RELATIONSHIP BETWEEN CAREER GUIDANCE AND COUNSELLING AND, CAREER CHOICE AMONG SECONDARY SCHOOL GIRLS IN VIHIGA COUNTY, KENYA

BY

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DECLARATION

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DEDICATION

I dedicate this work to my husband, Engineer Kenneth Inawedi Mudulia and my children, Sharon Lovega, Valentine Imali, Eugene Mudulia and Sally Kambiha whose support and encouragement gave me motivation and strength.

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ABSTRACT

Sustainable development goal number five aims to achieve gender equality and empower all women and girls. Kamunge report recommends that schools and universities provide guidance to university applicants to enable them make right choices. The purpose of this study was to explore the correlation between career guidance and career choice among girls in secondary schools in Vihiga County. The objectives of the study were to: establish the forms of career guidance services offered to girls, investigate the professional training levels of career guidance teachers, determine the effectiveness of career guidance services in enhancing academic and career choice competencies among girls, establish the level of stereotyping and its influence on career choices among girls; and establish the relationship between career teachers' professional training in career guidance and effectiveness of career guidance services offered to girls in secondary schools. The study embraced a mixed method approach. The study targeted 4,628 form four girls of 2012 in mixed and girls' secondary schools in Vihiga County. There were 112 mixed and girls' secondary schools in the county. Sampling was done using probability and non-probability sampling. Non probability sampling included simple random sampling and stratified random sampling to select 30 schools, 15 of which were girls' schools and 15 mixed schools. Non probability involved purposive sampling to select 30 principals, 30 career guidance teachers,4 district Quality and Standards Assurance officers and one county director of education. Data was collected using questionnaires, content analysis and interview schedules. Quantitative data was analyzed using frequencies, means, standard deviations, Pearson's product moment correlation, t-test and Analysis of Variance (ANOVA) while qualitative data was analyzed thematically. For all statistical tests, the alpha (significance) level was set at .05. The result of the analysis indicated that there was a statistically significant correlation among the students' perception on guidance and counseling services' effect on academic performance and career choice, r = 0.513, p< 0.05, teachers' perception on guidance and counseling services' effect on academic performance and subsequent career choice, t(58) = 2.035, p < .05.The forms of career guidance were mainly class counseling (83.3%) and group counseling, (71.45%), involving subject choices and filling of joint admission boards forms. Career guidance teachers' training level was found to be 57.2% trained and 42.8% untrained. On stereotyping, principals and career teachers agreed (means 4.12 and 4.61respectively on a Likert scale of 1to 5) that female students consider math, sciences and geography difficult. The study found out that schools that were better equipped and staffed, with many career guidance programs had better performance and sent more students to public universities who got admission into a variety of careers. The study concluded that career guidance is an essential component yet many schools are not adequately funded, equipped and staffed for it. It recommends that career guidance be incorporated into mainstream curricular .The study has practical implications for the ministry of education and school administrators to revamp career guidance and demystify careers in fields such as science, technology, mathematics and other emerging ones, for the girl child. The study recommends enactment of career guidance department in schools, infusion of career guidance in curricular and training of career guidance specialists. The findings will help in achievement of SDG number five and consequently goals 1,2,3,4 and 8.

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ACRONYMS

AusAID-Australian Agency for International Development

GOK-Government of Kenya

HOD-Head of Department

ICT-Information and Communication Technology

JAB-Joint Admissions Board (Now Known as Kenya Universities & Colleges Central Placement).

JKUAT-Jomo Kenyatta University of Agriculture and Technology

KUCCPS-Kenya Universities and Colleges Central Placement Services

KCSE-Kenya Certificate of Secondary Examination

KIE-Kenya Institute of Education

MoE-Ministry of Education

OECD-Organization for Economic Cooperation and Development

OVAE-Office of Vocational and Adult Education

SMT-Science, Mathematics and Technology

SPSS- Statistical Package for Social Scientists

TIVET-Technical, Industrial, Vocational and Entrepreneurship Training

TSC-Teachers' Service Commission

TTC-Teacher Training College

UNESCO-United Nations Education Scientific and Cultural Organization

CHAPTER ONE: INTRODUCTION TO THE STUDY

1.1 Introduction

This chapter opens with a background to the study. It then discusses briefly the statement of the problem, purpose of the study, main objectives and specific objectives. It also spells out the research hypothesis. In addition, the justification, significance, limitations, assumptions and scope of the study are stated and explained. The theory on which the study was based and, the conceptual frameworks linking the variables are also illustrated. Methods to be used in disseminating findings are then stated and the terms used in the research operationalized. The chapter ends with a summary.

1.2 Background to the Study

Formal guidance and counseling in institutions is traced back to America when it was introduced in the late 1890s and the early 1900s. Frank Parsons, who has been called the father of vocational guidance, was among the pioneers of the guidance and counseling movement. Through his efforts, guidance and counseling became an organized service and it gained recognition for its important contribution in society. Parsons established the first career institution in the USA, and set the pace for the development of psychological testing. Gradually, the guidance and counseling movement developed into an organized service, which has continued to make a significant contribution to the development of society (Makinde, 2004).

Just like in the USA, significance of career guidance was acknowledged in the People's Republic of China and its establishment begun in the 1990s.According to Weiyuan Zhang & Xiaolu Hu & Mark Pope(March 2002) in an article in a "Career

Development Quarterly", career development in China was influenced and benefitted from its earlier development in the USA. These writers, citing Y. Jin, (1991), Shen (1991), Wen (1990),and, S. Zhang, Jian, Zhang, & Shao,(1991) state that between 1990 and 1991, the State Education Commission of China commissioned several experts in career development to edit a series of career guidance and counseling books. The texts systematically introduced career counseling theories and practice. In 1992, a series of practical career guidance programs for high schools were published as a textbook in Shanghai, sponsored by Shanghai Education Bureau (1992). Since 1993, a course on career guidance and counseling has been required in all secondary schools in Shanghai, and some schools in Beijing have similarly adopted career guidance courses in their curriculum. In Guangdong, textbooks on career guidance and counseling were published by the Guangzhou Educational College and were used in some schools. In 1993, the Guangdong Province College of Education formed a research team on career guidance and counseling with support from the State Education Commission of China. In the provinces of Hubei, Jiangsu, Shanxi, Liaoning, Heilongjiang, and in Tianjin city, many secondary schools have followed the career guidance and counseling courses model and have developed their own programs.

Invited by the State Committee of Education and Beijing Normal University, Beijing four U.S. career counseling experts: John Krumboltz (Stanford University), Sunny Hansen (University of Minnesota), Xiaolu Hu (San Jose State University), and a high school counselor, Betty Krumboltz (Palo Alto, CA) visited China in the summer of 1993 to attend and present at a conference sponsored by the State Labor Department

and Beijing Normal University. At the conference, they spent nearly 2 weeks addressing career theories and practices in the United States (Hu, Krumboltz, & Hansen, 1997). On September 29, 1993, the Chinese Careers Guidance Association (CCGA), an affiliate of the National Vocational and Technical Education Association with support from the State Education Commission, was established in Beijing. This was the first national and professional career guidance and counseling association in China. The mission of the association (CCGA, 1994) was to help people choose careers, to assist employees to achieve satisfaction and fully use their abilities at the workplace, to help employers recruit qualified workers, and to promote everyone to become a contributor to Chinese society. The objectives of the CCGA included enhancement of research in the area of career guidance, promotion of career guidance practice, training for career guidance professionals, promote increased international exchange, and promote collaboration and communication in career counseling (CCGA, 1994).

With regard to the development of career guidance in Kenya, the researcher embarked on this work with the following questions begging for answers: Can one trace the developmental stages of the history of career guidance as a discipline in Kenya? Is there a professional body in Kenya like the Chinese Career Guidance association (CCGA)? What is the mandate of such a body, (if it exists) and how has its effects tricked down to the school level? What is its effect on performance and career choice among girls in high schools in Kenya?

Guidance and counseling(of which career guidance is a branch or subset) has been identified as an important aspect in educational and training institutions by many

countries in the world, owing to its internationally recognized role of improving all aspects of quality education (Wambui, et al., 2007). Guidance and counseling plays a significant role in the overall growth and development of a high school student and is therefore an essential part of school curriculum. This is because high school students are at the stage of adolescence which is characterized by many physical and psychological changes which pose a number of personal, social and educational challenges (Mutie and Ndambuki, 2009). Frank Parsons is considered as the father of career counseling as his work, "Choosing a Vocation "(1909) was the first major work concerned with careers. According to www.com/docs/284843/Historyof_career-counseling, Parson was the first to develop the first the conceptual framework for career guidance, which is:

Clear understanding of self, aptitudes, abilities, interests, resources, limitations among others; Knowledge of requirements, conditions and prospects in a given line of work; Application of "true reasoning" to realistically assess the likelihood of a successful match.

 Built on these are several modern theories of career development. These include theories by Super (1942), Boarding (1943), Ginzberg(1951) and Tredeman (1957). Leung (2004) gives a classification of some of the theories of career guidance as "The Big Five Theories". These five theories of career development have guided career guidance and counseling practice and research in the past few decades in the USA as well as internationally. These five theories are: theory of Work-Adjustment; Holland's Theory of Vocational Personalities in Work Environment; the Self-concept Theory of Career Development formulated by Super and more recently by Savickas; Gottfredson's Theory of Circumscription and Compromise; and, Social Cognitive

Career Theory. Another school of thought has come up with what is called the Big Picture View of Career Development Theory. These include but are not limited to: Trait-Factor Theory which goes as far back as 19000 and is associated most strongly with vocational theorists Frank Parson and E.G. Williamson; Holland's Career Typology Theory; Super's Life-Span/Life-Space Theory; Krumbolltz's Social Learning Theory of Career Choice; and, Constructivist Theory /Models of Career Development-by M.L. Savickas and Vance Peavy (2001).

