UNIVERSITY OF NAIROBI

TEACHERS AND STUDENTS PERCEPTION ON PORTFOLIO ASSESSMENT IN SECONDARY SCHOOLS IN KENYA

MUIRURI EMILY NUNGARI

M.ED

(MEASUREMENT AND EVALUATION)

DECEMBER 2020

A Research Project Submitted in Partial Fulfillment for the Requirements of the Award

of Degree of Master of Education in Measurement and Evaluation University of Nairobi

DECLARATION

I declare that this is my original work and has never been presented to any university for the award of a Master's in Education, Measurement and Evaluation Degree.

SIGNED:_____ DATE: _____

MUIRURI EMILY NUNGARI

E58/ 79809/2015

SUPERVISOR'S DECLARATION.

This research project has been submitted for examination with my approval as the University supervisor.

SIGNATURE:_____ DATE:_____

DR. KAREN T. ODHIAMBO

EDUCATION PSYCHOLOGY_MEASUREMENT AND EVALUATION

DEPARTMENT OF PSYCHOLOGY

UNIVERSITY OF NAIROBI

DEDICATION

I would like to extend my gratitude and appreciations to God for providing me with the opportunity to further my studies.

This scholarly work is dedicated to my parents Simon Muiruri Kagunda and Agnes Wangui Muiruri for encouraging me to further my education. I also dedicate this work to my sisters MaryNelly muiruri, Purity Muiruri and Margret Muiruri for the moral support and encouragement they gave me during the study.

I extend my appreciation to my husband Franklin M. Njue for his moral support and words of encouragement during my study.

I owe much to my Friends Mr and Mrs Masaku for their words of encouragement during my research.

I would like to thank my colleagues in the school of post graduate University of Nairobi for their guidance and support during the research.

ACKNOWLEDGEMENT

ABSTRACT

This study sought to establish the use of portfolio assessment as an alternative authentic assessment tool in Kenyan secondary school setting. The study was guided by three objectives: a) to determine whether Kenyan secondary school teacher practice in classroom assessment reflect an integration of portfolio assessment as an alternative authentic assessment tool; b) to determine secondary school teachers' perception on the use of portfolio assessment as an authentic assessment tool; and, c) to determine the perception of students on portfolio assessment as an alternative authentic assessment tool. To achieve these objectives, the study adopted a quantitative research methodology where Mbeere sub county was used as a case study. The target population in this study was secondary school teachers and Fourth Form students in Mbeere Sub-county. Self-administered research instruments were used and distributed among the targeted population for response. The study utilized a combination of purposive and convenient sampling to collect data from the target population. Collected data was organized coded, and entered into SPSS Version 25. This data was then analyzed for descriptive statistics to answer the research questions. The results of the analysis confirmed that;

a)Objective one, Secondary school teachers utilized portfolio assessment as an alternative authentic assessment tool [88% of the sampled teachers agreed to using portfolio assessment, 8% were not aware of portfolio assessment, while 4% did not use portfolio assessment. Secondary school teachers cited process portfolio as the most frequently used style [46%]. Evaluation style of portfolio assessment was equally popular at 36% while product portfolio was used by 18% of the total sampled population. Different subject seemed to prefer varying style of portfolio assessment. For instance, the science teachers seemed to prefer process portfolio 70%, Product portfolio was common among teachers teaching humanity subjects 56% while process evaluation was popular among mathematics teacher. Teachers teaching languages preferred evaluation portfolio 55%.

b) Objective two and three,Teacher and student perception on portfolio was assessed based on portfolio use, portfolio as a learning tool, the process of developing portfolio and grading portfolio. The first two constructs portfolio use, portfolio as a learning tool reported a positive attitude towards portfolio assessment for both teachers and students M=>4.5. Both teachers and students expressed their reservation on the last two constructs of portfolio assessment [process and grading]. The study could not authoritatively report a positive perception towards portfolio assessment as a result of the division in opinion for both teachers and students, however, both the teachers and students recommended the use of portfolio assessment as an effective alternative assessment tool. Based on this finding, portfolio assessment should be encouraged as an alternative authentic assessment tool and integrated into Kenyan secondary schools.

ACRONYMS

AWA   Analytical Writing Assessment.

CD   Compact Disks.

EBC   Evidence Based Curriculum

EFL   English as a Foreign Language.

FA   Formative Assessment

IEP   Individualized Educational Plan.

NACOSTI   National Commission For Science, Technology & Innovation.

SPSS   Statistical Package for Social Sciences

LIST OF TABLES

LIST OF FIGURES

TABLE OF CONTENTS

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Over the past two decades, the system of education has experienced a change from collective, product focused evaluation towards formative process-focused evaluation. Brown (2004) and Gillett and Hammond (2009) explain this change in regard of the need for strategies for assessment that are appropriate for the 21st century and fit for purpose strategies, while Boud (2000) indicates the necessity for sustainable evaluation. Current literature posits that the way to achieve such needs is efficient use of formative evaluation (Boud and Falchikov 2006; Faulkner et al. 2013; Gillett and Hammond 2009; Klenowski 2002; Nicol and Macfarlane-Dick 2006; Topping 1998; Yorke 2003). Viewed as a problem solution link, the change can be referred as an educational answer to a seen mismatch amid assessment practices and societal demands expectations (Luhmann 1995, 52f). Perception is opinion or belief, usually held by many individuals and built on how things seem according to the Cambridge dictionary. Oxford dictionary on the other hand refer to perception as the manner in which people regard, understand or interpret something.

Amid the different initiatives of learning and assessment presented in the slipstream of this model turn, the portfolio is one of the major popular with high expectations. This study is on portfolio and perception of it. The portfolio is referred to as a technique that can comprise more than wholesale transition from the culture of testing to a culture of evaluation (Wolf *et al.* 1991). It is also seen as an innovative tool for education and a whole new way to associate to students and their learning, therefore supporting demands for learning of the modern society (Arter 1995; Ellmin 2011; Herman and Morrell 1999; Krogh 2007; Niguidula 1993; Tolsby 2012).

The shift desired is from traditional measurement theory approaches to assessment that embraces critical thinking and awareness. Teachers are yet to adjust as well. The assessment teaching and assessment practices reflect those of traditional education theorists which is not appropriate in the current education thinking that embraces 21st Century thinking. Teachers and education administrators are increasingly concerned over the narrowly defined understanding of student performance provided by traditional assessment techniques (i.e., paper/pencil tests). Student assessment should reflect the multiple outcomes of education. Portfolio assessment is an evaluation technique that began in the 1980s as an option for

traditional tests. Portfolio assessment is one of the three major 90s curriculum trends (Vavrus, 1990). The rising interest in portfolio evaluation can be accredited to the major move towards assessment reforms and performance evaluation interest.

Portfolio assessment is an organized and systematic gathering of evidence adopted by educators and students to observe the knowledge, attitudes and skills of students in particular subject areas (Vavrus, 1990). Literature indicates that portfolios provide a means of evaluation that is continuous, multidimensional, collaborative, knowledge-based, and authentic (Valencia, McGinley, & Pearson, 1990). Documents and materials included in the portfolios can aid teachers in assessing student growth, change, prior experiences, and risk taking this leads to learnedness.

Properly designed procedures for assessment are vital to meeting students' needs such as monitoring their academic growth. Evaluation is involved at major steps in a range of student services: first identification, in placing students in suitable instructional practices, in monitoring students' progress in the programs, reassigning students to varied levels in a program dependent on their growth, in transition of students from special programs to mainstream sessions and follower up of students' progress in mainstream. The range wholly depends on the suitable selection, usage and interpretation of fairly evaluation procedures.

The portfolio development concept emerged from the fine arts field where portfolio usage is to show illustrative samples of work of artists. The goal of portfolio artist is to show work depth and breadth and also the interests and abilities of artists (Jongsma, 1989). Most educators see the intention of portfolios on education to be related to the fine arts portfolios, to show students capabilities depth and breadth through students work biographies (Wolf, 1989); students reading description and experiences in writing (Jongsma, 1989); folders of literacy (Jongsma,1989); collections writing pieces (Katz, 1988); reports for comparison (Flood & Lapp, 1989); and work exhibitions for students (Brandt, 1989).

Portfolio assessment advocate posits that portfolios offer a direct measure of performance of students (Shinn, 1989). Assessment by use of portfolio gives students the chance to produce real world products, other than only choosing responses on a traditional test on multi-choice, therefore giving students, teachers and parents a real picture of the abilities of students in relation to curriculum (Herbert, 1992; Nolet, 1992; Paulson & Paulson, 1991). A properly

designed portfolio can afford a better sign of students higher-order learning strategies or skills, like solving problems, which cannot be achieved from multiple choice questions responses (Nolet, 1992)

Currently, there is an increase in interest between mainstream educators in performance evaluation because of worries that standardized and tests on multiple-choices, mainly the major available option from publisher's tests, do not evaluate high order skills that are vital for school functioning and work locales (Haney & Madaus, 1989; Neill & Medina, 1989; O'Neil, 1992: Wiggins, 1989). Standardized tests are not reliable since they are not a representative of student activities they undertake in classroom. Additionally, multiple choice tests do not show the recent learning and cognition theories and are not in line with students abilities required for success in the future (Herman, 1992). Also standardized tests may not be used to monitor the progress of students in classroom curriculum annually because their administration is one or twice every year. These concerns are also experienced in students in Kenyan secondary schools. Portfolio evaluation or evaluation may be used as a way to rise communication between students and teachers as they discuss and mirror on current learning and forthcoming goals. Such dialogues assist in developing the classroom instruction direction (Nolet, 1992) and rice of self- efficacy of students (Zimmerman et al., 1992) (Herman & Win- ters, 1994).

1.2 Statement of the Problem

There has not been much research done on applicability and use of portfolio assessment as an alternative formative assessment in Kenyan secondary schools. Assessing students accurately is a significant component to ensuring the success of students (Bos & Vaughn, 2002). Lack of accurate evaluation of results, may give teachers difficulties in providing suitable student instruction. Past research has highly paid attention on portfolio as a reliable evaluation form, a tool for teaching, simple portfolio methods, variety of content and standardized tests supplement. Limited literature has focused expectations of current professional, concerns and attitudes and portfolio assessment implementation, more so the perceptions of students and teachers because the portfolio got more popular as an assessment option in the 1990's. This study provides further research based on Kim (2004), Poel (1998), and Swartz (1999) findings, by interviewing teachers and students to determine their perceptions on the portfolio assessment and implementation.

1.3 Purpose of the study

The purpose of this study was to determine teacher's and student's perception on the use of portfolio assessment in classroom.

1.4 Objectives of the Study

a) To establish whether Kenyan secondary school teacher *practice* in classroom assessment *reflect an integration* of portfolio assessment as an alternative authentic assessment tool,

b) To determine secondary school *teachers' perception on the use* of portfolio assessment as an authentic assessment tool

c) To determine the *perception of students* on portfolio assessment as an alternative authentic assessment tool. assessments for self-evaluation in classroom assessment.

1.5 Research questions

a) Does Kenyan secondary school teacher practice in classroom assessment reflect an integration of portfolio assessment as an alternative authentic assessment tool?

b) What are the teachers perception regarding the adoption of portfolio assessment as an authentic assessment tool in the Kenyan secondary schools?

c) What is the student's perception on the use of portfolio assessment as an authentic assessment tool in the Kenyan secondary schools?

1.6 Significance of the study

The study findings will go a great way in helping the education policy developers in the Ministry of education and the Kenya national examination council among others as they change from traditional evaluation to alternative evaluation needed in the 21st century; portfolio assessment being one of them. The study will also be used at school level to demonstrate how portfolio assessment can be valuable in the final examination, be used as a tool for research in assessing students' creative skills at varied schooling levels, teacher education portfolio as an instrument of student development monitoring and as an educational instrument so as to develop the ability of self-assessment between students.

Educational assessment in Kenyan schools is a transformation process. The execution of novel competency based curriculum 2- 6-3-3-3, would ensure that evaluation is changing from the traditional test methods to the alternative methods that is viewed to have high value in education in relation to the type of learning and teaching it inspires. Traditional assessment

methods like tests on pen and paper are highly doubted and the Ministry of Education proposes the alternative methods. They comprise portfolios, exhibits, open-ended questions, computer simulations, demonstrations, hands-on-experiments, projects and performance assessment (Herman, 1992:74; DoE, 2000:8).

Investigating with alternative approaches of evaluation, where learning and evaluation does not exists in different vacuums, comprises serious doubting as to if new methods to assessment ensure learning quality. One significant facet associated to quality is the level at which evaluation ensures the desire and motivation to learn and continuous learning (Herman, 1992:75). Therefore, educationists and educators should examine the appealing promises that most alternative evaluation methods hold beside their ability to increase the problem of learning assessment.

The novel curriculum in Kenya puts a lot of stress on evaluating the progress of learning by use of portfolio. Portfolio is a representation of continued assessment of the progress of learning, chances for putting instruction and learning assessment together, developing the high order thinking abilities and collaborative assessment method that that allow the interaction of learners and teachers in the process of assessment, teaching and learning. By utilizing portfolios in the process of assessment, learners can develop abilities and the knowledge needed to learn and carry on in the world for more education, work and training. Generally, learners are expected to be experts, strategic, reflective and self-regulated.

1.7 Justification of the study

The study will contribute knowledge on the area where there is not much knowledge on. There is need for better understanding on the way in which portfolio is mainstreamed. Perception being important will help determine the driving force or deterring force around the use of portfolios and to be able to determine the possibilities of success of its application.

1.8 Definition of key terms

Portfolio assessment: Refers to an organized and systematic pool of evidence used by educators and students to observe the students growth on skills, attitudes and knowledge in particular subject areas.

