portfolio was seen as a good way to assess learning of students. Some indicated that portfolio assessment has improved their final submission of work.

Birgin and Baki, (2007) also studied the use of portfolio to assess students' performance in faculty of Education in Firat University, Turkey. The study used survey to examine the status of assessment practices in Mathematics Education. The study was primarily conducted to

popularize the use of portfolio assessment. in mathematics education. the finding of the study indicated that portfolio has the potential which enables students to learn during assessment.

To summarize and determine the uniqueness of this study, the studies of Barnabas, (2015); Ugodulunwa and Wakjissa,(2015); Alwkarat, (2012), Cassidy and Schwitter, (2007) and Birgin and Baki,(2007) were reviewed. This study is not similar to the study of Barnabas, (2015) which was correlational survey, as well as Ugodulunwa and Wakjissa,(2015) which was quasi-experimental. But the studies of Cassidy and Schwitter, (2007) and that of Birgin and Baki, (2007) were indirectly similar to this study in term of research method, category of respondents and the aim of the study. The study of Cassidy and Schwitter, (2007) was conducted in Marquerie University, Australia, with the aim of determining the essence of students' feedback in learning. It was identified that use of portfolio assessment provides better opportunities for feedback to students at University level. The study discovered that portfolio assessment encourage regular work on the practicals while allowing for creativity in its open format.

The study of Birgin and Baki, (2007) was conducted in Firat University, Turkey. The study was conducted not only to establish the existing assessment problem but to also popularize the use of assessment portfolios in faculty of education. Therefore this study constitutes to know the status of assessment portfolio in the departments of faculty of Environmental Design in Ahmadu Bello University, Zaria. This study is unique because it is a descriptive research which used sample survey design to determine lecturers' and students' understanding of portfolio assessment in Ahmadu Bello University, Zaria.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

In this study the lecturers' and students' understanding of the concept of portfolio assessment, types and variation of portfolios, lecturers' knowledge of portfolio assessment, lecturers' frequent use of portfolio assessment and problems of using portfolio assessment have been investigated. This chapter is presented under the following subheadings:

3.1 Research Design

3.2 Population, Sample and Sampling Procedure

3.3 Research Instruments

3.4 Validation of Research Instruments

3.5 Reliability of the Instruments

3.6 Procedure for Data Collection

3.7 Data Analysis

3.1 Research Design

This study is a descriptive research. The study used two sets of questionnaires to collect data from lecturers and 300/400levels students of selected courses in the Departments of the Faculty of Environmental Design, Ahmadu Bello University, Zaria. Mbahi (2001) stated that descriptive research is the type that help researchers to collect data for the purpose of description and interpretation of the existing condition, prevailing practices, on-going processes of learning and assessment. Descriptive research includes: a) Case study, b) Sample Survey and, c) Correlation study. The purpose of descriptive research is to describe systematically the facts and characteristics of a given population or area of interest, factually and accurately. The central purpose of descriptive research is not just the description of 'what is', but the discovery of meaning. Descriptive research provides some or all the required information. The research design of the study was sample survey. Sample survey was used by the study to obtain information from a sample of respondents. The study therefore was determined to describe trends of assessment practices in the selected courses of the Departments in Faculty of Environmental Design, Ahmadu Bello University, Zaria.

3.2 Population, Sample and Sampling Procedure

The population for the study consists of all the students and lecturers of the departments of selected courses in the Faculty of Environmental Design, Ahmadu Bello University, Zaria. One thousand 300 and 400 levels of undergraduate students (1000) and one hundred Lecturers (100) comprising Professors, Associate Professors, , Senior Lecturers, Lecturers 1;Lecturers II, as well as Assistant Lecturers of the Faculty of Environmental Design, Ahmadu Bello University, Zaria. The study used stratified random sampling technique to allow for proper representation of both

students and lecturers across the Departments. The study drew its sample by the procedure of Stratified Random sampling technique. For stratified random sampling technique, it was necessary for the study to divide the population into eight strata. The members of the strata included: 1) Professor,2) Associate Professor;3)Senior lecturers, 4) lecturer 1; 5) Lecturer two; 6) Assistant lecturer; 7) 300level students and 8) 400 level students. The study considered these eight strata randomly selected the required sample from each stratum. Taro Yamane statistical analysis for determining sample size was also used to justify the draw of the sample size (Meyer in Senam and Akpan, 2014). Taro Yamane's statistical formula was adopted because the numerical strengths of the population are known. When the study used it, the result was two hundred and ninety three (293); where 300 and 400level students were two hundred (200) and Lecturers ninety three (093).

3.3 Research Instruments

The study used the Likert five points scale type questionnaire to examine lecturers' and students' understanding of the concept of portfolio assessment; types and variation of portfolios, lecturers' knowledge of using portfolio assessment, lecturers frequent use of portfolios and problems of using portfolio assessment. The questionnaire of lecturers was characterized by fourty-four (44) itemized statements which were drawn from the five research objectives of the study while that of the undergraduate students were characterized by research questions one and five with twenty-two (22) itemized statements.

3.4 Validation of Research Instruments

Fifty questionnaires were distributed to 200 level students and thirty copies of questionnaires to postgraduate students of Architecture. The postgraduate students and 200level students of Architecture are not part of population of the study. Experts in and outside the Departments of Architecture critically observed and improved the questionnaires in term of construct and content validity of the questionnaires. As a result of this, the research instruments were corrected and items in lecturers' questionnaire were also reduced from sixty items to forty-four. And that of students' from thirty-one to twenty-two. The reduction of items was done to avoid repetition and tautology of statements in the questionnaires.

3.5 Reliability of the Research Instruments

The administration and retrieval of the research instrument took the researcher two weeks before it was completed. The study having retrieved the questionnaires used Alpha Cronbach reliability coefficient to compute the reliability of the research instrument. The results of the reliability were 0.951 for students' questionnaires and 0. 981 for the lecturers' questionnaires. These values therefore, confirmed that the instruments were reliable for collection of data, see appendix D p.118.

3.6 Procedure for Data Collection

The researcher having collected an introduction letter from the Supervisory Committee through the Head of Department, and visited the selected Departments in the Faculty. This was to enable him to officially make it known that the administration of questionnaires was going to the selected Departments. Both lecturers and 300/400levels students were involved. The distribution

and retrieval of the questionnaires took the researcher sixty-five (65) days. The researcher distributed two hundred and ninety- three questionnaires. Two hundred were for undergraduate students and ninety- three for lecturers of the different Departments comprising Architecture, Fine Arts; Industrial Design and Urban and Regional Planning. The researcher retrieved only two hundred and sixty-two (262) which was 89.41% of 293(100%). The non- retrieved copies were 11.26%.