A study done in America by Ferris State Universities' Career Institute (2002) found out that among the people who influence career decision-making, out of the 809 sample, 78% said both their parents were involved while 10% had their teachers involved. Another 7% had other people involved while 5% were undecided. This means that a large percentage of high school students may not be benefiting from career guidance in schools in America. In a research to find out the patterns of career decision-making difficulties among Israeli and Palestinian Arab high school students, Yahya and Moshe (2004) found out that students in these countries were faced with career indecisiveness and that there were greater difficulties related to career indecisiveness among girls than boys. In addition, religious and ethnic backgrounds were found to have an impact on career indecisiveness.

Watson and McMahon (2005) stated that little attention is paid to career development of children. In a study comparing Australian and South African primary children's ability to connect school activities to the world of work, they found out that there is inadequate information and research on how children acquire information about work.

However, some countries have made great advances in this field. For instance, an international journal for educational and vocational guidance states that career guidance in Britain has evolved from 1960 when learners were only taught how to fill applications to today when it is so comprehensive that it is a compulsory part of the curriculum. Likewise, in Austria, career guidance is more advanced as it starts early, at grade 7&8 and is organized at three levels. These are: the career teacher, the student advisor and the school psychologist (OECD, 2003). In addition, special career guidance bodies for young women have been established to address the issue of gender stereotyping in occupational choice. In spite of this, the program faces challenges such as inadequate resources (time, physical space for student advisors, lack of access to computers and printed materials), ineffective delivery and limited amount of real work life contact for students.

Salami et al (2007) in a study in Nigeria found a relationship between parental attachment and psychological separation and career information seeking behavior of learners. Hence they suggested enlightening of career counselors, parents and students on the need to assess the relationship between students and parents when dealing with career development problems.

In Kenya, the Kamunge report (1988) recommended that schools and universities provide necessary guidance and counseling to university applicants to enable them make the right subject and course choices. Two decades down the line, a lot still needs to be done because, as Kipnusu (2001) found out that, the level of competency at which career guidance was being done in Kenya is low. Indoshi and Agak (2009) report that lack of proper career guidance on Art and Design curriculum is the cause of high

number of students dropping the subject. This beats the purpose of the 8-4-4 education whose aim was to vocationalize education for self-reliance.

The problem of inadequate career guidance is made worse for the girl child, by stereotyping and other social-cultural barriers which hinder or steer the girl child form certain careers (Osumba, 2010; UNESCO, 2000; Kimani et al, 2010).Osumba (2010) quoting (Earnest,2003)states that socialization into femininity and masculinity and, association of these categories with specific careers /leadership positions makes girls and women shy away from such careers, a phenomenon she refers to as 'the fear of losing femininity'. Sessional Paper number 1 of 2005 and UNESCO (2002) report that one of the challenges facing secondary education in Kenya is, girls' poor performance in the core subjects such as mathematics and sciences. This leads to low transition rates from secondary to tertiary institutions (particularly to universities), hence the gender disparity. While releasing the 2010 KCSE results, the then minister for education, professor Ongeri said that in spite of intensive measures put in place to address the gender gap, disparities in favor of boys still persisted especially in North Eastern, Western, coast and Nyanza provinces. The analysis of the top 100performers per province (Table2.1) showed that North Eastern had the worst disparity with 95% boys against 5% girls in the list. Second from the bottom was Nyanza (89% boys, 11%girls), followed by Central (82%boys, 18%girls) and Western (74% boys, 26% girls).

 Such great disparities point to the fact that a lot needs to be done to demystify education and careers as a whole for the girl child. Career guidance will increase motivation among girls and help to bridge the gender gap.

 It is against this background that this research was conducted to find out the impact of career counseling in schools on career choice. The dependent variable was the number of girls who qualify to join public universities from the schools and the type of course they are admitted for. The independent variable will be presence of a functional career guidance department (independent from the guidance and counseling department) and a trained careers teacher. Specific items looked for in the department included: career guidance room(s), access to computers and internet, time-tabling of career guidance, career guidance activities and expenditure on career guidance. Even though the overall enrolment in university continues to increase with increased county-wide access to education, the gender divide still persists.

The ministry of Education Policy documents in Kenya point to the need for career guidance in schools and has produced a Careers' Guide Book for Pupils" (MoE, 2009). There are emerging global issues which affect career choices. Learners making career decisions or teachers in career guidance need to be aware of them (Wambua & Khamasi, 2008). These include life skills, information communication technology, community involvement, volunteerism, environmental consciousness, equity, entrepreneurship, employability, work ethics and life-long education (MoE, 2009; Muriithi, 2007).

However, career guidance is not well established in many Kenyan schools. There is lack of support from the administration as teachers have subjects to teach and less time to spend on career guidance (Muriithi 2007). This results in a mismatch between jobs and one's interests, values, personalities and abilities leading to job frustration and dissatisfaction (Mwikwabe & Kurgat, 2005; Ojenge, 2007; Wanjohi & Mwaura,

2010).A large number of those who qualify for KUCCP (JAB) are enrolled for courses they did not choose, due to choosing courses they could not qualify for, an indicator of lack of guidance. Many request for, or are called upon by KUCCP (JAB) to revise career choices (Thuo, 2008; Daily Nation, 20th July 2011, Lugulu, 2011). The (KUCCP) JAB advertisement on the second revision of degree choices in the Daily Nation of 20th July 2011 had 8,740 candidates who, even after the first revision, did not qualify for their choices. Due to lack of information about variety of careers including the emerging ones, many students end up choosing the most fancied careers without understanding what they entail.

For instance, all KCPE and KCSE top performers say they plan to become neurosurgeons, cardiologists, engineers and lawyers as these are deemed as "rich and cool" by society, yet there are other new and exciting careers like ICT (Kariuki, 2011).Other students do courses they don't intend to pursue in the job market, as in case in the Daily Nation of 14th April 2011 of a student who was taking Bachelor of Arts Geography yet he plans to work in the banking and financial services.

Due to lack of guidance, some students who miss (KUCCP) JAB admission end up in diploma or TTC colleges even though they qualified and can afford module II of public universities or private universities (Mulago and Lungatso, N.D).According to Mukwonago (2005), teachers are not adequately trained and skilled to handle career guidance. There is therefore a yawning gap which has led to springing up of career consultants such as Edu-Worldwide. However these do not fill the gap as they are businesses only accessible at a fee. Not all schools or individuals have the money or,

see the need to hire them. In addition, they are mainly urban-based hence out of reach for rural schools.

1.3 Statement of the Problem

Enrolment of female students in public universities has been low over the years relative to enrolment of male students (GOK, 2013). In addition, enrolment of female students into specific careers, mainly those that are science and technology-oriented and those that require high cut –off points has equally been low. The scenario has even been worse in Vihiga County where out of 1,283 students who secured direct entry grades (B plain and above) to public universities in the year 2012, only 581were girls (Vihiga County Education Office, 2013, JAB admissions 2012). Besides, of these 581 girls who secured direct entry to public universities, very few girls were admitted into science and technology –based courses. A count from the JAB 2012 admission list showed less than 60 girls in this category. Majority were admitted into Arts-based courses, education and general courses like Bachelor of Arts and Bachelor of Science. Clearly, these statistics paint a grim picture on the future of female students from the County as far as university education attainment and training needs are concerned. If this is not checked, the gender disparity and female marginalization will continue. This will consequently derail the attainment of MDGs and Vision 2030.The researcher thus set out wondering, could inadequate career guidance amid rampant stereotyping be contributing to the poor performance and eventual under enrollment of girls in universities?

Earlier research findings in this area/subject indicate that inadequate career guidance is prevalent. These include Osoro (2002), Mukwana (2003), (Muriithi (2007), Ojege

(2007), and Yongo (2011) among others in Kenya. Manifestations of this are documented and include the following: first and foremost, there is inadequate information and research on how female students acquire information about work (Watson and McMahon, 2005). In addition, there is low academic achievement among female students due to lack of motivation (Christie, 2001). If female students were made fully aware of various careers and their requirements, they would be motivated to work harder.

Career indecisiveness among female students is also evident (Yahya and Moshe, 2004) since students make career decisions unaware of the cluster subject requirements, their ability, personality requirements and, employment opportunities available (Modern Machine Shop, 2002; OVAE, 2002).

Mukwana (2005), in a study of factors that hinder effective implementation of career guidance in Vihiga District found out that handling of the careers department by teachers who have no training in the field of careers and, failure to time-table career guidance were among the leading factors. As result, students join institutions of higher learning without proper course choices leading to poor performance and constant career changes in university and working life. There is gender disparity in terms of subjects selected in schools and, admissions and courses undertaken in Kenyan Universities. The number of girls who join university is lower than that of boys and, they mainly pursue Arts –based courses referred to as "traditional careers" (Kimani, et al., 2010; Wosyanju, 2003; Keriga and Bujra, 2009).

Most glaring is the disparity at JKUAT whose courses are mainly science and technology-based. In the 2008/09 academic year, admitted 4,818males versus 417 females (GOK, 2013).Enrolment for the subsequent years was as follows: 2009/10-3556males and 452 female; 2010/11:4471males, 621 females; 2011/12:3812 males, 625females. However, Kenyatta University does not show great disparities due to the fact that it used to major in education, a course within which most females were enrolled. The scenario in JKUAT is replicated in University of Nairobi's faculties of engineering ,design, and veterinary medicine as indicated by the 55th graduation list .Gender disparity is also prominent in vocational education worldwide (www.maec.org/beyond.html).One would expect the situation to improve as calls for gender parity and affirmative action increase. However, this has not been the case. This study therefore seeks to establish how effectiveness in career guidance influences career choice among girls-students in Vihiga County.

Many studies on career guidance have been ex-post facto such as, Ojege (2007), Daphne (2010), Abagiand Omamo (2010) and Lugulu (2011).This study differs from these in that the respondents were still in school.

