

**QUALITY ASSESSMENT OF EDUCATIONAL MATERIALS BY THE KENYA
INSTITUTE OF CURRICULUM DEVELOPMENT**

BY

RUNOH GEOFFREY KAMAU

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DECLARATION

This thesis is my original work and has not been submitted for a Degree in any other University.

Signed.....

RUNOH GEOFFREY KAMAU

DATE

IS/MSc/PUB/57/14

This thesis has been submitted with our approval as University supervisors.

Signed.....

PROF. DANIEL C. ROTICH

DATE

Department of Publishing, journalism and Communication Studies
School of Information Sciences,
Moi University

Signed.....

SR. DR. JUSTIN C. NABUSHAWO

DATE

Department of Publishing, journalism and Communication Studies
School of Information Sciences,
Moi University

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DEDICATION

This thesis is dedicated to my dear wife Damaris and children, Ayden and Theo, whose inspiration keeps me going. Thank you for infusing my life with love, joy, and encouragement which has been my driving force.

ABSTRACT

Education systems and structures in Kenya has rapidly expanded, posing quality issues on production of educational materials. Although Kenya Institute of Curriculum Development (KICD) is in the nucleus of quality assessment towards production of quality educational materials in Kenya through execution of its mandate, there has been limited focus on determining the extent of the role played towards quality assessment of educational materials in Kenya. The purpose of this study was to investigate quality assessment of educational materials by KICD with a view of identifying the challenges and recommending measures for improvement. The specific objectives were to: Examine the evaluation process as a tool of assessing quality of educational materials; determine the educational policies that lead to quality educational materials; analyze the role of stakeholders towards assessing the quality of educational materials; and make recommendations on quality assessment of educational materials by KICD. This research was guided by total quality management theory. A case study research design was employed, utilizing mixed method approach. Interviews were conducted on 18 senior officers drawn from KICD, Ministry of Education and publishing houses through purposive sampling. Quantitative data was collected from a sample size of 71 members representing 20% of 356 members of staff working in the three departments, through a structured questionnaire. Qualitative data was analysed through content analysis while Quantitative data was analysed using descriptive statistics. The results from the qualitative interviews carried revealed that the KICD uses vetting teams and guides in evaluation of learning materials. The study findings showed that the entire process of book evaluation was done by various stakeholders who include subject teachers, quality assurance officers, Kenya National Examinations Council, curriculum developers, printing and publications members, officials from Ministry of Education, the evaluation committees, and the academic committees. The quality of learning materials in relation to choice of paper and binding style was found to be determined by target users, size of book, grammage and KICD's guidelines. Major finding from correlation results indicated that stakeholders' involvement has negative association towards quality of educational materials while regression estimations revealed that policy implementation was significant in determining the quality of educational materials positively. On the other hand, stakeholder involvement was found to influence quality educational materials negatively. The study therefore, recommends that the government should create more policies and/or strengthen the existing ones and should ensure that these policies are strictly enforced. Quality in book evaluation at the KICD should ensure that few stakeholders are involved and given proper guidelines to follow in designing, production and distribution of educational materials.

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ABBREVIATIONS AND ACRONYMS

CDRC	Curriculum Development and Research Centre
CRS	Curriculum and Research Services
CW	Curriculum Wing
ESC	English Special Centre
HEFCE	Higher Education Funding Council
ICT	Information and Communication Technology
IEEE	Institute of Electrical and Electronic Engineers
KICD	Kenya Institute of Curriculum Development
KIE	Kenya Institute of Education
KNUT	Kenya National Union of Teachers
LOM	Learning Objects Metadata
MoE	Ministry of Education
MoEST	Ministry of Education Science and Technology
NACOSTI	National Commission for Science and Technology
NBDB	National Book Development Board
SPSS	Statistical Package for Social Sciences

CHAPTER ONE

INTRODUCTION AND BACKGROUND OF THE STUDY

1.0 Introduction

The chapter provides study background on the concepts under study, problem statement, research objectives, rationale for the study, significance of the study, scope, limitations and delimitations of the study and operational definitions of the key terms used in the study.

1.1 Background of the Study

In the past, Kenyan education system operated under the guidance of the national goals which are identified through the formation of different educational commissions and also by carrying out situational surveys on educational needs within the country (Rotich & Musakali, 2006). For instance, in the year 2003, the Government implemented the policy on free and compulsory primary education to all school going children. As a result, most primary and secondary school education curriculum in Kenya is faced with a challenge of increase in number of learners that has resulted from the increasing share of pupils' and students' enrolment" (Glennester, Kremer, Mbiti & Takavarasha, 2011). In an extension to free education, the government of Kenya has also embarked on the enormous project of provision of free textbooks to both primary and secondary schools (Simam, Rotich & Kemoni, 2012).

In an effort to match sudden increase in demand of materials by the relevant stakeholders, the quality of textbooks supplied and/or used in schools has recently been noted to

deteriorate. This has caused an outrage from the teachers and public at large (Odunga, 2018). Quality educational materials, in this context, referred to the quality of the information contained in textbooks, as well as the physical characteristics of the books used in the Kenyan primary and secondary schools. Kenya Institute of Curriculum Development (KICD) is a state owned organization that is currently domiciled in the Ministry of Education (MoE). It is mandated in the development of curricula and curriculum support materials in Kenyan schools below the university level (Oduor, 2018).

Primary and secondary school teachers across the country have raised alarm on the errors that have been found in the text books. Teachers are concerned that these mistakes are confusing learners and has also contributed to compromised teaching (Sayagie, 2018). The argument is based on the impact that these errors could have on learners. For instance, there was an early education science book that was noted to provide the incorrect names to body parts. Other examples of errors that have been identified includes; spelling mistakes, mix-up in content ideas, erroneous calculations, poor arrangements and trivial exercises, among others (Oduor, 2018). Such display of erroneous information, especially in the early stages of education, could set the wrong foundation for the learners thereby causing a downstream impact as they advance in their studies. Inaccurate and conflicting information on the textbooks that should serve as the guide to these students is detrimental on their education progress and could negatively impact them as they compete with other students globally. The importance of quality and accurate educational materials cannot be overstated. Publishing experts who are key stakeholders in this sector have raised concerns and blamed the Kenya Institute of

Curriculum Development on loose quality controls during the vetting of textbooks and cases where publishers influence approval of flawed books (Rotich, Kogos & Geuza, 2018). In addition to lack of strict measures to ensure quality on the approved textbooks, there have also been reports of circulation of unapproved textbooks to schools. KICD has decried the continued use of non-approved educational materials by some schools despite sensitizing the public and schools on the regulations and policies in place regarding the official list of approved teaching and learning materials. The downstream impact to this is having the students believe the erroneous information provided to them or going to an extent of students losing trust in printed copies when they note discrepancies. As previously noted, this would also place Kenyan students at a disadvantage when they are competing for opportunities globally.

Quality assessment of educational materials for all levels of education below the university, is mandated to KICD. This is an important practice aimed at producing quality educational materials for schools in Kenya. Similarly, through the KICD, the Ministry of Education (MoE) is active in enforcing government policies such as the textbook policy that saw the government spend around Ksh 7.6 Billion towards achieving a ratio of 1:1 pupils to textbooks. This policy has resulted to an increase in the number of textbooks needed to achieve this ratio consequently calling for improved quality system checks by the KICD. This involves working hand in hand with the different educational stakeholders to ensure that educational policies are implemented as needed. Several state-owned and private publishers are the main stakeholders with the Kenya Institute of Curriculum Development in the production of educational materials in Kenya (Sayagie, 2018).

Quality improvement and quality control of the education materials disseminated to students will involve a collaboration with all key stakeholders in this sector. With regards to quality of the contents contained in the textbooks, publishers have a big role to play towards publication of accurate textbooks for use in schools. According to the Kenya Publishers Association, there are 40 registered publishing houses in Kenya. The other stakeholders who complements the publishers are the Printing houses whose main role is to ensure that the physical standards and technical specifications of the books are of high quality. Technical specification guidelines are part of book evaluation criteria provided by KICD. The criteria for technical specifications are aimed at ensuring that the physical aspects of textbooks can withstand continuous usage for a period of up to four years (Odunga, 2018). Therefore, a robust quality evaluation process for the textbooks would ensure that the information contained within the textbooks is accurate as well as provide assurance that the physical specifications are met.

Quality teaching involves application of highly approved academic methods put in place in the production of learning outcomes for students (OECD, 2010). The process is comprised of several academic dimensions which include the effectiveness in designing of course content and school curriculum; having various learning contexts such as project-based learning, guided independent study, experimentation as well as collaborative learning; effectiveness in valuation of learning outcomes; and solicitation and usage of feedback (Hénard & Roseveare, 2012). The art of reusing the previously developed instructional objects as learning materials are often seen as a way of enhancing not only learning but also as a means of reducing cost of production (Bédard, Clément & Taylor, 2010).

Globally, the need for quality educational materials cannot be over emphasized (Masino & Nin˜o-Zarazu´a, 2016). Every country understands the benefits of developing and maintaining the quality of educational materials used for learning in schools (Tsang, 2008). Most countries, both developed and developing, have put a lot of effort to ensure that the quality of educational materials used in learning institutions is above board (Hénard & Roseveare, 2012). The Ministry of Education in Kenya has tasked the KICD with the mandate of evaluating all textbooks used below the university level. This is done to ensure that quality educational materials produced by the publishers meet the required standards. The book evaluation exercise is an intensive activity that is undertaken by the institute to scrutinize textbooks for correctness of content and technical specifications (Hungu & Thuku, 2010). The exercise culminates to the publication of the official approved list of school textbooks referred to as the “Orange Book.”

Various researchers have developed a keen interest on the quality of published materials used for educational instruction. For instance, according to Eales-Reynolds and Rugg (2013), a positive step was taken in 1999 by the Higher Education Funding Council (HEFCE) in England to support the establishment of initiatives which were in line with promotion and supportive to innovations and recognized learning and teaching excellence. In South Africa, Outhred, Beavis, Stubberfield, Wilkinson, Murphy, and Kelly (2013) noted that “there was no evidence that the workbooks assessed as exhibiting the greatest number of quality characteristics ‘to a major extent’ were better utilized by teachers, using the measures developed to measure utilization”. Rotich, Kogos and Geuza (2018) stated that evaluation process and vetting of textbooks in both primary and secondary schools intend to make sure that the learning materials given to schools are of

relevance, recommendable quality, has the suitability of set educational standards and can help in enhancing efficiency and effectiveness in learning within schools in Tanzania. According to Mawere (2013), school instructors Zimbabwean system were found not to use responsive pedagogy with balance, and the textbooks supplied to schools were not gender sensitive.

This study focused on Kenya Institute of Curriculum Development participation in the book evaluation exercise, policy implementation and stakeholder's involvement, among other activities. The study evaluates the role of KICD towards quality assessment of educational materials in Kenya.

1.1.1 Overview of Kenya Institute of Curriculum Development

The Kenya Institute of Curriculum Development, which is a successor of the Kenya Institute of Education (KIE), is a corporate body established under the then Ministry of Education through the Kenya Institute of Curriculum Development Act, No. 4 of 2013 of the laws of Kenya. The history of Kenya Institute of Curriculum Development dates back to 1957 when an English Special Centre (ESC) was set up in Nairobi for the purpose of coordinating and advising the Ministry of Education on the teaching of English. This was followed by the set-up of a Science Centre in 1961 whose aim was to promote the standards of Science teaching in the country. In 1965, a Mathematics Centre was also set up to and their aim was to develop and implement new mathematics curriculum for schools. In January of 1966, the three subject centres were merged together to become a "Curriculum Development and Research Centre (CDRC)" which progressively incorporated the development of other subjects.

The Education Act, Cap 211, of the Laws of Kenya, established the Kenya Institute of Education (KIE) in 1968. Subsequently KIE took over the functions of CDRC. The legal status of KIE was defined via a Legal Notice Number 105 of 1976, based on the provision of the Education Act. This Order was amended through a Legal Notices Number 144 of the year 1980, Number 126 of the year 1984, Number 125 of the year 2004 and Number 55 of the year 2007. In 2010, the Institute was established as a state corporation under the staff corporations Act, Cap. 446 of the Laws of Kenya through Legal Notice Number 120 of 2010.

The one of the key mandate of Kenya Institute of Curriculum Development is the development of the research-based curriculum through learning materials used below the university level. The institution has the mandate of giving advice to the national Government on issues related to development of school curricula, its evaluation, vetting, as well as approval for its applicability and implementation in Kenyan context. This institution helps in implementing of policies pertaining development of curriculum ranging from basic to tertiary level of education (Sayagie, 2018). In addition, the institute is responsible for the development, review, and approval of curricula, programmes, and curriculum support learning materials with required standards (Wanzala, 2018). KICD also performs the function of printing, publishing and disseminating content of basic and tertiary education curricula through use of electronic learning, mass media, among other ways. The KICD further helps to promote equity in Kenyan educational materials (Odunga, 2018).

The KICD is mandated to evaluate and approve all the educational materials that are used in basic education and tertiary training. They also work on policy implementation in various education related matters like the textbook policy and stakeholder's involvement in curricula and curriculum support materials production. The entire process of evaluation and approval as contained in the set guidelines that help in ascertaining accuracy and highest quality in educational materials (Odunga, 2018). This task of the evaluation and approval of the educational materials is the core objective of this study.

1.1.2 Quality Educational Materials

Numerous definitions have been proposed as regards the definition of a quality instructive material. The Learning Technology Standards Committee of the Institute of Electrical and Electronic Engineers (IEEE) in their Learning Objects Metadata (LOM) standard document provided an expansive definition of quality educational materials as any entity, digital or non-digital, which can be used, re-used or referenced during supported learning (Hawes & Stephens, 1990). Wiley (2002) proposed a definition that characterizes a quality educational material as any advanced asset that can be reused to help learning. Further refinements to the definition have been included, for instance, Sosteric and Hesemeier (2002) incorporated the thought of setting, characterizing a quality instructive material as an advanced record picture, motion picture, expected to be utilized for educational purposes, which incorporates, either inside or by means of affiliation, recommendations on the fitting setting inside which to use the article.

Further definitions on learning materials have been given by different scholars. For instance, Ally (2004) recommended that quality instructive materials ought to incorporate

a relearning aspect to set up the student for the data, a communication part to empower the student to process the materials at a significant level, and a post-learning section to check for authority and consider viable applications. Longmire (2000) prescribed that pupils and students ought to have the option to choose and tailor quality educational materials dependent on their needs and learning styles to manufacture a customized learning plan. Hamel and Ryan-Jones (2002) exhorted that quality instructive materials ought to have the option to remain solitary as a free component of guidance, be autonomous of instructional setting, and utilize conventional data however much as could be expected.

Kenya, being one of the developing countries aiming to attain middle level income by 2030, has invested significantly in the education sector. The Ministry of Education (MoE) through various government bodies ensures that the quality of educational materials used meets the required criteria and therefore, has the mandate of assuring the public that textbooks being supplied to various schools are of good quality and convey accurate information (Sayagie, 2018). This is done through formulation of various policies to be observed by respective stakeholders. Some of the major policies in place are: free and compulsory primary and secondary school education, quality assurance, free textbooks, requirement for publishers to ensure quality of textbooks distributed to both primary and secondary schools (Wanzala, 2018).

Quality educational materials can be measured based Garvin (2005) proposed elements. His concept was focused upon eight dimensions; performance, features, reliability, compliance, longevity, functionality, esthetics and perceived product quality, a well-

known structure for thinking about product quality. Given that the textbook is a product in this paper, Garvin's (1988) eight critical quality dimensions, which the authors considered a framework for assessing textbooks, are based on the indicators described for quality textbooks. In a nutshell, quality assessment should focus solely on design/format, text reliability and validity, and appropriate vocabulary used in writing and publishing

1.2 Statement of the Problem

KICD plays a vital role on the quality assessment of educational materials in Kenya through some of its core functions such as: Textbook evaluation exercise; implementation of education policies such as the free education and free textbook distribution; and involvement of various stakeholders such as publishers and teachers in its educational materials development programs. However, there has been a growing concern on the use of error prone and non-approved educational materials in Kenyan schools despite stringent measures that have been put in place by the government of Kenya. Such measures include regulations on the vetting and approval of textbooks by the KICD and implementation of national policies for all stakeholders to ensure quality educational materials are used in schools. This is probably due to the fact that some of educational materials do not go through the evaluation process done by KICD to check for quality and consistency (Sayagie, 2018). The Institutes Act, Number 4 of 2013, guides the publishers and learning institutions to ensure that the learning materials administered in Kenyan schools are vetted and approved (Odunga, 2018). Unfortunately, quality vetting policy has not been followed and as a result, the quality of educational materials in Kenyan schools has been compromised as observed in recent cases where errors were identified in both primary and secondary school textbooks (Igadwah, 2018).

In addition, some publishers, who are the major stakeholders in the production of quality educational materials, have claimed that some of the errors are attributed to weak controls systems on quality assessment exercise which had led to flaws in books approved from publishers (Odunga, 2018).The publishers also reported that some of the books approved by KICD may not be the same as those in circulation. Teachers have demanded an audit to assess whether the books given to schools have been submitted, reviewed and accepted by the KICD (Oduor, 2018).