3.7 Data Analysis

The study used quantitative analysis to analyze the responses of students and lecturers according to the categorization research questions of this study in the survey questionnaire. Data were analyzed using Descriptive statistics like mean, standard deviation, frequency of counts provided in Statistical Package for Social Sciences (SPSS).

CHAPTER FOUR

RESULTS AND DISCUSSION

4.0 Introduction

This chapter presents the analyzed data collected from respondents and discusses the results. The results are presented in order of research questions on tables that follows.

4.1. Results

4.1.0 Demographic Information of Respondents and Sample Size

S/No	Academic Rank	Sample size	Retrieved
	1.Professor	06	06
	2.Assoc. Professor	08	06
	3.Senior Lecturer	18	18
	4.Lecturer I	19	13
	5.Lecturer II	20	11
	6.Asst. Lecturer	22	08
	300/400 Level Students	200	200
Total Sample Size:		**293 (100.0%)**	**262(89.41%)**

Table 4.1.0 shows the sample size of the study which categorized academic ranks of lecturers in the universities and level of students as well. The study distributed two hundred and ninety –three (293) questionnaires (100%) but was able to retrieve two hundred and sixty – two (262) questionnaires (89.41%). The retrieved data was used for data analysis.

Research Question 1; Do Lecturers and Students understand the concept of Portfolio method of Assessment?

Table 4.1.1a.Lecturers' Understanding of the concept of Portfolio Assessment Method

	S D	D	U	A	S A	Mean	Remark
4.I know portfolio method of assessment	1(1.6)	3(4.8)	3(4.8)	33(53.2)	22(35.5)	4.16	Agree
5.Portfolio assessment is characterized by using rubric, guidelines, self- reflection form and portfolio model.	25(40.3)	10(16.1)	13(21.0)	3(4.8)	11(17.7)	2.50	Disagree
6. Portfolio assessment is storing and awarding of marks before and by the end of semester.	10(16.1)	15(24.2)	6(9.7)	24(38.7)	7(11.3)	3.05	Agree
7. Portfolio Assessment requires joint lecturers' attention for proper assessment in design and drawings.	1(1.6)	6(9.7)	7(11.3)	27(43.5)	21(33.9)	3.98	Agree
8.I do not understand the concept of portfolio method of assessment	3(4.8)	14(22.6)	9(14.5)	17(27.4)	19(30.6)	3.44	Agree

Table 4.1.1a shows the lecturers understanding of the concept of Portfolio Assessment method. The knowledge of portfolio assessment were 55(75%) with 4.16 mean value, agree. But the responses to characteristics of portfolio were (35%) with 2.50 mean, disagree. Portfolio assessment is just storing and awarding of marks 31(50.0%). Joint lecturers co-working for proper assessment were (48%) with 2.98 mean value. Whereas I do not understand the concept of portfolio method of assessment were also 36(58.0%).

Table 4.1.1b Students' Understanding of the concept of Portfolio Assessment Method

Item statistics	S D	D	U	A	S A	Mean	Remark
3.Portfolios are only used for keeping designs and drawings.	13(6.5)	35(17.5)	5(2.5)	76(38.0)	70(35.0)	3.79	Agree
4.Portfolios are not necessary for studio courses	63(31.5)	73(36.5)	15(7.5)	34(17.0)	15(7.5)	2.32	Disagree
5.Portfolios do not vary in the faculty of environmental design.	30(15.0)	67(33.5)	23(11.5)	42(21.0)	38(19.0)	2.96	Disagree
6.Use of portfolios is good for students learning in drawing and design.	3(1.5)	3(1.5)	14(7.0)	78(39.0)	102(51.0)	4.36	Agree
7.Lecturers have not been using portfolios for assessment in drawing and design courses.	29(14.5)	41(20.5)	47(23.5)	59(29.5)	24(12.0)	3.04	Agree
8.I have never seen assessment portfolios in my Department.	64(32.0)	45(22.5)	21(10.5)	37(18.5)	33(16.5)	2.65	Disagree

Table 4.1.1b indicates that portfolios only used for keeping of design and drawings were 146(73%) with mean value of 3.76 agree. Portfolio is good for student were 180(90%). Have not seen the use of portfolio as methods of assessment were 83(41%). While never seen portfolios in my Department were 109(54%) disagree.

Research Question 2; what are the Variations and Types of Portfolios Assessment used by Lecturers?

Table 4.1.2 Types and variations of portfolio assessment

Item statistics	S D	D	U	A	S A	Mean	Remark
14.We have one type of portfolio for keeping works and another for assessing work.	7(11.3)	22(35.5)	10(16.1)	18(29.0)	5(8.1)	2.87	Disagree
15.There are variations in the types of portfolio assessment practice of the Departments	2(3.2)	6(9.7)	10(16.1)	29(46.8)	15(24.2)	3.79	Agree
16.Digital portfolios are also used for drawings and designs.	1(1.6)	3(4.8)	17(27.4)	30(48.4)	11(17.7)	3.76	Agree
17.Multiyear portfolios exists in some Departments		3(4.8)	22(35.5)	28(45.2)	9(14.5)	3.69	Agree
18.We depend on the portfolios which stores drawings and designs without rubrics.	4(6.5)	6(9.7)	24(38.7)	22(35.5)	6(9.7)	3.32	Agree

Table 4.1.2 shows that the lecturers have variations in the types of portfolios which were 44(71%) with mean of 3.79 agree. Depended on the portfolios that stores drawings and design without rubrics were 28(45.2%) with 3.32 mean.

Research Question 3; Do Lecturers have knowledge of using Portfolio Assessment**?**

Table 4.1.3 Lecturers' knowledge of using portfolios as a means of Assessment

Item statistics	S D	D	U	A	S A	Mean	Remark
22.Portfolio are folders for keeping designs and drawings	1(1.6)	4(6.5)	7(11.3)	26(41.9)	24(38.7)	4.10	Agree
23.Portfolio assessment need rubric, guidelines, reflection forms and portfolio model	1(1.6)	26(41.9)	16(25.8)	8(12.9)	11(17.7)	3.61	Disagree
24.Portfolio assessment is obtained from process, show case and product portfolios.	1(1.6)	21(33.9)	15(24.2)	10(16.1)	15(24.2)	3.63	Disagree
25.An ideal evaluation requires the use of portfolio.		2(3.2)	10(16.1)	36(58.1)	14(22.6)	4.00	Agree
30 Portfolio assessment requires training and retraining..	3(4.8)	3(4.8)	9(14.5)	37(59.7)	10(16.1)	3.77	Agree
32.I do not need portfolio to assess designs and drawing performance	7(11.3)	22(35.5)	11(17.7)	14(22.6)	8(12.9)	2.90	Disagree

Table 4.1.3 indicates that portfolios are for keeping designs and drawings which were 50(80.6%) agree with the mean of 4.10. portfolio assessment need rubrics, guidelines; reflection form and portfolio models were 27(43.5%) disagree; while 16(25.8%) undecided.