The findings of this research will be employed by school principals so as to put emphasis on career guidance in their strategic plans, budgets and curriculum implementation. The findings will also inform policy formulation on career guidance at both ministerial and county government levels. School principals will make budgetary and time allocations and, increase structures for career guidance. The institute for curriculum development will craft a syllabus for every level of schooling while the ministry will train and post teachers to all schools. Teachers' Service Commission

(TSC) will administer and oversee implementation of the curriculum while Kenya National Examination Council will take charge of evaluation of the process.

1.4 Audience

Ministry of education, Kenya institute of curriculum development, County education officers, principals and Career guidance teachers are the audience for this study. The research is also addressed to parents, students and the communities at large.

1.5 Purpose of the Study

To establish the relationship between career guidance services and academic performance and, subsequent career choice among secondary school girls in Vihiga County.

1.6 Main Objective of the Study

To investigate the extent of establishment and effectiveness of career guidance and counseling services in girls' and mixed secondary schools and its impact on girls' career choices in Vihiga County. The study also sought to find out if there is a relationship between career guidance, stereotyping and, the number of female students who join public universities from the schools.

1.7. Specific Objectives

2. To establish the forms of career guidance services offered to girls in secondary schools in Vihiga County.

3. To establish the professional training levels and experience of career guidance teachers in secondary schools in Vihiga County.

4. To investigate and establish structures that can enhance career guidance in schools and its subsequent effectiveness

5. To assess the relationship between career guidance services and academic performance and career choice alignment among girls in secondary schools in Vihiga County.

6. To assess the relationship between stereotyping and career choice among girls in secondary schools in Vihiga County.

1.8. Research Hypothesis

H_{O1}: There is no statistically significant relationship between career guidance services and academic performance and subsequent career choice

1.9. Justification of the Study

The number of female students enrolled in universities countrywide is low compared to males. In addition, female students in some courses like medicine, engineering are alarmingly few. According to http://www.softkenya.com/ university women enrolment declined from 40.1% in 2008-2009 to 37.9% in 2009-2010.To boost the numbers, the joint admission board (JAB) currently known as Kenya Universities and Colleges Central Placement Services (KUCCPS) has an affirmative policy of admitting female students with a point lower than their male counterparts. In 2013-2014 admission, cut

off points for males was 60 (B plain) while for females it was 2 points lower (B- of 59 points).The affirmative action has however not brought gender parity, hence warranting research to be carried out to find out if career guidance is part of the causes. There is therefore need to look into ways of enhancing the girl child's access to career information and employment since they are largely culturally marginalized in some parts of the country including Vihiga County.

The study is also justified since there is a gap between curriculum implementation and transition into careers in Kenya. The Ministry of Education (2009) Report revealed that learners receive inadequate career guidance and that their career choices are made out of ignorance. Much emphasis is laid on subject performance with little career information on the link between subjects and careers. There also exist gender disparities on career preferences with more females preferring Art-related courses with males preferring science-related courses.

Although there is conflict of interest amongst parents, teachers and learners in terms of choice of subjects, teachers are the best placed to provide career guidance. However, many teachers are inadequately equipped, (MoE, 2009). The Ministry of Education is supposed to post trained guidance and counseling teachers to all schools. Many schools are yet to receive such teachers. Muriithi (2007) states that a careers' course piloted in four workshops in Laikipia and attended by 120 teachers was to be extended to head teachers and education officers. It is not clear how far the project went within the district and if it was extended to other districts. A bench marking tour of Alliance High school by teachers from Eldoret East District established that the school took its own initiative to send its careers teacher for training fully paid for by the school. However, in

many of our schools, untrained and unskilled teachers who struggle run the guidance

and counseling department between heavy workloads of teaching and career guidance

(Muriithi, 2007). Therefore, career guidance does not get the attention it deserves in

secondary schools and hence the need for this study.

1.10. Significance of the Study

Inadequate research has been done on career guidance in Kenya as evidenced by scarce

literature. The findings of this study will generate more knowledge on what ought to be

done to revamp career guidance with the aim of helping students, particularly female

students make informed career choices.

The findings will also be used by the Ministry of Education to draw appropriate policies

to govern the provision of career education and reinforce the existing policies. These

include policies on:

1. The existence and structures in the career guidance department;

2. Training and staffing of the department;

3. Curriculum guidelines, timetabling and budgetary allocation.

Findings of this research will also strengthen gender policy to eliminate stereotyping in

learning materials, in class/schools and at home so as to facilitate girls' empowerment

through education. In addition, the findings will be instrumental in helping to fulfill one

of the specific objectives of the Gender Policy, which is: 'empower girls and boys,

women and men on gender issues' (Republic of Kenya, 2007).This is also an objective

of SDG number 5. Finally, the findings of this study will form a basis for further studies

for scholars and academicians who will be interested to pursue this field of knowledge.

1.11 Scope/Delimitation of the study

The study was carried out in Vihiga County in Western Province of Kenya as a sequel to Mukwana (2005) and Odini (2009) studies. Career guidance for female students was the area of concern due to the underrepresentation of girls in public universities and in some careers. The form four classes of 2013 were selected as at the time of the study, they would have gone through the available career guidance processes and chosen careers.

Principals, teachers, county education officers were involved as they are policy administrators & implementers. KCSE results 2006-2012 were analyzed to gauge performance over a period of time. Performance over the years. Mixed methods were used to enable gathering of comprehensive data.

The study was conducted from 2012 to 2016.

1.12 Limitations of the Study

Veracity of the responses from respondents in this study could not be ascertained. These may have led to wrong deductions. A lot of red tape involved in getting information from government offices caused delays in obtaining required data. The officer at JAB quarried whether the researcher needed the admissions data for political reasons like some people do. Inaccessibility of principals and career teachers for interviews was also a problem. Students were also not readily available as it was during the KCSE exam period Confidentiality and infringement of rights a challenge where personal beliefs and school administrative practices ware discussed. One principle stressed that even though

there was need for the school to participate in the research for public relations, there was also a need to portray the image of the school positively. Another challenge was that there is inadequate previous research literature on career counseling in Kenya to guide the study; hence, there was over -reliance on foreign literature. In addition, eneralizability of the findings to the whole country may be reduced due to the narrowing of the study to one county since one county is less than a third of the 47 counties.

To minimize the challenges related to respondents, the researcher prepared neat, clear and appealing questionnaires, assured respondents of confidentiality, made prior calls to the principals to secure appointments and explain the significance of the research to them .The researcher also promised a copy of the complete research document for their schools so as to elicit a higher response rate. Use of triangulation of data from interviews, questionnaires, content analysis and the researchers' own observations was used to ascertain the veracity of information. Reading broadly and searching the relevant sources of archival materials helped to obtain as much information as possible.

1.13. Assumptions of the Study

The study made the following assumptions:

(i) That there is career counseling in some secondary schools in Vihiga County;

(ii) That stereotyping is a common phenomenon among girls in secondary schools in Vihiga County;

(iii) That the respondents will give honest and correct responses.

1.14. Theoretical Framework

The research was based on the expectancy theory by V.H.V room and E.E. Lowler developed in the United States during the 1960s (Cole, 1993).The theory states that an individual's behavior is formed not on some sense of objective reality, but on his/her own perception of reality - how he/she actually sees the world around him. It relates to how a person perceives three things-effort, performance and rewards. It suggests that effort or motivated behavior occurs when an individual perceives that the effort will lead to effective performance which will in turn lead to rewards which are seen as attractive. The strength of attraction of a particular outcome or rewards for an individual is known as valence. The degree of a belief that a particular act will produce a particular outcome is termed expectancy.

Valences and expectancies depend on an individual's own perception of a situation. For example, the prospect of a promotion could be seen by a new employee as an attractive prospect (valence) but his expectancy of gaining the promotion could be low if he perceives that promotion is attained primarily on length of service. In such a case performance does not lead to rewards, so effort in that direction is not seen as worthwhile. In any case, effort does not necessarily lead to effective performance if one has insufficient knowledge and skills or if his perception of his role does not equate with that of his superior. This can be compared to the case of girls shunning certain subjects and careers since they erroneously believe masculinity is a requirement just like the new employee who thinks experience,(which he lacks) is a prerequisite for promotion hence fails to work hard. The theory is illustrated in figure 1.1

Perception that effort will lead to effective performance

Perception that effective performance will lead to rewards (expectancy)

Perception that attractive rewards are available (valence)

Effort → Performance

Individual Characteristics

Role

Extrinsic

Intrinsic
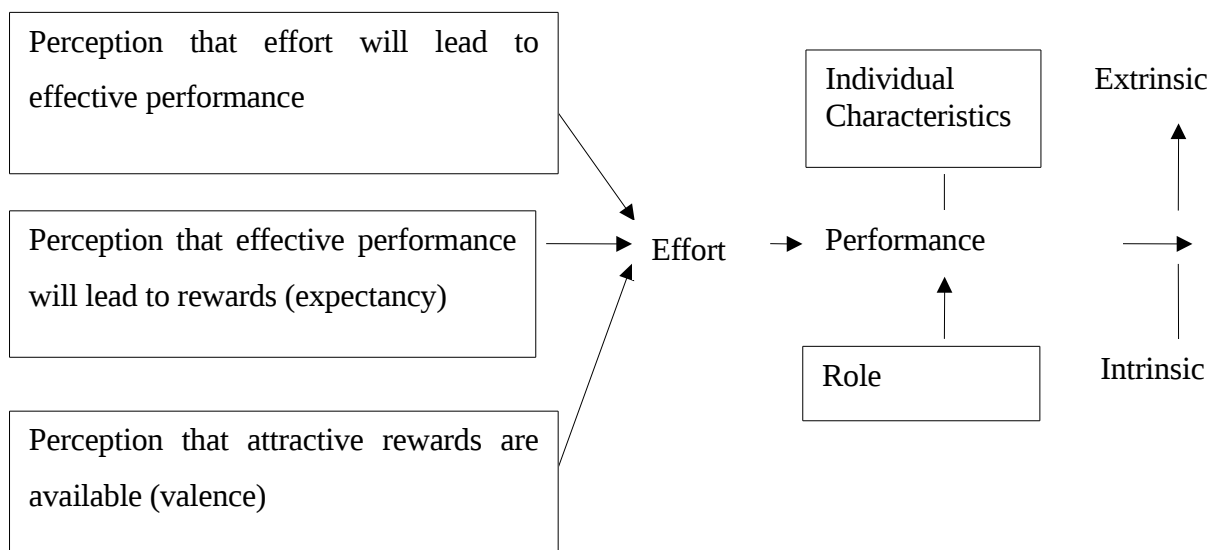
Figure1.1.Expectancy theory

Source: Cole (1993)