Portfolio: it is a collection of academic work and other methods of educational evidence put together for the goal of evaluating the quality of coursework, progress of learning and

achievement in academics; ascertaining if students have acquired standards of learning or other academic needs for courses, promotion grade level and graduation; assisting students mirror on their academic objectives and learners progress; and forming a long term archive of products of academic work, achievements and other documentations.

Alternative assessment: It is a method of grading the performance of students that provides for a high holistic method of assessment of students.

Traditional assessments: Refers to conventional testing approach which mainly creates a written document, like a quiz or exam.

Authentic assessment: It is task assessment that is related to writing and reading in school and real world.

Self-efficacy: Refers to believing in one's capability to attain an outcome or goal. Students with a high sense of efficacy are highly likely to challenges themselves with demanding tasks and inherently motivated.

Scaffolding: It is a process of learning intended to ensure deeper learning level. Scaffolding is the support provided in the process of learning which is aligned to the student needs with the aim of assisting the student attain learning objectives (Sawyer, 2006).

Learner autonomy: Situation where students have control and duty for their individual learning, in regards of what they learn and how they do it. It the starting point of the knowledge that students have the ability of self-direction and are able to develop an independent, proactive studies method.

21st century skills: Dispositions for abilities and learning that have been determined as being needed for success in 21st century society and workplaces by educators, business leaders, academics, and governmental agencies.

Perception: The way in which something is regarded, understood, or interpreted.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter reviews various studies done related to the research topic. The literature is reviewed and organised according to; related studies, related literature, the concept of portfolios, rationale for using portfolio assessment, types of portfolios and their contents, teachers views of their knowledge of student portfolios, implications of portfolios to education, theoretical perspective and conceptual framework.

2.2 Related studies

A study was carried out by Diane Cladwell (2007) on teacher perception on student portfolio assessment and implementation. The study was done to determine teachers' perception on portfolio assessment, regarding teacher's knowledge on of portfolio, how they are developed and implemented, their effectiveness as an instrument for education affecting instructional activities, their validity as an alternative evaluation and role and duties of students in portfolio development. Findings indicated that teachers believe portfolio evaluation is a precise way of student skills and portfolio evaluation was a more suitable way of student assessment than standard exams.

Bushman, Lisa; Schnitker, Brenda (1995) did a study on attitude of teachers on portfolio evaluation, execution and feasibility, with the aim of establishing the teachers' attitude towards portfolio assessment. The study findings concluded that teachers perceive portfolio as an efficient way of dealing with the progress, strength and weakness of students, however improved training is required. Teachers' attitudes indicated that they were receptive to the usage and implementation of portfolio assessment as an alternative assessment.

Tolga Erdogan and Irfan Yurdabakan, (2011) did a study on the opinions of secondary school students on portfolio evaluation in EFL. The study goal was to determine the view of students on portfolios assessments. Analysis was done on ten students open ended questions. The results from the analysis showed that students opinion on the assessments were that it is fair approach; in comparison to traditional application of testing, portfolio is more realistic; it improves responsibility since there is need to be best and demonstrate improvement; it stimulates the desire for learning; and students like the part on writing. In the negative views, there was inadequate time to handle a good work; high number of products ought to be added in

portfolios, students faced challenges in the part of portfolio reading and conducting self-evaluation; there was a challenge of reviewing and correcting tasks and homework; since it was the student's first experience. Some students indicated that this kind of assessment may be fairly unfair. A study by Fuchs, (1994) titled, connecting performance assessment to instruction concludes that in many instances, portfolio evaluation is there more like a vision of what classroom- based assessment might endeavour to attain than a clearly defined, readily usable assessment technology. Johns & VanLeirsburg, (1990) on the study Portfolio assessment: A survey between professionals (Literacy Research Report) concludes that classroom teachers have become familiar with the notion of portfolio assessment, but may not know how to design or implement portfolio assessment in their classrooms.

2.2.0 Summary on the Related Studies.

➢ Teachers believed that portfolio assessment was a good measurement of student's capability and was a highly valid method of student assessment than standardized exams.

➢ Teachers perceive portfolio as an efficient way of dealing with progress of students, their strengths and weakness, however there is need for more training.

➢ Teachers' attitudes indicated that they were receptive to the usage and implementation of portfolio assessment as an alternative assessment.

➢ The opinions of students on portfolio assessment were that portfolio assessment is a fair technique; it is more realistic in comparison to traditional tests as it rises duty since there is a requirement to show improvement and to do the best; it stimulates the desire for learning.

➢ Teachers have become familiar with the notion of portfolio assessment, but may not know how to design or implement portfolio assessment in their classrooms.

2.3 Related literature

2.4 The concept of portfolios

Student portfolios are an orderly collection of learners work and associated materials that show the activities of students, undertakings and successes in a single or more subjects in the school. The collection must comprise evidence of a learner's reflection and individual assessment, procedures for determining the contents of the portfolios and a method measuring work quality. The objective is to assist students gather portfolios that show their capabilities, show their capabilities for writing and telling their stories of achievement in school (Venn, 2000, pp. 530-531). Portfolios show a real method of grouping student's work, interpretation of their performance and examining their performance in relation to instructional goals. Jongsma (1989) explains that the portfolio concept has been used in situation where students demonstrate their finest work to show their achievements. While Valencia (1990) notes that in classroom instructions, portfolio is adopted in the same way, though the portfolio contents might show progressive work, ratings and formal outcomes of knowledge of learners relative to precise goals (Valencia, 1990).

2.5 Rationale for using portfolio assessment.

The foundation of usage of portfolios in student's assessments stems from three main reflections: the limitation of one measure evaluation, the complexity of the assessment subject and the requirement for adaptable evaluation methods in a classroom.

Single Measure Methods Limitations

Criticisms which are directed at standardized testing comprise the concerns that standardized tests

a) Lead to continuous low marks for minority learners in every area of skill since little is learned regarding strengths of building instructionally;

b) Might minimize teaching to test preparation;

c) Attention is focused on skills at the low level (Haney& Madaus, 1989);

d) Handle students as if supposed procedures are related and answers reasons irrelevant (Wiggins, 1989a); and

e) Stress on outcomes that are quantifiable other than instructions pertinent feedback/

Wiggins (1989a) explains that even though there is relevance in the criticisms, there are valid aims for having student's intellectual pulse, schools and their systems by use of standardized exams, more so if the results are adopted to support assessments in the school. Though the

standardized exams have a goal in the education system, they may not be sufficient or infallible. A lot of educators understand that any one score, a1course1or1percentile score from1a1referenced1test norm, mostly fails to properly report the overall1student1progress (Flood & Lapp, 1989). Only one measure is able to estimate the skills diversity, understanding, procedures and approaches combined to ascertain the progress of students. Education professionals mostly combine informal and formal assessment approaches to monitor the development of student language, however there is no system for the combination of the numerous measures and their interpretation as one unit. This need is dealt with by the portfolio assessment. Theoretical reviews by Anderson & Pearson, (1984); Samuels & Kamil, (1984) show the constructs complexity of comprehension in reading. Understanding is not seen as the ability of the student to choose correct choices from multiple questions anymore.

Comprehension is seen as the result of text interpretation by the student, which varies dependent on the purpose of the student in reading, previous material knowledge, or concepts that relate and reading approaches. Learners process the components of passage reading actively, focusing on elements that interest them, associate novel information to information that is in the memory or the passage, deduce meanings of complex concepts and words and mirror on the importance of information in relation to the main reading goal. The assessment is interested on the large procedures and understanding gained from passage reading (Valencia & Pearson, 1987). So, instructors that aim in creating a detailed assessment of comprehension reading are concerned in ascertaining the goal of students, clarification and strategic method to text objects. Similar elements are of concern in development of writing and ability to listen, open capabilities in mental procedures that relate to the one determine din reading and teachers are interested in for instruction (O'Malley & Chamot, 1990).

Theorists in education may differ in language proficiency conceptualization, but a conclusion can be made from the theoretical structures: proficiency in language should be observed as a compound of numerous levels of skills, capabilities and knowledge. A different measurement method, comprising of tests and non-tests techniques is required to determine the strength and flaws of students in important areas. Assessments by portfolio support the usage of many measures. Procedure for adaptability. The adaptability procedure for portfolio in the assessment in the classroom requires outcomes in main merits in student's instructions and assessment. First, is the alignment of the portfolio process to data requirements and instruction objectives and goals can lead to a high level of validity in curriculum and instruction than in standard

tests. Secondly, since assessment by portfolio in an assessment of language in a classroom, information on the progress of students is always there and may be used; this is different from collective goal of standard tests.

Thirdly, diversity in languages, culture and education in classrooms may be simply addressed in evaluation since there are individualized portfolios. Fourth, since assessments by use of portfolio has no quantification limitation, many choice methods, the focus can be on examining a high level skill variety, like the learner ability to fit in information. Finally, there is provision of documentation by portfolio on the development of learner language. An organized documentation of growth of language of student may be adopted as a backup in exit and decisions reclassification, different analysis and preferred decisions, parents consultations and evaluations program impact.

2.6 Types of Portfolios and their Contents

There are numerous portfolio types as indicated by Barret and Wilkerson (2004), Beattie (1994), Pole (1998), Salend (1998), Seely (1994), and Wilcox (1997). These include: process portfolio: Showcase portfolio, Cumulative portfolio, Documentation portfolio, Goal-based portfolio, Reflective portfolio; Passive portfolio; Evaluation portfolio; electronic portfolio, ePortfolio; mini-portfolio.

Poel (1998); Salend (1998); Seeley (1994) indicated that particular portfolios are different in purpose and content while they relate in terms of their features. The whole portfolio has item collection obtained for an extended time period, with every item evaluated to determine the alterations in process and products related with learning. Portfolio documentation stores the learner's steps and their growth.

Goal based portfolios shows the progress of students towards particular objectives, like the one found in learner's IEPs (Salend). The procedure portfolio indicates the stages and the direction used by the learner for every item in the portfolio. Related to the process is the active portfolio, which has varied items, assessed in numerous ways by varied instructors. Reflective portfolios stress on the students, parents and teachers reflections in the process of learning. Passive portfolios have students work sample (Wilcox, 1997). Evaluation portfolio is focused on pre-determined activities projected by local or state districts. Electronic portfolio also e-portfolio can be used to achieve the need of paper portfolio and technology usage (Barrett & Wilkerson,

2004). Mini portfolios are usually adopted by students to show their work art and explain the process development (Beattie, 1994). The following portfolios goal-based, active and process can produce new ideas and support the growth of academics and the teachers and students are working on portfolio pieces (Wilcox, 1997). Those portfolios that cannot change include passive, showcase, and reflective. Therefore, the learner might not learn novel information from the entries of portfolios (Wilcox).

Portfolios came in place as an alternative assessment; main groups that materialize are process and product portfolios (Mondock, 1997). Product portfolios comprise a group of completed pieces formed by students. It aims to display the best work of the student. The information that supports the growth of student in product portfolios is limited. Process portfolios make use of numerous pieces of portfolio to follow the development of student, as growth evidence, stressing the procedures by reflection, individual evaluation and peer and teacher conferences. Process portfolio variation results to evaluation portfolios (Mueller, 2006). It's mainly formed for the purposes of evaluation to file the growth concerning standards, to provide grades and placement of students. Identifying the appropriate portfolio method to achieve the student needs, an instructor is a vital part of success in portfolio evaluation (Dougan, 1996). It's important for an instructor and learner to make a decision on the portfolio objective prior determining the most appropriate. The teacher should also ascertain the restrictions that they may experience in the choices1because1of1the1age and ability of the student (Salend, 1998). Presentation of portfolios is by repositories of different sixes and shapes (Poel, 1998). Definitive need for container having the contents of the portfolio does not exist.

There are three major types file folders and ring binders, while other comprise the accordion kind folders, briefcases which are cardboard1like1or1CD1disks. Many exceptional portfolios are shown in things like the box pizzas, books scrap, shelves cubbyholes or cut books, painted, glued and modification to place the finished products of portfolios. (DeFina, 1992; Jasmine, 1995). Determining the suitable method to store and show a portfolio is highly dependent on the content of the portfolio and the preference of a person. For students in elementary, having huge pictures or written samples in pizza decorated1box1with index content put in the cover might be a suitable choice than irregularly bound size pages. An educator might prefer samples folding or minimizing a huge product using a photocopier for easy storage. A portfolio with huge volume of varied study subjects can be appropriate put in hanging files folder, divided by

areas of subject. The student portfolio container housing must be built to incorporate the portfolio content needs.

2.7 Teachers views on their knowledge on portfolio assessment

For success in the implementation of portfolios, educators should highly focus, wish and willpower, flexible, capability impart skill in little portions, proper management of the classroom and high organization capabilities (Jensen1&1Klonicke,11999;1Swartz, 1999; Wolfe1et1al.,11999). The managerial skills comprise understanding where portfolio should be kept, the time students can access and the goals of the portfolios and the precise content. A properly managed classroom is ingredient in creation of an optimistic learning place. The ability to reduce concepts to smaller pieces assists to avoid student's devastation. It is easy to adopt portfolios to meet student's individual needs. Learners bring individual prior knowledge and experience to the process of portfolio, there is need for flexibility to assist them in selecting desired pieces to add in the portfolio (Seely, 1994). The determination and desire of teachers is important to get rid obstacles like constraints on time and perceived limitations because of the ability and age of student. Educators are faced with challenges to determine the appropriate portfolio to achieve the objective of the teachers and student, learners training and the educator to add the content of the portfolio (Sweet, 1993). A study by Jensen and Klonicke (1999) found the respondents who were teachers pointed out that a high determination and desire are essential to avoid educators from portfolio execution and letting go as problems arise in the development process. The maintenance of goals as decisions made in the planning and execution is also vital for educators. Some educators feel highly knowledgeable in regard to portfolios, though others need more knowledge (Swartz, 1999).