Research Question 4; Do Lecturers use the Assessment Portfolios in the Departments?

Table 4.1.4 Lecturers' use of Assessment Portfolios in the Departments.

	S D	D	U	A	S A	Mean	Remark
33.Portfolios are used as a method of assessment	2(3.2)	13(21.0)	4(6.5)	30(48.4)	13(21.0)	3.63	Agree
34.Digital Portfolio and Ordinary Portfolio are used in the departments.	5(8.1)	15(24.2)	13(21.0)	23(37.1)	6(9.7)	3.16	Agree
36.I do not use portfolio for assessment of students' drawing or design work	12(19.4)	35(56.5)	4(6.5)	8(12.9)	3(4.8)	2.27	Disagree

Table 4.1.4 indicates that portfolios used as a method of assessment was 43(69.4%) agree with the mean value of 3.16. Digital and Ordinary Portfolios were used in the Departments which were 29(46.8%) with the mean value of 3.16 agreed. While I do not use portfolio for assessment of students' drawings and design were 47(s75.9%) disagree.

Research Question 5; what are problems of the use of Portfolio Assessment?

Table 4.1.5 Problems of using portfolios as a method of assessment

	SD	D	U	A	S A	Mean	Remark
37.Too much time to spent using portfolio assessment.	4(6.5)	20(32.3)	13(21.0)	19(30.6)	6(9.7)	3.05	Agree
40.Developing portfolio assessment criteria model can be difficult for the teachers	4(6.5)	17(27.4)	12(19.4)	20(32.3)	9(14.5)	3.21	Agree
43.Students incur financial expenses in using portfolio.	3(4.8)	13(21.0)	7(11.3)	34(54.8)	5(8.1)	3.40	Agree
44.Assessment Portfolios demand the joint commitment of teachers, students and parents.	1(1.6)	4(6.5)	8(12.9)	32(51.6)	17(27.4)	3.97	Agree

Table 4.1.5 indicates the problems of using portfolios as method of assessment. Both lecturers and students responses were lecturers responses on time consumption of using portfolios were 25(40.3%); students responses were 84(41, 0%). Difficulty of using portfolios in a large class according to lecturers responses were 44(71.0%) whereas students were 111(55, 5%).

4.2 Findings of the Study

The following were the major findings of the study:

4.2.1. The finding on lecturers' understanding of the concept of portfolio assessment was that, lecturers have the knowledge of portfolios but did not understand the structure of assessment portfolio, as their responses to the questionnaire were 35(56.4%) disagreed and 13(21.0%) undecided.

4.2.2. For the variations in the types of portfolios, 71% of the respondents agreed that portfolios vary, while 45% agreed that they depended on portfolios without Rubric, Self-reflection and Portfolio model sheet.

4.2.3. For lecturers' knowledge of the use of portfolio assessment, 50(80.6%) agreed that portfolios are being used for keeping drawings and designs. while 27(43.5%) disagreed with rubrics, self-reflection and portfolio model sheets as the comprehensive assessment scheme of portfolio assessment while 47(43.5%) agreed that the implementation of portfolio assessment requires lecturers' training and re-training.

4.2.4 The lecturers' responses to the use of portfolio as a method of assessment responses were, 29(46.8%) agreed that they used ordinary portfolios.

4.2.5. The analyzed responses on problems of using assessment portfolios; 40.8% of the respondents agreed that portfolio assessment is time consuming; 46.8% agreed that it is difficult to use the structure of assessment portfolio, while 79.0% of the respondents agreed that the use of assessment portfolios requires the joint commitment of lecturers, parents and students.

4.3 Discussion

. The findings generated by the interpretation of the first research question under the Table 4.1.1a concerning whether lecturers understand the concept of portfolio assessment; showed that respondents did not understand the concept of portfolio assessment. The outcome of the study is in tandem with that of Birgin and Baki,(2007) in whose study revealed that, teachers do not have enough knowledge and experience about portfolio assessment methods. The authors

therefore recommended training for the pre-service teacher concerning the use of assessment methods in Turkish Schools. The finding under 4.2.2 concerning variations in the types of portfolios revealed that the portfolios varied. This outcome has concurred with the study of Baki and Birgin, (2007) which indicates that there were different types of portfolios for assessment method. These included: a). developmental portfolio, b). Showcase portfolio, c).Evaluation portfolio and Class portfolio. Finding 4.2.3 concerned the lecturers' knowledge of using assessment portfolios. Majority of the respondents disagreed that the use of portfolio requires rubric, self-reflection, and portfolio model sheets. This means that, respondents have no adequate knowledge about the use of assessment portfolios. This finding has also agreed with the finding of Dilmac, (2006) which revealed that the use of portfolios as a means of assessment requires professional training. The use of assessment method is therefore, determined by the type of training attained by teachers. The result of table 4.1.5 identified the problems regarding the use of portfolio assessment which included: a) difficult to use in a large class, b).it is time consuming. This result has also agreed with the study of Baki and Birgin (2007) which revealed that, the use of portfolio as a means of assessment demand much time and teachers' attention. It is difficult to implement portfolio in a large class. They recommended checklist, rubric and digital portfolios in order to reduce time for assessment of the portfolio collection. .

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

In this chapter the study presents the summary, conclusion and recommendations. The study summarizes the entire work and concludes based on its' findings and gave recommendations in line with the objectives.

5.1. Summary

The study examines lecturers' and students' understanding of the concept of portfolio assessment; types and variations of portfolios and identified the problems and benefits of using portfolio assessment with a view to the need to use portfolio model which include rubric, self-reflection and portfolio model. The study has provided types of portfolios every student need in a semester (Developmental, Showcase and Evaluation portfolios). The study found that lecturers and students know portfolios as folders but did not understand the concept of rubric, self-reflection and portfolio model. Based on the findings of the study it was recommended that there is need for training of lecturers to understand the new concepts concerning portfolios. Suggestion for the use of portfolios along rubric, self-reflection sheets and portfolio model was also proffered.

5.2. Conclusion

The study concludes that lecturers and students of selected courses: Architecture, Fine Arts, Industrial design as well as Urban and Regional planning know portfolios without understanding the concept of portfolio assessment which is characterized by rubric, self-reflection and portfolio model sheets. There were agreements across the opinions of all the respondents that the portfolios vary. The majority of the respondents also agreed that they depended on portfolios without rubric, self-reflection and portfolio model sheets. The study also concludes that use portfolio assessment is difficult all the times because of time consumption and burdensome in large class. This study concludes that several studies have shown evidences of the workability of portfolios in enhancing learning when use with rubric, self-reflection and portfolio model sheets.