The model can be explained as follows: Effort or motivated behavior occurs when an individual perceives that the effort will lead to effective performance, which in turn will lead to rewards that are seen as attractive. However, effort alone may not necessarily lead to effective performance, as other factors are involved. These include one's characteristics like personality, knowledge and skills. This model relates to my study in

several ways. First, career guidance will increase the learner awareness of the available opportunities and where and how to attain them hence increase their valence and expectancy, leading to increased effort (motivation to work hard). Second, the knowledge and skills on career development learnt in career guidance impact on the personality of girls, a crucial factor in enhancing performance as shown on the model. Third, it will enhance their self-esteem and infuse in them the 'yes we can' spirit concerning certain careers that are stereotyped as masculine. Their role perception in society will shift from mere caregivers to individuals who can do more, contrary to the roles society has relegated them to.

The role of the careers department is to increase the valence and expectancy of students towards studies, all the subjects and all the careers irrespective of their gender. This will bring about more effort and better results, which boosts transition into suitable careers. For the female students, the theory holds as it can be interpreted in relation to the career development cycle (Figure1.2) as follows: developing their self-awareness and linking it with the occupational possibilities, coupled with activities such as career fairs, job shadowing and role modeling will increase valence (attraction of outcomes -jobs) and expectancy (the degree of belief that working hard at certain subjects will get them into careers that are otherwise deemed unfit for them). This will in turn increase their effort and make them excel.

1.15. Conceptual Framework

This study was based on how career guidance plays a role in determining career choice and eventual placement of girls in secondary school in universities. The independent

variables were effectiveness of career guidance, career teachers' professional training levels and forms of career guidance services. The constructs for career guidance were the structures, capacity among staff and, time and resources allocated to career guidance. Stereotyping was considered as an intervening variable and investigated along aspects of attitudes, opinions and beliefs about certain subjects and careers in relation to gender. The dependent variables were academic performance and career choice. This is illustrated in the figure 1.2.

Independent variables

Dependent

Variables

Career guidance effectiveness:

Department, structures and

facilities

Academic achievement
Aligned career choices

Forms of career guidance services:

Programmes, activities and

processes

Intervening Variable

Career teachers
 Professional qualification and experience:
Level of training and in-service training, workload and other duties

Stereotyping:
Gender-based attitudes, opinions and beliefs on career choices

Figure 1.2: Conceptual Framework

Source: Researcher (2014)

The figure can be interpreted to mean that in the presence of a strong career guidance tradition by virtue of an effective career guidance department, comprehensive

programmes and processes managed by well-trained teachers, learners will achieve highly. They will therefore not only enroll into courses of high cluster but also those that suit their other attributes (hence aligned career choices).Stereotyping influences career choice among girls. However, with adequate career guidance, stereotyping can be controlled leading to good performance and uninhibited career choices among girls.

1.16. Dissemination of Findings

The findings of this study will be made public through presentation of papers at seminars and conferences. Articles will also be written and put in the print and audio visual media, in refereed journals and on the internet. The whole thesis will also be published as a book and copies of it availed to libraries in the country. The researcher will also give talks in schools and other forums such as county government meetings and women groups. Establishment of a consultancy on career guidance and counseling will also be done.

1.17. Operational Definition of Terms

Career: The Interaction of work roles and other life roles over a person's lifespan including both paid and unpaid work in an individual's life (UNESCO 2002).For this study, career was used to mean the types of jabs the students will get into when they complete the degree choices they will have made or been selected into by KUCCP.

Career Choice: Deciding or determining on what one wants to do in life or the line of expertise that one wants to attain (www.ask.com>Q&A>Society>Social Science. The phrase is used in this study to mean the degree courses that the girls intend to select when they will fill the university admission forms.

Career guidance and counseling: A process that helps one to know and understand oneself and the world of work in order to make career, educational and life decisions. (www.career.boisestate.edu/whatiscareercounseling)For this study, career guidance refers to the programmes, processes and assistance provided the students pertaining to degree choice.

Performance: Accomplishment of a given task measured against present known standards of accuracy, completeness, cost and speed
(www.businessdictionary.com/definition/performancehtml).

Performance in this study refers to the grades and points attained in Kenya Certificate of Secondary Education (KCSE) which is used by JAB/KCCUP to select students for university degree programmes in Kenya. The KCSE results for the last six years (2006-2012) was the focus for performance in this study.

Stereotyping: To believe unfairly that all people or things with a particular characteristic are the same (www.merriam-webster.com/dictionary.

In this study, the word is used to refer to the notion that women are only suited to certain subjects and hence specific types of work and roles. For instance, subjects like mathematics and sciences and, careers such as engineering, medicine, pilot, ICT among others.

Placement: Assignment of students to appropriate classes or programs (www.thefreedictionary.com/placement). For the purpose of this study, the term is use to mean admission of KCSE candidates into degree courses by the Joint Admissions Board (JAB) basing on mean grade and cut off points for the courses

1.18 Chapter Summary

This chapter has discussed the preliminary aspects of research. These are: background to the study, statement of the problem, purpose of the study, main and specific objectives, research hypothesis, justification, significance, limitations, assumptions and scope of the study. The theoretical frameworks, conceptual framework, dissemination of findings were discussed and finally the terms used in the research operationalized.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter consists of a review of the studies that have been done on career guidance. Studies reviewed are those related to the dependent variable, independent variables, and the relationship between these two. The dependent variables were academic achievement, career choices and the types of degree courses that girls are mainly admitted for in public universities. The independent variables for which literature was been reviewed include career guidance effectiveness, and forms of career guidance and career teachers' professional qualifications. Literature has also been reviewed on gender-based attitudes about career choices. Critique of the studies and the gap is then presented.

2.2 Dependent Variables

2.2.1. Academic achievement

Academic achievement was gauged as a measure of KCSE Performance and the Number of Girls who are enrolled in Kenyan Public Universities. Due to the limited access, frequent drop out, and poor performance among girls in secondary schools, the female enrollment in all public universities has always been lower than that of men (Suda, (2002); Chacha, (2004) and Wainaina, 2009).Poor performance of girls which leads to low enrolment in universities is illustrated by the analysis of the number of boys and girls in the provincial top 100 performers for the year 2010 shown in table1.1.

Table1.1: .Analysis of the provincial 100 top performers of the 2010 KCSE results

Province	boys	Girls	Province	Boys	Girls
Coast	66%	34%	Rift Valley	54%	46%
Central	82%	18%	Western	74%	26
Eastern	65%	35%	Nyanza	89%	11%
Nairobi	52%	45%	North Eastern	95%	5%

Source: www.gusii.com/2011/03/kcse2010results_analysis

Suda (2003) gives the example of the 1992/1993 academic year when the enrollment of female students comprised of only 27% of the total university. In 1998/1999 academic year, males constituted 69.5% of the total public university enrolment (FAWE, 2001).Measures such as lowering the cut –off by one point for girls have not helped much in raising the enrollment.

Kimani et al (2010), Wosyanju (2003) Keriga and Bujra (2009) add their voice to this when they say that the number of girls who join public universities is lower than that of boys and, they mainly pursue Arts-based courses referred to as "traditional careers". Suda (2003) further states as follows: "although a large number of women have entered the labor force over the last two decades, they are mainly concentrated in low-status, low paying occupations such as teaching, secretarial work and domestic jobs, which are viewed as extensions of their traditional roles. For instance, she states that in 1995, only 6% of senior positions in job group P and above were occupied by women."Wainaina (2009) states that module II programmes are not gender sensitive hence will perpetuate the gender disparities that currently characterize the education sector or worse still

create new ones that will diminish or undermine the gains that could have been made towards gender parity in this and other levels of education.

A study titled: "Challenges female students in engineering courses face at the University of Nairobi" found out that there is a large disparity in the ratio of men to women studying science, engineering and technology courses in public universities in Kenya (African-studies.uonb.ac.ke/node/499).The study recommended continuous affirmative action in admissions and improvement of learning facilities and resources.

The same is echoed in the gender policy document of 2007which states as follows: "Enrolment in public universities is characterized by a wide gender disparity in favor of males. In 2004, female students made up only 36.2%. Furthermore, enrolment in math science and technology (MST) related degree courses are very low. For instance in the university of Nairobi in the academic year 2002/2004 to 2004/2005 female constituted only16.1 and 26.3% of those enrolled for Bachelor of Architecture and computer science."

This document also takes cognizance of the fact that the enrolment of females in accredited private universities is higher than that of males and has been raising since 2000/2001 and reached 53.1%of total enrolment in 2004/2005 academic year. The document adds that low performance of girls in MST in KCSE hinders them from joining the world of science at university level. This limits their opportunity to join lucrative professional fields. The policy also notes that with regard to human resource, there is low participation of women in lecturing, research, governance, management and administrative responsibilities at the university level.

Even though affirmative action has been in place for some time, the gender disparity still remains, as shown by the table 2.2.