In the assessment of Kentucky portfolio, there were high concerns that portfolios execution with each student will take a lot of time meant for instructions and there was uncertainty on how to achieve the requirements of the curriculum (Kampfer et al., 2001). To improve their understandings, most educators studied journal, went to workshops or shared with fellow workers (Swartz, 1999; Wolfe et al., 2000). Educators had varied feelings regarding the process of portfolio after workshops (Manning, Crossen, & Anderson, 2000). Most individuals acquired novel knowledge and individual resolutions after meetings. The Massachusetts teachers met the sessions of training and had also support from the school sites. A teacher posited that the gatherings were essential to assist in focusing and reflection on portfolio

research. The visits on classroom to students and teachers by university employee were an essential factor in the support of development of the portfolio.

In Berryman and Russell's (2001) study, teachers supported group discussions to improve their understanding and their level of comfort for teaching by use of portfolio writing. Because of training, some of the teachers became very knowledgeable and comfortable using portfolio assessment (Wolfe et al.), while others raised concerns or confusion over the criteria for selecting the most appropriate type of portfolio, the procedure, or organization (Manning et al.). Approximately half the teachers in the training were unsure if they believed portfolios would be useful for documenting student progress (Manning et al.) The demands from the federal government, state, school districts, principals, parents, and other professionals add stress to teachers. It seemed that using portfolios met the requirements of school administrators, but teachers wanted the portfolio's focus on quality over quantity (Swartz).

Teachers in Sawyer's study (1998) took part in a research project sponsored by the University of New York to explore the use of portfolios to assess literature learning. These teachers worked in collaboration with the University faculty to develop research questions and portfolio systems. Support was provided to teachers at the scheduled project meetings where the entire research team gathered and individually shared with teachers in school. The positive atmosphere and support allowed teachers to successfully implement portfolios as a means of teaching and assessing students.

2.8 Students perception on their roles in developing and implementing portfolios

Many students are apathetic towards learning and assessment (Boerum, 2000). In Apple and Shimo's study (2003), students listed numerous positive comments regarding portfolio assessments. These included benefits from reflections on learning, cooperative learning opportunities, ample teacher feedback, and enjoyable experiences in working on their portfolios. There are four main reasons for students to be willing to participate in portfolio activities (Sweet, 1999). These are (a) a joy of creation and ownership, (b) goal awareness, (c) individual accountability, and (d) continuous and extended learning opportunities. Students also made comments, such as, "I felt like studying harder because the portfolio is my own [product];" and "I worked hard so I wouldn't make my group members and partners [get] in trouble." (p.56). It seems that student portfolios are one of the means to help students understand and practice skills they can develop to become life long learners (Sweet, 1999).

Various studies indicated the importance of student input, self-evaluation, and reflection as a method to help students understand what they know, and to inform teachers and parents about the learner's performance (e.g. Apple & Shimo, 2004; Frazier & Paulson, 1992; Herter, 1991; Poel, 1998; Politano & Davies, 1994). As a learner, portfolios can promote a student's growth in self-assessment, especially in selfcritique or peer review activities (Tierney, Clark, et al. 1998). Self-evaluation is a means of helping develop pride in student accomplishments and guiding students in setting new goals that are realistic and attainable (Politano & Davies). For example, Frazier and Paulson (1992) studied student progress using portfolios. These students were identified as reluctant writers. Their teacher believed they would perform better if they understood the criteria of the analytical writing assessment (AWA) that was used for judging their work. Before implementing student portfolios, she taught students how to assess their own work using the AWA format. Knowing the evaluation process allowed the students to become better and more confident writers. Shortly after implementing the portfolio one student wrote, "I think my story had a good start. I need to add more ideas." A few months later, the reflection was more confident and analytical. The same student said, "I think 1 improved in my cursive writing and my AWA scores. If you do not believe me, look in my portfolio. It has proof. Just read my first story and my last" (Frazier & Paulson, 1992, p.64). Analytical reflections from older students included statements such as; "Elaborating, providing suspenseful plots, and holding the audience's interest are what I do best as a writer" and "The more I write, the more I understand about myself and the world I live in" (Herter, 1991, p. 90). It was found that many students had similar experiences, and teachers evidenced student growth from simple initial reflections to complex reflections that were articulate, meaningful, persuasive, and insightful (Frazier & Paulson; Herter; Poel).

In contrast, the results of Chan's study (2000) did not support that the student's participation in self-reflective activities led to a better portfolio collection. In the study, students appeared to be excited about their portfolio being recognized, but they did not understand the purpose of developing their portfolio. To help students create portfolios, teachers presented samples of finished portfolios for students to better understand the requirements and criteria. It was noted that many learners who were comfortable with traditional testing were frustrated at developing portfolios and did not like setting their own goals, selecting pieces for their portfolios, or reflecting on the work they completed (Apple & Shimo, 2002).

The importance of students' understanding of portfolio development and their ownership is the focus for their success. Students should understand a portfolio is not a collection of perfect pieces (Schwartz 1999), and they should select their own topics, voices, and genres (Peterson & Neill, 1999). Students enjoyed searching through their portfolio for well written pieces and sharing them with their peers. Portfolios serve as the catalyst for students to think and make decisions, build pride and self-confidence, and assume ownership (Swartz). Allowing for the uniqueness of individual students to emerge when working and assessing portfolios helps students build a positive self- concept (Swartz, 1999; Jensen & Klonicke, 1999). Listening to students was another important facet mentioned by teachers for incorporating pieces to include in a portfolio because children enjoy writing about their experiences (Swartz). While many teachers believe all students benefit from portfolio development and assessment, they see an added bonus for students with special needs, whose growth is not always accurately measured in standardized tests (Jensen & Klonicke, 1999). Teachers commented, "The look in a student's eyes when he proudly shows his accomplishments in his portfolio says it all. They have grown academically, emotionally, socially, and in their selfesteem. These are all steps to become life long learners." (Jensen & Klonicke, p. 49).

Despite the many positive comments, some concerns were raised by students (Juniewicz, 2003). These included the amount of time they spent to develop their portfolios and confusion over different criteria required by their teachers. For example, one student said, "I do not enjoy doing portfolios because I think it is too much of a hassle." (p. 75). Other negative comments on portfolio assessments included, "time consuming," "too much work," "complicated tasks," and "difficult work" (Apple & Shimo, 2002).

2.9 Implication of Portfolios Assessment to Education

Curriculum- using portfolios will enable teachers to broaden their curriculum to include areas they traditionally could not assess with standardized testing. How well this works depends on how much a curriculum is developed "to the test," in other words, how much curriculum is geared towards achieving high test scores rather than learning for learning's sake.

Instruction-Portfolio assessment appears to compliment a teacher's use of instructional strategies centered around teamwork, projects, and applied learning. Portfolios are also compatible with more individualized instruction, as well as strategies focused on different learning styles.

Assessment-A portfolio can be used as an assessment tool. External assessors- employers, evaluation panels, and so on-can benefit from them. Teachers can also utilize them to judge student performance. Plus, students can use their own portfolios for self-assessment and reflection.

Instructional Outcomes

A portfolio is not a random collection of observations or student products; it is systematic in that the observations that are noted and the student products that are included relate to major instructional goals. For example, book logs that are kept by students over the year can serve as a reflection of the degree to which students are building positive attitudes and habits with respect to reading. A series of comprehension measures will reflect the extent to which a student can construct meaning from text. Developing positive attitudes and habits and increasing the ability to construct meaning are often seen as major goals for a reading program.

Multiple Products Collected over Time

Portfolios are multifaceted and begin to reflect the complex nature of reading and writing. Because they are collected over time, they can serve as a record of growth and progress. By asking students to construct meaning from books and other selections that are designed for use at various grade levels, a student's level of development can be assessed. Teachers are encouraged to set standards or expectations in order to then determine a student's developmental level in relation to those standards (Lamme & Hysmith, 1991).

Variety of Materials

Portfolios can consist of a wide variety of materials: teacher notes, teacher-completed checklists, student self- reflections, reading logs, sample journal pages, written summaries, audiotapes of retellings or oral readings, videotapes of group projects, and so forth (Valencia, 1990). This shows assessment as a process.

Student Involvement

An important dimension of portfolio assessment is that actively involve the students in the process of assessment (Tierney, Carter, & Desai, 1991).

Effective Means of Evaluating Reading and Writing

There are many ways in which portfolios have proven effective. They provide teachers with a wealth of information upon which to base instructional decisions and from which to evaluate student progress (Gomez, Grau, & Block, 1991). They are also an effective means of communicating students' developmental status and progress in reading and writing to parents (Flood & Lapp, 1989). Teachers can use their record of observations and the collection of student work to support the conclusions they draw when reporting to parents. Portfolios can also serve to motivate students and promote student self-assessment and self-understanding (Frazier & Paulson, 1992).

Linn, Baker, and Dunbar (1991) indicate that major dimensions of an expanded concept of validity are consequences, fairness, transfer and generalizability, cognitive complexity, content quality, content coverage, meaningfulness, and cost efficiency. Portfolios are an especially promising approach to addressing all of these criteria.

Brings Assessment in Line with Instruction

Portfolios are an effective way to bring assessment into harmony with instructional goals. Portfolios can be thought of as a form of "embedded assessment"; that is, the assessment tasks are a part of instruction. Teachers determine important instructional goals and how they might be achieved. Through observation during instruction and collecting some of the artifacts of instruction, assessment flows directly from the instruction (Shavelson, 1992).

Portfolios can contextualize and provide a basis for challenging formal test results based on testing that is not authentic or reliable. All too often students are judged on the basis of a single test score from a test of questionable worth (Darling- Hammong & Wise, 1985; Haney & Madaus, 1989). Student performance on such tests can show day-to-day variation. However, such scores diminish in importance when contrasted with the multiple measures of reading and writing that are part of a literacy portfolio.

Valid Measures of Literacy

Portfolios are extremely valid measures of literacy. A new and exciting approach to validity, known as consequential validity, maintains that a major determinant of the validity of an assessment measure is the consequence that the measure has upon the student, the instruction, and the curriculum (Linn, Baker,&Dunbar, 1991). There is evidence that portfolios inform

students, as well as teachers and parents, and that the results can be used to improve instruction, another major dimension of good assessment (Gomez, Grau, & Block, 1991).

2.10 Theoretical basis of the study

2.10.1 Theories of learning
2.10.2 Theory of Constructivism

Constructivism is theory of knowledge in which humans actively engage in making meaning and building knowledge by manipulating, creating, and exploring the new information to fit their belief systems and prior experiences (Cooperstein & Weidinger, 2004). Knowledge is not passively received but is actively constructed by the learner (Savasci & Berlin, 2012, Wheatley, 1991). With a practical lens, students do not come to class as blank slates waiting to be filled with information but rather with diverse knowledge impacted by their environment, culture, and surroundings (Kincheloe, 2000).

There are multiple forms of constructivism including personal, social, behavioural, cultural, radical and others. These revolve around the concept that the learner is active in constructing his/her own knowledge (Piaget, Vygotsky, Dewey, Maria Montessori). John Dewey stressed the idea that the child's own experience must be acknowledged as the heart of both the content and the process of education (Ultanir, 2012). He rejected the notion that schools should focus on repetitive rote memorization and emphasized that education needs to be grounded in real experience by which students can only learn through directed living. Hence students need to engage in real-world authentic workshops to be provided with opportunities to think for themselves and creatively construct knowledge (Ultanir, 2012). On a similar note, Maria Montessori states that a student chooses what he wants to be involved with as well as how long and with whom. The freedom of decision spheres students within the discipline inherent within themselves, encourages problem-solving skills, and teaches independence (Lopata, Wallace, & Finn, 2005).

Bednar et al (1992) highlight two ways in which constructivist learning can be evaluated. First are how well students are able to function within a content domain, whether they can use the tools and understandings of the domain to solve problems, and if involved in an authentic task, then assessing whether the student successfully completed that task. The second method is students reflecting on the processes whereby they came to their conclusions and document this construction process. These methods relate to the four stages in applying constructivist

teaching: 1) eliciting prior knowledge, 2) creating cognitive dissonance, 3) authenticity and applying to new contexts with feedback, and 4) reflecting on learning. In terms of eliciting prior knowledge, teachers can use formal pre-tests, asking informal questions, having formal interviews with students, or setting up activities such as concept-mapping (Baviskar et al., 2009). Eliciting and organizing the information in the form of a map that resembles the student's own cognitive construct allows the student and teacher to assess any misconceptions and target the implementation of the lesson plan accordingly.

Second is creating cognitive dissonance that should act as a motivator to students as they think how the contradicting beliefs or new knowledge fit with their own constructs. Teachers can select tasks that have a high chance of being problematic for students (ex: case study problem) and so encourage students to think deeply to resolve the conflicting or 'missing' ideas (Wheatley, 1991). Furthermore, the third stage is application of knowledge with feedback (Vermette et al., 2001; Windschitl, 2002).

This can be in the form of quizzes, presentations, group discussions, projects, portfolios, or other activities where students compare their individual constructs with their cohorts' or new situations (Baviskar et al., 2009). In addition to checking their construct validity, application allows students to define the interconnectedness of the new knowledge to a variety of contexts. Through task authenticity, this new knowledge is integrated permanently. Finally is reflection on learning where students have the opportunity to express what they learned (Baviskar et al., 2009). This can be through presentations, papers, or examinations with questions fostering reflection on the learning process (Saunders, 1992). Reflection can also be through activities that are more meta-cognitive in nature like a reflexive paper, a return to the dissonance creating activity, or having the student explain a concept to a fellow student (Lord, 1994). Constructivist assessment can also motivate students to form their own checklists, construct rubrics, and aid learning through portfolio, self and peer-assessment tools.