Teachers have pointed out that in accuracies on the information on the textbooks that includes: miscalculations, spelling errors, mixtures of subject concepts, poor student assignments, and poor organization of topics. The errors confuse the students and affect the delivery of quality education. There is a critical need of focusing on quality in evaluation of educational materials, progress measurement, as well as the integration of quality education into different contexts. Several studies have been done and published that have acknowledged that education is the means to development (Rotich & Musakali, 2006; Mutuku, 2015; Hénard & Roseveare, 2012; Bess & Dee, 2008; Simam, Rotich & Kemoni, 2012; Cohen & Marcelo, 2007; Abadzi, 2006; Glennerster, Kremer, Mbiti & Takavarasha, 2011).Although KICD is in the nucleus of quality assessment and assurance of educational materials in Kenya, there has been limited focus on analysis and evaluation of the effectiveness of this core function. Therefore, the goal of this project was to investigate the process of quality assessment of educational materials with focus on KICD.

1.3 Aim of the Study

This study aimed at investigating the quality assessment of educational materials by Kenya Institute of Curriculum Development with a view of identifying the challenges and recommending measures for improvement.

1.3.1 Specific Objectives of the Study

The specific objectives of the study were to:

- i. Examine the books evaluation process as a tool of assessing quality of educational materials by the KICD.
- ii. Determine the educational policies that lead to quality assessment of educational materials.
- iii. Analyze the role of stakeholders towards assessing the quality of educational materials.
- iv. Make recommendations on quality assessment of educational materials.

1.4 Research Questions

- i. Does book evaluation process help in assessing the quality of educational materials at KICD?
- ii. Are there educational policies that lead to quality assessment of educational materials?
- iii. What role do stakeholders play towards assessing the quality of educational materials?

1.5 Significance of the Study

The findings of the study are significant to various parties. This study is of great value to the management of KICD as it provides important insight into quality assessment of educational materials by the Institute. The study is of great significance to the government as it provides input on streamlining the production and dissemination of quality educational materials to schools. The study offers insight into the various policies that could be formulated and implemented to enhance quality assessment of educational materials by the KICD.

The government can therefore gain insight on how quality assessment of educational materials could be improved by revising current policies and strategies to address the issues noted on this research project. This will lead to improvement of education in Kenya.

Through the conclusions and recommendations made by this research, the publishers and other stakeholders are able to develop a better understanding of the role played by KICD and gain insight on how to develop measures to assist in development of quality educational materials for Kenyan schools. The study can also help the printing houses of the larger publishing industry in understanding the importance of following high quality technical specifications on the production of quality educational materials. Production of quality materials is a collaborative effort from all relevant stakeholders. Therefore, by this study providing visibility as to the roles played by each sector, there could be a buy-in from all stakeholders on the quest to improve quality on the materials produced.

The study provides a platform for further research on the significance of quality assessment of educational materials. The study is of great value to researchers and scholars as it sets a foundation to gain knowledge on quality assessment of educational materials and they could also use this information to carry out further research on this topic.

This study will be of critical significance to the government, KICD, researchers, teachers, and relevant corporate sectors. If the recommendations provided on this study are followed, students in Kenyan schools will be furnished with accurate and quality education materials.

1.6 Justification of the study

The KICD is faced with challenges of ensuring the use of quality educational materials in Kenya. Major contributing factor to this issue has been circulation of non-approved educational materials in schools. The development of curricula and curriculum support materials is an extraneous task which requires high degree expertise and resources to complete. Additionally, the process of vetting, evaluation and approval of educational materials from the publishers faces personnel, time, and financial constraints. If these challenges are not properly addressed, they could result in development of sub-standard educational resources that would in turn negatively impact the students and also lead to loss of credibility on the educational materials furnished to students.

There has been a rise in demand of the educational materials which has been attributed to the on-going overhaul of curriculum in the country. KICD quest to offer equity access

and affordability of quality educational materials in Kenya is a huge undertaking especially due to rise in demand of the books. The Government has laid various policies to aid in production of quality educational materials. However, these policies are faced with several unforeseen challenges caused by unanticipated factors such as increment in number of school enrolment and non-adherence to rules and regulations set forth for the production of educational materials. Other environmental factors such as technological, cultural, political, social, as well as economic factors are also been found to affect quality assessment of educational materials by KICD and the relevant stakeholders to effectively produce quality educational materials in Kenya. There needs to be stringent policies and processes that ensures that the rise in demand on educational materials does not adversely impact the quality of the resources produced. This research provides an analysis on the current quality assessment of educational materials by the KICD and the recommendations whose aim is to provide solutions needed to enhance the quality of the educational materials that are disseminated to schools.

1.7 Scope and Limitations of the Study

The research was confined to investigating quality assessment of educational materials. The study focused on KICD in Nairobi, Kenya. The respondents were only senior managers from KICD, MoE and private publishers for qualitative data while curriculum developers, who are responsible for the Institutes core mandate of developing curricula and curriculum support materials in KICD were used for quantitative data. The choice of KICD was because of the responsibility the institution has in its core mandate.

The subject of use of quality learning materials in Kenya is a daunting task and involves a lot of input from various fields. The researcher was limited to KICD, which is the core institution tasked with the responsibility of evaluating educational materials. The researcher also encountered other challenges such as time and financial resources constraints. The researcher therefore only estimated and focused on the study's completion in a given period of time to meet the study goals. The researcher informed the interviewees that the information they provided would only be used for academic purposes. Management staff are often busy, which means it's difficult to make time during the day to interview and collect data. A data collection tool and a flexibility interview guide were therefore used by the researcher.

The study encountered reluctance by respondents to disclose information which they thought could be confidential. However, the respondents were assured that their feedback in the study shall be confidential and was solely for the purpose of academic requirements. With the assurance of total confidentiality, the respondents agreed to complete the questionnaires and created time for the collection of qualitative data.

1.9 Assumptions

The study assumed that the respondents from KICD, MoE and publishing houses, were knowledgeable on the development of quality educational materials. The study also assumed that the respondents filled the questionnaires correctly. The study further assumed that the management allowed the collection of data which enabled the study to collect sufficient data to investigate quality assessment of educational materials by the KICD.

After the field study, the number of respondents that completed the questionnaire and the completeness in which they were filled, assured the assumption that the respondents were knowledgeable on the quality assessment of educational materials. Similarly, the assumption as to whether the management would allow collection of sufficient data for the study was positively responded to through an authority letter to collect data at the institute (see appendix IV).

1.10Chapter Summary

The chapter comprises of various sub-sections. Detailed background of the study on the concepts under investigation is covered. This sub-section further gives an overview of KICD, which is the unit of research in the study. In addition, an introduction to quality educational materials is provided, followed by a problem statement highlighting the gaps in the concepts and context of study. The study presents the research objectives which are addressed in the study. The sub-section of significance of the study, study justification, scope, limitations and delimitations of the study and operational definitions of terms are as well highlighted in this chapter. This was followed by review of both theoretical and empirical literature as indicated in the next chapter.

1.11 Operationalization of terms

Quality Assessment -Quality assessment of educational materials can be understood in a broader meaning which may include entire process, activities and tools as well as strategic planning of staff and stakeholders that deal with ensuring quality in educational materials. (Eales-Reynolds & Rugg, 2013; Ho, 2007)

Educational Material - This refers to any entity, digital or non-digital, which can be used, re-used or referenced during supported learning(Hawes & Stephens, 1990).

Book Evaluation - This is a structured interpretation and giving of meaning to actual or predicted impacts of book or results. The study investigated the evaluation processes that are either predicted or that were accomplished and how various parties involved accomplished it (Akareem& Hossain, 2012).

Policy Implementation - This refers to the third stage of policy cycle. It means the stage of the policy process immediately after the passage of a law, or the action that will be taken to put the law into effect or that the problem will be solved. This study viewed at the critical stage that enhances realization of quality education in Kenya(Buchanan, 2011; Steuer & Ham, 2008).

Stakeholder's Involvement - It is the process by which an organization involves people who may be affected by the decisions it makes, or can influence the implementation of its decisions. The stakeholders targeted by the study were:

KICD, MoE, book publishers, printing houses, teachers and curriculum developers(Pritchard &Honeycutt, 2007).

Curricula and Curriculum Support Materials – These refer to the entire learning program and content taught or materials used in schools as per the government or school system regulators. Curricula and Curriculum support materials referred to in the study include course outlines, set books, textbooks, exercise books, among others (Sayagie, 2018; Wanzala, 2018).

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter reviews various researchers' literature carried out in relation to concepts and contexts under study. The specific areas covered are; theoretical literature review, empirical review related to quality assessment of educational materials, and conceptual framework that was used as guide of the study.

2.1 Theoretical Review

This section analyzes three theories; Total Quality Management Theory, Stakeholders Theory, and Education Production Function Theory, on their strengths and weaknesses in regard to relevance with the study. The most relevant theory that was used as basis of this research is highlighted in this part.

2.1.1 Total Quality Management Theory (JUSE, 1997)

Ho (2007, pg 7) argues that "TQM/Business Excellence (BE) is the systematic use of quality management principles and tools in business management, with the goal of improving performance based on the principles of customer focus, stakeholder value, and process management." He further holds that everyone associated with the organization is fully committed and involved in continuous improvement to meet fully the customers' expressed and implied requirements.

As a behavioral theory, TQM involves a primary change in the technology, the manner in which a company works; a change in the culture, standards, values and beliefs of a company as to how a company works, and an alter in policy-making and power bases (Fields et al, 2014). TQM standards ensure that performance indicators consistently change and surpass the industry average in employee, customer and organizational and financial performance indicators.

The TQM theory is overarching because the other five anchor aspects are included. The seven elements essential to be effective in TQM include theory, vision, strategy, expertise, capital, incentives and organizations (Aized, 2012). TQM values and methods would ensure that the KICD management carries out its duties with minimal organizational capital. In many companies, TQM has never been implemented, but it is not because of the philosophy itself, but it has been mainly due to implementation failures (Aole, 2013). In addition, there was the difficulty in gaining a true understanding of the concept of customers or quality, and the importance of quality in business management (JUSE, 1997).

Total Quality Management Theory benefitted this study in achieving its objective of determining the educational policies that lead to quality assessment of educational materials by KICD. It focused on the systematic use of quality management principles and tools with the aim of improving performance in order to satisfy customer needs, stakeholders' values, and the entire process of management. This theory was found to be the most relevant to this study and was hence used as a basis for this research. This study brought out the importance of quality in educational materials as a foundation of

acquiring formal knowledge and skills for human and for national development, which can also be seen as a substitute for the teacher in the education of the child and society because the evolution of the textbook is closely related to the evolution of education.

It is in this light that the KICD and MoE have guidelines for textbook production and ways of ensuring quality in educational materials. Apple (2010) argued that textbooks dominate the curriculum and teaching practices of many classrooms. Stein, Stuen, Carnine and Long (2001) report that textbooks cover approximately 75 to 90 percent of classroom instruction in this way. While the textbook dominates so much of what happens in classrooms and structures that become official knowledge, one of the things we least know about is a textbook.

This has further surfaced in the prediction of the educational policies that lead to quality assessment of educational materials by the KICD. The findings have supported this theory as it was revealed that policy implementation was significant in determining the quality in educational materials. This was found to be in line with TQM principles as the issue of continuous improvement in quality among the educational materials in Kenyan schools surfaced. The principles and tools of TQM can come in handy in ensuring that management of KICD enforces quality with minimum available resources.

2.1.2 Stakeholder Theory (Freeman, 1984)

The argument in this theory is based on its application in modern times to business managers with an effect on the relations between investors and stakeholders. De Villiers and Van Staden (2011) say that the reporting regulations provide an enforcement mechanism. Kock, Santalo and Diestre (2012) argued in favor of having managers

personally accountable and responsible for misbehavior, if compliance is complied with by such reporting frameworks. The additional argument is based on interventions by public institutions which provide energy for an organization to follow similar good governance practices (De Villiers & Van Staden, 2011).

The stakeholder management allowed the study to understand the way the KICD develops and deals with the various strategically developed clusters. From the point of view of Freeman (1984) the principles or management of stakeholders or their approaches to management of companies are developed and carried out via the fulfillment process of various groups and individuals with the stakeholders. The main task is to coordinate and incorporate the government, curriculum designers, politicians, publishers, teachers and students, as well as other related groups.

Stakeholder Theory is important to this study as it challenges the usual analysis frameworks, by suggesting putting stakeholders' needs at the beginning of any action (Harrison, Wicks, Parmar & De Colle, 2010). A study of educational materials reflects both the society's nature and the individual's goals. With the advent of formal educational books in Kenya, it was believed that books, particularly textbooks, which are an art of the arts, have an extensive link with educational aims and styles, and are important for the development of all education systems (Douglas & Hegelheimer, 2007).

The stakeholders' theory was linked to the prediction of the role of stakeholders towards assessing the quality of educational materials by the KICD. The findings have revealed that involvement of stakeholders was found to have a significant but negative effect on quality educational materials. Even after inclusion of other covariates like age, gender,

experience and educational level where only book evaluation, stakeholders' involvement, plus gender of employees they reported a statistically negative influence on quality educational materials. The findings indicated that the quality of educational materials can only be ensured through strategic linkage between all the relevant stakeholders such as curriculum developers, policy makers, publishers, teachers, and students as well as other related groups. This had implication on the linkage of these managers to other stakeholders like government as employer.

2.1.3 Education Production Function Theory (Hopkins, 1990)

An education production function is an application of the economic concept of a production function to the field of education (Hanushek & Kimko, 2000). This includes many factors influencing the learning of a child, such as the pupil-teacher ratio, educational materials and physical facilities that influence education quality. This calculation monitors outcomes, which include achievements in jobs, school enrolment, graduation rates and most commonly standardized test scores (Krueger, 1999).

Several successive studies involving more economists have produced contradictory findings on the effects of school resources on student performance which have led to significant controversy in policy discussions. Policy discussion also centered on class size reduction, expanded academic study of class size and quality relationships (Giroux, 1983). As the main focus of formal education throughout the world, the textbook reveals the importance of a single teaching assistance following the teacher. The textbook remains a main instrument of instruction and the transfer of knowledge, despite other educational aids, such as film, video and television. In this respect, Lintowinsky (1992)

suggests that "the best child's teacher in the educational situation is the textbook." Kennedy (1971) advocated that primary teachers focus on the child's textbook. Therefore, school textbooks must be prepared with great care given the vital role they play in the lives of learners. They (books) should guide appropriately.

Murby and Crossley (2008) proved that the educational material defines the curriculum. In other words, a textbook determines the nature of school curriculum in practice. The pivotal role played by textbooks in the quality of education is perhaps most clearly visible in the developing world where often textbooks are the major-if not the only definition of the curriculum (Lockheed & Verspoor, 1991). Moreover, work by researchers such as Fuller (1987), Altbach and Kelly (1988) and Farrell & Heyneman (1989) underlined the potential of textbook projects as key vehicles for the cost-effective improvement of the quality of education. Altbach and Kelly (1988) stated that "Educational materials stand at the heart of the educational enterprise".

The purpose of this textbook study lies in the very fact that textbooks at primary school are at the centre of the education system in Kenya. Teachers depend on them to set the educational criteria and to communicate basic learning material. The schoolwork of students also begins and ends with the textbook. For most teachers, teaching is ineffective without a textbook, as it is not supported by secondary sources.

The theory propelled this study by enabling the researcher achieve the objective of examining the evaluation process as a tool for quality assessment of educational materials by KICD. The theory surfaced in the findings where it was revealed that quality in book evaluation is vital in the scheme of formal education. In designing Kenyan educational

materials, where often textbooks are the biggest but not the only concept in the school curriculum, the pivotal role played by textbooks is perhaps most evident. The results have further shown that the textbook remains a key tool for instruction and transfer of knowledge, apart from other educational aids such as videos, filming and television.

2.2 General Perspective of Educational Materials

Quality assessment of educational materials can be understood in a broader meaning which may include entire process, activities and tools as well as strategic planning of staff and stakeholders that deal with ensuring quality in educational materials. Educational learning materials are described based on various categories (Quinn, 2000). One of them is the category of interaction, which encompasses flow of information from the resource to the end user/consumer. Secondly, the learning resource category which entails use of specific types of available resources like exercises, simulations, questionnaires, diagrams, figures, graphs, indices, slides, tables, narrative texts, exams, or experiments. According to Krauss and Ally (2005), the learning materials can be rated higher towards the areas of quality content, alignment of learning goals, as well as motivation. Nonetheless, they identified adaptation, interaction, feedback, and usability as key areas that require to undergo improvement. On the other hand, Metros (2005) noted the complexion of developing quality educational materials based on current technology. Furthermore, Petrinjak and Graham (2005) articulated that it requires major effort from educators to transform existing educational materials. Therefore, quality in learning educational materials becomes a component of the educational system for proper implementation of any school curriculum.