Table 2.2: Undergraduate Enrollment in Kenyan Public Universities: 2008/09 to 2011/12

UNIVERSITIES	2008/09		2009/10		2010/11		2011/12	
	M	F	M	F	M	F	M	F
Nairobi University	9,102	3,558	7,347	4,232	8,876	4,449	9,489	3,740
Kenyatta University	9,520	3,054	8,530	2,617	8,738	3,020	8,189	3,007
JKUAT University	4,818	417	3,556	452	4,471	621	3,812	625
Egerton University	5,445	2,340	5,705	2,331	5,654	2,519	7,132	2,841
Moi University	3,765	1,798	3,588	1,363	3,705	1,418	5,236	1,649
Maseno University	1,739	859	1,860	949	2,687	1,312	2,044	1,211

Source: Ministry of Education, Science and Technology, Statistics Section (2013)

The table shows that JKUAT, which offers mainly science and technology-based courses, registers the greatest gender disparity.

A more recent manifestation of the disparity is seen in the list of graduates in the University of Nairobi's 55th graduation in some faculties, as shown in table 2.3.

Table 2.3: Number of Grandaunts by gender from some Faculties in the University of Nairobi 2016 September Graduation

S/NO.	FACULTY/DEGREE	MALES	FEMALES	TOTAL
1	Bachelor of Education (Bed) (Arts)	265	198	463

2	Bachelor of Education (ECD)	16	26	43
3	Bachelor of Education(science)	85	25	110
4	School of Physical Sciences	190	75	265
5	School of Mathematics	100	47	147
6	School of Computing and Informatics	105	23	128
7	School of Art and Design	58	0	58
8	School of Engineering	279	53	332
9	Faculty of Veterinary Medicine	113	38	151

Source: University of Nairobi 55th Graduation Book; Friday, September 2nd, 2016

The table shows that of all the faculties/schools, education had the highest number of females. However, the problem of gender disparity is still manifested in school of education as most of the female B.Ed. graduates were in the Arts category. All the other faculties in the table had more males than females, with the school of Art and Design and school of Engineering showing the greatest gender disparity.

A study by Ambogo (2010) on factors influencing performance in KCSE science subjects in Eldoret Municipality in Kenya found out that there was low performance in sciences due to a myriad of reasons. Among them was "being female". The others included inadequate books, laboratories, equipment, time and failure to complete the syllabus.

The dependent variable was the aligned career choices of the girls, academic performance, measured by number of girls who qualify to join public universities per school in the last five years, and the types of degree they were admitted to.

2.2.2 Career Choices among Girls

Among the theories of career development is one known as Gottfredon's Theory of Circumscription and Compromise, developed by Gottfredson (1981, 1996, 2002, and 2005). The theory can be used to explain why females tend to follow certain trends when choosing careers. The theory assumes that career choice is a process requiring a high level of cognitive proficiency. It says that a child's ability to synthesize and organize complex occupational information is a function of chronological age progression as well as general intelligence. In addition, cognitive growth and development is instrumental to the development of a cognitive map of occupation and concepts of self that are used to evaluate the various occupational alternatives. Hence, there is a dynamic interplay between genetic make-up and the environment. The genetic characteristics play a crucial role in shaping a person's interests, skills and values, yet their expression is moderated by the environment that one is exposed to. It goes on to say that, even though genetic makeup and environment play a crucial role in shaping the person, a person is still an active agent who influences or molds their own environment.

Therefore, career development is viewed as self-creation processes in which individuals look for avenues or niches to express their genetic proclivities within boundaries of their own cultural environments.

Unlike the public notion that choice is a process of selecting, Gottfredson theorized that career choice and development is a process of elimination, which she referred to as circumscription. Circumscription, the theory states, is the process in which a person progressively eliminates certain occupational alternatives from further consideration, guided by salient aspects of self-concept emerging at different developmental stages. She maintained that career aspirations are influenced more by the public (e.g. gender, social class) than private aspects of their self-concept (such as skills, interests). The theory proposed a career developmental model consisting of four stages of circumscription. The first stage is known as "orientation to size and power" (ages 3-5) in which the child perceives occupations as roles taken up by big people (adults). The second stage is, "orientation to sex roles" (ages 6-8) in which sex role norms and attitudes emerge as a defining aspect of a child's self-concept. The child evaluates occupations according to whether they are appropriate to one's sex (gender) and eliminates from further consideration those alternatives perceived to be gender inappropriate.

If this theory is anything to go by, then this stage explains the gender disparities in career choices that are the focal point for this research. The third stage is the "orientation to social valuation" (ages 9-13) as social class and status become salient to a child's development of self-concept. The emerging adolescent hence eliminates from further consideration occupations that are too low (such as those with unacceptable prestige levels) or too high (such as those with high prestige beyond one's efficacy level). The fourth stage is called "orientation to the internal unique self" (ages 14 and above), in which internal and private aspects of the adolescent's self-concept such as

personality, interests, skills and values become prominent. The young adolescent considers occupations from the remaining pool of acceptable occupations according to their suitability or degree of match with one's internal self.

The second part of the theory, referred to as compromise can also be adopted in explaining career choice tendencies of women.

Gottfredson explains compromise as a situation where compatibility with one's interest is compromised first so as to maintain a greater degree of correspondence with one's preference for prestige and sex type. This explains why females void certain careers on grounds of gender incompatibility. The findings of the study discussed below shed more light on this.

Yongo (2011), in a study to investigate factors influencing career choice by girls in public schools in Migori County found out that many girls' career choices are influenced by their negative attitudes and perceptions. They believe that some careers are for males while others are for males. The girls were found to have internalized beliefs that make them perceive themselves as unequal and inferior to boys. Secondly, the study also found out that curriculum implementation influences career choice among girls. Curriculum has remained gender based as some subjects are still considered feminine and others masculine. An example here would be home science which is mainly offered in girls' schools while aviation technology would most commonly be offered in boys' schools and mixed schools. The study also found out that female role models are important for determining career choices as they provide learning experiences that increase the likelihood of choosing specific careers. The study

concluded that female students make poor career choices based on wrong and inadequate information due to lack of comprehensive career guidance programmes.

An article from www.research_college_board.org//characteristics and career states that career choices during adolescent may be related to personal characteristics such as values, interests, life goals, abilities and self-image. The problem here is that in many cultures, life goal and self-image are much gendered hence the need for career guidance.

Kemboi (2012) in a study of the relationship between personality type and career choice in undergraduate students at Moi University found out that57.7% males against 42.3% females were in the investigative category while 52% female versus 47.7 males were in social category of careers.

2.3 Independent Variables

The independent variable that was investigated by this study is career guidance. The effect of stereotyping as an intervening variable was also investigated.

2.3.1 Career Guidance

Career guidance is the process of helping individuals to select a course of study that may help them to get into a job or make them employable (Wikipedia). It focuses on career exploration, career change and career development among others. Horby et al (2003) states that guidance as involves helping learners either individually or in groups to make personal, educational or vocational choices. A career counselor helps

candidates to get into the career that suits their aptitude, personality, interests and skills (UNESCO 2002, MoE 2009, Wanjohi and Mwaura, (2010).The approach of career counseling varies but generally includes cognitive ability tests and personality assessments. The most commonly used are Strong interest Inventory and Myers Briggs Type Indicator (MBTI). Different career development theories and models are available for use. Ireh (1999) reports that counselors experience difficulties in assisting students in career planning due to their lack of understanding of these models and theories.

For instance a study by Mitterdorff et al (2011) on the students' perceptions of career conversations with their teachers revealed four different teacher guidance profiles. The most remarkable was that teachers spoke little about career issues and, school issues were mostly on the agenda. The results indicate that teachers struggle with the transition towards becoming a career guide. Hence aspects influencing the transition need to be considered.

Rajinder (2010) in a study on post-secondary education in the Dominican Republic of California found out that schools in rural counties have only one counselor who must also attend to both educational and, disciplinary counseling. Hence much of the basic information about colleges and careers is not fully conveyed or understood by students. Plant (2001) and Rajinder (2010) describe what career guidance entails. The former says that guidance is much more than a face-to face interview and that it should involve the following:

Informing,advising,assessing,teaching,enabling,advocating,networking,feedingback,managing,innovation/systems change, signposting ,mentoring, sampling work experiences

or learning tasters, and following up. He says that in most cases only some of the above 15 activities are carried out in the OECD countries. The same case applies in Kenyan schools (Ministry of Education, (2007). Ngumi (2000) quoting Makinde (1984) says that pre-occupational career guidance and counseling which is provided in educational institutions has the following components: awareness of work, which aims at developing an individual's sensitivity to work to create an understanding of the dignity and value of work; orientation, which entails availing information about available careers; exploration, which deals with enabling hands on experiences of occupations available (also known as job shadowing); and, preparation and placement, which involves the actual entry into an occupation.

As important as this process is, its implementation is still fraught with problems in secondary schools as reported by Mukwana (2005). The study sought to find out factors that hinder effective implementation of career guidance programmes in schools in Vihiga district from a sample of 21 teachers and 336 students. The study found out that 49.9% of the teacher's assigned career guidance responsibilities were either indifferent or unwilling to conduct this duty. The reasons for this included lack of training and in-servicing, negative attitude, lack of remuneration for the extra responsibility and, heavy workload. He found out that 57.1% of teachers had not received any training and that of those who had any training; only 4.8% had undergone training for three months and above.

On the question of adequacy of the training, 61.9% found the training inadequate. Teachers said career guidance was conducted in places that are not conducive. For instance, 61.9% reported lack of rooms and 66.7% cited lack of all the other necessary

resources. Time allocation was also an area of concern as 33.3% said career guidance was not assigned any time at all, 33.% said it was allocated from 4 to5 P.M while 9.5% had it allocated lunch break. The findings of Mukwana (2005) concur with those of Wotuku (2002) who said that designated career teachers/counselors perform the duties of a regular teacher in addition to teaching, therefore slighting the functions of career counseling.