2.11 Theories of portfolio

2.11.1 Portfolio assessment is based on metacognition theory. Metacognition is thinking about thinking. It is an increasingly useful mechanism to enhance student learning, both for immediate outcomes and for helping students to understand their own learning processes. Metacognition is a broad concept that refers to the knowledge and thought processes regarding one's own learning. According to Moely and colleagues, 1995; Schraw, 1998) metacognition is a teachable skill that is central to other skills sets such as problem solving, decision making, and critical thinking. Reflective thinking, as a component of metacognition, is the ability to reflect critically on learning experiences and processes in order to inform future progress.

2.11.2 The metacognitive concept was coined by Flavell in the 1970s through the results of experimental studies on memory processes; it is defined as individual thought about one's cognition by observing one's own cognitive activities (Flavell, 1979, 1981). Flavell considers metacognition in the new millennium to be knowledge and processes. Knowledge of metacognition includes a comprehensive mental working structure in general and the comprehension of one's own mental working structure in particular. On the other hand, metacognition processes include planning, following, and arranging thoughts (Flavell, 2000, 2004; Papaleontiou-Louca, 2008).

In this context, metacognitive skills can be defined as one's own self-awareness, learning characteristics, and ability to regulate one's cognitive processes. Hence, Flavell, Miller, and Miller (2002) draw attention to metacognition as the key for success in different areas like verbal skills, reading, writing, language acquisition, care, memory, and social interaction Metacognitive skills are the abilities to control and develop cognitive performance. Individuals with metacognitive skills often have selfconfidence and feelings of self-efficacy, and this situation has a positive influence on motivated learning and success (Eisenberg, 2010; Hacker, Dunlosky, & Graesser, 2009).

Reflection and self-arrangement of metacognitive skills are emphasized as the Portfolio assessment has the feature of supporting high-level thinking skills (Meeus, van Petegem, & Meijer, 2008). Teachers and students can clearly see the kind of study that needs to be done with portfolios related to concept-learning evaluations and students' learner characteristics and levels. Therefore, students have to think about the feedback they receive as a result of their

actions and what is expected from them. From this point of view, portfolios help students become individuals who can use metacognitive knowledge and skills (Clark, 2010). On the other hand, portfolio usage is effective in transforming self-regulation into a behavior.

In a portfolio evaluation process, metacognition is prompted by planning, following, and arranging (Zimmerman, 2002). Thus in Baas, Casteljins, Vermulen, Marten, and Segers's (2014) study, metacognition was determined to be stimulated when portfolio evaluations are performed. Meyer, Abrami, Wade, Aslan, and Deault (2010) also say that portfolio assessment influences the construction of basic metacognitive skills, such as students placing themselves in the center of the learning process, setting goals, choosing necessary-to-follow strategies, and reflecting onthe learning process. Students have to think about themselves as both the learning subject and the learner in portfolio assessments (McLeod & Vasinda, 2009).

Bloom and Bacon (1995) suggested that portfolios develop student's self-reflection and self-evaluation skills and simplify integrating decision and problem-solving strategies with a student's skills. Studies emphasizing the importance of portfolio use in education underline its effectiveness at developing reflective thinking and learning skills (Klenowski, Askew, & Carnell, 2006; Lyons, Hyland, & Ryan, 2002); when a student evaluate their own skills, they find opportunities to reflect on their in-class activities, knowledge, and skills. (Hopfer,1999).

2.11.3 Psychological Perspective

2.11.3.1 Behaviorism

Behaviourism as a perspective of learning focuses on changes in individual's observable behaviors.i.e changes in what people say or do. In portfolio assessment, the process of learners developing and creating portfolios leads to intrinsically motivated learners who enjoy the whole process of learning and assessment. This is because the learner is excited by his/her collection of work over time and he progress built over time. This leads to learners who have self-efficacy, self-confidence, autonomous and intrinsically motivated in the learning and assessment process.

2.11.3.2 Cognition

Piaget's (1936) theory of cognitive development explains how a child constructs a mental model of the world. He regarded cognitive development as a process which occurs due to biological maturation and interaction with the environment. Students involvement in preparing

and developing portfolios leads to development of cognitive abilities such as critical thinking and problem solving. In the process of portfolio assessment learners are able to realise and develop their various cognitive styles such as, conceptual differentiation, reflection versus impulsivity, levelling versus sharpening, scanning and field independency. (Richard Culcatta 2020)

2.12 Conceptual framework

Table 2.12.1: Conceptual framework

DEPENDENT VARIABLE (DV)	INDEPENDENT VARIABLE(IV)	INTERVENING VARIABLES	EFFECT/IMPACT
Portifolio assessment as an alternative authentic assessment.	-Portifolio practice in school. -Teacher's perception on use of portifolios. -Student's perception on the use of portfolios. -Types of portfolios used. -Academic performance.	-Teaching experience. -Teacher's academic qualification. -Hours taught per week. -Subject taught. -Class size. -Age and gender.	-Leads to autonomous learners. -Enhances collaboration among learners. -Encourages teacher –learner interaction. -Leads to better pedagogic practices. -Leads to objectivity while grading. -Leads to learners with skills such as critical thinking, self-efficacy and problem solving. -Valued discourse in education.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter presents the methodology adopted in the process of answering the research question. The chapter is organized into research design, target population, sampling methods, sample size, data collection, research procedure, data analysis, and ethical considerations.

3.1 Research Design

This study utilized quantitative research methods to achieve the objectives of the study. Specifically, a case study approach was utilized where Mbeere Sub county schools were conveniently selected as the study Area. The assumption in this study is that since Kenyan secondary school teachers receive the same pedagogy training at the various respective levels, there is bound to be similarity in the teaching practice of teaching across the country. In addition, the Ministry of Education utilizes a universal curriculum that guide teaching practice and at all secondary schools in Kenya. Mbeere subcounty was selected as a case study to assess the use of portfolio assessment in Kenyan Secondary Schools. Quantitative research includes designs, techniques and measures that do not produce discrete numerical data this is the invers of quantitative data which produces discrete numerical data. Quantitative research is designed to reveal a target audience's range of behaviour and the perceptions that drive it with reference to specific topics or issues (Survey Monkey 2019). The researcher believed that the use of quantitative methods would provide multidimensional data necessary to gain an understanding of the dynamics of teacher and students perceptions regarding portfolio assessment.

3.2. Target population, sampling method, and sample size

A sample is a small proportion of a population selected for observation and analysis (Best and Kaln,1989). The target population will be secondary school teachers in Mbeere sub-County as well as form four students in the region

Currently, there are 56 secondary schools in Mbeere Sub-County, approximately 800 teachers and 3000 form four students. The researcher will use purposive sampling to select the secondary schools visited, however, teachers and students will be randomly selected. Purposive sampling is a sampling technique that allows a researcher to use cases that have the required information with respect to the objectives of his or her case study.

Cases of subjects are handpicked because they are informative or they processes the required characteristics. (Mugenda 2003). A purposive sample is a non-probability sample that is selected based on characteristics of a population and the objective of the study. This type of sampling can be very useful in situations when you need to reach a targeted sample quickly, and where sampling for proportionality is not the main concern (Ashley Crossman 2019).

The sample size was calculated using an online tool, surveyssytems.com. At 95% confidence interval and a total of 56 school, 800 teachers and 3000 students, the sample size needed was determined to be 49, schools, 260 teachers, and 341 students.

The reason for selecting this sample size allowed the researcher to draw a small and manageable number of schools from each based on the time and financial constraints. An assumption will be made that teachers bear similar characteristics having been trained in the same way and having undertaken the same curriculum as set out in the universities and Teacher-training colleges. Also the mode of assessment in common across all schools and for this matter purposive sample was thoughts applicable and appropriate.

Table 3.2.1: Target Population and sample size

	Target population	Sample size
Schools	56	49
Teachers	800	260
Student	3000	341

3.3 Data Collection Instruments

The research utilised survey instruments in the form of questionaries' that were designed to capture both student and teachers' perception on portfolio assessment. The questionaries' were organized into two sections. The first section focused on demographic characteristics of the sampled population, the second section sought to assess both teacher and student perceptions on portfolio assessment [refer to appendix 1].

Table 3.3.1: Data Collection Methods

Objectives		Information desired	Data Collection Instrument
One	To establish whether the current classroom assessment practices reflect an intergration of portfolio assessment as an alternative authentic assessment tool.	Common classroom assessment practices and types portfolios used.	Teacher's Student's Questionnaire Interview schedule
TWO	To determine the secondary school teacher's perception on the use of portfolio assessment.	Attitudes and views toward portfolio assessment.	Teacher's Student's Questionnaire Interview schedule
THREE	To determine student's perception on portfolio assessment as an alternative authentic assessment.	Attitudes and views toward portfolio assessment	Teacher's Student's Questionnaire Interview schedule

Questionnaire and interviews specifically designed for teachers in secondary school will be administered. The questionnaire had three sections A, B and C. Section A solicited information on teachers' bio data, qualification, training and experience and the workload. Section B captured the practice of teachers on portfolio assessment. Section C sought information1on how the teachers used1portfolio1assessment1information gathered from students and their possible recommendation on the use of portfolio assessment. Questionnaires were preferred because they are easy to administer to the respondents and1convenient for collecting information. Questionnaires and interviews for students will also be used get the perception of

students towards portfolio assessment, their knowledge of the different types of portfolios and their recommendation [Appendix 1].

3.4 Validity and Reliability

The survey instruments used for this study had already been determined by Adem (2011). In his study, Adem had established that the instrument measured what it was designed to measure. Adem (2011), reported a Cronbach Alpha coefficient of 0.78 indicating that the instruments were above the recommended 0.7 score on internal consistency coefficient. Permission was sought to use this tool

3.5 Data collection Procedure

The primary data collection method for this study was through self-administered questionnaires. The research instruments were in the form of questionnaires printed and distributed to the purposely selected school. Once in the respective school, they were distributed through the class teachers to the respective students. For the teachers the researcher utilized drop and pick approach where the research instruments were dropped at the deputy principle's office who randomly distributed the questionnaires to the teachers. This approach was utilized because it was time saving and convenient to the researcher.

3.6 Data Analysis

Kerlinger (1986) defines data analysis as categorizing, manipulating and summarizing of data in order to obtain answers to research questions. The information gathered from the questionnaires, pertaining to the participant's perceptions and knowledge on portfolio assessment were cleaned and entered into Statistical Package for Social Sciences version 25. This information was then analysed for descriptive statistics. All responses were organized and narrative analysis utilized to identify possible trends in the responses.

4.1 Introduction

This chapter summarizes the results of the analysis. The chapter is organized into demographic characteristics, the use of portfolio assessment as an alternative authentic assessment tool, perception of teachers towards portfolio assessment, the perception of students towards portfolio assessment

4.2 Demographic Characteristics of the Sample Population

A total of 700 (300 for teachers, 400 for students) questionnaires were distributed in 49 school. Out of the 300 for teachers, 262 were fully completed. The remaining 38 had missing data or were never respondent to. Out of the 400 distributed for students, 345 had complete information. Each of the sampled groups met the expected sample size. The demographic characteristics of the sampled population are shown below

Table 4.2.1: Demographic Characteristics of the Sample Population

Variable	Character	Count(N)	Percentage
Gender	Male	139	53.05
	Female	123	46.95
Age	25 – 29 years	38	14.50
	30 – 39 years	129	49.24
	40 – 49 years	70	26.72
	Above 49 years	25	9.54
Academic qualifications	Diploma in Education	65	24.81
	Post graduate diploma	17	6.49
	Bachelor of education degree	168	64.12
	Masters of education degree	7	2.67
	Other qualifications	5	1.91
Hours per week	Below 12 hours	94	35.82
	12 – 19 hours	111	42.28
	20- 29 hours	45	17.27
	30 or more hours	12	4.63
Class size	Below 20	4	1.43
	20 – 40	6	2.06

	41 – 60	168	64.26
	60 and above	84	32.25
Teaching	Less than 1 year	8	3.01
experience	1 – 5 years	58	21.93
	5.1 – 10 years	61	23.44
	Above 10 years	135	51.62

4.3 Whether Secondary School Teachers' Classroom Assessment Practice Reflect an Integration of Portfolio Assessment as an Alternative Authentic Assessment Tool

To determine whether Kenyan secondary school teacher practice in classroom assessment reflect an integration of portfolio assessment as an alternative authentic assessment tool, teachers identified whether they used portfolio assessment, the style that was popularly used, and how often they encouraged documentation of portfolio data from students. As to whether teachers used portfolio as an alternative authentic assessment tool, 88% of the sampled teachers agreed to using portfolio assessment, 8% were not aware of portfolio assessment, while 4% did not use portfolio assessment.