In developing countries in particular, the only source of the learning process in schools was regular practice in considering textbooks. For most teachers, a textbook is a genuine classroom material, while for most students it has become a common practice to be burdened with a bag packed on their school journey with their prescribed textbooks. The textbook is the only educational material available in most schools in Pakistan (Government of Pakistan, 2006). The origination cost refers to the fixed cost of a book produced by an author. They include the printing, writing, covering and book design, project administration, proof reading, authorization to use copyrighted material and all other once-in - a-stance costs associated with book production (Moll, 2006). Because many of these costs—including editing and proofreading—rely on the numbers of words or pages included in the book (since diagrams and other graphics increase the cost of the typeset and layout), the cost of creating the book is largely influenced by the book length(Quinn, 2000).

In Kenya, the Ministry of Education through various government bodies ensures that the quality of educational materials used meet the required criteria. KICD is tasked with this mandate of evaluating all textbooks to ensure that quality educational materials are used for learning in schools (Sayagie, 2018). The book evaluation exercise culminates to the publication of the official approved list of school textbooks referred to as the “Orange Book.” Participation in the book evaluation exercise, curriculum and curriculum support materials development, policy implementation and stakeholder’s involvement, among other activities raises the question on the extent of the role played by the KICD towards quality assessment of educational materials in Kenya (Oduor, 2018).

The extensive use of textbooks impresses with materials used, particularly for understanding content and lessons, slowly ascending vocabulary, ambiguity free sentence structures, appropriate, attractive and self-explicit diagrams, nature and an agreeable layout, horizontal and vertical coordination (Sheldon, 1988). These are the key characteristics of quality textbooks. It is also generalized that most textbooks are often selected based on the easily accessible surface features (Donovan & Smolkin, 2001).

The textbooks should provide a wide range of problems solving and practical tasks, according to Akareem and Hossain (2012), which should help students to identify the links between concepts and abilities. The three cases and literature mentioned above suggested a set of eight fundamental indicators for a quality textbook, including: conformity of textbooks with the curriculum policy, reliability and validity, proper vocabulary, illustrations and sizes, text alignment within the book and across the whole series of subjects, encouraging critical and creative learning, assessing and evaluating the text (Aole, 2013).

2.2.1 Books Evaluation Process and Assessment of Quality in Educational Materials

Experts in most countries write textbooks with the help of publishers and the Government Agency evaluates those textbooks. Provincial or national textbook boards and private publishers play a part in the development of textbooks. Such boards and publications are aimed at publishing the textbooks in compliance with national curriculum guidelines published by the curriculum wing of the Ministry of Education. The role of textbook evaluation by the curriculum wing is to ensure that the curriculum guidelines for boards and editors match the curriculum (Akareem& Hossain, 2012).

The headers and prefaces are known as a tool to ensure quality and transparent processes in order to promote evaluation processes. The more precise a rubric is for a quality textbook metric, the more valuable it will be to assessors, editors and/or authors. The descriptors of the criterion should apply to specific requirements of the content of the textbook and explain explicitly the quality of the work on the subject at every point. The requirements for assessing the textbook should be shared as the guidelines are introduced to help publishers begin with the end (Arnon & Reichel, 2007).

Results of the survey of marketing professors conducted previously by Silver et al. (2012) underline the significance of content as a criterion for textbook choice. Many other researchers have discussed content criteria in decisions on the choice of material for both higher and lower education (Al Helal, 2012). The study of several science textbooks written for elementary school students by Meyer and Turner (2007) focused primarily on comparing the book's contents scope as a test of their usability. Results of this study showed that the content they covered and how this information was presented in elementary science textbooks were widely varied. Meyer (2007) argued that the content should be an important consideration in the process of selecting textbooks because of these differences.

In a higher education study, Griggs and Koenig (2001) compared 15 psychology textbooks in terms of content, length, and pedagogical aids. They found considerable variability in the texts, especially in the content focus of each book. While such variability is often viewed as problematic, these authors believed that such differences actually serve to “accommodate teachers’ preferences and needs”. It is interesting to note

that students “preferences and needs” were not included in the discussion, but seemed to be subsumed within faculty preference.

In addition to content coverage, one study examined the content accuracy as a criterion for textbook choice (Steuer & Ham 2008). Such researchers argued that the accuracy of the material was difficult to evaluate and was time consuming because it required a high level of expertise and thorough reading. For this reason, they identified a technique for efficiently assessing the correctness of textbook content through a random sample of chapters in the textbook, followed by a random sample of second level passage headings in selected chapters. Such passages can then be thoroughly checked and correctly analyzed by experts. Steuer and Ham (2008) outlined further the findings of their study of a number of psychology textbooks using their methodology. “We insulated a total of nine textbook passages in their study and found multiple ingredient errors. This work stresses, but also offers an important way to take into account the content accuracy in addition to content coverage”.

Jones (1992) employed a wide range of readability tests to compare the 15 most commonly used high school and college technology training textbooks. The authors also examined human interest and the style of writing in addition to readability and ranked them according to their ratings on all three factors. They found all reading formulas to be approximately equivalent and can be interchanged. Although most scholars argue that it is important to consider the ability to read when choosing a textbook, some claim that it is too difficult to rely on such measures as a result of their negative effects upon the overall quality of the textbook (Arnon & Reichel 2007).

Discussion continues on the emphasis given to readability by selection committees (Cunningham & Stanovich, 1993; Gunning, 2003). Several scholars concentrated on how textbooks affect education (Petrides, et. al., 2011). The research analyzed a number of findings including knowledge, comprehension, motivation, behavior, communication levels and performance evaluation.

Developing textbooks is an evolving process that requires continuous and thorough research and development. Most countries have some sort of textbook assessment mechanism. A field-tested and study based evaluation and review of textbooks will produce results that lead to high-quality textbooks (Kuecken &Valfort, 2013). For example, in Pakistan, Curriculum Wing (CW) is the national institution that draws up and approves curricula for any subject up to class XII within the Ministry of Education.

The CW is empowered to prescribe and withdraw textbooks for schools in Pakistan (Pakistan Government, 2006). The assessment of textbooks is one of the CW's main duties. The creation and assessment of textbooks in Pakistan has always been the subject of debate. There are a number of reasons, but the lack of clear standards for the evaluation of the textbook is one of the main concerns. In order to improve the evaluation process, accepted measurements of quality textbooks need to be identified. Textbooks affect significantly what is learned and taught in elementary, primary and secondary schools.

Insook (2012) reported that most teachers use textbooks as their key curriculum guide and lesson source. Tyson (1997) pointed out that those new and inexperienced teachers or those who have inadequate time to plan the lessons will actually teach little or nothing

from the first page of the textbook. Monazza and Kingdon (2011) have concluded that teacher's textbooks are commonly used and identified three key reasons for this: developing teaching materials in their own classroom is extremely difficult and a difficult process for educators; there's little opportunity for teachers to develop new materials; and external pressure that prevents most teachers to implement own development.

2.2.2 Policy Implementation and Quality Assessment of Educational Materials

The process of implementing quality in educational materials includes the developmental steps and the ministry's position that has an impact on textbook production. The proposed evaluated textbook also covers policy issues. The various implementation procedures include: curriculum development, which is handled by the KICD, the bidding process and the adoption and evaluation process for the textbook by the Ministry of Education's Directorate of Quality Assurance and Standards (Bunyi, 2013).

For one way or another, the procedures impact the final written textbook. The contents of textbooks are described by syllabuses. The bidding process tries to separate the best textbook from the potential textbook publishers while the assessment process places the textbook in a review setting to ensure that primary schools have good materials (Buchanan, 2011). It guarantees that pupils in schools receive a quality education. Assessment is a sure way to create a good textbook. A textbook is a book that decides the condition and growth of the mind of educated people rather than any other book (Steuer and Ham, 2008). Consequently, the production of the textbook is null and unreasonable without analysis. That is because no country in this world creates its textbooks without an evaluation.

Farrell (2007) says there are two fundamental educational policy issues faced by all nations. These are private versus public publishing and local versus international control publications. The whole system is a state-controlled or state-financed system of education materials (Pogelschek, 2007). Governments in all nations tend to interfere with the development and provision of the textbooks for better or worse. Ganu (2004) claims that the government controls the most lucrative market segment in Ghana through the Ministry of Education. Djurovic (2011) indicates that Serbia is grounded in the education policy developed in the early nineteenth century, which involves interdisciplinary access to the textbook development.

2.2.3 Stakeholders Involvement and Assessment of Quality Educational Materials

According to the Apple (2010) evidence from national education systems worldwide suggests that textbook content development is a product of competition between powerful groups who see the curriculum as being fundamental to the creation of national collective remembrance designed to meet unique cultural, political, ideological and social challenges. The decision to make a textbook is often market-oriented and practical. Making a textbook requires authors, editors and native illustrators from native speakers (Pogelschek, 2007). The writing begins with the concepts and manuscript production. All of the people in question need a lot of effort and hard work. Authors first work on a concept draft, propose the basic text and finally produce a draft. Authoring is done in a group; the final versions of the writers of the units are carefully edited and submitted for approval.

Sewall (2005) says that the contents of a textbook can be decided in the USA, for example, by field officers, marketing staff, market analysts, product managers, and publishing directors. It shows the importance of the textbook to publishers and the entire nation. The US textbook industry gives our educators more choice of quality textbooks than any nation in the world,' says a seminal essay on school books (Squire & Morgan, 2008). Nevertheless, what is happening now is that new schoolbook publishing represent lower perception of the general education sector.

The government of the Philippines has formed a Philippine National Book Development Board (2008) with the key mandate of formulating, adopting and implementing a National Book Policy and national book development plan as well as providing capacity building services for its stakeholders, such as publishers, writers, printers, and other publishing entries. In the context of a research program, NBDB reviews textbooks. Only those schools that have passed the NBDB Content Assessments and Quality Production Requirements are identified and/or supplied by the Department of Education (DepED), Government of Philippines. The Department also publishes in both English and Filipino a list of suitable words for particular grades in order to instruct textbook writers.

Teachers, managers, parents and staff rarely participate directly in the actual development of student textbooks. The vast majority of research and analysis on the value of textbooks thus discussed standards by which selection committees assess their choices, irrespective of their composition. Watt (2009) carried out a study of the K-12 literature selection process in the US, finding that most of the requirements for the choice of textbooks sponsored by States are cost dependent. Other selection criteria commonly mentioned in

the literature include, sensitive to cultural diversity, content coverage, content accuracy, readability, educational impact and pedagogical aids (Pritchard & Honeycutt, 2007).

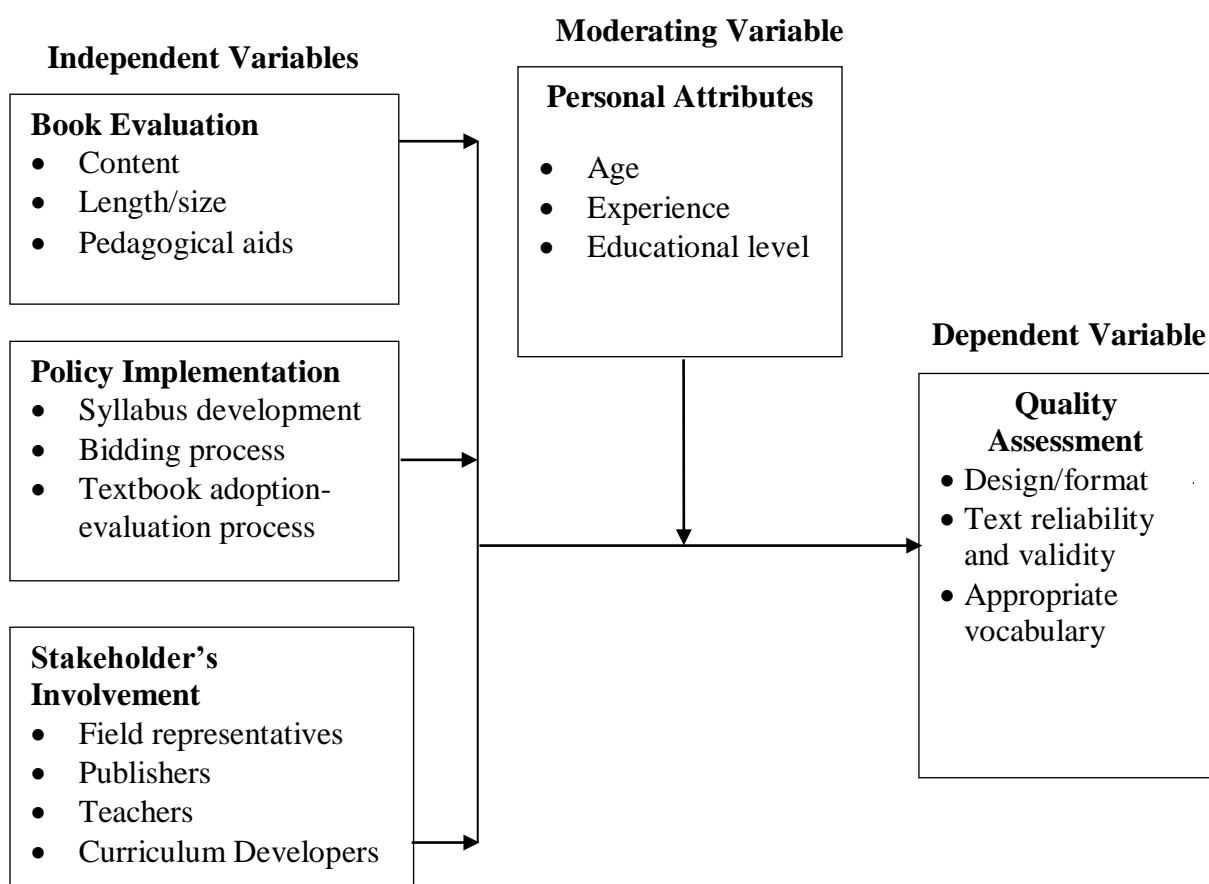
The Kenya Institute of Curriculum Development depends on several stakeholders for the proper execution of its core mandate. KICD established 30 participants, according to the Kenya Curriculum Design Plan 2015-2020. The strategic plan articulates the Institute's common vision, mission, key activities, political priorities, strategic goals and capital needs. In order to provide the required strategic adaptations, operational processes are continuously evaluated. These stakeholders have over the years contributed towards KICD goal of promoting production of quality educational materials in Kenya (Igadwah, 2018). To actualize the strategies and activities outlined, the institute continues to engage key stakeholders. Some of the main stakeholders involved in the process of curricula and curriculum support materials development includes curriculum developers, publishers, field representatives as well as teachers.

2.3 Conceptual Framework

This research focused on the KICD and aimed at analyzing the quality assessment of educational materials in by the KICD. This research showed a conceptual context, as shown in Figure 2.1, from the reviewed literature. The diagram shows the connection between the independent variables and the dependent variable. Book assessment, policy implementation and stakeholder engagement are the founding influences of the independent variables within this analysis. The control variables as used in research consist of personal characteristics such as age, level of education and the experience of KICD staff, while quality assessment (of educational materials) was the dependent

variable. The goal of this analysis is in particular to investigate how independent variables influence the dependent variable and how personal attributes are moderated. For example, the model shows that quality assessment of educational materials is a feature of book evaluation, proper application of policies and stakeholder participation.

Figure 2.1: Conceptual Framework



Source: Author (2019)

2.4 Summary of Literature Review

This chapter gave a review of both theoretical and empirical literature. Review of the theories was done on three theories whereby the Total Quality Management Theory was found most relevant to the current study. Other theories reviewed were Stakeholder's

Theory as well as Education Production Function Theory. Review of the empirical literature enabled the researcher to understand the results from various scholars from different research areas within the context of quality assessment of educational materials. It was realized that some studies were not carried in the context of secondary and primary educational levels while others were not measuring the relationship of all the concepts under investigation. There are very few studies that tested the quality assessment of educational materials. This study therefore, aimed at contributing to available literature by investigating the quality assessment of educational materials by the KICD. The chapter that follows outlined various ways/methods used by the study in collecting and analyzing data.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

The chapter dealt with description of the methods and procedures that were employed in the quest to examine the topic under investigation. Specifically, the sections involved in this chapter were: research design, target population, sampling procedure, description of data collection procedures and description of data analysis procedures.

3.1 Research Design

A study design refers to a strategy, a structure, or a plan followed by researchers with an aim of getting feedback on a study's research questions by optimally managing the variables under investigation (Kerlinger, 1986). The present study employed a case study design to investigate the quality assessment of educational materials by KICD. Saunders, et. al. (2016) argued that this kind of research design enables the researcher to collect data from the field to help in achievement of the research objectives (Saunders, Lewis & Thornhill, 2016). This study employed use of Mixed Method Research (MMR). It adopted both qualitative and quantitative approaches in data collection. Qualitative data collection was done through use of an interview guide while quantitative data was collected through use of a structured questionnaire. As much as quantitative methods were used in answering questions broadly in terms of to what extent, how many, and how often; qualitative came in handy in provision of deeper answering of questions based on the hows and whys. The study therefore followed the aspect of explanatory approach where qualitative research was conducted after the quantitative one to justify the reasons

behind the findings drawn from quantitative data (Zikmund, Babin, Carr & Griffin, 2013). This adoption of mixed methods assisted in description of quality assessment of educational materials in by the KICD. The methods were found to be unifying, logic and followed the rules of inferential statistics. They were also consequence oriented, problem centered and pluralistic (Zikmund, Babin, Carr & Griffin, 2013). The researcher required such approaches because of the dynamics of the target population under investigation (Sedgwick, 2014). Therefore, this data assisted in description of the patterns of variables under study.