Ojenge, (2007) carried out a research among 314 professionals in Kenya to find out their level of job satisfaction. He found out that 66% were dissatisfied, a factor he attributed to lack of career guidance leading to job and personality mismatch. He recommended the use of Personality Analysis Expert System for college admissions.

Plant (2001) gives the competencies for the counselors. These are: insightful, honest, open-minded and results-oriented. They need to have certain skills, including documenting client interactions and progress, accommodating diversity, collecting, analyzing and using information and conveying the information clearly when speaking and writing. They need to have knowledge on: career development models and theories; the change process, transition stages and career cycles: career planning process; and, organizations and resources for career development. They also need to be guided by a code of ethical behavior.

The question on when career counseling should start and the time span also needs to be addressed. Kiran (2006) focused on guidance as a process that starts from the birth of a child. Rajinder (2010) says it should start as soon as a student enters an institution and a record of the student's evolution from entry to exit kept using electronic portfolio. In

Kenya, this may not be happening as reported by Wanjira (2007). Her study titled: "Guiding and counseling Pupils in Kenyan Public Primary Schools: Head teachers' and Teacher Counselors' Role perceptions and Experiences", cited many problems facing the department. The study found out that 95.8% of the teacher counselors sited lack of support from the government and NGOs in terms of: not training guidance and counseling teachers; not providing adequate resources; guidance and counseling not being incorporated in the statutory curriculum so as to facilitate its timetabling; lack of financial support and motivation as the government does not recognize the multiple roles they play; and, lack of visiting resource persons. The study found out that 55.6% of the teacher counselors and 71.4% of head teachers had not received any basic training in guiding and counseling skills,90.7% of the schools had not timetabled guidance and counseling,93.3% had no offices and reference materials and,79% had no training materials.

In both Wanjira's and Mukwana's findings, training for the counselor was wanting. This impacts negatively on delivery of services as it affects competence. Wango and Mungai (2007) give a list of the qualities of a counselor, of which competence is the first. Competence entails being qualified professionally and it comes with training and practice. The other qualities are courage empathy, fairness, humility, resilience, respect, responsibility, sincerity trustworthiness and wisdom which, just like competence will be inculcated with training.

Career guidance the world over is guided by theories. These include what Leung (2002) refers to as…The Big Five Theories". These five theories of career development have guided career guidance and counseling practice and research in the past few decades

in the USA as well as internationally. These five theories are: Theory of Work-Adjustment (TWA); Holland's Theory of Vocational Personalities in Work Environment; The Self-concept Theory of Career Development formulated by Super and more recently by Savickas; Gottfredson's Theory of Circumscription and Compromise, and, Social Cognitive Career Theory (SCCT).

The Theory of Work Adjustment was put forward by Dans (2002, 2005). It is anchored on the individual difference tradition of vocational behavior called person-environment continual process of adjustment and accommodation in which: The person (P) looks for work organization environment (E) that would match his/her requirements in terms of needs and; E in turn looks for individuals who have capabilities to meet the requirements of the organization. The term satisfaction is used to indicate the degree that P is satisfied with E, and satisfactoriness is used to denote the degree that E is satisfied with P.

Holland's theory of Vocational personalities in the Work environment states that vocational interest is an expression of one's personality and that vocational interests can be conceptualized into six typologies. These are: Realistic (R), Investigative (I), Artistic (A), Social (S), Enterprising (E), and Conventional (C), (acronym as RIASEC).

If a person's degree of resemblance to the six vocational personality and interest types is assessed, it generates a three letter code, such as SIA, RIA, to denote and summarize one's career interests. The first letter is a person's primary interest type, which would likely play a major role in career choice and satisfaction. Like-wise, the theory states that vocational environments could be arranged into similar typologies. Therefore, in

the career choice and development process, people search for environments that allow them to exercise their skills and abilities and to express their values and attitudes. Both Dans' and Holland's theories can be applied in career guidance in that they help in finding a match between the person and the work environment.

The self-concept theory of career development developed by Super (1942-1957) and later built on by Ginsberg (1974) is not very different from the two discussed above. It suggests that career choice and development is essentially a process of developing and implementing a person's self-concept. It states that self-concept is a product of complex interactions among a number of factors including physical and mental growth, personal experiences and environmental characteristics and stimulation. Hence career development occurs in continuums shown below:

Stage one: The growth stage, (birth to fourteen years) during which a child develops interest, abilities and aptitudes.

Stage two: The exploration stage, (fifteen to twenty four years), when a person is seeking an occupation.

Stage three: The establishment stage, (twenty-five to forty four years) during which a person does trials with various jobs to find out the most suitable (the trial phase) then finally establishes oneself in a suitable occupation (the stable phase).

Stage four: The maintenance stage, (forty five to sixty five years); a when the type and level of employment is already set and proceeds as determined by previous stages.

Stage Five: The decline stage (65 years and above), a depreciation stage during which professional and physical abilities decrease as well as their concern for the job.

The theory has been built on by Savakis (2002) who took a constructivist perspective and postulated that the process of career construction is essentially that of developing and implementing vocational self-concepts in work roles. Application of Super's theory lies in understanding the ages and related stages of career development as this assists the career counselor to identify where clients are in the career development continuum and suggest appropriate career related goals and activities.

Gottfredson's theory of circumscription and compromise (1981, 1996, 2002, and 2005) suggests that career choice and development is a culmination of the interaction of chronological age progression, cognitive growth and the environment, which results in an individual eliminating careers that are deemed unsuitable for one's sex and prestige. The theory differs from the others in that while the others take the approach of selecting a career from a given variety, this theory looks at eliminating unsuitable choices on the basis of various factors until one is left with the best match. Its application has been discussed in section 2.1.1(Career Choices among Girls).

The Social Cognitive Career Theory (SCCT) by Lent, Brown and Hackett, (2002) is associated with Bandura's Self -efficacy theory of 1977- 1997. It postulated a mutually influencing relationship between people and their environment. It offers three segmental yet interlocking process models of career development. The models seek to explain: development of academic and vocational interest; how individuals make educational and career choices; and, educational and career performance and stability.

The three segmental models have different emphasis centering around three core variables, which are, self-efficacy, outcome expectations and personal goals.

Due to the diverse nature of career development theories, another school of thought has categorized them into what they call the Big Picture View of Career Development Theories. They have put together common theories of Human Development and major career development theories. The human development theories in the big picture of career development are as follows:-

a) Abraham Maslow's theory of human motivation (1908-1970), based on hierarchy of needs. Its application in career guidance is given by way of an example whereby they say, a youth who is homeless would need assistance in securing shelter first before being referred to a career decision-making program.

b) B.F. Skinner's theory of reinforcement (1904-1990) which can be applied by, for example using verbal praise and other forms of recognition to encourage youths to continue their job search.

c) Erickson's psychosocial theory of development (1902-1994) which describes the eight stages of development from infancy to adulthood. At each stage, one deals with and hopefully resolves certain developmental issues and the success of each stage builds on the success of the previous stage. The practical implication of this would be for instance, helping one to first seek self-identity then career path will follow.

d) Frankl's existential theory (1905-1997 which states that human beings are responsible for their own existence and for finding purpose or meaning to their lives. Practical application of this lies in encouraging learners to make their own career choices and help them consider careers that will be personally meaningful and fulfilling.

The theories of career development considered in The Big Picture are:

   a) The Trait Factor Theory of Frank Parson (1900s)

   b) Holland's Career Typologies;

   c) Super's Life-Span/Life-Space Theory;

   d) Krumboltz's Social Learning Theory; and,

   e) Savickas and Vance Peavy's Constructivist Theory/Model.

Theories (b), (c), and (e) have been discussed earlier on. The other two are discussed below:

The Trait Factor Theory states as follows:

   i.   Every person has a unique pattern of traits made up of their interests, values, abilities and personality characteristics which can be objectively identified and profiled to represent an individual's potential.

   ii. Every occupation is made up of factors required for the successful performance of that occupation, which can be objectively identified and represented as an occupational profile.

   iii. It is possible to identify a fit or a match between individual traits and job factors using a straight forward problem-solving /decision-making process.

   iv. The closer the match between personal traits and job factors, the greater the likelihood for successful job performance and satisfaction.

   v.   The application of this theory is as direct and straightforward as the theory itself. In fact, most of the aptitude, personality and interest tests used today evolved from this theory.

Krumboltz's theory of social learning states that career decisions are the product of an uncountable number of learning experiences made possible by encounters with the

people, institutions and events in a person's particular environment. That is, people chose careers based on what they have learned. The theory further states as follows:

i. The four main factors that influence career choice are genetic influences, environmental conditions and events, learning experiences and, task approach skills (e.g. self -observation, goal setting and information seeking).

ii. The consequences of these factors and most particularly learning experiences lead people to develop beliefs about the nature of career and their roles in life (self-observation generalization).These beliefs whether realistic or not, influence career choices and work related behavior.

iii. Learning experiences, especially observational learning stemming from significant role models (.g. parents, teachers. heroes) has powerful influence on career choices, making some occupations more attractive than others.

iv. Positive modeling, reward and reinforcement will likely lead to the development of appropriate career planning skill and career.

Activities such as career days for schools and universities, students visiting work stations, parents taking their children to their work and business stations (as practiced by the Asian community) are among the practical applications of this theory.

Felissa K. Lee and Joseph A. Johnston (2001) in a journal article outline the path that career counseling should take. They identified ways in which career counseling can be designed to best serve our clients given the challenges of our turbulent economic and work environment. They stated that it should be a holistic approach which: First, we emphasize the value of taking a holistic approach to career counseling; one that integrates attention to both career and personal emotional issues. Second, we highlight

attention being given to Personal Career Theory (Holland, 1997), and suggest how this client-centered conceptualization might be used as a guiding framework for counseling sessions. Third, specific interventions, those involving attention to chance events and open-minded decision-making, will be introduced as important additions to our counseling repertoire.