5.3 Recommendations

1. There is need for the retraining of lecturers through workshops and symposium to make them understand the new concepts of assessment practices in Faculty of Environmental Design not only in this University but also in the Universities.

2. There is need to use, at least, three different portfolios per student for two dimensional design and drawing courses. The type of portfolios may include: a). Developmental, b).Showcase and c). Evaluation portfolios.

3. The study recommends urging the lecturers to keep using assessment portfolios to be conversant with portfolio assessment from time to time. The lecturers need to guide students on how to use at least three types of portfolios as listed above.

4. The study also recommends that there is need for trial on the use rubric, self-reflection and portfolio model sheets during assessment of drawings and design with students-lecturers conference in the studio through exhibition.

5.4 Contribution to Knowledge:

The study has:

1. provided three(3) types of Portfolios every undergraduate student should have in drawing and design courses(Developmental, Showcase and Evaluation portfolios).

2. provided a structure for involving students in understanding criteria for good work and the use of critical thinking and self-reflection

3. identified the difficulties of using Portfolio assessment in drawing and designing and how to overcome them.

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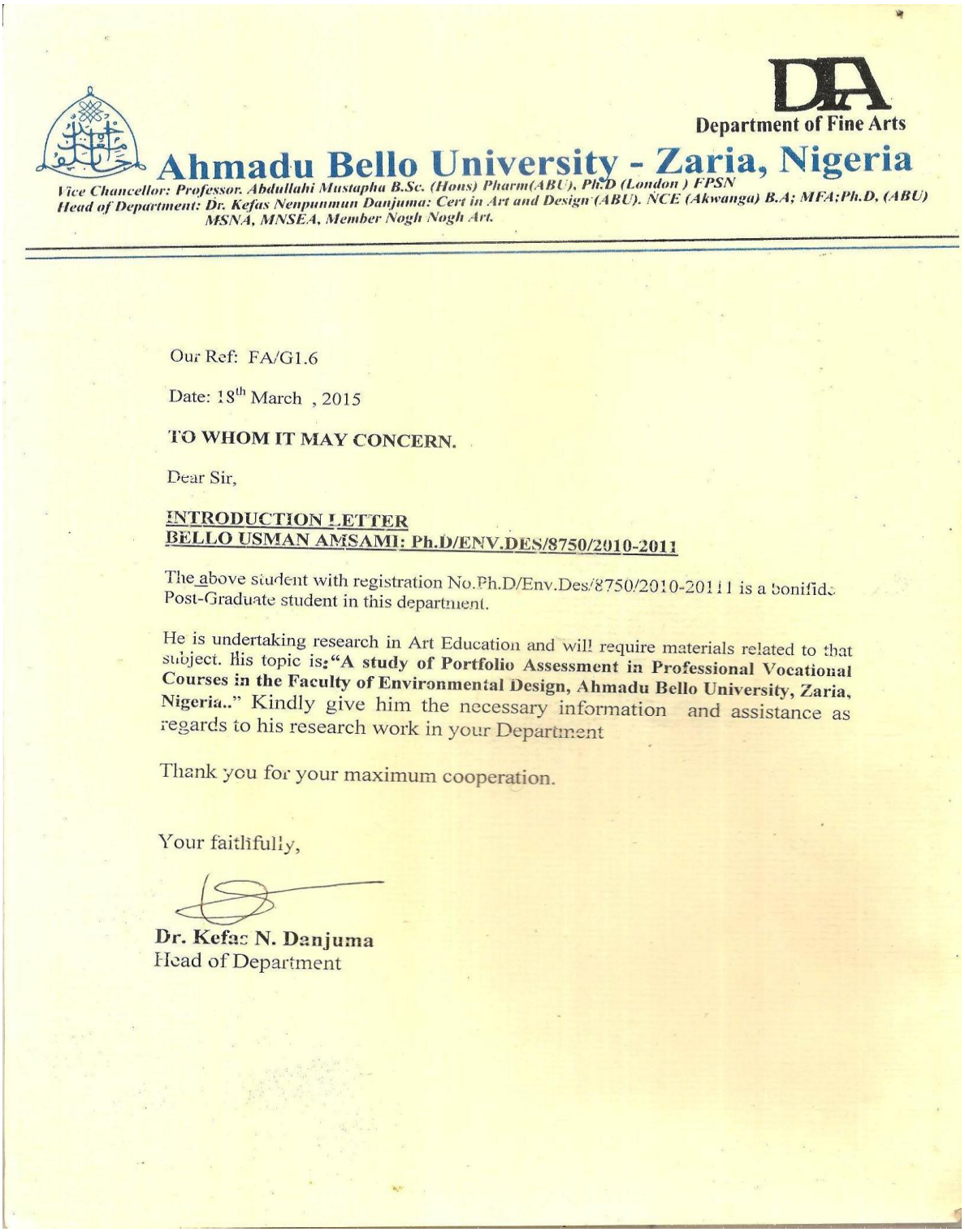
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APPENDIX A

INTRODUCTORY LETTER FOR PILOT STUDY



Department of Fine Arts

Ahmadu Bello University - Zaria, Nigeria

Vice Chancellor: Professor. Abdullahi Mustapha B.Sc. (Hons) Pharm(ABU), Ph.D (London) FPSN
Head of Department: Dr. Kefas Nenpunmun Danjuma: Cert in Art and Design (ABU). NCE (Akwanga) B.A; MFA;Ph.D, (ABU) MSNA, MNSEA, Member Nogh Nogh Art.

Our Ref: FA/G1.6

Date: 18th March , 2015

TO WHOM IT MAY CONCERN.

Dear Sir,

INTRODUCTION LETTER
BELLO USMAN AMSAMI: Ph.D/ENV.DES/8750/2010-2011

The above student with registration No.Ph.D/Env.Des/8750/2010-2011 is a bonifide Post-Graduate student in this department.

He is undertaking research in Art Education and will require materials related to that subject. His topic is:**"A study of Portfolio Assessment in Professional Vocational Courses in the Faculty of Environmental Design, Ahmadu Bello University, Zaria, Nigeria.."** Kindly give him the necessary information and assistance as regards to his research work in your Department

Thank you for your maximum cooperation.

Your faithifully,

Dr. Kefas N. Danjuma
Head of Department

APPENDIX B

INTRODUCTORY LETTER FOR FIELD WORK

Department of Fine Arts
Ahmadu Bello University, Zaria-Nigeria
FACULTY OF ENVIRONMENTAL DESIGN
Vice-Chancellor: Professor Ibrahim Garba, B.Sc. (Hons) Geology, M.Sc (ABU), Ph.D London, DIC, FNMGS, MCOMEG
Head Department: Dr. Duniya Giles Gambo, B.A; M.A; Ph.D (ABU) MSNA, MNSEA, MAHAN.