3.2 Population of the Study

Cox (2015) described target population of the research as that unit of analysis that researchers focus on in generalization of the study findings. Kothari (2011) referred target population as the total of items about which information is sought. Kombo and Tromp (2006) defined target population as the total group of items, objects, or individuals having a minimum of one common characteristic making them eligible to participate in a research. Therefore, the entire population for the study was 374 employees as indicated in Table 3.1 below.

Table 3.1: Population of the Study

Description	Population(Employees)
Quantitative Data	
Department of Curriculum and Research Services	77
Department of Media and Extension Services	121
Department of Corporate Services	158
Sub Total	356
Qualitative Data	
Top Managers	8
MoE	5
Publishers	5
Sub Total	18
Total Population of the study	374

Source: Kenya Institute of Curriculum Development (2018)

The study population for quantitative data was 356 members of staff working with KICD in the departments of curriculum and research services, media and extension services and corporate services while the population for qualitative data was 18, comprising of top managers from KICD, MoE and publishers.

3.3 Sample Size

A sampling frame for the present study was constructed from the employees of KICD, publishers as well as Ministry of Education. Zikmund, *et. al.* (2013) and Mugenda and Mugenda (2012) recommended that for a sample size to be termed as sufficient for data collection and analysis, it should then range from 10 to 30 percent. For that reason, the

current research used a sample size of 20 percent of the total population (356) as shown in Table 3.2. Therefore, the study relied on a sample size of 71 employees working in KICD, who were picked through use of stratified sampling techniques where each department at KICD was taken as a stratum.

Table 3.2: Sample Size for Quantitative Data

Department	Population	Percentage %	Sample size
Curriculum and Research Services	77	20	15
Media and Extension Services	121	20	24
Corporate Services	158	20	32
Total	356		71

Source: Author (2019)

On the other hand, 18 respondents were targeted for qualitative data, which was done through use of purposive sampling technique. This method deemed fit since it enabled researcher in identifying the exact respondent. Interviews was conducted on 5 managers from different publishing houses, 8 top level managers from KICD and 5 top level managers from MoE, most of whom were found to be decision makers in their respective place of work as indicated in Table 3.3. This was done to ensure proportionality in the survey in order to avoid biasness to enhance robustness of the findings.

Table 3.3: Sample Size for Qualitative Data

Respondents	Population
Top level managers at KICD	8
Top level managers at MoE	5
Managers of publishing houses	5
Total	18

Source: Author (2019)

3.4 Data Collection Instruments

The study gathered quantitative and qualitative data in which the interview guide and the standardized questionnaire were combined, which allowed a diversified and rich data source from respondents. The benefit of gathering both quantitative and qualitative data helped the researcher to analyze the content in more detail. They helped to gain explanations and views from respondents. Qualitative research data was based on human experience and provided the researcher with more content.

The structured survey questionnaire was used in quantitative data collection as this allowed the respondents to provide a varied and rich source of data. The questionnaire had questions that were both open and closed with choices for topics under review. This approach was used by the study to separate answers from outside causes because the respondents were totally free to impartially share their attitudes or views.

The questionnaire designed by this study comprised of four sections (see appendix III, pages 99– 102). Section A included the demographic and operational characteristics.

Section B was devoted to the textbook evaluation process towards quality assessment of educational materials. Section C comprised questions on the aspect of policy implementation. Section D had questions on stakeholders' involvement towards quality assessment of educational materials.

The interview guides (as indicated in appendix IV and V, pages 103 – 106) were used to collect qualitative data, which was done through recordings. The interview guide contained questions that were used to get respondents' opinions on the provision of quality educational materials.

3.5 Data Collection Procedures

This survey collected primary data that highlighted aspects on quality assessment of educational materials by KICD. The choice of this method enabled gathering of the respondents' opinions based on the subject being investigated. Creswell (2011) says that the assertion of using quantitative approach can help in providing a deep understanding of research problems since it gives one a chance of selecting appropriate techniques available for data collection.

Copies of the study questionnaire was auto-administered via e-mail and using the drop-and pick approach to workers at the KICD. The submitted questionnaires were to be completed by a deadline. In order to provide high response levels, the researcher presented that section of the questionnaire to ensure that the questions were fully understood before the reply was received. To collect qualitative data, the researcher scheduled interview dates with managers of publishing houses and top-level managers

working at the KICD and MoE. The respondents were assured that the interview was meant for academic purposes only and their consent (see appendix I, page 97) was sought before the interviews were conducted since they included voice recordings.

3.6 Pilot Study

Pilot test of the steps against prospective sample population was performed prior to the actual study. In this survey, pre-testing the interview guide and a questionnaire was critical. The questions were re-examined to ensure they were not vague or misleading, resulting in skewed answers. A pilot survey was conducted to assess the validity of the mode of administration to be implemented (self-administration) and to test the reliability under actual data collection conditions.

The pilot study also enabled the researcher to determine the level of anticipated non-response and secure control of the respondents' potential co-operation. The optimal pilot test is (1% to 10%) of the sample size, according to Eisinga, TeGrotenhuis, and Pelzer (2013). Five officers were chosen for the pilot study, representing 6.75 percent of the population. The selected officers during the actual study were not included in the final response rate. The pilot study helped to improve the tool by establishing the validity of research based on the expert knowledge of other researchers, thus preventing the acceptance of falsified work within a field of study and providing valuable feedback for review and improving report.

3.7 Validity of the Instrument

Validity is the degree to which the test object specimen matches the material to be assessed by the analysis (Saunders, Lewis & Thornhill, 2016). The presence or absence of systematic error in information often referred to as non-random error is largely determined. The reliability of the material was introduced to check the measure's value. Content validity tests the degree to which information obtained using a common instrument represents a particular area or content of a particular concept. The author sought opinions of experts in the field of analysis, particularly the curriculum developers, to determine the credibility of the research tool. In addition, the supervisors helped assess the instrument's validity. This made it possible to revise and modify the research instrument and thus to improve its validity (Drost, 2012).

3.8 Reliability

Reliability refers to the calculating accuracy and is often measured through the measure reliability process. It is influenced by spontaneous errors. Reliability decreases as random errors rise (Mugenda & Mugenda, 2012). Reliability was improved through the inclusion of many similar measurements, by testing a variety of individuals and the use of uniform tests (Drost, 2012).

A pilot study was done amongst personnel at the KICD which improved the performance of the research instrument. In the actual study the pilot data was not included. The reliability of each questionnaire was achieved by correlating the scores for each variable. In checking the accuracy of the survey, the material moment correlation coefficient (r)

was used. The questionnaire was considered reliable if the value for r was closer to 1.0 and greater than 0.7 getting consistent responses when the same question was posed to the same respondent more than once (Cronbach, 1990).

3.9 Data Processing and Analysis

Qualitative results were analyzed and interpreted using content analysis. The data was recorded and transcribed in a practice based on the analysis of thematic content. The study also used quantitative analysis, in which data was evaluated using Version 23 of the Social Sciences Statistical System (SPSS). The data collected were well analyzed and comprehensibility tested. Afterwards, concise and inferential tests were conducted and coding procedures were observed. The results were interpreted descriptively after analysis, where the results were presented through charts, graphs, frequency tables and percentages. Data presentation was designed to highlight the findings and to explain the data or outcomes by displaying figures and tables so that general patterns could be easily identified.

On the other hand, the study involved the use of inferential analysis to estimate the relationship between independent and dependent variables. This was done through application of correlation and regression analysis where F -test was used to establish the joint significance of all coefficients while t -test and p -values were used as a measure of significance level of coefficients of the variables. Regression analysis was guided by the following regression analysis equation:

$$QAEM = \alpha + \beta_1 BE_1 + \beta_2 PI_2 + \beta_3 SI_3 + \varepsilon$$

Where:

QAEM=Quality assessment of educational materials

α = Constant

BE_1 = Book Evaluation

PI_2 = Policy Implementation

SI_3 = Stakeholders' Involvement

β_1, \dots, β_3 are regression coefficients of the variables

ε = Error term.

3.10 Ethical Considerations

Research ethics' as a concept refers to a complex set of values, standards and institutional schemes which contribute to science based exercise and restrict it (Anney, 2014). The research's ethical considerations are partly related to research tradition, which involves ties between researchers and partly respect for individuals and institutions, including the responsibility for the implementation and distribution of science. The researcher supported the conduct, design, analysis and dissemination of data gathering tools throughout the study in ethical consideration.

By ensuring the protection of confidential data made available during the whole research, the researcher concentrates on the core values of privacy and confidentiality. The right to

privacy is the freedom of the person to decide how his / her actions, behaviors or opinions can be made public (Crête 2003).

The right to privacy requires anonymity, which ensures that the author or anyone else can never connect a respondent to the data and secrecy which is a promise that the participants' information will not, except where express consent is given, be openly divulged or obtained to anyone other than participants of study. Privacy and anonymity were ensured and the collected data was used for the analysis only (Ilhéu, 2016, pp. 18-19).

The confidentiality, anonymity and data collected were guaranteed and used for academic purposes only. The informed consent was also an important principle to which the author concentrated. It is illegal for individuals to be used as informants without their consent or their legal representatives' direct, free written consent.

Such agreement must always be achieved before the evidence is gathered by any kind of contact, interaction or involvement with the participants or when it requires the detection of actions in a personal or social environment where respondents may reasonably assume that there is no measurement (Almeida, 2013). Before participating in the study the participants were well informed and sought their consent (see appendix I). The participants were told that they were free to take part in the study and should be free to withdraw at all times from the study.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1 Introduction

This chapter covered data presentation, interpretation and discussion of the findings. The aim of the study was to examine the quality assessment of educational materials by the KICD. The study specifically resolved to estimate how independent variables which in this case were proxied by book evaluation, policy implementation and stakeholders' involvement, influence quality assessment of educational materials. The study's goal was achieved through analysis of the primary data gathered based on concepts under study. Therefore, this chapter was comprised of three sections, the first one being qualitative analysis, the second one is quantitative analysis and the third one was that of discussion.

4.2 Personal Information

The respondents' personal information was examined based on their highest educational achievement, gender, age bracket, and experience of work.

4.2.1 Employees' Highest Education Achievements

On the question requiring the respondents to state their highest level of education, the study provided the results as shown in Table 4.1 below:-

Table 4.1: Highest Level of Education

Educational Level	Frequency	Percent
Higher Diploma	12	18.2
Bachelor's Degree	40	60.6
Post Graduate	14	21.2
Total	66	100

Source: Author (2019)

From the findings given, it can be construed that majority of the respondents with a representation of 60.6 percent had bachelors' degree as their highest educational achievement. About 21.2 percent of them were found to have attained post graduate degrees, while those who were found to have higher diplomas had a representation of 18.2 percent. The results imply that the employees of KICD have prerequisite education levels which can enable them execute their duties.

4.2.2 Gender of Respondents

The research required the respondents to indicate their gender and the results are as provided in Figure 4.1.

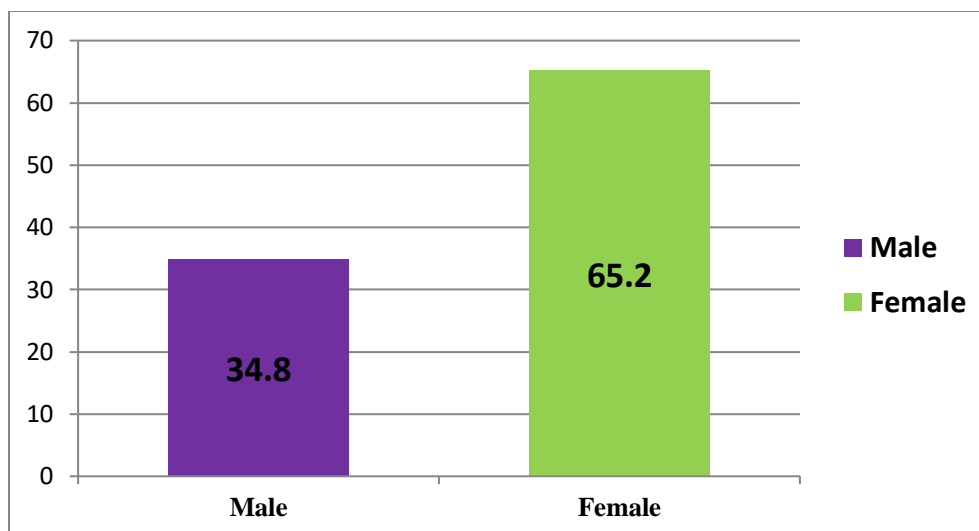


Figure 4.1: Gender of Respondents

Source: Author (2019)

It can be construed that most of the respondents who filled and returned their questionnaires for analysis were female represented by 65.2 percent. On the other hand, male respondents had a representation of 34.8 percent. This could therefore, indicate that employees of KICD are comprised of mixed gender.

4.2.3 Age of the Respondents

In addition, the research sought to establish the age of respondents who participated in this survey. This was done based on the reasonable age brackets which ranged between 18 – over 46 years which was arranged in ascending order on the basis of increase in age and percentage measures as indicated in Table 4.2.

Table 4.2: Age Brackets of the Respondents

Age in Years	Frequency (n)	Percent (%)
18 – 25 years	12	18.2
26 – 30 years	9	13.6
31 – 35 years	13	19.7
36 – 40 years	12	18.2
41 – 45 years	6	9.1
46 years and above	14	21.2
Total	66	100

Source: Author (2019)

It can be deduced that employees who were in the in age bracket of 46 years and above led with a representation of 21.2 percent. This was followed by the respondents in the age group ranging from 31 – 35 years with a representation of 19.7 percent. Those who fell in the age brackets of between 18 – 25 years and 36 – 40 years each had a representation of 18.2percent. In addition, 9 respondents with a representation of 13.6percent indicated to belong in the age set of between 26 and 30 years. A small percentage of 9.1 percent accounted for the respondents in the age bracket of 41 – 45 years. In addition, it can be deduced that over 50 percent of employees are 35 years and below. These results have indication that the employees of KICD are of mixed age groups and thus, a sign of good representation of all ages.

4.2.4 The Period of Work at KICD

To ascertain the duration of which employees have worked at KICD, the researcher as well resolved to categorize the period into various manageable sizes as shown in Table 4.3 below.

Table 4.3: Responses on Duration of Work

Duration in Years	Frequency (n)	Percent (%)
1-5 years	2	3.0
6-10 years	15	22.7
11-15 years	12	18.2
16-20 years	27	40.9
21-25 years	6	9.1
26 years and above	4	6.1
Total	66	100

Source: Author (2019)

The findings indicate that almost half of the respondents (40.9 percent) were found to have worked at KICD for a period of between 16 – 20 years. Those who had been employed by KICD for duration of 6 – 10 years had a representation of 22.7percent. Furthermore, the research findings revealed that 18.2 percent of the respondents had served at KICD for a period ranging from 11 – 15 years. Those who had been employees of KICD for a duration of between 21 – 25 years and 26 years and above had a representation of 9.1 percent and 6.1 percent respectively. The remaining 3 percent of the respondents were found to have worked at KICD for less than 5 years. This could be an

implication that most of the respondents had worked at KICD long enough and therefore, were in position to understand the operations undertaken in their line of duty.

4.3 Textbook Evaluation

The respondents were required to give their views on the statements regarding the extent to which aspects of book evaluation contributed to provision of quality assessment of educational materials. This was done based on a Likert scale measurement where 1 stood for no extent, 2 meant less extent, 3 was for moderate extent, 4 translated to great extent, and 5 represented very great extent as indicated in Table 4.4.

Table 4.4: Textbook Evaluation

Descriptive Statistics	N	Minimum	Maximum	Mean	Std. Deviation
Evaluation process is considered as a vehicle to ensure the quality and objectivity	66	3.000	5.000	4.31667	0.624138
Our institution ensure that the boards and private publishers produce textbooks based on the approved guidelines and curriculum	66	3.000	5.000	4.30000	0.671452
Textbooks are evaluated in terms of content, length and pedagogical aids	66	2.000	5.000	4.23333	0.789049
The evaluation focuses mainly on comparison of the content covered in the books as a measure of their acceptability for use.	66	1.000	5.000	3.95000	0.909926
The evaluators examine human interest and writing style and rank the books according to their scores on all three factors	66	1.000	5.000	3.68966	1.095556
The evaluation process in terms of random sampling of book chapters and passages	66	1.000	5.000	3.41379	1.124441

Source: Author (2019)

In relation to results given in Table 4.4, it can be seen that KICD considers evaluation process as a vehicle of ensuring quality and objectivity (Mean = 4.31667 and standard deviation of 0.624138). Another aspect given priority at the time of book valuation is KICD ensuring that the boards and private publishers produce textbooks based on the approved guidelines and curriculum since it produced a high mean of 4.30000 with a standard deviation of 0.671452.