Figure 4.3.1: Use Portfolio Assessment
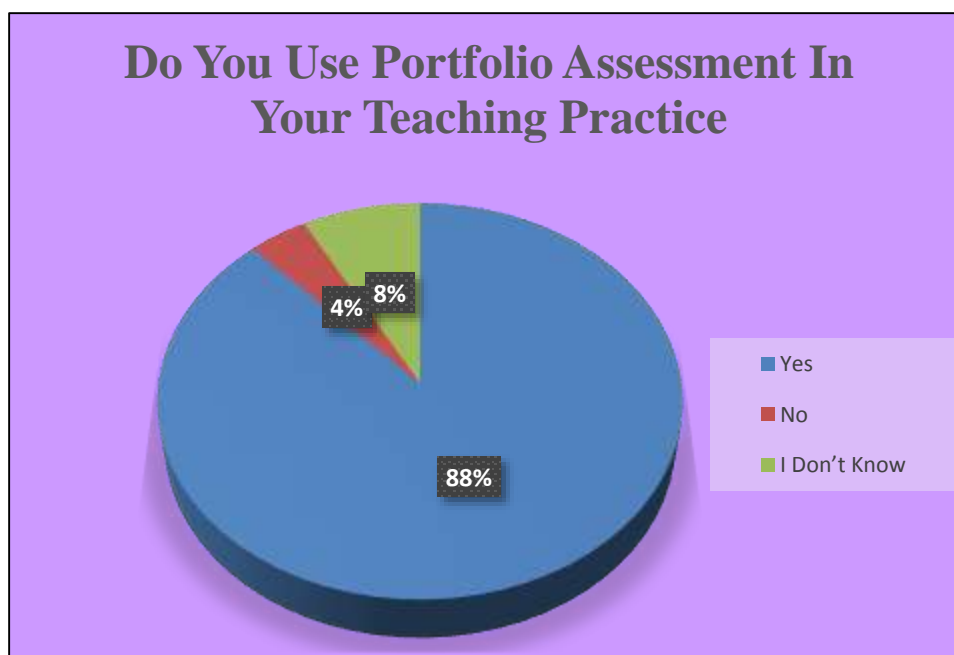
Figure 4.3.2: Popular Style of Portfolio Assessment among Teachers

Most Frequently used Style of Portfolio Assessment

Evaluation portfolio 36%
Process portfolio 46%
Product portfolio 18%

- Process portfolio
- Product portfolio
- Evaluation portfolio
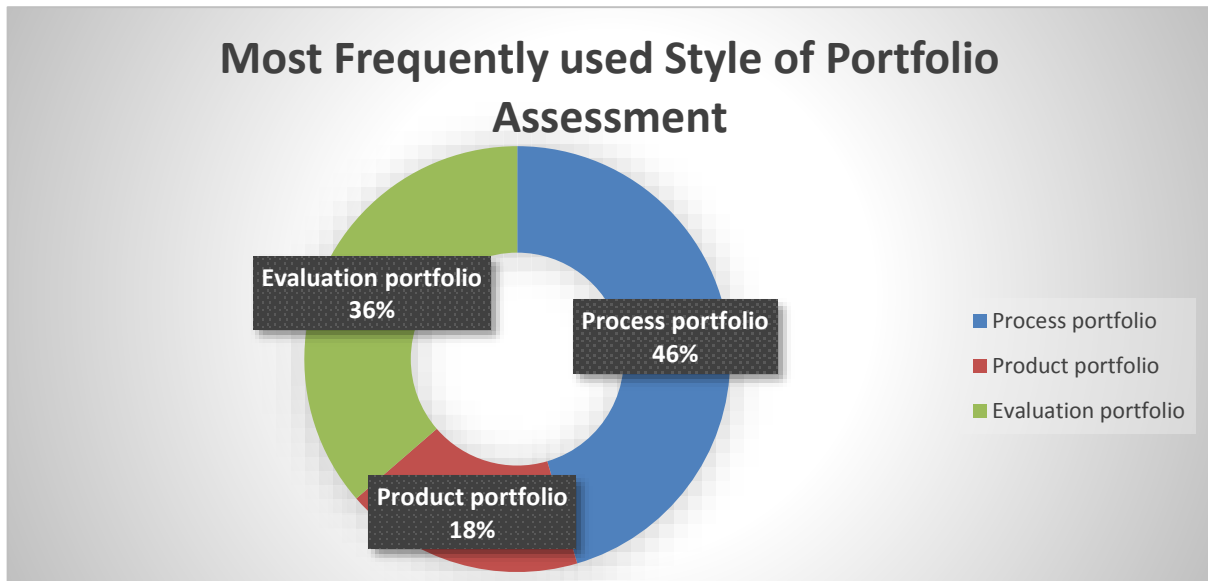
When asked the most frequently used style of portfolio assessment, teachers in the sampled population cited process portfolio as the most frequently used style [46%], evaluation style of portfolio assessment was equally popular at 36% while product portfolio was used by 18% of the total sampled population.

Style of Portfolio used Based on Subject Taught

- Evaluation Portfolio
- Product portfolio
- Process portfolio
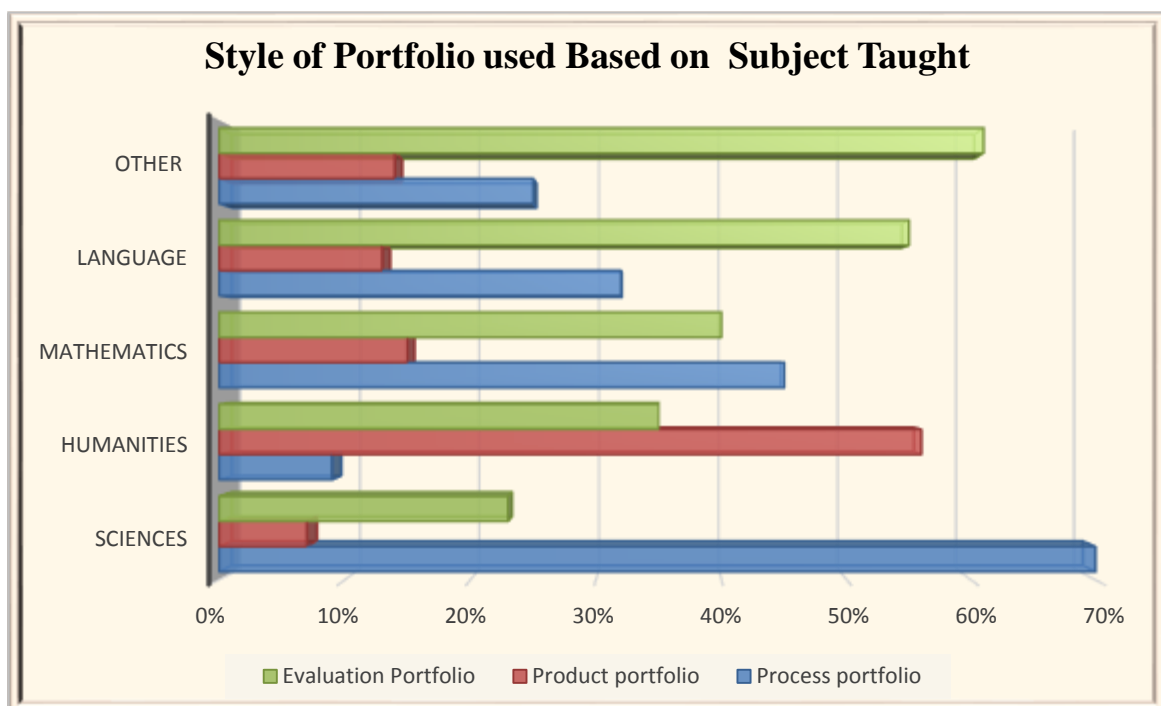
Figure 4.3.3: Style of Portfolio Used Based on Subject Taught

The distribution of portfolio use was further extended to subject taught. Under this category, different subject seemed to prefer varying style of portfolio assessment. For instance, the science teachers seemed to prefer process portfolio 70% and evaluation portfolio 23%. Product portfolios were uncommon among science teachers 7%. Humanities teachers preferred to use product portfolio 56% and evaluation portfolio 35%. Process portfolio was not common among humanity teachers 9%. Among the mathematics teachers, there was a slight difference in use between process portfolio 45% and evaluation portfolio at 40%. Teachers teaching languages preferred evaluation portfolio 55% and process portfolio 32%. Evaluation style of portfolio assessment was popular among teacher teaching other subjects65%. However, process portfolio was equally significant 25%.

Table 4.2.1: Documentation of Document Student's Activities, Accomplishments, and Achievements.

N						262
Item						Scale
	Never	Rarely	Neutral	Often	Very Often	Mean
Daily	%	35%	45%	8%	12%	2.5
Weekly	%	1%	%	52%	47%	4.9
Monthly	21%	16%	44%	15%	4%	2.9
Depends on the Subject	%	8%	%	24%	68%	4.8

At the heart of portfolio assessment is the need to document student's activities, accomplishments, and achievements. Most secondary school teachers did not recommend the documentation of student's activities, accomplishments, and achievements on a daily basis [35% rarely; 45% neutral] a mean score of 2.5 confirmed that this category was lowly rated. Weekly documentation of student's activities, accomplishments, and achievements seem to be a popular practice as 99% of the teachers (52% often, 47% very often) cited encouraging student to document their progress every week. A mean score of 4.9 confirmed that weekly documentation of student's activities, accomplishments, and achievements was highly favoured by teachers. Monthly documentation of student progress was not popular among teachers. With a mean of 2.9 and a cumulative percentage distribution of 81% (21% never, 16% rarely, and

44% neutral), this category was not popular among secondary school teachers. Imperatively, most of the secondary school teachers seemed to encourage students to document their activities, accomplishments, and achievements depending on the subject.92% of the teachers sampled agreed to vary their recommendation based on the subject taught.

4.4 Secondary School Teachers' Perception on the use of Portfolio Assessment As An Authentic Assessment Tool

Table 4.4.1: perception of teachers towards portfolio assessment

Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean
					N	*262*
Use						
1. *can be used as an effective assessment method*	%	%	3%	33%	64%	4.8
As A learning Tool						
2. *has an impact on the students' skills*	%	2%	5%	42%	51%	4.6
3. *has an impact on your teaching in the class*	%	1%	6%	25%	68%	4.7
4. *is an interactive and dynamic process*	%	8%	12%	52%	28%	4.4
5. *enhances students' sense of responsibility*	%	%	%	57%	43%	4.8
6. *gives the students' development process clearly*	%	4%	12%	61%	23	4.5
7. *encourages self-learning*	%	%	%	42%	58%	4.7
8. *enhances collaboration among the students*	1%	6%	14%	45%	34%	4.4
9. *encourages student-teacher interaction*	%	%	%	14%	86%	4.9
Process						
10. *Portfolios are difficult to construct*	35%	22%	3%	20%	20%	2.8
11. *Carrying or storing the bulky materials presents a logistical challenge to the teachers*	%	6%	18%	45%	31%	4.2
12. *Training or conferences should be held about portfolio assessment*	%	%	14%	64%	22%	4.6
13. *Teachers should actively help students during the organization of reports*	%	9%	15%	23%	53%	4.4
Grading						
14. *Grading portfolio is easy*	16%	35%	14%	25%	10	3.2
15. *Teachers try to be objective while grading*	%	%	21%	26	53	4.2

Teachers perception towards portfolio assessment was established through teachers' opinions on the use, portfolio as a learning tool, the process of portfolio development, and grading. A cumulative 97% [33 agree, 64% strongly agree] of the secondary school teaching population sampled for this study identified portfolio assessment as an effective assessment tool. Under portfolio as a learning tool, teachers expressed support for portfolio assessment as a learning too as 93% [42% agree, 51% strongly agree] believed it had an impact on student skills, had

an impact on teacher's teaching processes [93%], wwhile 4% disagreed and 12% remained neutral to portfolio assessment being an interactive and dynamic process, 52% and 28% agreed to the portfolio assessment being interactive and dynamic. All the teachers pointed to the fact that portfolio assessment enhances a sense of responsibility to the students. As a clear depiction of student development, 4% disagreed with this position, while 12% remained neutral on the subject. However, a significant majority.94% agreed to portfolio assessment as a clear measure of student developmental processes. All the teachers sampled supported portfolio assessment as a tool that encourages self-learning but a cumulative 21% did not believe that the tool encouraged collaboration between students.

Nevertheless, 79% of the sampled population believed that portfolio assessment enhanced collaboration among the students. All the teachers agreed that portfolio assessment encouraged student teacher interaction. On the subject of process, a cumulative 55% [35% strongly disagree, 22% disagree] did not believe that portfolios were difficult to construct. 40% [20 agree, 20 strongly agree] identified portfolio development as a difficult activity to develop. Most teachers believed that carrying and storing materials presented a major logistical challenges to the teacher 45% agree, 31% strongly agree. 86% of the teachers believed there is need for training on portfolio assessment while 14% remained neutral on this subject. A cumulative 76% of the teachers believed that student needed to be constantly helped by teachers during the organization of portfolio reports, 15% did not offer a comment, while 9% disagreed with this position. A total of 51 % 16% strongly disagree, 35% disagree) pointed out that grading portfolio was not an easy task. Only 35% viewed grading portfolio as an easy task. A significant majority of the teachers, 26% agree, 53% strongly agree, were of the opinion that teachers were objective while grading portfolios. 21% did not offer their opinion on this subject. The distribution of means as captured by the figure below depict a varying attitude towards specific measures of teacher perceptions. For instance, the first two measures of perception pointed to a positive attitude towards portfolio assessment, however, some items of the process and grading were rated lowly indicating reservation towards the support for portfolio assessment. For instance, portfolios were generally thought to be difficult to grade m =3.2 and the process of carrying and storing portfolio materials were thought to present a logistical challenge to the teachers m= 4.2.

The Distribution of Means on Teacher Perception Measures

Use · As A Learning Tool · The Process · Grading

Use
1. can be used as an effective...

As A learning Tool
2. has an impact on the students'...
3. has an impact on your...
4. is an interactive and dynamic...
5. enhances students' sense of...
6. gives the students'...
7. encourages self-learning
8. enhances collaboration among...
9. encourages student-teacher...

Process
10. Portfolios are difficult to...
11. Carrying or storing the bulky...
12. Training or conferences should...
13. Teachers should actively help...