Our Ref: FA/G3.1

Date: 2nd December, 2015.

The Head
Department of_____
Ahmadu Bello University
Zaria.

Dear Sir/Ma,

This is to inform you that Mr Bello Usman Amsami with registration number Ph.D/Env.Des/08750/2010-2011 , a Ph.D Art Education student of the Department of Fine Arts, Ahmadu Bello University, Zaria hereby needs your support to carry out his research titled : **"On Evaluation of Porfolio Assessment in Professional Courses of the Faculty of Environmental Design, Ahmadu Bello University, Zaria"**. We are therefore appealing to you to allow him carry out his research, take photographs, conduct interviews and have access to your achives.

Thank you for your cooperation.

Yours Sincerely,

H. O. D.
Department of Fine Arts
A. B. U. Zaria, Nigeria.
Dr. G. G. Duniya
Head of Department.

APPENDIX C

LIST OF PROFESSIONAL COURSES IN FACULTY OF ENVIRONMENTAL DESIGN

S/No	Department	Course Code	Title of Course
1	Architecture	Arch301	Architectural Design
2	Architecture	Arch302	Architectural Design
3	Architecture	Arch401	Architectural Design
4	Architecture	Arch 402	Architectural Design
5	Building	BLDG 306	Steel Design
6	Building	BLDG307	Steel Design
7	Building	BLDG413	Construction Design
8	Building	BLDG417	Construction Design
9	Fine Art	FINA301	Nude figure drawing
10	Fine Art	FINA302	Clothed-fig-Drawing
11	Fine Art	FINA303	Landscape Drawing
12	Fine Art	FINA401	Portraiture Drawing
13	Fine Art	FINA402	Figure Drawing
14	Geomatics	Geom308	Laboratory Practice
15	Geomatics	Geom322	Digital Mapping
16	Geomatics	Geom 432	Geomatic Design
17	Industrial Design	INDE 326	Packaging
18	Industrial Design	INDE 328	Advertising Design
19	Industrial Design	INDE 331	Computer-aided Design
20	Industrial Design	INDE 425	Editorial Design
21	Industrial Design	INDE 431	Advert Design Product
22	Urban and Reg Plan	URPL 305	Landscape Design
23	Urban and Reg Plan	URPL306	Rural Settlement Plan
24	Urban and Reg Plan	URPL403	Elements of Urban Des
25	Urban and Reg Plan	URPL419	Urban Dev. Plan. Studio Practice

APPENDIX D

Reliability test for Students questionnaire

Case Processing Summary

		N	%
Cases	Valid	20	100.0
	Excluded[a]	0	.0
	Total	20	100.0

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.981	.981	31

Item Statistics

	Mean	Std. Deviation	N
Question 1	3.5000	.60698	20
Question 2	3.9500	1.23438	20
Question 3	3.8500	.87509	20
Question 4	3.8000	1.00525	20
Question 5	3.6000	.94032	20
Question 6	3.8000	1.19649	20
Question 7	3.8000	1.15166	20
Question 8	3.5500	1.27630	20
Question 9	3.6000	.94032	20
Question 10	3.8000	1.28145	20
Question 11	3.8000	1.00525	20
Question 12	4.0000	.79472	20
Question 13	3.4000	1.04630	20
Question 14	3.9000	1.16529	20
Question 15	3.6000	.94032	20
Question 16	4.1000	.85224	20
Question 17	3.4000	.68056	20
Question 18	3.9000	1.25237	20

Question 19	3.8000	.89443	20
Question 20	3.8000	1.00525	20
Question 21	3.6000	.94032	20
Question 22	3.7000	1.30182	20
Question 23	3.6000	1.39170	20
Question 24	3.5000	1.23544	20
Question 25	3.4000	1.23117	20
Question 26	3.8000	1.28145	20
Question 27	3.7000	1.12858	20
Question 28	3.7000	1.21828	20
Question 29	3.3000	1.21828	20
Question 30	3.7000	1.12858	20
Question 31	3.7000	1.03110	20

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.698	3.300	4.100	.800	1.242	.036	31
Item Variances	1.187	.368	1.937	1.568	5.257	.158	31
Inter-Item Correlations	.627	-.120	1.000	1.120	-8.335	.052	31

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
114.6500	720.766	26.84708	31

Reliability test for Teachers Questionnaire

Case Processing Summary

		N	%
Cases	Valid	10	100.0
	Excluded[a]	0	.0
	Total	10	100.0

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.951	.953	60

Item Statistics

	Mean	Std. Deviation	N
Question 1	2.7000	1.15950	10
Question 2	2.2000	1.39841	10
Question 3	2.6000	1.26491	10
Question 4	2.5000	.97183	10
Question 5	3.0000	.66667	10
Question 6	3.7000	1.15950	10
Question 7	3.6000	.96609	10
Question 8	3.3000	.94868	10
Question 9	3.2000	1.03280	10

Question 10	3.1000	1.28668	10
Question 11	3.2000	.78881	10
Question 12	2.9000	.73786	10
Question 13	3.0000	.94281	10
Question 14	3.2000	1.03280	10
Question 15	3.6000	.96609	10
Question 16	3.2000	1.03280	10
Question 17	3.4000	.69921	10
Question 18	2.9000	.99443	10
Question 19	3.8000	.91894	10
Question 20	3.0000	.94281	10
Question 21	3.3000	.82327	10
Question 22	3.2000	1.22927	10
Question 23	2.6000	1.17379	10
Question 24	2.9000	1.10050	10
Question 25	2.9000	1.19722	10
Question 26	3.1000	1.10050	10
Question 27	3.2000	.91894	10
Question 28	3.2000	1.13529	10
Question 29	3.0000	1.05409	10
Question 30	3.4000	1.17379	10

Question 31	3.1000	.87560	10
Question 32	2.8000	.78881	10
Question 33	3.0000	1.15470	10
Question 34	3.8000	.91894	10
Question 35	3.2000	1.03280	10
Question 36	3.2000	1.03280	10
Question 37	3.0000	1.15470	10
Question 38	3.3000	.94868	10
Question 39	2.8000	1.13529	10
Question 40	2.8000	.78881	10
Question 41	3.2000	1.13529	10
Question 42	3.8000	1.03280	10
Question 43	3.3000	.94868	10
Question 44	3.4000	1.07497	10
Question 45	3.4000	1.26491	10
Question 46	3.6000	.96609	10
Question 47	3.6000	1.17379	10
Question 48	3.2000	.63246	10
Question 49	3.4000	1.26491	10
Question 50	3.8000	.91894	10
Question 51	3.0000	1.33333	10