The issue of KICD evaluating textbooks in terms of content, length, and pedagogical aids was also ranked high as it scored a mean value of 4.23333 and a standard deviation of 0.789049. The evaluation of books focusing mainly on comparison of the content covered in the books as a measure of their acceptability for use also reported a mean of 3.95000 and a standard deviation of 0.909926. This was followed by the statement of evaluators examining human interest and writing style as well as ranking the books according to their scores on all three factors (Mean = 3.68966, Standard deviation = 1.095556). Ultimately, the factor of KICD evaluating books in terms of random sampling of their chapters and passages was done but to a moderate extent (Mean = 3.41379, standard deviation = 1.124441).

This revelation show that KICD mostly rely on the following key aspects at process of book evaluation: evaluation process being considered as a vehicle to ensure the quality and objectivity; the institution ensuring that the boards and private publishers produce textbooks based on the approved guidelines and curriculum; and textbooks being evaluated in terms of content, length and pedagogical aids.

4.4 Policy Implementation

Furthermore, the participants who responded to the questionnaire of this study were required to give their views on process of policy implementation towards quality assessment of educational materials. From the output shown in Table 4.5, it can be opinionated that the respondents agreed with the institution's policies for quality education being anchored within teaching and learning framework (Mean = 4.18182, standard deviation of 0.839580). The study findings also revealed that the respondents were agreeable to the statement that pedagogical competencies were being included in the evaluation of books and career progression policies (Mean = 4.15152, and a standard deviation of 0.996029). Similarly, with a mean of 4.11290 and a standard deviation of 0.976861, it was discovered that human resources policies supported the strategic objective of quality educational materials at KICD.

Furthermore, the aspect of policies being reviewed regularly to identify inconsistencies on policies that could hinder quality education was important as it has a mean of 4.07576 with a standard deviation of 1.099799. The findings also show that the respondents moderately agreed (Mean = 3.95161, Standard deviation of 1.136971) to the statement that technology policy was well aligned with evidence on ways to use IT for more effective production of quality educational materials. Consequently, the study found out that the policies on remuneration were not being prioritized since the respondents moderately agreed (Mean = 3.67188, standard deviation = 1.182608) that there existed policies on remuneration package that reflected the full range of effective book production, teaching and learning practices.

Table 4.5: Policy Implementation in Quality Educational Materials

Descriptive Statistics	N	Minimum	Maximum	Mean	Std. Deviation
Institution's policies for quality education are anchored within teaching and learning framework	66	1.000	5.000	4.18182	.839580
Pedagogical competencies are included in the evaluation of books and career progression policies.	66	1.000	5.000	4.15152	.996029
Human Resources policies support the strategic objective of quality educational materials	62	1.000	5.000	4.11290	.976861
Policies are reviewed regularly to identify inconsistencies on policies that could hinder quality education.	66	1.000	5.000	4.07576	1.099799
Technology policies are well aligned with evidence on ways to use IT for more effective production of quality educational materials.	62	1.000	5.000	3.95161	1.136971
There exist policies on remuneration package that reflects the full range of effective book production, teaching and learning practices.	64	1.000	5.000	3.67188	1.182608

Source: Author (2019)

It can, therefore, be said that KICD focuses on the following aspects when it comes to the process of policy implementation: institutional policies for quality education being anchored within teaching and learning framework; pedagogical competencies being included in the evaluation of books and career progression policies; HR policies supporting the strategic objective of quality educational materials; and the aspect of policies being reviewed regularly to identify inconsistencies on policies that could hinder quality education.

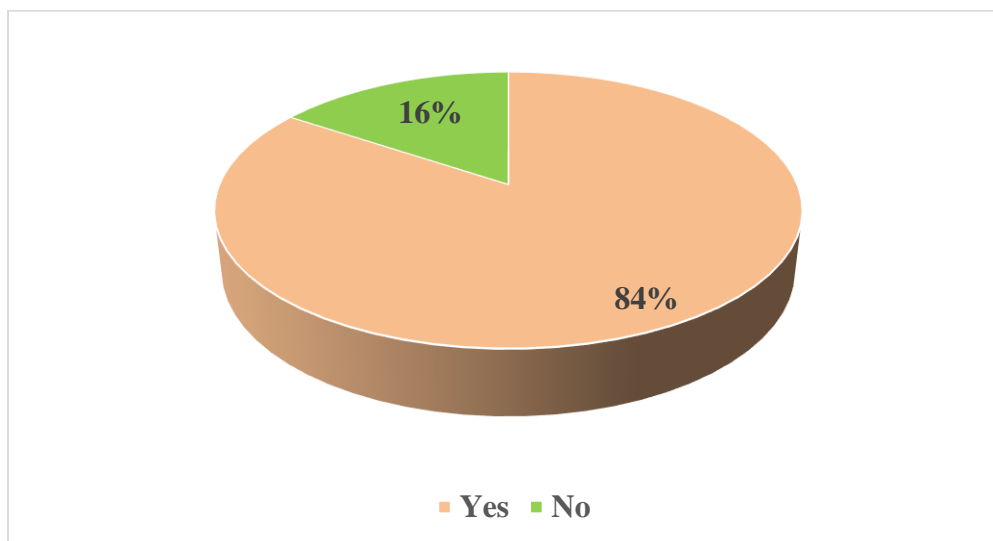
4.5 Stakeholders Involvement

This subsection deals with the aspect of how KICD involves stakeholders towards quality assessment of educational materials by the KICD.

4.5.1 Full Participation of Stakeholders

The study sought to establish whether KICD fully involved all the stakeholders in the effort of providing quality assessment of educational materials to schools below the University level in Kenya. The findings given in Table 4.6 indicate that an overwhelming majority (84.4 percent) of the respondents acknowledged that all stakeholders normally participate towards provision of quality assessment of educational materials. On the contrary, about 15.6 percent of the respondents thought otherwise.

Figure 4.2: Participation of Stakeholders in Quality Educational Materials



Source: Author (2019)

4.5.2 Selection Criteria of Stakeholders at KICD

From those who agreed with the above questions, 39.3 percent of them revealed that KICD uses the criteria of content coverage/accuracy in choice of stakeholders to be involved. Approximately, 18 percent of them stated that the institution was basing on the cultural diversity to choose stakeholders. About 16.9 percent of those who responded to this question indicated that KICD relied on the criteria of looking at educational impact to settle on the right stakeholder to be involved in provision of quality educational materials. Furthermore, an estimate of 14.6 percent of them highlighted pedagogical aids as a criteria being used by KICD to select its stakeholders, while the other 11.2 percent said that this institution focuses on the criteria of readability when determining the involvement of its stakeholders.

Table 4.6: Selection Criteria of Stakeholders at KICD

Criteria	Frequency (n)	Frequency (%)
Content coverage/accuracy	35	39.3
Cultural diversity	16	18.0
Educational impact	15	16.9
Pedagogical aids	13	14.6
Readability	10	11.2
Total	89	100

Source: Author (2019)

Therefore, from the above study findings it can be construed that KICD mostly observe the criteria of content coverage and accuracy in determination of the involvement of stakeholders in the process of providing quality educational materials for both primary and secondary schools in Kenya.

4.5.3 Stakeholders' Involvement

On the question which required the respondents to indicate whether various stakeholders were involved/not involved in the entire process of quality assessment of educational materials to schools below the University level in Kenya, the output of the results are as illustrated in Table 4.8. The findings point out that 95.2 percent of the respondents acknowledged that KICD involves quality assurance officers from MoE in the entire process.

Table 4.7: Percentage Involvement of Stakeholders

Criteria	Involved (%)	Not Involved (%)
Quality Assurance Officers (MoE)	95.2	4.8
Teachers/lecturers/instructors	92.1	7.9
Administrators	92.1	7.9
Curriculum developers	87.3	12.7
Publishing houses	81.0	19.0
County Education Officers (MoE)	79.4	20.6
Printing houses	74.6	25.4

Source: Author (2019)

On equal measure, responses on involvement of teachers/lecturers/instructors and administrators each had a representation of 92.1 percent. The study further ascertained that 87.3 percent of the respondents cited involvement of curriculum developers. On the same note, about 81 percent of the respondents said that KICD involves publishing houses in the entire process. County education officers residing at MoE were found to be involved in the process of providing quality educational materials as indicated by 79.4 percent of the respondents. Likewise, about 74.6 percent of the respondents stated that print houses are involved by KICD in the entire process of quality assessment of educational materials. It can be summed up that KICD mostly rely on quality assurance officers from MoE, teachers/lecturers/instructors, administrators, curriculum developers, and publishing houses in the entire process of provision of quality educational materials across the country.

4.6 Test of Assumption Using Kolmogorov-Smirnova and Shapiro-Wilk

Normal distribution of data is a condition that many statistical operations require to be met before the data proceeds for further analysis. The data was tested for normality using the Shapiro-Wilk test and confirmed using Kolmogorov-Smirnov and the results are as given in Table 4.8. The data obtained on the variables under investigation show that the significant value for each variable was found to be marginally more than 0.05. An indication that data employed in the analysis was normally distributed around the mean. Tabachnik and Fidell (2007) suggested that significance value more than 0.05 indicates that the data is normally distributed. On the other hand, a significance value below 0.05 suggests violation of the assumption of normality.

Table 4.8: Test of Assumption Using Kolmogorov-Smirnova and Shapiro-Wilk

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Quality Assessment	.321	63	.070	.676	63	.098
Evaluation Process	.154	58	.092	.924	58	.088
Policy Implementation	.159	60	.101	.844	60	.090
Stakeholders	.206	48	.176	.882	48	.123

a. Lilliefors Significance Correction

4.7 Test of Multicollinearity

The study tested multicollinearity based on variance of inflation factor (VIF) and tolerance values. The VIF indicates whether a predictor variable has a strong linear relationship with dependent variable. Multicollinearity occurs when there is a high degree of correlation between independent variables (Ombaka, 2014). Hair et al. (2006) opine that VIF value greater than 5 is a sign of collinearity and a cause of concern. Multicollinearity increases the standard errors of the coefficients and thus makes some variables statistically insignificant while they should otherwise be significant. According to O'Brien (2007), a tolerance value of less than 0.20 indicates serious collinearity problems. The results on test of multicollinearity are as presented in Table 4.9

Table 4.9: Test of Multicollinearity

Coefficients^a			
	Model	Collinearity Statistics	
		Tolerance	VIF
1	Evaluation Process	.561	1.783
	Policy Implementation	.495	2.021
	Stakeholders Involvement	.823	1.215

a. Dependent Variable: Quality Assessment

The outcomes provided in the Table 4.9, have confirmed that the VIF for all the predictor variables under study were below 5 with the highest being 2.021 and the lowest being 1.215. Tolerance values were found to be above 0.2. An indication that the relationship

between all the predictor variables under the study towards dependent variable indicated absence of multicollinearity between them and were considered fit for further analysis.

4.8 Inferential Analysis

The study employed use of inferential analysis where correlation estimates were carried out to determine the association between variables. To add on that, the study carried out regression analysis based on the model provided in the sub-section of data processing and analysis. This was done to estimate the relationship between independent and dependent variables.

4.8.1 Correlation Results

Based on the methods proposed in the preceding chapter, the study variables underwent correlation analysis to estimate the association between the dependent variable and the independent variables. The dependent variable in this case was quality educational materials while the independent variables were represented by book evaluation, policy implementation as well as stakeholders' involvement. From the findings given in Table 4.10, it can be deduced that a unit increase in the ratio of stakeholders' involvement is associated with 37.5 percent decrease in quality of educational materials. On the other hand, the variable of book evaluation and policy implementation seem not to have significant correlation since they produced insignificant coefficient and p – values of 0.216 (p - 0.132) and 0.176 (p - 0.204) respectively.

Table 4.10: Correlation Analysis

		Quality Educational materials	Book Evaluation	Policy Implementation	Stakeholders' Involvement
Quality Educational Materials	Pearson Correlation	1	0.216	0.176	-0.375**
	Sig. (2-tailed)		0.132	0.204	0.004
	N	66	66	66	66
Book Evaluation	Pearson Correlation	0.216	1	0.006	-0.148
	Sig. (2-tailed)	0.132		0.963	0.276
	N	66	66	66	66
Policy Implementation	Pearson Correlation	0.176	0.006	1	0.240
	Sig. (2-tailed)	0.204	0.963		0.069
	N	66	66	66	66
Stakeholders' Involvement	Pearson Correlation	-0.375**	-0.148	0.240	1
	Sig. (2-tailed)	0.004	0.276	0.069	
	N	66	66	66	66

** . Correlation is significant at the 0.01 level (2-tailed).

4.8.2 Regression Results

The study further carried out regression analysis where the results on model summary was determined based on the R squared. Analysis of Variance (ANOVA) output was as well given where F -test and p – value were used to establish the joint significance of all coefficients. Moreover, the regression model provided the coefficients of variables together with t – tests and p – values which were used as a measure of significance level of coefficients of each independent variable on dependent variable as indicated in Tables 4.11 – 4.16.

4.8.3 Effect of Book Evaluation, Policy Implementation and Stakeholder’s Involvement on Quality Assessment of Educational Materials

Regression analysis was done to establish the effect of Book Evaluation, Policy Implementation and stakeholder's Involvement on quality educational materials and was guided by the following equation:

$$QAEM = \alpha + \beta_1 BE_1 + \beta_2 PI_2 + \beta_3 SI_3 + \varepsilon$$

Where: QAEM represented quality assessment of educational materials, BE_1 is a sign of book evaluation, PI_2 was an abbreviation of policy implementation, SI_3 stood for stakeholders’ involvement, α is the constant value, $\beta_1 \dots \beta_3$ are regression coefficients of the variables, while ε is the error term.

The summary results given in Table 4.11 indicate that the regression model provided a combined correlation R-value of 0.615 and an R squared value of 0.378. This indicates that the entire process of book evaluation, policy implementation and stakeholder's involvement has possibility of explaining 37.8 percent of quality in educational materials.

Table 4.11: Summary of the Regression Model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.615 ^a	0.378	0.329	0.702185

a. Predictors: (Constant), Book evaluation, Policy implementation, Stakeholders' involvement

The output of ANOVA shown in Table 4.12 below gave a regression sum square of 11.402 and a residual sum square of 18.736 with mean squares of 3.801 for regression and 0.493 for residual. With an F – statistics of 7.708 and a significant value of 0.000, the model shows that the independent variables used in this study were acceptable and fit to determine the dependent variable and therefore an indication that the study should reject any null hypothesis that book evaluation, policy implementation, and stakeholders' involvement does not influence quality assessment of educational materials.

Table 4.12: ANOVA Results

	Model	Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	11.402	8	3.801	7.708	0.000 ^b
	Residual	18.736	56	0.493		
	Total	30.138	64			

a. Dependent Variable: Quality assessment of educational materials

b. Predictors: (Constant), Book evaluation, Policy implementation, Stakeholders' involvement

Moreover, the model gave estimations on the effect of individual aspects of independent variables under investigation and the findings of regression coefficients are as illustrated in Table 4.13. The estimations on coefficients revealed that policy implementation was significant in determining the quality assessment of educational materials since this variable provided a positive beta value of 0.111 accompanied by a strong t – value of 2.429 supported by significant value (p – value) of less than 0.5. On the opposite, stakeholders' involvement was found to have a significant but negative effect on quality assessment of educational materials given a beta value of -0.423 (t – value of -4.228) with a significant value of 0.000. The variable of book evaluation seems not to have a significant effect on quality assessment of educational materials.

Table 4.13: Results of Regression Coefficients

Model	B	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
		Std. Error	Beta		
(Constant)	7.057	0.832		8.483	0.000
Book evaluation	-0.086	0.045	-0.317	-1.916	0.063
Policy implementation	0.111	0.046	0.404	2.429	0.020
Stakeholders' involvement	-0.423	0.100	-0.552	-4.228	0.000

a. Dependent Variable: Quality educational materials

4.8.4 Moderating Effect of Personal Attributes on Relationship between Book Evaluation, Policy Implementation and Stakeholder's Involvement Towards Quality Assessment of Educational Materials

The study further established the moderating effect of personal characteristics on the relationship between the independent and dependent variables. Thus, after controlling with personal characteristics like age, gender, experience, and educational level, the model's *R* and *R* squared improved to 0.698 and 0.488 respectively as shown in Table 4.14. This is an indication that all the independent variables with inclusion of personal attributes can explain 48.8 percent in quality assessment of educational materials in by the KICD.

Table 4.14: Summary of the Regression Model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.698 ^a	0.488	0.382	0.673912

a. Predictors: (Constant), Book evaluation, Policy implementation, Stakeholders' involvement, Age, Gender, Experience, Educational level

Table 4.15 shows that the estimation of analysis of variance registered a regression sum square of 14.697 with a mean of 2.100 and a residual sum square of 15.441 accompanied with a mean square of 0.454. The model provided an F – statistics of 4.623 and an acceptable p – value of 0.000. Therefore, from the results of p – value reported, it can be said that the study should reject the null hypothesis that book evaluation, policy implementation, stakeholders' involvement, age, gender, experience, educational level jointly has no effect on quality assessment of educational materials.