Fourth, we argue that attention to building interpersonal resources, in terms of skills and social contacts, will be increasingly important for our clients' career success. We conclude by summarizing our recommendations for the practice of career counseling. Holistic Framework takes a holistic perspective, one that does not separate career form psychosocial issues, is a particularly appropriate career counseling approach given today's work environment. In the application of the theories of career counseling it would be important to appreciate the fact that none of the theories is comprehensive and that their strengths and weaknesses have to be born in mind.

The UNESCO handbook (2002) on career counseling gives a cyclical representation of the career development process, shown in figure 2.1 below.
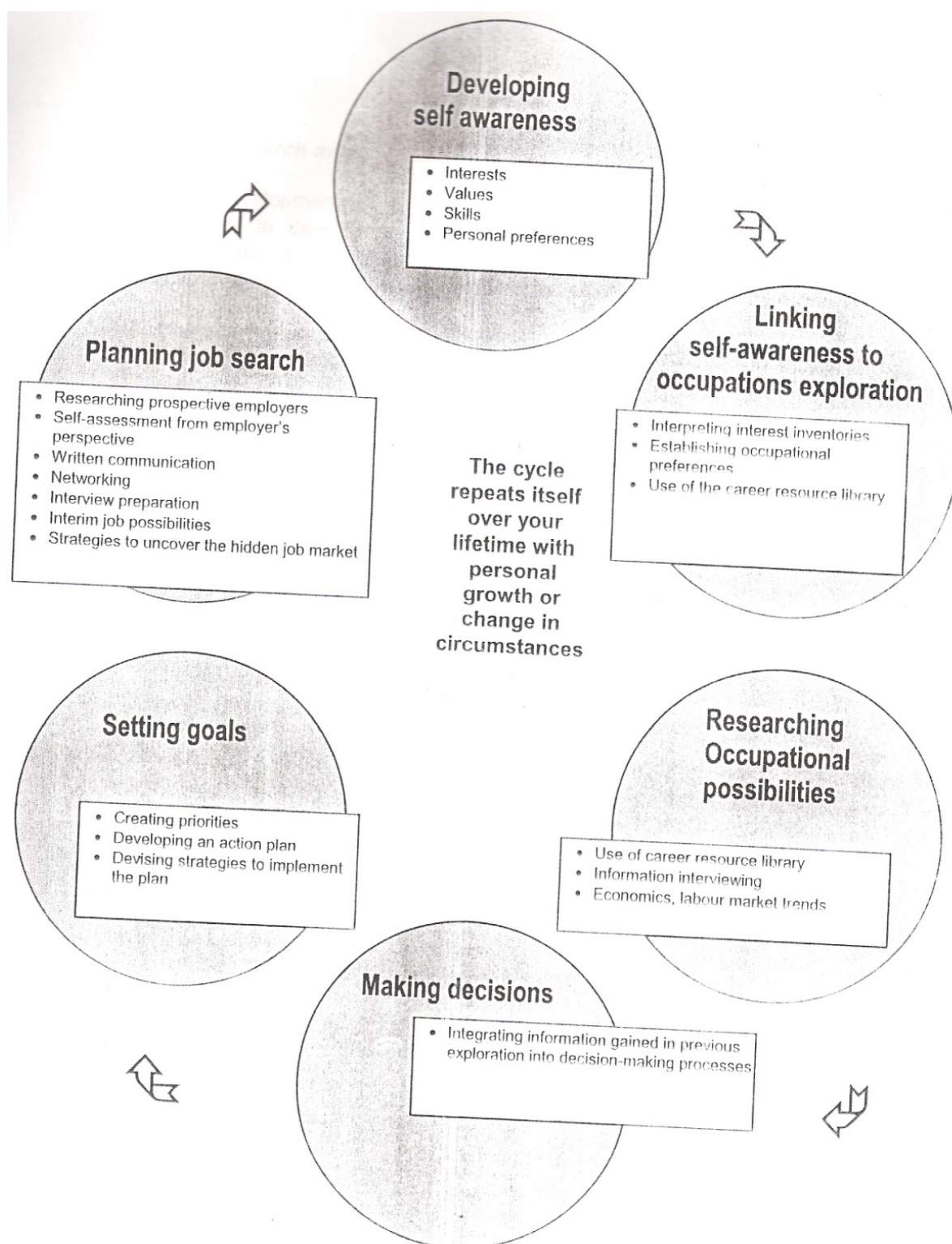
Figure 2.1 UNESCO Career development cycle
Source: UNESCO Handbook on Career Counseling (2002)

The process involves six stages, starting with development of self-awareness followed by linking of self – awareness to occupations, then researching occupational possibilities, making decisions, setting goals and finally, planning the job search. Career counselors need to navigate the whole course of this cycle with their clients in order to make meaningful career choices. However, many times this is not the case, as reported by the studies which show that many students go straight to stage four(decision-making) without having passed through stages one to three. This results in great difficulty in career decision-making, career indecision, choice of wrong careers and eventually job dissatisfaction and frustration. Career decision-making is the basis for several studies including the following: OVAE (2000), Majilla & Gerald (2005), Guunkel et al (2010), Sonja & Katja (2007) and, Salami & Aremu (2007).

A number of students on joining university request for transfers into different courses, a likely indicator that they were not adequately prepared to make informed career choices while at school. Thou (2008) reports that in 2005, 1800 students were required to change their courses. He further states that there is a relationship between the type of school and the students' perceptions of guidance and counseling services offered and that in some schools, some students leave school without knowing that there existed a career guidance department. They learn of some university career options for the first time on the day they fill the university application forms (ibid; Lugulu, 2011). Wanjohi (2011) reports that a survey by Modern Machine Shop (2002) investigated the challenges facing career guidance among high school students in U.S.A found out 51% of the students could not identify someone at school who advised them on careers while (78%) credited their parents as their top advisors. Bathsheba et al (2000) found out that

in Kenyan high schools, rural students seek help from parents and teachers more than urban ones and that gender, self-concept and vocational stereotyping influence career decision-making. A study by the ministry of Education in 2007 on career practices in 22 randomly sampled schools in Kenya found out the following: "The private academies take students to university fairs, give individual attention to students and hold career debates.

In the high cost public schools, the counselor discusses with interested students but there is no full time counselor as each counselor has teaching load too. In the other public schools where we have 90% of Kenyan high school students, no real counseling is done except on the use of the careers booklet, which contains a list of college courses and their cut off points." A study by the ministry of Education and a Canadian university in 2000 found out that among the agents that influence career choice in Kenya, career counselors have the least influence as they are too few and poorly trained.

In a study on the effect of provision of career guidance information in secondary schools on choice of degree programmes among second year students in Moi University, Lugulu (2011) found out the following: first, majority of students did not seek career information in primary, form one, two and three, and only sought this information while in form four. Such a time is rather late to benefit the learners fully. Second, that their performance in KCSE was the major determinant of their degree courses and not career guidance. Third, that although career guidance was available in their schools, it had minor influence on their degree choice. Expounding on this, one respondent even expressed surprise at the number of courses available which their

teachers had no idea about. While previous works in this field have mainly been on the role of the counselor, the parents and effect of career counseling on performance, this study intends to look at how career counseling can be infused and integrated into classroom teaching so that it becomes part of the curriculum in order to enhance career decision-making among girls.

In line with the UNESCO career guidance cycle, Pepe Minambo (2013) in the careers guide manual/motivational booklet titled 'Be Your Absolute Best' has given some insights on how step one of the cycle (self- awareness) can be effected. He posits that self-awareness should entail a thorough search to unearth one's life vision, mission statement, core values, role models and mentors. He further stresses the importance of a heroic attitude based on three pillars namely self-concept, self-ideal and self-value (personal worth).The writer also stresses the importance of students carrying out research on performance in subjects in KCSE. He also stressed the importance of personal effectiveness where students need to learn that their performance and career choice are among the things they have influence on (circle of influence) unlike things like the weather (circle of concern) hence they should strive to influence the former and ignore the latter. The writer ends by stressing the need for consistency, striving to become a better person, personal reflection, belief in change and deciding ones' destiny. The second step of the cycle (linking self- awareness to occupations explorations) and the third step, 'Researching Occupation Possibilities 'can be done in schools by adopting the model used in the Gichohi's 'Career Word magazine'. The magazine that used to be produced every two months, presents information on career exploration by picking on a specific careers and listing the following information about it:

a) Broad Career field

b) Career tracks under the broad field-the various branches

c) Academic training and other qualifications required as pre-requisite

d) Essential KCSE subjects

e) Job outlook-opportunities and growth prospects in the career

f) Requisite skills and personal qualities

g) Areas of employment

Such information about the world of work, if infused into school curriculum and made part of timetable for instruction, will shed a lot of light on the relationship between work and school. There already exists a book with some content on careers known as 'Careers Guidebook for schools.' However, it is mainly used as a reference book when students are choosing careers in form four to fill the JAB forms and not as a course book to guide learners in their earlier years of secondary schooling..

2.3.2 Stereotyping and Career Choice

A stereotype is a popular belief about specific social groups or specific types of individuals (Wikipedia). Stereotypes are standardized and simplified conceptions of groups based on some prior assumptions. The word is a Greek derivative which means firm solid impressions. One of the theories of stereotyping is that people stereotype because of the need to feel good about themselves. Stereotypes protect one from anxiety and enhance self–esteem. Designating one's group as the standard or normal group and assigning others to groups considered inferior or abnormal provides one with a sense of worth. Leung (2002) commenting on the application of Gottfredson's theory of career circumscription and compromise states as follows: "gender stereotypes is a part of many cultures (e.g. Asian cultures) and individual are encouraged to pursue occupation

that are perceived to be compatible to their gender". Stereotypes are thought to develop from childhood experiences. An article dabbed "Dreaming Big: What's Gender Got to do with it? The impact of Gender Stereotypes on Career Aspirations of Middle Scholars" Is in agreement with Gottfredon's theory.