Question 52	3.2000	1.31656	10
Question 53	2.8000	.78881	10
Question 54	2.3000	1.15950	10
Question 55	2.0000	.66667	10
Question 56	2.5000	1.08012	10
Question 57	2.6000	1.17379	10
Question 58	2.1000	1.19722	10
Question 59	3.2000	1.03280	10
Question 60	2.5000	1.17851	10

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.080	2.000	3.800	1.800	1.900	.174	60
Item Variances	1.099	.400	1.956	1.556	4.889	.130	60
Inter-Item Correlations	.253	-.781	1.000	1.781	-1.280	.118	60

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
184.8000	1013.733	31.83918	60

APPENDIX E

Procedure for Determining the Sample Size

1. RULE OF THUMB TABLE

Population Range	Approximate Sample size
Infinity	384
500,000	384
100,000	383
50,000	381
10,000	370
5,000	357
3,000	341
2,000	322
1,000	278
Source:Senam and Akpan ,(2014)	

Source: Krejcie and Morgan in Akpan and Senam,(2014).

2. TARO YAMANE'S STATISTICAL FORMULA:

$$N = \frac{}{1+N(e)^2}$$

Where; n= the sample size

N=the finite population

e=the level of significance

1=unit

Therefore the computation of sample size for the study is as follows:

$$n = \frac{N}{1+N(e)^2}$$

$$= \frac{1,100}{1+1,100(0.05)}$$

$$= n = \frac{1,100}{1+1,100(0.0025)} \quad \text{therefore,} \quad n = \frac{1,100}{1+2.75}$$

$$= \frac{1,100}{3.75} = 293.33$$

By the computation above, the sample size of the study was two hundred and ninety three (293); where 300/400level students were two hundred (200) and Lecturers were ninety three (93).

APPENDIX F
Result of the Pilot study

The tables below are the summary of items analysis showing the means, variances and inter-item correlations of the questionnaires after pilot study.

Summary Item Statistics for Teachers

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.080	2.000	3.800	1.800	1.900	.174	53
Item Variances	1.099	.400	1.956	1.556	4.889	.130	53
Inter-Item Correlations	.253	-.781	1.000	1.781	-1.280	.118	53

Source: Pre -field work (2015).

The table above indicates mean and variance of the items in the questionnaires. The items means (3.080),Item variances (1.099) and inter- item correlations (.253) show that the items of the instrument to teachers were consistent.

Summary Item Statistics for Undergraduate Students

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.698	3.300	4.100	.800	1.242	.036	23
Item Variances	1.187	.368	1.937	1.568	5.257	.158	23
Inter-Item Correlations	.627	-.120	1.000	1.120	-8.335	.052	23

Source: Pre-field work (2015).

The table above shows mean and variance of the items in the questionnaires. The items means(3.698),Item variances(1.187) and inter- item correlations (.627) show that the items of the instrument to students were also consistent.

APPENDIX G

LECTURERS' QUESTIONNAIRE ON PORTFOLIO ASSESSMENT METHOD IN PROFESSIONAL COURSES OF THE FACULTY OF ENVIROMENTAL DESIGN, AHMADU BELLO UNIVERSITY, ZARIA.

Dear Sir/Madam,

Please indicate your opinion about the statements by a (tick) in the appropriate box. Your responses will be strictly confidential and for academic purposes only.

.1. **Academic Rank:**

- Professor
- Assoc. Professor
- Senior Lecturer
- Lecturer I
- Lecturer II
- Asst. Lecturer

2. D**epartment:**

- Architecture
- Building
- Fine Arts
- Geomatics
- Industrial Design
- Quantity Survey
- Urban and Regional Planning

3. **Years of teaching experience:**

- 0-9 years
- 10-15years
- 16-20 years
- 21 – 30 years

KEY:

SA-Strongly Agree
A-Agree
UD-Undecided
DA-Disagree
SDA- Strongly Disagree

Lecturers Understanding of The Concept of Portfolio Assessment

STATEMENT	SA	A	UD	DA	SDA
4..I know portfolio method of assessment					
5.. Portfolio assessment is characterized by using rubric, guidelines, self- reflection form and portfolio model.					
6. Portfolio assessment is just storing and awarding of marks before and by the end of semester.					
7. Portfolio Assessment requires joint teachers' attention for proper assessment in design and drawings.					
8. Portfolio assessment is workable as long as it contains rubric, self-reporting questionnaire and portfolio assessment model.					
9. Portfolio assessment practices are not important for the vocational courses.					
10. Portfolio assessment is using marked works to measure students performance in higher institutions					
11. Portfolio assessment requires careful and regular recording of marks.					
12.I do not understand the concept of portfolio method of assessment					
13. Students keep both marked and unmarked drawings and design work in the portfolios					

Types and Variations of Portfolios

STATEMENT	SA	A	UD	DA	SDA
14. We have one type of portfolio for keeping works and another for assessing work.					
15.We have portfolio for keeping unmarked drawings and designs					
16.There are variations in the types of portfolio assessment practice of the departments					
17. Portfolio assessment is similar in the faculty of environmental design.					
18, Both students' personal portfolio and examination portfolios are maintained in some departments.					
19. Digital portfolios are also used for drawings and designs.					
20 Multiyear portfolios exists in some departments.					
21. We depend on the portfolios which stores drawings and designs without rubrics.					

Lecturers' Knowledge of Using Portfolio Assessment

STATEMENT	SA	A	UD	DA	SDA
22. Portfolios are also used for assessing three dimensional works.					
23. Portfolio assessment is not mere keeping of designs and drawings in a folder.					
24.Portfolio assessment need rubric, guidelines, reflection forms and portfolio model					
25.Portfolio assessment is obtained from process, show case and product portfolios.					
26. Tenable designs and drawings are expected to be obtained from process, show case and product portfolios.					
27.I do not have sufficient information on the use of assessment portfolios					
28.Assessment Portfolios are folders for storing and assessing drawings and designs.					
29..An ideal evaluation requires the use of portfolio.					
30.Portfolio assessment requires training and retraining..					
31. I can assess designs and drawings without portfolio attachments (Rubric, Self reporting Questionnaire, Portfolio model) .					
32. I do not need portfolio to assess designs and drawing performance					

Lecturers' Use of Portfolios Assessment

STATEMENT	SA	A	UD	DA	SDA
33. Portfolios are used as a method of assessment					
34. Digital Portfolio and Ordinary Portfolio are used in the departments.					
35. I have not been using portfolio in my class					
36.I do not use portfolio for assessment of students' drawing or design work					

Problems of the use of Portfolio Assessment

STATEMENT	SA	A	UD	DA	SDA
37. Too much time to spent using portfolio assessment.					
38. I do not have adequate knowledge of portfolio assessment.					
39. It is cumbersome to assess through portfolio in a crowded classroom.					
40. Developing portfolio assessment criteria model can be difficult for the teachers .					
41.. Storage, handling and control of portfolio in a large classroom is also a problem on part for the teacher					
42.Works can be stolen easily in portfolio					
43. Students incur financial expenses in using portfolio.					
44. Assessment Portfolios demand the joint commitment of teachers, students and parents.					