Table 4.15: ANOVA Results

	Model	Sum of Squares	Df	Mean Square	F	Sig.
	Regression	14.697	9	2.100	4.623	0.001 ^b
1	Residual	15.441	54	0.454		
	Total	30.138	63			

a. Dependent Variable: Quality educational materials

b. Predictors: (Constant), Book evaluation, Policy implementation, Stakeholders' involvement, age, gender, experience, educational level

The results of regression coefficients are as displayed in Table 4.16. It can be construed that upon addition of personal attributes, only book evaluation, stakeholders' involvement, plus gender of employees became significant. However, they all seem to have a negative impact on quality assessment of educational materials. Book evaluation has a coefficient value of -0.122 ($t = 2.611$) and a p – value of 0.013. Similarly, stakeholders' involvement gave a coefficient value of -0.394 ($t = 3.854$) with a p – value of 0.000. Moreover, employees' gender also provided a coefficients value of -0.697 ($t = 2.473$) and a p – value of 0.019.

On the other hand, policy implementation, educational level, experience, age did not have significant effect on quality of educational materials since they reported weak p – values less than the recommended threshold of 0.05.

Table 4.16: Results of Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	10.358	1.589		6.517	0.000
Book evaluation	-0.122	0.047	-0.449	-2.611	0.013
Policy implementation	0.082	0.048	0.299	1.722	0.094
Stakeholders' involvement,	-0.394	0.102	-0.514	-3.854	0.000
Educational level	-0.306	0.224	-0.201	-1.365	0.181
Gender	-0.697	0.282	-0.350	-2.473	0.019
Experience	-0.053	0.105	-0.068	-0.501	0.619
Age	0.009	0.069	0.017	0.132	0.895

a. Dependent Variable: Quality educational materials

4.9 Qualitative Analysis

The qualitative data was gathered through interviews conducted on 18 interviewees who included managers of publishing houses and top level management of both KICD and MoE. Thereafter, recorded data underwent transcription and description through a pragmatic process based on thematic content analysis. This was done based on the objectives of the study and in line with topical focus, which was on quality assessment of educational materials by KICD.

4.9.1 Evaluation Process as a Tool for Quality Assessment of Educational Materials

The study sought for the criteria and procedure used by KICD in selecting quality educational materials to be used in Kenyan schools. The results revealed that the institution uses vetting teams, use of guides in orange book, and evaluation of books by relevant subject officers. A top manager at MoE responded by stating that; “The publishers are requested to submit the materials for vetting. Teams for vetting are invited to go through the materials. Vetted materials are authorized for sale and use. Thereafter, vetted materials are added to the orange book.” Another officer in the MoE stated that the materials and book evaluation is done by selected subject officers.

A Top-level manager at KICD also indicated that the materials cover the syllabus and have a teacher’s guide and the technical specifications allow mass usage of textbooks for 4 – 5 years. Other criteria followed by KICD included development of checklists and scoring lists, advertisement of approvals through media, observing language and style, appropriateness, relevancy and accuracy. Using standard tools to vet learning materials,

as well as using panel system for evaluation. A top-level manager also indicated that “Course materials are submitted for evaluation and approval and this is done in two popular daily newspapers, i.e. the Daily Nation and the Standard. The criteria used in vetting can also be found on the KICD website”.

The study sought to ascertain the views of publishing house managers on how they ensure quality text fonts in terms of colour, size and type. Most of the publishing houses were found to follow the guidelines set by KICD. “Font size and type suggested by KICD and in the tender documents is strictly adhered to” (Publishing house manager). This was seconded by another manager who said that “Standard text fonts are set and categorised in terms of classes or rather level of classes such as pre-school, lower primary, secondary and tertiary.” The quality of learning materials in relation to choice of paper and binding style was found to be determined by target users, size of book and grammage. “Paper binding styles are dictated by target users and book sizes. The grammage is dictated by targeted users and books” clarified a publishing house manager. The choice of paper and binding style was also found to be based on KICD’s guidelines. This is as supported by one of the managers in publishing houses who stated, “Choice of paper and style of binding is done in conformity to KICD technical specifications.”

The study requests the publishing house managers to state any other measures taken by their firms to ensure quality in provision of educational materials to Kenyan primary and secondary schools. The managers gave various options available at their respective publishing houses and which are applied to ensure quality of educational materials. For instance, a publishing manager revealed that they adhere to guidelines given by KICD

and also proof-read contents before publishing. “Our firm insists on adhering to KICD regulations. We also make sure that the content to be published undergoes thorough proof reading before being published. This helps us to ensure that all errors are removed” said a publishing house manager). Other publishing houses were found to rely on qualified publishing team to ensure quality in publication of educational materials. “We have a dedicated and highly motivated publishing team/production team to deliver quality” said a publishing house Manager.

The publishing house managers were requested to recommend or suggest what they think KICD would address towards quality assessment of educational materials in Kenyan primary, secondary and tertiary learning institutions. The findings indicated that KICD is required to give enough time in development of contents, involve qualified teachers in evaluation, rely on feedback from researches done, adhering to set rules and regulations and consultations from all the relevant stakeholders. “KICD should incorporate publishers in vetting process because most of the time the evaluators do not understand the process of book development,” said one of the publishing house managers. This was reinforced by a different manager who articulated;

KICD should do wide consultation from the relevant departments and stakeholders while strictly adhering to rules and regulations on evaluation content. They should seek services of qualified teachers to be evaluators and give enough time to acquisition and development of content and submission after floating tenders. A manager of a publishing house, August, 2019.

The top-level managers from both KICD and MoE were asked to mention some of the challenges they encounter in the process of evaluation of educational materials. From the feedback given, it is evident that KICD is faced with myriads of problems related to quality in educational materials. Some of the challenges mentioned included: substandard

materials for vetting, too many materials to evaluate, pressure from publishers, inadequate funds, corruption, limited time, shortage of skilled personnel and infiltration of irrelevant materials in market. “Some of the challenges we encounter in bid to ensure quality in learning materials are: lack of funds, some materials not meeting specifications, corruption by some publishers who reach out to panelists, and some subject materials do not attract many publishers as they are narrow and publishers can’t find them viable”. A top level manager at MoE reiterated. Another top-level manager from KICD contributed by saying that;

There are a few cases of conflict of interest on the part of evaluators and publishers. We have also received few cases where no materials pass the thresholds set yet the learners are needy. Similarly, there was also a case of language barrier. For particular learning areas, publishers do not provide materials in their language(s) notably foreign languages and Hindu Religious Education. The issue of inadequate funds is a hindrance to our services provision and this makes KICD not to have capacity or mandate to regulate what is sold in stores.

KICD top-level manager 2019

The study sought to find out some of the common errors noted in Kenyan educational materials in the past two years. The interviewees who included top managers from both MoE and KICD highlighted the following errors: factual errors, typographical errors, missing dates of approval, contextual errors, editorial errors, lack of clarity of font and illustrations, pictures not corresponding to content, inaccurate information, wrong bidding methods, grammatical errors, wrong formulas, and numbering errors. “We experience editorial errors, some content not clear, typographical errors, and some pictures in the materials not corresponding to the content”, elaborated a top-level manager from MoE. During the evaluation of learning materials at KICD, a senior officer indicated “we encounter errors in terms of content (factual errors), the accurate data of

statistics of learners not clear and the data is always inconsistent and does not represent the facts on the ground.”

The research identified the causes of the aforementioned errors and the interviewees highlighted them as follows: “a major cause of such errors is politics in publishing where the error issue is untruly caused by computation. Some books which underwent evaluation in the past 10 years are found in circulation” (KICD manager). Similarly, another manager from MoE ascertained that “publishers do not correct the already circulating materials even after the errors have been identified and publishers selling materials that have not been validated by KICD.” Apart from that, other top level managers mentioned causes of errors such as pressure of approval of books, corruption, inadequate quality writers, publishers working in a hurry to beat set deadlines, inadequate editing, lack of vigilance by authors, limited understanding of some languages by some publishers, some publishers put books on market before they are vetted and evaluated, and cut throat competition. “This is caused by improper planning leading to rushing through the process to meet set timelines, lack of vigilance and attention to details by some panelists and biasness in approvals” added a top level manager from KICD.

Furthermore, the study enquired to know how KICD respond to errors realized in school textbooks and the responses given show that they re-evaluate textbooks, publishers are notified of the errors to take action, panels are reconvened, corrections done, withdrawal of erroneous curriculum support materials, issuance of addendums, periodically reviewing materials, accepting memorandum from Kenyans and interaction with book users. “Authors are advised to correct the errors and reprint of books which have errors is

done” said a top level manager from KICD. In the same context, a senior top manager from the KICD stated as follows;

The institution is required to check to confirm the truth in the error(s) made, call for erratum for errors of less than 3 percent, then call for reprint for errors above 5 percent and recall the books with errors above 10 percent .” We carry out the root cause analysis to determine the exact cause of error(s). Revision of the affected materials is called for issuance of an erratum and authors/publishers acknowledging and owning up the errors with the view of correcting them.

Top level manager KICD, August 2019.

4.9.2 Educational Policies that lead to Quality Assessment of Educational Materials

In establishment of the policies undertaken by MoE and KICD to ensure quality in the process of provision of educational materials, the interviewees highlighted a number of measures. A top manager from MoE voiced that “MoE has setups of panels from the educational sector to vet materials for primary and secondary schools” Another measure identified by this research was distribution of course books where a top level manager said that “The Ministry of Education has distributed course books to primary schools across the country, for instance, Tusome books.”

On the same note, another top-level manager expressed that:

The data is gathered concerning the gaps identified before materials are organized in terms of scope and sequence, then designed and developed to give solutions to the writers/authors and publishers to follow. Furthermore, the content materials are vetted and evaluated before they are released to schools. Therefore, the ministry publishes the approved materials. Top manager from MoE August, 2019.

The top-level officers from KICD also shared similar sentiments where the institute was found to focus on proper implementation of quality educational frame works like Quality

Assurance and Standards directorate, vetting of learning materials and training of evaluators.

The evaluation of education instructional materials is carried out in two stages, which involve both content and technical evaluation. At the onset of the Government of Kenya procurement further content clean-up is done and certification of technical specifications can be of mass production. Inspection is then done at printing houses and at schools to ensure quality. Top manager from KICD August, 2019.

“At KICD, other measures taken include; evaluation of print and electronic curriculum support materials; monitoring of audit materials and following the constitution of subject panels with practicing teachers” voiced another top-level manager at KICD. In addition, a different top manager at KICD reiterated, “the materials are taken through a validation process which is done by KICD. The MoE through Quality Assurance and Standards directorate monitors and establishes the kind of materials being used at school and procurement and supplies of materials to schools is done by the MoE”.

4.9.3 Stakeholders Involvement towards Quality Assessment of Educational

Materials

The interview as well addressed the aspect of stakeholders’ involvement in the process of book evaluation. The study findings showed that the entire process of book evaluation is done by various parties among them being subject teachers, quality assurance officers, Kenya National Examinations Council, curriculum developers, printing and publication members, officials from MoE, the evaluation committees, the academic committees, independent translators and KICD subject officers. A top-level manager at MoE articulated; “We involve subject teachers with reputable record on curriculum

implementation in a physical classroom. Quality assurance and standards officers and KICD subject officers with subject specialty are also involved”.

The quality in book evaluation is observed through involvement of various stakeholders. Policy makers approve the procedures; content masterly staff members ensure content in various subjects or learning areas; print and publication officers are in-charge of confirming the technical specifications. We also involve the Ministerial textbook evaluation committee, the KICD evaluation committees, the teachers and the academic committees. A top-level manager from KICD, August, 2019.

The researcher then narrowed down and focused on publishers as the main KICD stakeholders, with a view to analyze their involvement towards quality assessment of educational materials by KICD. The study, therefore, resolved to understand how publishing houses addressed the issue of content coverage based on scope and depth in the process of ensuring quality in school textbooks. From the feedback provided, it was generally indicated that most of publishing houses focus on conformity to design of curriculum, content moderation, copy editing, proof reading, internal quality checks and control. “Our publishing house adheres to the curriculum design during the moderation of the content written by author” said a manager from one publishing house. On the same note, another publishing house manager supported the findings by saying that “content developed by author is thoroughly moderated.” This was further articulated by another sentiment made from a manager of a different publishing house who stated, “Content coverage is guided by a researched and tested curriculum adapted after doing a needs assessment.”

On the aspect that sought to determine how publishing houses undertook the general artworks and illustrations of the textbooks of primary and secondary schools, the study

found out that publishing houses focus on expertise of qualified artists. “We seek the services of qualified artists. The illustrations and artworks are first received by the organization’s designer to ensure that they are of high quality” said one of the publishing house manager. The findings of the research as well revealed that publishing houses depend on qualified freelance artists, moderation by editors and authors. “Our publishing house seeks services of qualified freelance artists. Illustrations briefs are moderated by authors and editors. Books’ illustrations also pass through design section for quality checks before being placed in books.” On the other hand, another publishing manager stated, “our in-house team passes and approves all artworks and illustrations before they get into a book.”

4.10 Discussion

The qualitative findings established that KICD follow some policies and guidelines from various bodies to ensure quality in educational materials. These involved assurance and standard directorate, vetting learning materials and training of evaluators, use of guides in orange book, evaluation of book by relevant subject officers as well as development of checklists and scoring lists. When the independent variables (book evaluation, policy implementation, stakeholders’ involvement) were regressed with dependent variable (quality educational materials), it was found out that policy implementation was positively affecting quality of educational materials. It can therefore, be interpreted that an increase in proper and viable policies can lead to increase in quality of educational materials. A research done by Farrell (2007) found out that the policies followed in analyzing educational materials are essential in ensuring quality. This researcher categorized these policies as either being private or public publishing and/or being in the

category of local or international control publishing. To add on that, Djurovic (2011) study revealed that the root of interdisciplinary access concerning textbook production in Serbia was based on the educational policy established in the early nineteenth century.

The qualitative findings showed that the entire process of book evaluation is done by quite a larger number of stakeholders among them being subject teachers, quality assurance officers, Kenya National Examination Council, curriculum developer, printing and publication members, officials from ministry of education, the evaluation committees, the academic committees, independent translators and KICD subject officers. Despite all these participants, the study established that there still exists noticeable errors in the learning materials being supplied in the Kenyan schools. The findings concurred with that of quantitative outcomes, which showed that a reduction in the number of stakeholders involved in production of quality educational materials can improve quality of educational materials. In other words, an increase in the number of stakeholders involved in production of quality educational materials reduces quality of educational materials. Sewall (2005) states that the contents of a textbook are decided in the USA for example by field leaders, marketing teams, industry analysts, product managers and publisher.

Nevertheless, after controlling for covariates of personal attributes, it was discovered that book evaluation, stakeholders' involvement, plus gender of employees were affecting quality of educational materials negatively. It can therefore be construed that presence of book evaluation comes in handy when quality of educational materials reduces. Meyer and Turner (2007) maintained that, because of these differences, content would be central to the choice of textbooks. Steuer and Ham (2008) have argued that information

reliability is difficult to assess and takes time because high levels of expertise and accurate reading are necessary. The research findings further reveal that precision in the number of stakeholders' attribute to more quality in educational materials. Consequently, the results show that participation of more women in the entire process of production of quality educational materials could lead to better decision made on quality in educational materials. According to Apple (2010), evidence from the national education systems around the world indicates strongly that the development of textbook content is the result of competition between powerful groups who view it as central to the creation of collective national mimics to meet certain cultural, economic, ideological and social challenges.

The findings revealed an interdisciplinary theoretical implication. Total Quality Management Theory appeared to be a pillar of the research as it focuses on the systematic use of quality management principles and tools with the aim of improving performance in order to satisfy customer needs, stakeholders' values, and the entire process of management. The findings are in line with TQM principles as the issue of continuous improvement in quality among the educational materials in Kenyan schools surfaced.

The TQM concepts and methods can be used to make sure the management of the KICD enhances performance with limited resources available. Educational resources can also be viewed as a substitute for the teacher than for the children's schoolbook and society, as an instrument of the acquisition of the formal knowledge and skills for human and national development, because the evolution of the textbook is closely related to education development.

The findings supported the stakeholders' theory as the study focused on managers of organizations that dealt with production of quality educational materials in Kenya. This has an implication on the linkage of these managers to other stakeholders like government as an employer. The stakeholder management can enable KICD understand that it deals with various groupings formulated strategically to achieve a specific goal. The results have clearly indicated that the quality of educational materials can only be ensured through strategic linkage between all the relevant stakeholders such as curriculum developers, policy makers, publishers, teachers, and students as well as other related groups.

Education production function theory surfaced in the findings as it deals with issues of relating various inputs affecting learning of students such as instructional materials, pupil-teacher ratio, and physical facilities that affect the quality of education. The study findings have shown that quality in book evaluation is vital in the scheme of formal education.