Grading
14. Grading portfolio is easy
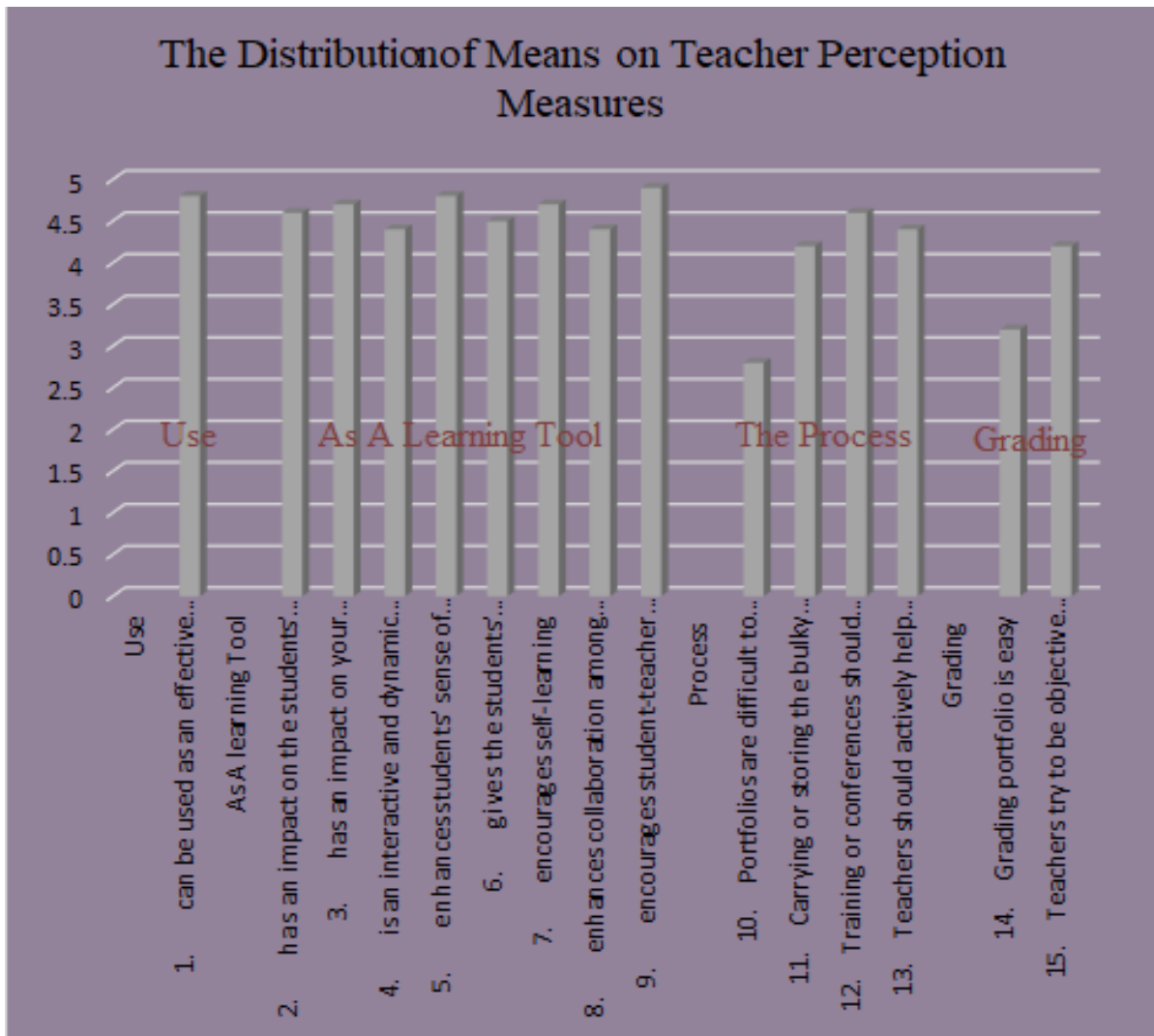15. Teachers try to be objective...

**Figure 4.4.1: Distribution of Means on Teachers' Perceptions**

4.5 The Perception of Students on Portfolio Assessment as an Alternative Authentic Assessment Tool.

Table 4.3.1: Student Perceptions

| Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean
N						*345*
Portfolio should be used as an assessment method	5%	7%	2%	25%	65%	4.5
As a Learning Tool						
Portfolio helps in Revisions	2%	1%	%	27%	70%	4.8
Portfolio allows us to learn by ourselves	%	10%	2%	23%	65%	4.6
Portfolio increases collaboration among students	%	%	12%	52%	46%	4.7
Show teachers commitment to my learning	3%	6%	8%	23%	60%	4.7
Process						
Portfolio training or seminar should be done	%	%	%	49%	51%	4.9
Difficult to Prepare	%	15%	12%	60%	13%	4.4
Grading						
Objective grades are given while evaluating	4	11%	25%	25%	35%	3.7

The perception of student on portfolio was assessed based on its use, effectiveness as a learning tool, the development process, and grading. 90% [25% agree, 65% strongly agree] of the students believed that portfolio should be used as an assessment tool. Portfolio as a learning tool, student pointed that portfolio helped them in revision, 97%, promoted self-directed learning, 88%, increased collaboration among students, 88% and demonstrated teachers' commitment to student learning, 83%. As a process, students called for seminars and training on portfolio assessment, 100% while 83% stated that portfolios are difficult to prepare. However, there were divisions on the objectivity of grading in portfolio assessment. 11% of the students did not agree that objective grades were given to portfolios while grading, 25% declined to comment on the subject, 25% agreed to objective grading, while 35% believed that the gradings were objective enough. The distribution of mean as captured by the image below demonstrate that students had a positive attitude towards two of the measures of perception [use m=4.5 and as a learning too m= 4.8, 4.6, 4.7, 4.7] but disliked the process of portfolio development [4.9;4.4] and grading [3.7].

Figure 4.5.1: Distribution of Means by Student Perception Measures
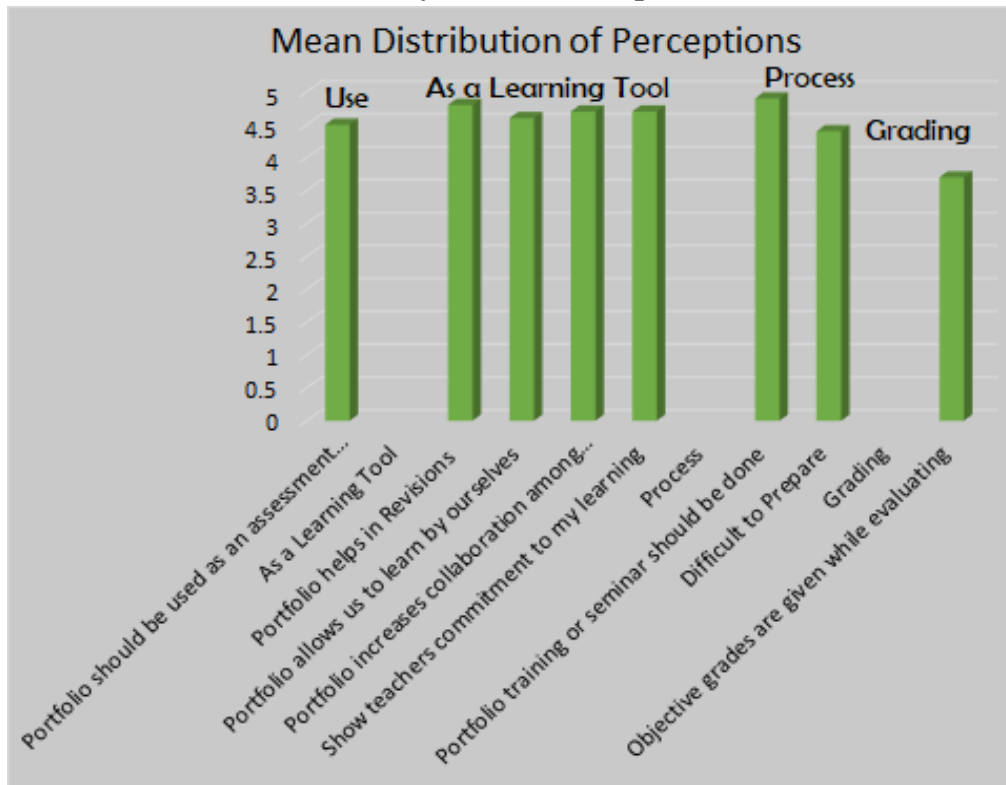
Since portfolio relies on rubrics, guidelines, and other requirements to define assessment criteria, students were asked whether they understood the rubrics, guidelines and other requirements whether based on their response on this subject, they believed that portfolio should be used as an assessment tool. Most of the students did not understanding the rubrics, guidelines and other requirements used to define assessment in portfolios [20% agree 45 % strongly agreed]. However, this did not prevent them from recommending the use of portfolio as a classroom assessment too. 90% [agree 25% strongly agree 65%] of the sampled students believed that portfolio should be used as an assessment method.

Figure 4.5.2: Comparing Understanding of Portfolio criteria with the Ability to Recommend the use of Portfolio

STUDENT BELIEF ON PORTFOLIO

☒ I don't understand the rubrics, guidelines, and requirement in portfolios
☒ Portfolio should be used as an assessment method.

<div align="center">
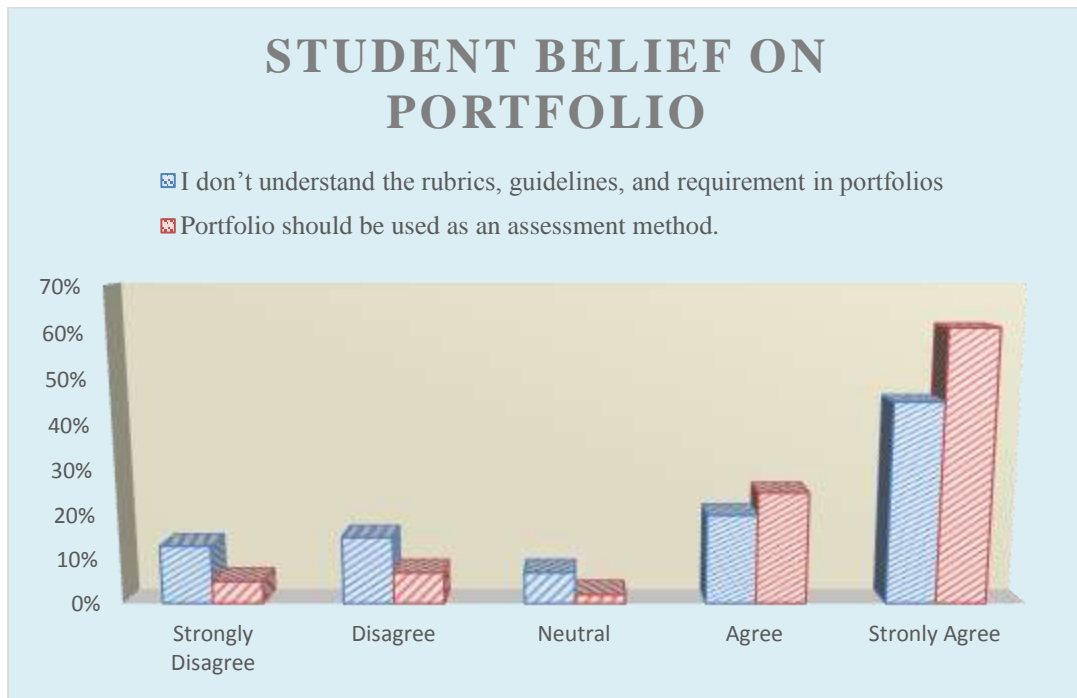
CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

</div>

5.1 Introduction

This chapter provide a detailed interpretation of the findings of this study in relation to the literature reviewed, conclusion reached based on the findings and recommendations. The chapter is organized into the use of portfolio assessment as an alternative authentic assessment tool among secondary school teachers, teachers perception on portfolio assessment, student perception on portfolio assessment, conclusion and recommendation.

5.2 Discussion

5.2.1 Whether Secondary School Teachers' Classroom Assessment Practice Reflect an Integration of Portfolio Assessment as an Alternative Authentic Assessment Tool

Teachers identified that they used portfolio assessment in classrooms frequently, the product and process were the popularly used types of portfolios. The teachers also encouraged documentation of portfolio data from students for purposes of student self-evaluation and assessment of growth over time. The use of portfolios also varied from one subject to another, with the humanities subjects leading in the use of portfolios the different types of portfolios.

5.2.2 Teacher Perception on the use of Portfolio Assessment as an alternative authentic assessment tool

The result of this study were inconclusive on the overall perception of teachers on portfolio assessment as measured by the four constructs (use, as a learning tool, process, and grading. The first two construct use and contribution to learning while process and grading were viewed negatively by teachers as reported in the findings. The difference in finding can be explained by the difference in knowledge and opinion about portfolio assessment. Borg (2006) argued that teachers' opinion and knowledge influence their classroom practices. Therefore, in this study, it is highly probable that what teachers know and believe about portfolio assessment influenced the way the think of and implement it. This was true for the two constructs, process and grading which measured the implementation aspect of portfolio assessment. On the use and portfolio as a learning tool, teachers' agreement of the effectiveness of portfolio assessment as an assessment technique that gives positive impact to students' writing performance is one of the indicator that they perceived portfolio assessment positively. Other indications are teachers' positive thoughts of portfolio assessment is the call for capacity building activities such as training. Generally, teachers' understanding that good training on

<div align="center">

38

</div>

portfolio assessment improves their effective in teaching students and the effectiveness of portfolio as an educational tool. Moreover, training impart teachers with strategies that influence on instructional practices, teachers and students' active participations, roles and responsibilities in portfolio assessment practice.