APPENDIX H

STUDENTS' QUESTIONNAIRE ON PORTFOLIO ASSESSMENT METHOD IN PROFESSIONAL COURSES OF THE FACULTY OF ENVIROMENTAL DESIGN, AHMADU BELLO UNIVERSITY, ZARIA.

Dear Student,

Please indicate your opinion about the statements by a (tick) in the appropriate box. Your responses will be strictly confidential and for academic purposes only.

.1.**Educational Background**

- o Teachers Grade II
- o S.S.C.E
- o Ordinary Diploma
- o Higher National Diploma
- o Nigeria Certificate of Education
- o Other specify…….
- o **KEY:**

2. **Department……**

Architecture
Building
Fine Arts
Geomatics
Industrial Design
Urban and Regional Planning
Quantity **S**urvey

SA-Strongly Agree
A-Agree
UD-Undecided
DA-Disagree
SDA- Strongly Disagree

Students' Understanding of the Portfolio Assessment

STATEMENT	SA	A	UD	DA	SDA
3. Portfolios are only used for keeping designs and drawings.					
4.Portfolios are not necessary for studio courses					
5. Portfolios do not vary in the faculty of environmental design.					
6, Use of portfolios is good for students learning in drawing and design.					
7. Assessment portfolios help students to know their strengths and weaknesses in drawings and designs.					
8. I do not know that portfolio is used for assessment.					
9. Lecturers have not been using portfolios for assessment in drawing and design courses.					
10. I have never seen assessment portfolios in my department.					

Problems of the use of Portfolio Assessment

STATEMENT	SA	A	UD	DA	SDA
11. Portfolio assessment is time consuming					
12. Portfolio assessment requires rubric, guidelines, time and feedback.					
13. Portfolio assessment is difficult and needs good management.					
14. Portfolio is only used for storage and safe keeping of designs and drawings.					
15. It is difficult to assess through portfolio in a crowded classroom.					
16. Developing portfolio assessment criteria model can be difficult for the teacher .					
17. Storage, handling and control of portfolio in a large classroom is also a problem on the part of the teacher					
18.Works can be stolen easily in portfolios					
19. Students incur financial expenses in using portfolio.					
20. Assessment Portfolios demand the joint commitment of teachers, student and parents.					
21. It is not easy to use assessment portfolios in large classes.					
22. I know process, showcase and product portfolios.					

APPENDIX I

SAMPLE OF ANALYTICAL RUBRIC FOR ARCHITECTURAL DESIGN

Criteria	Poor -1point	Average- 2points	Very Good-3
1.Knowledge:History Demonstrate comprehensive knowledge of development and trajectory of architecture from prehistoric to contemporary times.	Student is unable to demonstrate knowledge of general periodization and development in architecture through their project work.	Student demonstrates a working knowledge. Student is able to identify the principle of design and philosophies of the modern and contemporary periods of architecture.	Student is not only able to demonstrate but also is able critically reflect upon their acquired knowledge of principle and philosophies and design cultures of a place and time within their project.
Knowledge: Concepts n **Terminology**; Student is expect to have a broad knowledge of concepts and terminology related to urban and architectural history.	Student is unable to demonstrate knowledge about the principle designers and periods in the history of architecture.	Student is able to identify the principles of designers and periods.in the history of architecture.	Student is able to critically reflect on acquired knowledge of architecture. Landscape architecture and urban planning within their project.
Knowledge: Key Developments; identify the key developments in modern history of architecture.	Student is unable to demonstrate knowledge about the modern history of architecture within their project work.	Student is able to identify basic movements, individuals, and time periods in modern architecture history and its place and impact on their project work.	Student is able to critically reflect upon their acquired knowledge of modern architectural history and its place and impact on their project work.
2.Design Practice: Designing visual representation and demonstrate through design practice, knowledge of the key methods of visual representation with an emphasis on strategies of visual clarity and understanding.	Student is unable to demonstrate skill using visual rhetoric, semiotics, or primary rendering skills within their project work.	Student is unable to demonstrate skill using visual rhetoric, semiotics, using two or more of the following: visual rhetoric, semiotics, and/or primary rendering skills.	Student is able to demonstrate skill and marked improvement using visual rhetoric, semiotics, and primary rendering skills to represent abstract concepts within their project work.
Graphic standards: Show competence through design practice and process methodologies.	Student is unable to demonstrate fluency with any one of the following skills within their project work: multiple image composition, contrast and hierarchy, or system-wide structure within their project work.	Student is able to demonstrate fluency with two of the following skills within their project work: multiple image composition, contrast and hierarchy, and/or system-wide structure within their project work.	Student is able to demonstrate fluency and marked improvement with all of the following skills within their project work: multiple image composition, contrast and hierarchy, or system-wide structure within their project work.
3.Key Concepts: History and theory; identify and describe the concepts and design methods.	Student is able to demonstrate fluency and marked improvement with all of the following skills within their project work: multiple image composition, contrast and hierarchy, or system-wide structure within their project work.	Student is able to express a basic grasp of key concepts in the history and theory of architecture and design methods through papers, graphic presentations or design projects.	Student is able to clearly express and critically evaluate key concepts in the history and theory of architecture; and is able to clearly articulate/express and critically engage design methods through papers, graphic presentations and design projects.

Source: Macleod,J. and Erlandson,C.(2009) Saschewan professional development Unit.

APPENDIX J

SAMPLE OF ANALYTIC RUBRIC FOR DRAWING/DESIGN

Criteria	**1**	**2**	**3**	**4**
Creativity and Originality	Piece is finished but provides no evidence of creativity or originality	Piece includes an idea, but lacks originality and may have imitated someone else's plan	Piece includes many unique ideas and several materials were used	Piece include unique ideas and creative use of materials
Draughtmanship	Piece is incomplete	Piece is completed with minimal effort, work is somewhat careless	Piece is complete with good effort, meeting all requirements	Piece is complete with substantial evidence of effort beyond what was required
Concept of Understanding	Piece was created but does not depict a monument at all	Piece was created as a monument but it is unclear who is being honored or why?	Piece was created to honor one of the live historical figures	Piece was obviously planned and created to honor one of the five historical figures and their contributions.

Source: Macleod,J. and Erlandson,C.(2009) Saschewan professional development Unit.