These results show that the textbook remains a key tool for instruction and transfer of knowledge, apart from other educational aids such as videos, filming and television. In developing Kenya's educational materials, where textbooks are often the only definition in the school curriculum, the pivotal role of textbooks in the qualities of education is perhaps most clearly visible.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presented the study summary of the findings. Conclusions were also made with focus on the results of the research as well as suggestion of recommendations to be considered by the relevant authorities.

5.2 Summary of Study Findings

The main goal of this research was to ascertain quality assessment of educational materials in Kenya with focus on KICD. Specifically, the study sought to: investigate the book evaluation process as a tool for quality assessment of educational materials by KICD; determine the educational policies that lead to quality assessment of educational materials by KICD; find out the role of stakeholders' involvement towards quality assessment of educational materials by KICD and make recommendations for quality assessment of educational materials by KICD.

5.2.1 Summary of Qualitative Findings

The top level officers from both KICD and MoE indicated that they focus on proper implementation of quality education frameworks like quality assurance and standards directorate, vetting learning materials and training of evaluators in selecting quality educational materials to be used in Kenyan schools. The results from the interview carried out also revealed that the institution uses vetting teams, use of guides in orange book, and evaluation of books by relevant subject officers. Other criteria followed by

KICD included development of checklists and scoring lists, advertisement of approvals through media, observing language and style, appropriateness, relevancy and accuracy.

The study findings showed that the entire process of book evaluation is done by various stakeholders among them being subject teachers, quality assurance officers, Kenya National Examinations Council, curriculum developers, printing and publications members, officials from MoE, the evaluation committees, the academic committees, independent translators and KICD subject officers. Some of the challenges encountered in the process of evaluation of educational materials included: substandard materials for vetting, too many materials to evaluate, pressure from publishers, inadequate funds, corruption, limited time, shortage of skilled personnel and infiltration of irrelevant materials in the market.

The interviewees who included top managers from both MoE and KICD highlighted the following errors: factual errors, typographical errors, missing dates of approval, contextual errors, editorial errors, lack of clarity of font and illustrations, pictures not corresponding to content, inaccurate information, wrong bidding methods, grammatical errors, wrong formulas and numbering errors. Furthermore, it was established that KICD responds to errors realized in school textbooks by re-evaluating the affected textbooks, notifying the publishers of the errors to take action, reconvening panels to address the corrections to be done, withdrawing the erroneous curriculum support materials, issuance of addendums, periodically reviewing materials and interacting with book users.

The study found out that publishing houses addressed the issue of content coverage based on scope and depth in the process of ensuring quality in school textbooks through focusing on conformity to design of curriculum, content moderation, copy editing, proof

reading and internal quality check and control. The general artwork and illustrations of the textbooks of primary and secondary schools was ensured by employing expertise of qualified artists, dependence on qualified freelance artists, moderation by editors and authors and ensuring quality text fonts in terms of colour, size and type. Most of the publishing houses were as well found to follow the guidelines set by KICD.

The quality of learning materials in relation to choice of paper and binding style was found to be determined by target users, size of book, grammage and KICD's guidelines. The managers gave various options available at their respective publishing houses, which were being applied to ensure quality of educational materials. They included: adhering to guidelines given by KICD and also proofread contents before publishing. The publishing house managers recommended that KICD is required to give enough time in development of contents, involve qualified teachers in evaluation, rely on feedback from researches done, adhering to set rules and regulations and consultations from all the relevant stakeholders.

5.2.2 Summary of Quantitative Findings

From the findings provided in the preceding chapter, the results show that majority of the respondents had bachelors' degree as their highest educational achievement. Most of the respondents who filled and returned their questionnaires for analysis were found to be female as compared to their male counterparts. It was deduced that majority of the respondents were found to be in age bracket of 46 years and above. The findings indicate that almost half of the respondents were found to have worked with KICD for a period of between 16 – 20 years.

The study findings revealed that in the process of book evaluation, KICD mostly relied on the aspects of considering evaluation process as a vehicle to ensure the quality and objectivity; the institution ensuring that the boards and private publishers produce textbooks based on the approved guidelines and curriculum; and textbooks being evaluated in terms of content, length, and pedagogical aids. It was also discovered that KICD focuses on the aspects of having institutional policies for quality education which is anchored within teaching and learning framework; pedagogical competencies being included in the evaluation of books and career progression policies; HR policies supporting the strategic objective of quality educational materials; and the aspect of policies being reviewed regularly to identify inconsistencies on policies that could hinder quality education in the process of policy implementation.

Overwhelming majority of the respondents acknowledged that all stakeholders normally participate in provision of quality educational materials. The study findings figured out that KICD mostly observe the criteria of content coverage and accuracy in determination of the involvement of stakeholders in the process of providing quality educational materials for both primary and secondary schools in Kenya. It was summed up that KICD mostly relied on quality assurance officers from MoE, teachers/lecturers/instructors, administrators, curriculum developers, and publishing houses in the entire process of provision of quality educational materials across the country.

The results revealed stakeholders' involvement highly correlates with quality of educational materials where a unit increase in the number of stakeholders involved in the process of ensuring quality in educational materials was associated with reduction in

quality of educational materials. Alternatively, a reduction in the number of stakeholders was associated to increase in the quality of educational materials. Regression estimations between the dependent variables and independent variables revealed that policy implementation was significant in determining the quality in educational materials. In addition, stakeholders' involvement was found to have a significant but negative effect on quality educational materials. However, upon addition of personal attributes like age, gender, experience and educational level where only book evaluation, stakeholders' involvement, plus gender of employees became significant. However, they all had a negative impact on quality educational materials.

5.3 Conclusion of Findings

The study established that policy implementation was significant in determining the quality in educational materials. Therefore, the policies used in ensuring quality of educational materials are essential for both the government and consumers (schools). Without proper and viable policies being put in place, the stakeholders might have limited knowledge on the guidelines to follow in the process of production of quality educational materials. It is expected that the entire process of production of quality educational materials including design of textbooks and production process that involve printing and distribution are to be carried out under stated rules and guidelines.

The study also revealed that involvement of stakeholders was found to have a negative effect on quality educational of materials. It can be reasoned that when lesser number of stakeholders are involved in the process of production of quality educational materials, the quality of educational materials is guaranteed unlike when they are many. This is

could be attributed to the fact that the process of decision making works well with smaller groups which tend to come to a solution faster than a larger group and with less mistakes.

Furthermore, too much stringent criteria on book evaluation were found to reduce the quality of educational materials. Thus, the presence of good policies substitute some of the criteria involved in book evaluation and therefore, precision and workable conditions is paramount. Ultimately, gender influences quality of educational materials negatively. This could be comprehended that inclusion of more men in the process of production of quality educational materials could definitely reduce the quality of educational materials. However, participation of more women in the process of production of quality educational materials would help in improvement of quality of educational materials.

5.4 Recommendations

From the research findings realized in chapter four, it can be recommended that:

In order to ensure quality in the learning materials, the government should create more policies and/or strengthen the existing ones and should ensure that they are followed to the letter for the betterment of schools.

KICD should involve few and relevant stakeholders in the process of developing the school curriculum since this would result to better quality in educational materials. Book evaluation should not be given much attention instead KICD should ensure that all stakeholders involved are given proper guidelines to follow in designing, production and

distribution of educational materials. This would minimize errors at the time of book evaluation.

In addition, there is need for KICD to ensure that participants of production of quality educational materials are of mixed gender, though women should be given an upper hand in the entire process.

5.5 Suggestion for Further Research

This research focused on investigating the quality assessment of educational materials in Kenya with focus on KICD. The research focused on the following variables: book evaluation, policy implementation as well as stakeholders' involvement. The study therefore, suggests that a similar research should be done based on different variables other than those used to establish how quality of educational materials would be improved.

REFERENCES

- Abadzi, H. (2006). *Efficient Learning for the Poor: Insights from the Frontier of Cognitive Neuroscience*. Washington: The World Bank.
- Aized, T. (2012). *Total Quality Management and Six Sigma*. Rijeka, Croatia: InTech Prepress.
- Akareem, H. S., & Hossain, S. S. (2012). Perception of education quality in private universities of Bangladesh: A study from students' perspective. *Journal of Marketing for Higher Education*, 22(1), 11–33.
- Al Helal, M. A. (2012). Expensive private higher education in Bangladesh: Who can afford? *Asian Journal of Business and Economics*, 2(4), 1–19.
- Ally, M. (2004). Designing effective learning objects for distance education. In McGreal, R. (ed.), *Online education using learning objects*, 87 – 97. London: Routledge Falmer
- Almeida, J. F. D. (2013). Ética da investigação em ciências sociais. [Research ethics in social sciences]. *Sociologia On Line*, 6. revista.aps.pt/wp-content/uploads/2017/09/N6_art-4_Jorge-Almeida.pdf
- Altbach, P.G. & Kelly, G.P. (1988) Textbooks in the Third World: an overview, in: P.G. Altbach & G.P. Kelly (Eds) *Textbooks in the Third World: policy, content and context*, 3 – 17, New York, Garland.
- Anney, V. N. (2014). Ensuring the quality of the findings of qualitative research: Looking at trustworthiness criteria. *Journal of Emerging Trends in Educational Research and Policy Studies*, 5(2), 272-281.
- Aole, R. M. (2013). Quality Gurus: Philosophy and Teachings. *International Journal of Research in Aeronautical and Mechanical Engineering*, 1(8), 46 – 52.
- Apple, M. W. (2010). *Textbook Publishing: The Political and Economic Influences: Theory into Practice*, Taylor & Francis, Ltd.
- Arnon, S., & Reichel, N. (2007). Who is the ideal teacher? Am I? Similarity and difference in perception of students of education regarding the qualities of a good teacher and of their own qualities as teachers. *Teachers and Teaching: Theory and Practice*, 13(5), 441–464.
- Bédard D., Clément M. & Taylor K. L. (2010). *Validation of a conceptual framework on faculty development: Meaning and scope*. In A. Saroyan & M. Frenay (dir.), *Building teaching capacities in higher education: A comprehensive international model*. Sterling: Stylus Publishing, 168 – 187.

- Bess, J. L. & Dee, J. R. (2008). *Understanding College and University Organization*. Sterling, Virginia, Chapter on “Organizational change in higher education”. II, 790 – 825.
- Blumberg, B., Cooper, D. R. & Schindler, P. S. (2014). *Business Research Methods*, (4th ed.), Boston: McGraw-Hill.
- Buchanan, J. (2011). Quality teaching: Means for its enhancement? *Australian Universities' Review*, 53(1), 66–72.
- Bunyi, G. W. (2013). The quest for quality education: the case of curriculum innovations in Kenya. *European Journal of Training and Development*, 37(7), 678 – 691
- Cohen, D. & Marcelo, S. (2007). Growth and Human Capital: Good Data, Good Results, *Journal of Economic Growth*. Berlin: Springer.
- Creswell, J. W. (2011). *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research* (4th ed.). Pearson.
- Cronbach, L. (1990). *Essentials of psychological testing*. Harper & Row, New York.
- Cunningham, A. E., & Stanovich, K. E. (1993). Children's literacy environments and Early word recognition skills. *Reading and Writing: An Interdisciplinary Journal*, 5: 193 – 204.
- De Villiers, C., & Van Staden, C. (2011). Shareholder requirements for compulsory environmental information in annual reports and on websites. *Australian Accounting Review*, 59(21), 317 – 328.
- Djimeu, E. W. & Houndolo, D. (2016). Power calculation for causal inference in social science Sample size and minimum detectable effect determination. *International Initiative for Impact Evaluation*, Working Paper (26)
- Djurovic, L. (2011). Teacher Competencies for Evaluating the Quality of Textbooks, Technology, Informatics and Education for Learning and Knowledge Society. *International Symposium, Technical Faculty*, 6: 3 – 5.
- Donovan, C. A., & Smolkin, L. B. (2001). Genre and other factors influencing teachers' book selections for science instruction. *Reading Research Quarterly*, 36, 412–440.
- Douglas, D. & Hegelheimer, V. (2007). Assessing Language using computer technology. *Annual Review of Applied Linguistics* 27: 115 – 132.
- Drost, E. A. (2012). Validity and Reliability in Social Science Research. *Education Research and Perspectives*, 38 (1), 105 – 123

- Eales-Reynolds, L. J. & Rugg, E. (2013). *Engendering a Culture of Quality Enhancement in Teaching and Learning – Lessons Learned*. University of Westminster, London, UK.
- Eisinga, R., TeGrotenhuis M. & Pelzer B. (2013). The reliability of a two-item scale: Pearson, Cronbach or Spearman-Brown? *International Journal of Public Health* 58 (4), 637 – 642.
- Farrell, J.P. & Heyneman, S.P. (Eds) (1989). *Textbooks in the Developing World. Economic and educational choices* (Washington, DC, World Bank).
- Farrell, T. S. C. (2007). *Reflective Language Teaching: From Research to Practice*. London: Continuum
- Fields, P., Hague, D., Koby, G. S., Lommel, A., & Melby A. (2014). What is quality? A management discipline and the translation industry get acquainted. *Revista Tradumàtica: tecnologies de la traducció*, 404 – 412.
- Freeman, R. E. (1984). *Strategic management: A stakeholder approach*, Pitman Publishing, Boston, MA.
- Fuller, B. (1987). What school factors raise achievement in the Third World? *Review of Educational Research*, 57: 255 – 292.
- Galloway, L., Anderson, M., Brown, W. & Wilson, L. (2005). Enterprise skills for the economy, *Education and Training*, 47(1), 7 – 17.
- Gannicott, K. & Throsby, C. D. (1992). Educational quality in economic development: ten propositions and an application to the South Pacific, *International Review of Education*, 38: 223 – 239.
- Ganu, K. M. (2004). Scholarly Publishing in Ghana: Role of Ghana Universities Press. *Journal of Scholarly Publishing*, 30 (3), 111 – 123.
- Garvin, D. A., & Michael A. Roberto. (2005). Change Through Persuasion. *Harvard Business Review* 83(2), 104 – 112.
- Garvin, D.A. (1988). *Managing Quality: The Strategic and Competitive Advantage*. New York: Free Press.
- Giroux, H. A. (1983). *Theory and resistance in education*. South Hadley, MA: Bergin & Garvey.

- Glennerster, R., Kremer, M., Mbiti, I., & Takavarasha, K. (2011). Access and quality in the Kenyan education system: A review of the progress, challenges and potential solutions. A report prepared for Office of the Prime Minister of Kenya. Retrieved November 6, 2017, from <http://www.povertyactionlab.org/publication/access-and-quality-kenyan-education-system>
- Government of Pakistan (2006). *Green Paper on Textbook and Learning Materials*. Islamabad: Policy and Planning Wing, Ministry of Education.
- Griggs, R. A. & Koenig, C. S. (2001). Brief introductory psychology textbooks: A current analysis. *Teaching of Psychology*, 28: 36–40.
- Gunning, T. G. (2003). The role of readability in today's classrooms. *Topics in Language Disorders*, 3, 175-189.
- Hamel, C., & Ryan-Jones, D. (2002). Designing instruction with learning objects. *International Journal of Educational Technology* 3 (1), 42 – 56
- Hanushek, E. A., & Kimko, D. D. (2000). Schooling, labor force quality, and the growth of nations. *American Economic Review* 90 (5), 1184 – 1208.
- Harrison, Wicks, Parmar & De Colle. (2010). *Stakeholder Theory, State of the Art*, Cambridge University Press.
- Hawes, H. & Stephens, D. (1990). *Questions of Quality. Primary education and development*, London, Longman.
- Hénard F. & Roseveare D. (2012). Fostering Quality Teaching in Higher Education: Policies and Practices. *An IMHE Guide for Higher Education Institutions*. Institutional Management in Higher Education.
- Ho, S. (2007). *Operations and quality management*, (1st ed.). International Thomson Business Press.
- Hopkins, D. S. P. (1990). The Higher Education Production Function: Theoretical Foundations and Empirical Findings. In S. A. Hoenack & E. L. Collins (Eds.), *The Economics of American Universities* (pp. 11-32). Albany: State University of New York Press
- Hungi, N., & Thuku, F. W. (2010). Differences in pupil achievement in Kenya: Implications for policy and practice. *International Journal of Educational Development*, 30: 33–43.
- Igadwah, L. (2018, March 28). Errors in New Textbooks Downplayed. Daily Nation, Newspaper.