Palaces (1992) argues that teacher beliefs are important mediators of teacher behaviour. However, the relation between teacher beliefs and teacher behaviour is far from clear, as teacher beliefs are messy constructs with different interpretations and meanings (Pajares, 1992). This study found convergence of ideas about the nature of teacher beliefs in the literature. For instance, current definitions of teacher beliefs focus on teachers' assumptions which affect what they notice in any set of circumstances and what they regard as possible, the goals they will set, and the knowledge they will bring into those circumstances (Clark & Peterson, 1986; Kagan, 1992; Pajares,1992). Since teacher beliefs shape the way teachers perceive and interpret classroom interaction and influence their construction of intentions in response to those interactions, it becomes apparent that an integrated system of personalized assumptions about the nature of a subject, its teaching and learning is required for effective implementation of portfolio assessment. It has generally been demonstrated that teacher beliefs differ in specificity and in strength depending on the context (as perceived), that they tend to be activated in clusters, and that incompatible beliefs may contend for priority (Aguirre & Speer, 2000; Ajzen, 2002; Schoenfeld, 1998). This implies that not all teachers' beliefs will play a role in their actual behaviour. Only the most salient beliefs will influence the execution of teaching tasks.

5.2.3. Student perception on portfolio assessment as a classroom assessment tool

This study found that students had a positive attitude towards portfolio use as an assessment tool in classroom settings. However, two of the constructs developed to test for perception did not report a positive attitude towards portfolio assessment. Nevertheless, students recommended the use of portfolio assessment as an alternative authentic assessment method indicating that there was general sport for the practice from students. For the students, portfolio allowed them to easily learn the subject under consideration, learn by themselves, while improving collaboration and communication among students. One of the unique elements of portfolio assessment is its ability to allow learners to monitor their own progress and take responsibility for meeting set goals. Mokhtaria (2015) found that by documenting growth over

time, portfolio enabled learners to see possibilities for reflection and redirection. These ways, students are able to keep track of their own learning efforts and regulate the process of learning. Moreover, portfolio measure not just what the students know but the extent of their understanding. The fact that portfolio improve student's ability to make connections and ease the transfer of knowledge to new situations was central to explaining the positive attitude and motivation towards the recommendation to use portfolios as an assessment tool in classroom environment. The educational value of portfolios as a method of assessment is widely documented in contemporary literature. Studies associate the use of portfolios to assess students with promotion of student-centered learning. Tierney et al., (1991) found that portfolios enhanced student deep learning capabilities and reflective learning. The potential of portfolios to drive student learning in an education desirable direction could be used to explain the positive attitude towards this assessment tool that was witness in the results. Bennett (2003) l found that portfolios helped students identify their weaknesses, strengths, motivate them, and develop a variety of cognitive competencies that are critical to learning. Cain et al (2005) cited critical and creative thinking skills, problem solving and decision making skills as some of the most commonly acquired skills by students in the use of portfolio as an assessment tool. However, Cain et al., (2005) notes that such skills needed to be modeled by the teachers first before being developed among the students. Similar observations were made by Mokhtaria (2015) who argued that teachers must help students acquires cognitive skills by providing the opportunities for practice. As such, while the students were enthusiastic about the use of portfolio as an assessment tool, this may have reflected high teacher's competence in implementing portfolios in classroom assessment.

Portfolio assessment is known to be flexible and effective, however, its reliance on predetermined components such as rubrics, guidelines and other requirements may make it difficult for students to understanding. In this study, a large proportion of the student confirmed that they face difficult to interpret and understanding portfolio rubrics, guidelines and requirements, however, this did not seem to negatively affect their overall perception on the use of portfolio as classroom assessment tool. The difficulty in understanding rubrics, guidelines and requirements in portfolio has been reported elsewhere Apple & Shimo (2002). Explaining this difficult, Dudley (2001) cite a scenario where portfolio requirements may ask them to select specific types of writing pieces. Where the student may not feel that they have a best piece of writing in this example, the concept of reflecting on one's work may be complex and invalid in this case.

5.3 Conclusion

This study investigated the use of portfolio assessment as an alternative authentic assessment tool in Kenyan secondary school by assessing the perception of student and teachers on portfolio assessment. The study established that portfolio assessment was a commonly used tool in different classroom settings. However, teachers and students expressed reservation on two of the four constructs of portfolio assessment [process and grading] pointing to the need for capacity building on these areas for effective implementation of portfolio assessment in secondary school classroom setting. Thus study could not authoritatively report a positive perception towards portfolio assessment as a result of the division in opinion for both teachers and students, nevertheless, both the teachers and students recommended the use of portfolio assessment as an effective alternative assessment tool. The core reason for embracing portfolio assessment despite discrepancies on grading and process is the fact that portfolios inspire students to become active, reflective, and engaged learners. Based on these findings, portfolio assessment was seen as a tool that could promote and sustain students' academic enrichment and personal growth making it a powerful idea for adoption Kenya secondary schools.

5.4 Recommendations

The results of this study have major implication on the nation-wide implementation of evidence based curriculum, however, it must be admitted that the study relied on self-reported responses which is susceptible to bias. However, the conclusions arrived after the study lead to the following recommendations:

a) Portfolio assessment should be implemented Kenyan secondary school system based on the subject and classroom context as one of the ways of resolving the teaching-testing incoherence prevalent in most classroom settings and on the other hand to boost students' achievement in writing ability.

b) The capacity of both teachers and students especially on the process of portfolio development and grading should be augmented to improve the effectiveness of portfolio assessment as an alternative authentic assessment tool.

c) With the popularization of technologies in teaching practice, it is expected that portfolio assessment will be based on online platforms. Future studies should explore the use of e-portfolios and whether the use of electronic solutions could help students and teachers view the process of compilation and grading more positively. An electronic solution could help instructors provide interventions in forms of templates, checklists, examples, and give feedback quickly so as to help students while grading.

REFERENCES

Apple, M., & Shimo, E. (2006). *Learners to teacher: Portfolios, please! Perceptions of portfolio assessment in EFL classrooms.* Retrieved November 26, 2006, from 2004

Barrett, H. C., & Wilkerson, J. (2004). *Competing paradigms in portfolio approaches.* Retrieved October 3, 2006, from http://electronicportfolios.com

Beattie, D. K. (1994). The mini-portfolio: Locus of a successful performance examination. *Art Education, 47(2),* 14-18

Bennett, A. (2003). *Mathematics: A new kind of portfolio assessment*. Message posted to http://www.math.ksu.edu/math791/finallist.html

Berryman, L., & Russell, D. (2001). Portfolios across the curriculum: Whole school assessment in Kentucky. *The English Journal, 90(6),* 76-83.

Boerum, L. J. (2000). Developing portfolios with learning disabled students. *Reading & Writing Quarterly, 16(3),* 211-238

Bos, C. S., & Vaughn, S. (2002). *Strategies for teaching students with learning and behavior problems* (5th ed., pp. 22, 307). Boston, MA: Allyn and Bacon.

Bushman, L. & Schnitker, B. (1995). *Teacher attitudes on portfolio assessment, implementation, and practicability.* (ERIC Document Reproduction Service No. ED388661).

Calfee, R. & Perfumo, P. (1993). Student portfolios: Opportunities for a revolution in assessment. *Journal of Reading*, 36(7), 532-537.

Caner, M. (2010). Student views on using portfolio assessment in EFL writing courses. *Anadolu University Journal of Social Studies,* 10(1), 223-236.

Chan, Y. (2000). The assessment of self-reflection in special education students through the use of portfolios. Bell & Howell Information and Learning Company. (UMI number 3001780)

Cheek, D. W. (1992). Evaluating learning in STS education. *Theory into practice, 31(1),* 64-72.

Chen, L. (1993). Portfolios in second and foreign language classroom assessment. Retrieved October 21, 2005 from http://spectrum.troy.edu/~lchen/ papers/portfolio.doc.

Coombe, C. & Barlow, L. (2004). The Reflective portfolio: Two case studies from the United Arab Emirates. *English Teaching Forum*, 42(1), 18-23.

DeFina, A. A. (1992). *Portfolio assessment.* New York, NY: Scholastic Inc.

Denham, A., & Lahm, E. A., (2001). Using technology to construct alternate portfolios of students with moderate and severe disabilities. *Teaching Exceptional Children, 33(5),* 10-17.

Deveci, H., Ersoy, A. F. & Ersoy, A. (2006). The views of prospective elementary school teachers on the use of portfolio assessment in teacher education. *Educational Sciences: Theory and Practice,* 6(1), 193-199.

Dougan, A. M. (1996). Student assessment by portfolio: One institution's journey. *The History Teacher, 29(2),* 171-178.

Dudley, M. (2001). Speaking my mind: Portfolio assessment: When bad things happen to good ideas. *The English Journal,* 90(6), 19-20.

Ediger, M. (1999). *Purposes in learner assessment.* (ERIC Document Reproduction Service No. ED429991).

Enoki, D. (1992). *Student portfolio and profiles: A holistic approach to multiple assessments in whole language classrooms.* Paper presented at the annual meeting of the American Educational Research Association, SanFrancisco, CA. (ERIC Document Reproduction Service No. ED35343).

Fenwick, T. J. & Parsons, J. (1999). *Using portfolios to assess learning.* (ERIC Document Reproduction Service No. ED428398).

Gomez, E. (2000). *Assessment portfolios: Including English language learners in large-scale assessments.* ERIC

Digest based on article published by the Northeast and Islands Regional Educational Laboratory at Brown University in "Perspectives on Policy and Practice" (March 1999). (ERIC Document Reproduction Service No.ED447725).

Gussie, W. F. & Wright, R. (1999). *Assessment of the implementation of portfolio assessment in K-8 school districts in New Jersey.* Paper presented at the Annual Meeting of the Eastern Educational Research Association, Hilton Head, SC. (ERIC Document Reproduction Service No. ED429996).

Frazier, D. M., & Paulson, F. L. (1992). How portfolios motivate reluctant writers. *Educational Leadership.* 49(8), p. 62-65

Furger, R. (2002). Assessment for understanding. In *Edutopia online.* The George Lucas Educational Foundation Web site: http://www.glef.org

Gibbs, H. J. (2004). Student portfolios: Documenting success. *Techniques,* 27-31.

Gipps, C. (1999). Socio-Cultural Aspects of Assessment. *Review of Research in Education, 24, 355-392.*

Gordon, E. W. (1995). Toward and equitable system of educational assessment. *The Journal of Negro Education,* 64(3), 360-372.

Hall, B. W., & Hewitt-Gervais, C. M. (2000). The application of student portfolios in primary-intermediate and self-contained-multiage team classroom environments:

Implications for instructional, learning, and assessment. *Applied Measurement in Education, 13,* 209-228.

Hanson, M. F., & Gilkerson, D. (1999). Portfolio assessment: More than ABCs and 123s. *Early Childhood Education Journal, 2 7(2).*

Herter, R. J. (1991). Research and practice: Writing portfolios: Alternatives to testing. *The English Journal, 80(1),* 90-91.

Jasmine, J. (1995). *Portfolio planner: A step by step guide to portfolio assessment.* Huntington Beach, CA: Teacher Created Materials, Inc.

Jensen, W. M., & Klonicke, A. S. (1999). *Assessing social and academic skills or special education students using authentic assessments* (Monograph No. 040). Saint Xavier

University & Skylight Professional Development. (ERIC Document Reproduction Service No. ED 438 642)

Junewicz, K. (2003). Student portfolios with a purpose. *The Clearing House, 77(2),* 73-77.

Kaiser, J. S. (2000). Are high stakes tests taking control: Looking beyond tests scores to maintain middle level practices into the new millennium. *Schools in the Middle,* 18-21.

Kampfer, S. H., Horvath, L. S., & Kleinert, H. L. (2001). Teachers' perceptions of one states alternate assessment: Implications for practice and reparation. *Exceptional Children, 67(3),* 361-374.

Kim, Y. (2004). Teacher's perspectives, self-reported practices, and concerns related to the Illinois alternate assessment system. *ProQuest Information and Learning Company.*

Kleinert, H. L., & Thurlow, M. L. (2001) Alternate assessment: Measuring outcomes and supports for students with disabilities. In *An introduction to alternate assessment.* (pp 1-15). Baltimore: Brookes.

Kratcoski, A. M. (1998). Guidelines for using portfolios in assessment and evaluation. *Language, Speech, and Hearing Services in Schools, 29,* 3-10.

Krest, M. (1990). Adapting the portfolio to meet the student needs. *The English Journal,* 79(2), 29-34.

Ladson-Billings, G. (1998). Teaching in dangerous times: Culturally relevant approaches to teacher assessment. *The Journal of Negro Education,* 67(3), *255-267.*

Linn, R. L. (1993). Educational assessment: Expanded expectations and challenges. *Educational Evaluation and Policy Analysis, 15(1),* 1-16.

Manning, M. A., Crossen, S. G., & Anderson, K. J. (2000). *Delaware alternate portfolio assessment.* University of Delaware.

Maurer, R. E. (1996). Designing alternative assessments for interdisciplinary curriculum in middle and secondary schools. Boston: Allyn and Bacon

Mondock, S. L. (1997). Portfolios - The story behind the story. *English Journal, 86(1),* 59-64.

Mueller, J. (2006). Portfolios. In *Authentic Assessment Toolbox.* Retrieved November 27, 2006, from http://jonathan.mueller.faculty.noctrl.edu/toolbox/portfolios.htm

Olsen, K., Bechard, S., Kennedy, S., Haigh, J., Parshall, L., & Friedebach, M. (1998). *Alternate assessment issues and practices* University of Kentucky: Mid-South

Regional Resource Center. (ERIC Document Reproduction Service No. ED 431 263)

Paulson, F. L., Paulson, P. R., & Meyer, C. (1991). What makes a portfolio a portfolio? *Educational Leadership, 48(5),* 60-63.