APPENDIX K
SAMPLE OF FINE ART ANALYTIC RUBRIC:

Painting Rubric

Criteria	**4**	**3**	**2**	**1**
1. Design/ Composition	Student applies design principles (such as unity, contrast, balance, movement, direction, emphasis, and center of interest) with great skill.	Student applies design principles (such as unity, contrast, balance, movement, direction, emphasis, and center of interest) with fair skill.	Student tries to apply design principles (such as unity, contrast, balance, movement, direction, emphasis, and center of interest) but the overall result is not with skill.	The student does not appear to be able to apply most design principles to his/her own work.
2.Color Choices	Choice and application of color shows an advanced knowledge of color relationships. Color choice enhances the idea being expressed.	Choice and application of color show knowledge of color relationships. Colors are appropriate for the idea being expressed.	Choice and application of color shows knowledge of color relationships. Colors are, however, not appropriate for the idea being expressed.	Student needs to work on learning color relationships and using that knowledge in his/her work.
3. Painting Skill	Application of paint is preplanned and done in a logical,sequential manner.	Paint is applied in a careful, logical manner. Colors remain sharp and texture is evident.	Control is somewhat lacking. A few drips, ragged edges and failure of certain areas of pattern/texture may be evident.	Student needs to work on controlling paint and preplanning paint application. Muddy colors, ragged edges, lack of texture, drips, and/or blobs are evident.
4.Capturing A Style/Artist	Paint is applied in a manner very consistent with the technique or artist being studied.	Paint is applied in a manner that is reasonably consistent with the technique or artist being studied.	An attempt has been made to apply paint in a manner that is consistent with the technique or artist being studied, but it is not effective.	No attempt has been made to apply paint in a manner that is consistent with the technique or artist being studied.
5.Use of materials	Student typically keeps painting materials and area clean and protected without reminders. The student shows great respect for the materials.	Student typically adequately cleans materials and work area at the end of the session without reminder, but the area may be messy during the work.	Student adequately cleans and takes care of materials if reminded. Occasional spills and messy work area may be seen. Shows some respect for materials.	Student deliberately misuses materials or does not adequately clean materials or area when reminded. Shows little respect for materials.

Source: Macleod,J. and Erlandson,C.(2009) Saschewan professional development Unit.

APPENDIX L
SAMPLE OF UNIVERSAL HOLISTIC RUBRIC

Description of Grading with rubrics

Grade A DISTINCTION:
• This grade is for portfolio content of outstanding quality in all respects. • The self-reflection statement demonstrates deep and original thinking, interpretation and critical thinking. • The grade is for well-structured and expression with flair.
Grade B CREDIT:
• The evidence selected for the portfolio surpasses the objectives for the unit plan and demonstrates a sound understanding of content. • Self-reflection statements are used at this point to support the student's point of view and references are used appropriately. • The works are well structured, well organized and precisely design or drawn. • The grade is an expression of confidence in the ability of the student to progress with some supervision and guidance.
Grade C MERIT:
• The evidence selected for portfolio achieves the objectives of unit plan and demonstrates an adequate grasp of the content, but confine to the minimum requirement. • There is little evidence of reflection in the self-reflection statement to support students work done. • The work is poorly organized and language is reasonably fluent but has some lapses in composition and finishing.
Grade D BELOW AVERAGE:
• The evidence for portfolio by this score does not adequately meet the objectives of the unit plan. • The reflection statement is a simple recall of facts with little or no evidence of effort or hard working. The work is not well structured and the overall organization is poor and lacks consistency.
Grade E POOR:
• The evidence in this grade does not show achievement of the objectives of unit plan. • The refection indicates no supportive argument or reflection. • The work does not meet the minimum levels of presentation, as there are frequent mistakes in drawing or design expression. • The work does not address the stated requirements and is not organized in an obvious manner.
Grade F FAIL
• The evidence in this grade show noviceness and does not meet the objectives of the unit plan. • The reflection does not provide reflection related to the unit plan

Source: Macleod,J. and Erlandson,C.(2009) Saschewan professional development Unit.

APPENDIX M

SAMPLE OF UNIVERSAL ANALYTIC RUBRIC

Course title…… Course code……..

Level…….. Academic session……..

Department…….. student's no……..

Analytic Rubric Sheet:

Criteria	**Beginning 1**	**Developing 2**	**Accomplished 3**	**Exemplary 4**	**score**
composition					
Draughtmanship					
Originality					
finishing					
	Reflecting beginning level of performances	Reflecting movement towards mastery level	Reflecting achievement level of performance	Reflecting highest level of performance	

Date……

Teacher's Signature……

Source: Metler,(2001)

APPENDIX N

SAMPLE OF HOLISTIC RUBLIC

TEMPLATE FOR HOLISTIC RUBRIC		
Rubric Score	**Grade**	**Category**
70-100	**A**	**Excellent**
60-69	**B**	**Credit**
50-59	**C**	**Merit**
40-49	**D**	**Fair**
30-39	**E**	**Unfair**
20-29	**F**	**Poor**

Source: Metler,(2001)

APPENDIX O

SAMPLE OF CHECKLIST FOR THE COLLECTION OF PORTFOLIO

Student's Name…… **Course Code…….**

Student's No…….

S/No	Date of Entry	Title of Drawing/Design	Studentsignature	Teacher'sSignature

Source: Metler,(2001)

APPENDIX P

SAMPLE OF REFLECTION SHEET

Student's Name……. **Academic Session**…….

Course…….. **Course Code**……

Level……

What was the idea behind this work?.....

.....

.....

Is this work your best work?...

……

What do you like or not about this piece of work?.....

,,,,,,,,,,,,,,,,,,,,,,,,,,,,……

Do you want to improve on next drawing or design?.....

……

……

……

Does this work show your growth as a designer or artist?.....

……

……..

APPENDIX Q

SAMPLE OF TEACHER'S GUIDELINES FOR REVIEWING PORTFOLIOS

Instructions: Teachers should carefully adhere to the following dos and don'ts:

Dos

- Look for signs of growth and improvement in drawing and design.
- Watch carefully as you cross-check the drawing or design on paper to understand their progress and problems in drawing or design and offer considerate suggestions.
- Respond to students drawing or design and provide feedback on the portfolios including strengths and weaknesses as well as achievement effort and goals.
- Include students as co-evaluators in the review of drawing or design products.
- Encourage students to review and share their portfolios with other students.
- Use positive comments.
- Make notes while reviewing the portfolios.

Don'ts

- Encourage students to select the best workss into portfolios- it is quality that counts, not quantity.
- Focus on what students have done/mastered.
- Provide adequate suggestions.
- Provide moderate judgments to students' works.

Adopted from AL-Serhani, (2007).