- Insook, C. (2012). The effect of teacher-student gender matching: Evidence from OECD countries. *Economics of Education Review*, 31(3), 54 – 67.
- Japanese Union of Scientist and Engineers. (1997, May/June). A manifesto of TQM - Quest for a respectable organizational presence- The TQM Committee JUSE. *SocietasQualitatis*, 11(2), 1 – 8.
- Jones, P.W. (1992) *World Bank Financing of Education, Lending, learning and development*, London, Routledge.
- Kennedy, D. K. (1971). Training with the cloze procedure visually and auditory to improve the reading and listening comprehension of third grade under achieving readers. *Unpublished doctoral dissertation*, Pennsylvania State University, University Park.
- Kerlinger, F. (1986). *Foundation of behavioral research* (3rd ed.). New York: Holt, Rinehart, and Winston.
- KICD strategic plan (2015-2020). Retrieved on March 25, 2019 from <https://kicd.ac.ke/uploads-2018/01-Strategic-Plan-2015-2020>
- Kock, J., Santalo, J., & Diestre, L. (2012). Corporate governance and the environment: What type of governance creates greener companies? *Journal of Management Studies*, 49, 492-514.
- Kothari, C. (2011). *Research Methodology; Methods and Techniques*. New Delhi: New Age International Publishers.
- Krueger, A. B. (1999). Experimental estimates of education production functions. *Quarterly Journal of Economics*, 114(2), 497 – 532.
- Kuecken, M. &Valfort, M. (2013). When do textbooks matter for achievement? Evidence from African primary schools. *Economics Letters, Elsevier*, 119 (3), 311 – 315.
- Lintowinsky, O. (1992). *Writing and publishing books for children in the 1992's*, Walker and Company, N.Y.
- Lloyd, Cynthia B., Kaufman, Carol E., & Hewett, Paul. (2004). *The Spread of Primary Schooling in South Africa: Implications for Fertility Change, Population and Development Review*. Oxford: Blackwell Publishing Ltd.
- Lockheed, M. &Verspoor, A. (1991), Improving primary education in developing countries. In Glewwe, P., Kremer, M. & Moulin, S. (1998) *Textbooks and test scores: Evidence from a prospective evaluation in Kenya work-in-progress*. WBA.
- Longmire, W. (2000). A primer on learning objects. *Learning Circuits: ASTD's Online Magazine All About E-Learning*

- MAPPP SETA (2004). Annual Report, Sector of Education and Training Authority, Johannesburg
- Masino, S. & Ninõ-Zarazu´a, M. (2016). What works to improve the quality of student learning in developing countries? *International Journal of Educational Development*, 48: 53 – 65.
- Mawere, D. (2013). Evaluation of the Nziramasanga report of inquiry into education in Zimbabwe, 1999: the case of gender equity in education. *International Journal of Asian Social Science*, 3(5), 1077 – 1088
- Meyer, D. K. & Turner, J. C. (2007). Scaffolding emotions in classrooms. In K. Schultz & R. Pekrun (Eds.), *Emotions in education* (243 – 258). London: Academic Press.
- Moll, P. G. (2006). *Primary Schooling, Cognitive Skills and Wages in South Africa*, Economica. London: Blackwell Publishing Ltd.
- Monazza, A. & Kingdon, G. (2011). What can teachers do to raise pupil achievement?" *Economics of Education Review*, 30(3), 559 – 574.
- Mugenda, O. M., & Mugenda, A. G. (2012). *Research Methods: Quantitative and Qualitative Approaches*. Nairobi: Acts Press
- Murby, M. & Crossley, M. (2008). Textbook Provision and the Quality of the School Curriculum in Developing Countries: Issues and Policy Options. *Comparative Education*, 30(2), 99 – 114.
- Mutuku, K. G. (2015). Kenya National Union of Teachers’ initiatives influencing provision of quality education in primary schools in Machakos County, Kenya. *Unpublished Thesis, University of Nairobi*
- National Book Development Board (2008). *Annual Report*. Manila, Philippines.
- Odunga, D. (2018, March 26). It is wrong to spread falsehoods regarding new textbooks policy. Daily Nation, Newspaper.
- Oduor, A. (2018, March 8). Teachers reject new textbooks because of errors. The Standard Newspaper.
- OECD (2010). *Learning our lessons, Review of quality teaching in higher education*, OECD Publishing
- Ong, A. D. & Weiss, D. J. (2000). The Impact of Anonymity on Responses to Sensitive Questions1. *Journal of Applied Social Psychology*, 30: 1691 – 1708

- Outhred, R., Beavis, A., Stubberfield, C., Wilkinson, J., Murphy, M. & Kelly, D. (2013). Formative Evaluation of Textbooks and Workbooks in South Africa. *The Australian Council for Educational Research*. A Report to The United Nations Children's Fund, South Africa.
- Petrides, K. V., Pita, R., & Kokkinaki, F. (2011). The location of trait emotional intelligence in personality factor space. *British Journal of Psychology*, 98, 273–289.
- Petrinjak, A., & Graham, R. (2005). Creating learning objects from pre-authored course materials: Semantic structure of learning objects, Design and technology. *Canadian Journal of Learning and Technology*, 30(3), 33-46.
- Pogelschek, B. (2007). How textbooks are made: insight from an Australian educational publisher. In peace democratization and reconciliation in textbooks and educational media, Ninth international conference on research on textbooks and educational media. September 2007, Tonsberg Norway. IARTEM.
- Pritchard, R., & Honeycutt, R. (2007). Best practices in implementing a process approach to teaching writing. In S. Graham, C. A. MacArthur & J. Fitzgerald (Eds.), *Best practices in writing instruction* (28–49). New York: The Guilford Press.
- Rotich, C. D. & Musakali, J. (2006). Evaluation and selection of school textbooks in Kenya: The role of the ministerial textbook vetting committee. *Caught in the Web or Lost in the Textbook*. 349 – 360
- Rotich, D. C., Kogos, E. J. & Geuza, Z. R. (2018). An Investigation of Textbook Vetting and Evaluation Process in Tanzania. *Publishing Research Quarterly*, 34(1), 96 – 109.
- Saunders, M., Lewis, P. & Thornhill, A. (2016). *Research Methods for Business Students*, (7th ed.), Harlow: Pearson.
- Sayagie, G. (2018, March 8). Publishers work on errors in textbooks. Daily Nation Newspaper.
- Sewall, G. T. (2005). *Textbook publishing*. McGraw-Hill Book Co.; HOUGHTON Mifflin Co.; Book Publishers, Phi Delta Kappan, 86(7), 498 – 502.
- Sheldon, L.E. (1988). *Evaluating English Language Teaching textbooks & materials*. *ELT Journal* 42 (4), 237-246.
- Shieh, G. (2010). Sample size determination for confidence intervals of interaction effects in moderated multiple regressions with continuous predictor and moderator variables. *Behavior Research Methods*. 42 (3), 824 – 835

- Silver, L. S., Stevens, R. E., & Clow, K. E. (2012). Marketing professors' perspectives on the cost of college textbooks: A pilot study. *Journal of Education for Business*, 87(1), 1-6.
- Simam, R., Rotich, D. C., & Kemoni, H. (2012). Educational publishing and provision of quality primary textbooks in Kenya. *Journal of Human Social Science*. 4(2), 117 – 127.
- Sosteric, M. & Hesemeier, S. (2002). When is a learning object not an object: A first step towards a theory of learning objects? *International Review of Research in Open and Distance Learning* 3 (2), 114 – 125
- Squire, J. R. & Morgan, R. T. (2008). The elementary and high school textbook market. In Sewall, G. T. (2005). *Textbook publishing*. McGraw-Hill Book Co.; HOUGHTON Mifflin Co.; Book Publishers, Phi Delta Kappan, 86(7), 498 – 502,
- Stein, M., Stuen, C., Carnine, D., & Long, R. M. (2001). Textbook evaluation and adoption practices. *Reading & Writing Quarterly*, Taylor & Francis.
- Steuer, F. B., & Ham, K. W. II. (2008). Psychology textbooks: Examining their accuracy. *Teaching of Psychology*, 35(3), 160-168.
- Tsang, M. (2008). Cost analysis for education. A review of cost studies in education in developing countries. *Review of Educational Research*, S(2), 181-230.
- Tyson, H. (1997). *Overcoming Structural Barriers to Good Textbooks*. Washington: National Education Goals Panel.
- Wanzala, O. (2018, March 7). Teachers reject ministry textbooks over errors. Daily Nation Newspaper.
- Watt M. G. (2009). Research on the Textbook Selection Process in the United States of America, *IARTEM e-Journal*, 2: 1
- Westbury, I. (1994). Textbook Approval. Textbook Development. Textbook Distribution. Textbook Selection: Pedagogical Considerations. Textbooks: An Overview. In Husén T. & Postlethwaite T. N. (eds.). *The International Encyclopedia of Education: Research and Studies*. (2nded.) Oxford: Pergamon.
- Wiley, D. (2002). Learning objectives needs instructional design theory. In Rosset, A. (Ed.), *The ASTD e-learning handbook: best practices, strategies and case studies for an emerging field*, (115 – 126) New York (NY) McGraw-Hill
- Zikmund, W. G., Babin, B. J., Carr, J. C., & Griffin, M. (2013). *Business research methods*. Cengage Learning.

APPENDICES

Appendix I: Consent Letter

Dear (Respondent)

I am a post graduate degree student at Moi University undertaking a research project on,
**QUALITY ASSESSMENT OF EDUCATIONAL MATERIALS BY THE KENYA
 INSTITUTE OF CURRICULUM DEVELOPMENT.**

Your department has been selected for this study and you have been selected to participate in the research. The information provided will exclusively and solely be used for academic purposes and will be treated with the confidence it deserves. Upon request, you will be furnished with a copy of the final report.

Consent Endorsement

I do declare that I have read the above information relating to the research and have also heard the verbal version. I declare that I understand it. I have been offered the opportunity to discuss and fill the relevant aspects of research with the researcher and thereby declare that I voluntarily agree to participate in the research project. I am also aware that I can withdraw my involvement at any time in the course of the study.

Signature

Date

Thank you,

Geoffrey Runoh

Appendix II: Letter of Introduction from Moi University



MOI UNIVERSITY

Tel No: +254 053 43720, 43597, 43620
Fax: +254 053 43047, 43360
Telex No.: MOIVERSITY 35047
Email -hodpublishing@mu.ac.ke
Direct Line (053) 43041

P.O. BOX 3900
ELDORET
KENYA

**SCHOOL OF INFORMATION SCIENCES
DEPARTMENT OF PUBLISHING AND MEDIA STUDIES**

Ref. No.IS/MS/PUB/57/14

7th June 7, 2018

To

The National Council for Science and Technology

Dear Sir/Madam,

RE: RUNOH GEOFFREY KAMAU

This is to confirm that Runoh Geoffrey Kamau (Reg. No. IS/MS/PUB/57/14), has successfully defended a proposal titled '*The Role Of Kenya Institute Of Curriculum Development Towards The Promotion Of Quality Educational Materials In Kenya*', and needs a permit to proceed to the fieldwork. Any help accorded to him is highly appreciated.

Yours sincerely


DR. DUNCAN OMANGA
HEAD: DEPT. OF PUBLISHING AND MEDIA STUDIES



Appendix III: Research Instrument (Questionnaire) for Staff of KICD

Please tick (✓) the box that matches your answer to the questions and give the answers in the spaces provided as appropriate. The information you provide will be treated with utmost confidentiality.

Section A: Personal Information

1. What is your gender?

Male [] Female []

2. What is your highest level of education?

Higher Diploma []

Bachelor's Degree []

Post Graduate []

Any other, kindly specify.....

3. How many years have you worked with KICD?

1-5 years [] 6-10 years []

11-15 years [] 16-20 years []

21-25 years [] 26 and above []

4. In which age bracket do you belong to?

18 – 25 years [] 26 – 30 years []

31 – 35years [] 36 – 40 years []

41 – 45 years [] 46and above []

Section B: Textbook Evaluation To what extent do you agree the following aspects of textbook evaluation contribute to quality assessment of educational materials?

Aspects	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Evaluation process is considered as a vehicle to ensure the quality and objectivity					
Our institution ensure that the boards and private publishers produce textbooks based on the approved guidelines and curriculum					
Textbooks are evaluated in terms of content, length, and pedagogical aids					
The evaluation focuses mainly on comparison of the content covered in the books as a measure of their acceptability for use.					
The evaluators examine human interest and writing style and rank the books according to their scores on all three factors					
The evaluation process in terms of random sampling of book chapters and passages					

Section C: Policy Implementation

In your own opinion and based on five point likert scale, rate the following statements on policy used in quality assessment of educational materials. (1 – strongly disagree, 2 – disagree, 3 – neutral, 4 – agree, and 5 – strongly agree)

Statement	1	2	3	4	5
Institution's policies for quality education are anchored within teaching and learning framework					
Pedagogical competencies are included in the evaluation of books and career progression policies.					
Human Resources policies support the strategic objective of quality educational materials					
Policies are reviewed regularly to identify inconsistencies on policies that could hinder quality education.					
Technology policies are well-aligned with evidence on ways to use IT for more effective production of quality educational materials.					
There exist policies on remuneration package that reflects the full range of effective book production, teaching and learning practices.					

Section D: Involvement of Stakeholders

5. Does your organization involve all the stakeholders fully in the provision of quality educational materials?

Yes [] No []

6. If Yes in question 6, which selection criteria does your organization use in choice of involvement?

Cultural diversity [] Content coverage/accuracy [] Readability []

Educational impact [] Pedagogical aids []

7. State whether the following stakeholders are involved in the entire process (tick where appropriate)

Stakeholder(s)	Involved	Not Involved
Teachers/lecturers/instructors		
Administrators		
Curriculum developer		
Publishing houses		
Quality Assurance Officers (MoE)		
County Education Officers (MoE)		
Printing houses		
Others		

**Appendix IV: Research Instrument (Interview Guide) for Management of KICD
and MoE**

1. Which measures do KICD and MoE apply to ensure quality assessment of educational materials by the KICD?

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2. Who are involved in the whole process of book evaluation?

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3. Which criteria and procedures do KICD and MoE use in selecting quality educational materials?

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4. What are some of the causes contributing to errors in school textbooks?

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5. How does KICD respond to errors realized in school textbooks?

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6. What are some of the challenges encountered by KICD in the process of quality assessment of educational materials?

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Appendix V: Research Instrument (Interview Guide) Managers of Publishing Houses

1. In the process of ensuring quality in school textbook, how do publishing houses address the following variables?

a. Content coverage (Scope and Depth)

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b. Artwork and illustrations

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c. Text fonts (color, size, type)

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d. Choice of paper and binding style(s)

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2. Please state any other measures taken by your organization towards ensuring production of quality educational materials

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3. In your opinion, what would you like KICD to address towards quality assessment of educational materials?

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.....
.....
.....
.....

Appendix VI: Permission from KICD



KENYA INSTITUTE OF CURRICULUM DEVELOPMENT

Telephone: Nairobi
3749900-9, 3748204, 3747994
Fax: 254 (020) 3639130
Email: info@kicd.ac.ke
Website: www.kicd.ac.ke

Desai Road
Off Murang'a Road
P.O. Box 30231-00100
NAIROBI, KENYA

KICD/D/1/2/75

29th May 2018

Evans Munge
Moi University
School of Information Sciences
Nairobi Programme Coordinator
P O Box 3900,30100
ELDORET

RE: PERMISSION TO COLLECT DATA FOR GEOFFREY KAMAU RUNOH REG.NO.
IS/MSC/PUB/57/14

This has reference to a letter dated 8th May 2018 REF: No: MU/NRB/SIS/SA/24 concerning the above matter.

I am pleased to inform you that permission has been granted to **Mr.Geoffrey K. Runoh** to collect data at Kenya Institute of Curriculum Development (KICD) concerning *'The role of Kenya Institute of Curriculum Development towards the promotion of Quality Education Materials in Kenya'*.

Please note that **Mr.Runoh** is expected to share the final report with KICD.

JOHN KIMOTHO
FOR: DIRECTOR/CEO
KENYA INSTITUTE OF CURRICULUM DEVELOPMENT

Appendix VII: Permit from National Commission for Science and Technology and Innovation (NACOSTI)



NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471,
2241349,3310571,2219420
Fax: +254-20-318245,318249
Email: dg@nacosti.go.ke
Website : www.nacosti.go.ke
When replying please quote

NACOSTI, Upper Kabete
Off Waiyaki Way
P.O. Box 30623-00100
NAIROBI-KENYA

Ref. No. **NACOSTI/P/18/13971/23581**

Date: **20th July, 2018**

Geoffrey Kamau Runoh
Moi University
P.O Box 3900-30100
ELDORET

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on *“The role of KICD towards the promotion of quality educational materials in Kenya”* I am pleased to inform you that you have been authorized to undertake research in **Nairobi County** for the period ending **19th July, 2019**.

You are advised to report to **the County Commissioner and the County Director of Education, Nairobi County** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit a **copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.


BONIFACE WANYAMA
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Nairobi County.

The County Director of Education
Nairobi County.

THIS IS TO CERTIFY THAT:
MR. GEOFFREY KAMAU RUNOH
of MOI UNIVERSITY, 2739-200
Nairobi, has been permitted to conduct
research in Nairobi County

Permit No : NACOSTI/P/18/13971/23581
Date Of Issue : 20th July,2018
Fee Recieved :Ksh 1000

on the topic: THE ROLE OF KICD
TOWARDS THE PROMOTION OF QUALITY
EDUCATIONAL MATERIALS IN KENYA

for the period ending:
19th July,2019



[Handwritten Signature]
.....
Applicant's
Signature

[Handwritten Signature]
.....
Director General
National Commission for Science,
Technology & Innovation