Pierce, L. V. & O'Malley, J. M. (1992). *Performance and portfolio assessment for language minority students.* NCBE Program Information Guide Series, 9 Retrieved October 17, 2005 from http://www.ncela.gwu.edu.

Rolheiser, C., Bower, B. & Stevahn, L. (2000). *The portfolio organizer: Succeeding with portfolios in your classroom.* Alexandria: Association for Supervision, Retrieved January 15, 2005 from http://site.ebrary.com

Sawyer, M. H. (1998). The portfolio research project: A successful school/university collaboration. *The English Journal,* 88(1), 64-67.

Sweet, D. (1993). Student portfolios: Administrative Uses. *Education Research Consumer Guide* (OR 93-3107). No. 9.

Singer, S. (1993). *Portfolio assessment in foreign language, pilot project.* Evansville-Vanderburgh School Corp.,Ind. (ERIC Document Reproduction Service No. ED368197).

Slater. T. F., Ryan, J. M. & Samson S. L. (1997). *The impact and dynamics of portfolio assessment and traditional assessment in a college physics course.* Retrieved January 18, 2005 from http://solar.physics.montana.edu/tslater/publications/#jrst1

Spencer, D. M. (1999). *An exploration of portfolio assessment and its influence on children's writing.* Unpublished master's thesis, Regina University – Canada.

Swartz, L. (1999). *An interview-observation study of the use of portfolios for instruction and assessment in the general education classroom with students with disabilities.*

Tierney, R.J., Carter, M.A., and Desai L.E. (1991). *Portfolios assessment in the reading writing classroom.* Norwood, MA. Christopher-Gordon Publishers, Inc.

Tierney, R. J., Clark, C., Fenner, L., Herter, R. J., Simpson, C. S., Wiser, B. (1998). Theory and research into practice: portfolios: assumptions, tensions, and possibilities. *Reading Research Quarterly,* 33(4), 474-486.

Warlick, K., & Olsen, K., (1999). How to conduct alternate assessments: Practices in nine states University of Kentucky: Mid-South Regional Resource Centre. (ERIC *Document Reproduction Service* No. ED 431 261)

Wilcox, B. L., (1997). Writing portfolios: active vs. passive. The English Journal, 86(6), 34-37.

Tiwari, A. (2003). From process to outcome: The effect of portfolio assessment on student learning. *Nurse Education Today*, 23(24), 269-277.

Valencia, S. (1990). A portfolio approach to classroom reading assessment: The whys, whats, and hows. *The Reading Teacher*, 43(4), 38-40.

Mokhtaria, L. (2015). The Use of Portfolio as An Assessment Tool. *International Journal of Scientific & Technology Research* 4(7).

Cain, M, et al., (2005). Developing Portfolios for Integrating Teaching, Learning, and Assessment. *School of Education, Trinidad and Tobago*.

Dudley, M. (2001). Speaking my mind: Portfolio assessment: When bad things happen to good ideas. *The English Journal,* 90(6), 19-20.

Apple, M., & Shimo, E. (2006). Learners to teacher: Portfolios, please! Perceptions of portfolio assessment in EFL classrooms. *Pan-SIG Proceedings.* Tokyo Keizai University, Toyko, Japan.

APPENDIX I: QUESTIONNAIRE

Questionnaire

PORTFOLIO ASSESSMENT QUESTIONNAIRE FOR TEACHERS

This survey is to be applied for a research study on teachers' perceptions on portfolio assessment in the school. Hence, your opinions are highly valued not only for the study but for the institution as well. The results will be shared after the study. Thank you, a lot, for your cooperation.

PART A. Please complete the following items

Teachers

Please indicate the following

1. Gender
- Male
- Female
2. Years of Experience
- 0 – 5
- 6 – 10
- 11 and above
3. Students per class
- Below 20
- 21 – 40
- 41- 60
- 60 and above
4. Hours taught per week
- 8 – 12
- 13 – 17
- 18 and above
5. Subject taught
- ✓ Sciences

- ✓ Humanities
- ✓ Mathematics
- ✓ Language
- ✓ Other

6. Do you apply portfolio assessment in your class?

- Yes
- No
- I don't Know

Portfolio is a systematic collection of student work and related material to capture a student's activities, accomplishments, and achievements in one or more school subjects'

7. Which of the following style of portfolio assessment do you use?
- ✓ Process portfolio
- ✓ Product portfolio
- ✓ Evaluation portfolio

8. In a scale of 1 to 5 How frequent do you encourage documentation of student progress in a portfolio (1=Never 5=Very Often)
    - ✓ Daily,
    - ✓ Weekly
    - ✓ Monthly
    - ✓ Depends on the tests

Part B:

Please circle one of the numbers that show your agreement or disagreement.

1= Strongly Disagree

2= Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Use					
1. can be used as an effective assessment method					
As A learning Tool					
2. has an impact on the students' skills					
3. has an impact on your teaching in the class					
4. is an interactive and dynamic process					
5. enhances students' sense of responsibility					
6. gives the students' development process clearly					
7. encourages self-learning					
8. enhances collaboration among the students					
9. encourages student-teacher interaction					
Process					
10. Portfolios are difficult to construct					

11. Carrying or storing the bulky materials presents a logistical challenge to the teachers					
12. Training or conferences should be held about portfolio assessment					
13. Teachers should actively help students during the organization of reports					
Grading					
1. Grading portfolio is easy					
2. Teachers try to be objective while grading					

This survey is to be applied for a research study on teachers and students' perceptions on portfolio assessment in the school. Hence, your opinions are highly valued not only for the study but for the institution as well. The results will be shared after the study. Thank you for your cooperation.

Students

Please fill in the questions about you below.

Your gender: Male _____ Female _____

Please indicate whether you agree with the statements below by choosing one of the numbers.

1= Strongly Disagree

2= Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

Items	1	2	3	4	5
Portfolio helps in Revisions					
Portfolio allows us to learn by ourselves					
Portfolio increases collaboration among students					
Portfolio increases communication between students					
Portfolio training or seminar should be done					
Difficult to Prepare					
I don't understand the rubrics, guidelines, and requirement in portfolios					
Objective grades are given while evaluating					
Portfolio should be used as an assessment method.					

APPENDIX II: APPROVAL LATER

UNIVERSITY OF NAIROBI
FACULTY OF ARTS
PSYCHOLOGY DEPARTMENT

Telegrams: VarsityNairobi
Telephone: 318262
Fax: 3245566
Telex: 22095 varsity Ke Nairobi

NACOSTI
P. O. BOX 30623-00100
NAIROBI

20TH August 2020

Dear Sir/Madam,

REF: PERMISSION TO CARRYOUT RESEARCH

The student whose name appears below is a fulltime registered student at the University of Nairobi (UON), she/he hopes to collect data and is seeking permission from your office.

Please accord her all the assistance she/he needs.

MUIRURI EMILY NUNGARI –E58/79809/2015

TOPIC: Teachers' and Students' Perception on Portfolio Assessment in

Kenyan Secondary Schools

Sincerely yours

Dr. Karen T. Odhiambo
Lecturer – University of Nairobi
Coordinator- Masters in Education
Measurement and Evaluation

APPENDIX III: NACOSTI APPROVAL

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR
SCIENCE, TECHNOLOGY & INNOVATION.

Ref No: 237423

Date of Issue: 15/October/2020

RESEARCH LICENSE

This is to Certify that Miss.. Emily Nungari Muiruri of University of Nairobi, has been licensed to conduct research in Embu on the topic: TEACHERS AND STUDENTS PERCEPTION ON PORTFOLIO ASSESSMENT IN KENYAN SECONDARY SCHOOLS. for the period ending : 15/October/2021.

License No: NACOSTI/P/20/7115

237423

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR
SCIENCE, TECHNOLOGY &
INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document,
Scan the QR Code using QR scanner application.

APPENDIX IV: PERMISSION TO USE RESEARCH INSTRUMENT

Emily   Fri, Oct 23, 11:06 AM

muiruri <muiruriemily02@gmail.com>

to A.Soruc

Dear Dr. Adem,

My name is Emily N. Muiruri, i am from a country called Kenya in East Africa. I am currently a masters student in the University of Nairobi, Kenya, East Africa. I am pursuing a Masters of Education degree in Measurement and Evaluation.

My master's research topic is **'Teachers' and Students' Perception on Portfolio Assessment in Kenyan Secondary Schools.'** In the course of my online research, i came across one of your studies titled **'Teachers and Students' Perceptions regarding Portfolio Assessment in an EFL context: A Cops and Robbers Chase'.**

Your study has really guided me and enlightened me during my research. The questionnaire therein, especially is quite relevant to my research objectives.I am hereby writing to you Dr, kindly requesting you to grant me permission to use the questionnaire in the above study in my research. I will be glad to get your feedback soon.

I thankyou Dr Adem for always adding to the body of knowledge. Your journals and work of research has helped many students.

Yours faithfully,

Adem Soruc <as3762@bath.ac.uk>   Oct 23, 2020, 2:02 PM

me

Hi Emily,

Great to hear that you are interested in performance-based assessment and doing research on it.

Yes, yes, you can use the instrument in the study. No worries

Wishing you the best

Adem

APPENDIX V: SAMPLE OF QUESTIONNAIRES FOR TEACHERS

Questionnaire

PORTFOLIO ASSESSMENT QUESTIONNAIRE FOR TEACHERS

This survey is to be applied for a research study on teachers' perceptions on portfolio assessment in the school. Hence, your opinions are highly valued not only for the study but for the institution as well. The results will be shared after the study. Thank you, a lot, for your cooperation.

PART A. Please complete the following items

Teachers
Please indicate the following
1. Gender
   - Male
   - ✓ Female
2. Years of Experience
   - 0 – 5
   - ✓ 6 – 10
   - 11 and above
3. Students per class
   - Below 20
   - ✓ 21 – 40
   - 41- 60
   - 60 and above
4. Hours taught per week
   - ✓ 8 – 12
   - 13 – 17
   - 18 and above
5. Subject taught
   - ✓ Sciences
   - ✓ Humanities
   - ✓ Mathematics
   - ✓ Language
   - ✓ Other
6. Do you apply portfolio assessment in your class?
   - ✓ Yes
   - No
   - I don't Know

Portfolio is a systematic collection of student work and related material to capture a student's activities, accomplishments, and achievements in one or more school subjects'
7. Which of the following style of portfolio assessment do you use?
   - ✓ Process portfolio
   - ✓ Product portfolio
   - ✓ Evaluation portfolio

55

Part B:

Please circle one of the numbers that show your agreement or disagreement.

1= Strongely Disagree

2= Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Use					
1. can be used as an effective assessment method				✓	
As A learning Tool					
2. has an impact on the students' skills					✓
3. has an impact on your teaching in the class				✓	
4. is an interactive and dynamic process					✓
5. enhances students' sense of responsibility				✓	
6. gives the students' development process clearly					✓
7. encourages self-learning					✓
8. enhances collaboration among the students					✓
9. encourages student-teacher interaction				✓	
Process					
10. Portfolios are difficult to construct		✓			
11. Carrying or storing the bulky materials presents a logistical challenge to the teachers			✓		

APPENDIX VI: STUDENT QUESTIONNAIRE RESPONSES

Students

Please fill in the questions about you below.

Your gender: Male _____ Female ✓_____

Please indicate whether you agree with the statements below by choosing one of the numbers.

1= Strongly Disagree

2= Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

Items	1	2	3	4	5
Portfolio helps in Revisions					✓
Portfolio allows us to learn by ourselves					✓
Portfolio increases collaboration among students				✓	
Portfolio increases communication between students				✓	
Portfolio training or seminar should be done					✓
Difficult to Prepare	✓				
I don't understand the rubrics, guidelines, and requirement in portfolios	✓				
Objective grades are given while evaluating				✓	
Portfolio should be used as an assessment method.					✓

Part B:

Please circle one of the numbers that show your agreement or disagreement.

1= Strongely Disagree

2= Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Use					
1. can be used as an effective assessment method					✓
As A learning Tool					
2. has an impact on the students' skills				✓	
3. has an impact on your teaching in the class					✓
4. is an interactive and dynamic process				✓	
5. enhances students' sense of responsibility					✓
6. gives the students' development process clearly				✓	
7. encourages self-learning					✓
8. enhances collaboration among the students					✓
9. encourages student-teacher interaction				✓	
Process					
10. Portfolios are difficult to construct	✓				
11. Carrying or storing the bulky materials presents a logistical challenge to the teachers	✓				

TEACHERS AND STUDENTS PERCEPTION ON PORTFOLIO ASSESSMENT IN SECONDARY SCHOOLS IN KENYA

ORIGINALITY REPORT

14%	10%	5%	5%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	erepository.uonbi.ac.ke Internet Source	1%
2	SORUÇ, Adem. "İngilizceyi yabancı dil olarak öğrenen öğrencilerin ve öğretmenlerin portfolyo hakkındaki algıları: bir polis- hırsız kovalamacası", TUBITAK, 2011. Publication	1%
3	psasir.upm.edu.my Internet Source	1%
4	rdw.rowan.edu Internet Source	1%
5	pdfs.semanticscholar.org Internet Source	1%
6	Ahmet Ok, Mehmet Erdogan. "Prospective teachers' perceptions on different aspects of portfolio", Asia Pacific Education Review, 2010 Publication	<1%
7	www.scribd.com Internet Source	

Katie Nothieunbo%
Psychology Department
2nd December '2020