The theory posits that individual gradually eliminate careers from their list of choices basing on their gender and prestige and, also make compromises on some which would suit them. The article ("What's gender to do with it?") is based on research done by Simmons College in collaboration with the Girl Scout of Eastern Massachusetts (GSEM) on middle scholars in New England, New York and Pennsylvania in (2011).The study established that children establish gender stereotypes as early as age two and an emerging career identity by middle school. The reason for this is that children live in a gendered environment which affects them. The example given by the study is that during these formative years, children are surrounded by a gendered media which shapes their thinking. For instance, they see movies where only 19%of the characters are women watch television where 27% of women compared to 1% of the men are doing housework, and read books where men are depicted in twice as many careers as women. The general conclusion of the study, which supports Gottfredson's theory, is that gender roles delineate what women and men are expected to do, impact the talents they cultivate and the opportunities and constraints they encounter and correlate with the occupational paths they pursue.

The study involved three groups of 414 boys, 475 girl scouts and 299 girls who were not scouts. Four primary findings that emerged from the survey were as follows: girls in the sample had set ambitious goals for themselves; the primary career advice they got

was "do what makes you happy"; girls hearing this well-intentioned advice do so while surrounded by a gendered landscape promoting stereotypic messages about what girls can and should do or should not do. As a result, they make many career choices that reflect those gendered messages. While parents and educators are supportive, girl-serving organizations such as girl scouts can significantly counter those gendered messages, increase a girl's confidence in her leadership capabilities and expand her career choices.

This study has implications to this study in that career guidance needs to be perfected in order to serve a similar purpose like that of girl-serving groups like scouts in demystifying careers as a whole.

This line of thought in the Massachusetts study is echoed by Kariuki (2013) in a journal paper titled, "feminization of poverty among the Agikuyu and the Abagusi in Kenya "in which he states that the factors that increase poverty among women include: socialization, power asymmetries in the institution of marriage, Female Genital Mutilation, Gender Based Violence, patriarchy, education opportunities, the growth of female-headed households and politics. Of significance to this research is what the writer says under socialization, that is, "Women are socialized that there are separate roles for men and women. Women's roles are domestic based. She can't venture out".

This study sought to find out if this is manifested in career choice at later stages in life. The research will look at gender stereotyping where by females are thought of as incapable of successfully pursuing certain subjects and careers. Widespread acceptance of stereotyping of scientists and engineers as predominantly male domain from

elementary to university level is still the norm. This refers to the practices of attributing roles, behaviors, and aspirations to individuals or groups solely on the basis of gender. The study by Simmons College described above found out that girls were not only less interested in STEM (science, technology, engineering and math) careers but also perceived less support than boys for their interest in STEM careers. While only 10% of the girls chose a job in STEM, 32% of boys would. Discriminations based on gender stereotype surface in many ways in the school context. It may occur, for example, through teachers' samples of group placements and activity assignments, the content of compliments and criticism. Examples range from the treatment of females in textbooks and curriculum materials to differential treatment of males and females in the classroom, to mistaken beliefs about attitudes and cognitive abilities (Martorella et al. 2005; Saitoti, 2005).

The Kenya Education Sector Support program (2005-2010) states that the realization of girls' and women's empowerment through education has been impeded by a number of factors such as cultural and religious attitudes and practices. Some of these manifest as stereotyping in learning materials, in class teaching and in homes. Abagi et al (2009), Daphne (2010) and Yahya (2004) attribute the gender gap and stereotyping in education to the fact that men are still regarded as the owners and controllers of resource and breadwinners while women are regarded as homemakers (wives and caregivers),and dependent on men. Hence education of girls is not regarded as important by many households, leading to different socialization programs and behavior patterns of males and females at home and in learning institutions. Abagi et al (2009) in an emancipatory study on 12 career women in ICT found out that stereotyping is not only making few women accesses the sub-sector but even those who access and are

trained in ICTs find themselves stereotyped and/or just discriminated. Despite their ICTs knowledge and skills, they find themselves in 'female' oriented service jobs. This stems from the fact that women are underrepresented and discriminated in formal education and even in school text books, especially those in mathematics, science and engineering. Many (predominantly male) teachers say girls cannot think or work scientifically and that science is too mechanical and technical for girls.

Unlike Abagi's study which narrowed down on women in ICT, Daphne (2010) did a study of social cognitive influences on career choice in science, mathematics and technology (SMT) among Kenyan women. Interviews of 20-30 year old women who were already in SMT careers revealed that high self-efficacy and a strong environmental support, and coping efficacy helped them to make career choices in SMT. The two studies found out that strong parental support and encouragement to choose careers of their choice assisted in preventing societal and school stereotypes from interfering with the women's career choices. A study by Kathleen at the University of Maryland in America states that girl scouts are steered away from scientific pursuits while boys are discouraged from pursuing artistic careers (Nauert, 2011). This is perpetuated by the use of manuals, projects and budges that portray strong gender messages.

An article on the internet titled "Gender Disparity in Vocational Education" states as follows: At policy level, all course are (or should be) open to all students, regardless of gender. However, attracting girls to vocational education courses historically nontraditional to their gender is considered to be important because of the higher wages earned in technical occupations dominated by males. Gains that have occurred since the

passage of Title IX appear to be minimal ([www.maec.org/beyond.html)](www.maec.org/beyond.html). Keriga and Bujra (2009) report that in 2007, only36 %(5,851) females were admitted into regular degree programmes in public universities. Furthermore, they were mainly enrolled in arts-based subjects. Technical and science-based institutes also record lower number of females. For instance, only 44% of TIVET enrolment constituted females and, in Kenya Polytechnic, 52% of the females were enrolled in business studies as opposed to only 5% in engineering according to this study. A study Known as Gender Equity in Commonwealth Higher education noted that a bias towards arts based disciplines in most East African institutions of higher learning can be attributed to: lack of role models, fear of mathematics related courses and hostile attitudes towards females who showed interest in nontraditional subjects such as agriculture, engineering and computing (ibid). Hence, they have low perceived ability in science, negative attitudes toward science classes, and lack of motivation to pursue advanced studies in science and mathematics (DE Backer & Nelson, 2000).

A report by Organization for Economic Co-operation and Development (OECD) (2008) states as follows:

> "Tertiary education increases lifetime earnings and is a good investment for individuals and society. However, this tends to be less true for women. The main reason for this is the different subjects that young men and women study at university. Women prefer health and welfare subjects with humanities, arts and education a close second. For males, subjects related to engineering, manufacturing and construction come first just ahead of mathematics and computer science. Women thus end up in female –dominated fields characterized by lower status and less well-paid jobs".

Thus in the 34 OECD member countries, even though women are now more educated than ever, they are still not well represented in some careers. This could be an indicator that career guidance is inadequate and stereotyping is at play

The cost of low performance in mathematics and science subjects is that women and girls are unable to enter science-related careers. A study done in Ghana on post-secondary school subject choices found out that only 12% of girls elect science (physics, chemistry, and biology), 5% of girls enroll for mathematics and, less than 1% of girls enter middle level technical raining institutions (Andam, 1990). The above studies show that generally, women are invisible when one talks about science and technology education which have long been recognized as the cornerstone of development in Ghana in particular and Africa in general. An amusing scenario of stereotyping in careers is told in a FAWE article as follows: "Professor Mwandosyo of Dar-Es-Salaam University said that when the faculty of engineering complex was constructed, there was not even provision for female toilets. Thus some male toilets had to be converted on the realization that even if they never dreamed there might one day be female students or lecturers, the faculty would need female administrative staff for its operation!"

2.3.3 Career Guidance and University Admissions

Every year, JAB requests a large number of candidates to revise their degree choices (Thuo, 2008).An article by JAB in the Daily Nation of Wednesday July 20th, 2011 stated that 8,740 of the 2010 KCSE candidates failed to qualify for their course choices even after the first revision. They were therefore being called upon by JAB to make the

second and final course revision. This points to the fact that there is inadequate counseling of students in secondary schools on the need to match ones' academic ability to their degree choices. The situation does not seem to improve with time as come 2012, the same scenario is repeated. An article in the Saturday Nation of 15th December 2012 states as follows: "The admission of students to universities seven months after results are out is infuriating. Eighty five percent of the first year students in universities are not taking courses of their choice, even after the provision for revision of courses". This was given in a report known as Status of Higher Education: Project Masomo, which was conducted by Gallup Africa The writer of the article, Fwandeh, continues to say: "Their dreams are now twisted, if not dashed. All they can do is try and fit in the courses that they have been assigned. Some of the students come from schools that do not offer good guidance on career choices, only concentrating on passing exams." Career guidance needs to start early like in form one. Students should be taught about the basic aggregate points, raw cluster points and weighted clusters and how these impact on their qualifying for various degree programmes, and how to calculate the latter using the formula below:

$$W = \sqrt{\left[(c/48) \times (a/84) \right] \times 48}$$

Where:

W=weighted cluster,

c=raw cluster (points for the 4 cluster subjects)

a = basic aggregate points (total points for the 7 subjects).

Source: Joint Admissions Board, htt.www.jab.uonbi.ac.ke

Weighted cluster is a derivative of the overall basic aggregate points and the cluster points that one needs to attain in the four subjects considered compulsory for entry into particular degree programmes. Raw cluster is the actual points a candidate scored in the 4 subjects considered compulsory for the degree of their choice. Basic aggregate is the actual points scored, in the best 7 subjects. The maximum points one can score in the four compulsory subjects, if one scores 4 'A's is 48 while 84 is the maximum possible number of points that a candidate can score in the 7 subjects.

The KCSE exam is scored on a scale ranging from grade A=12 points to E=1 point (MoE, 2009). Students should be taught about the subject requirements and weighted cluster calculation for all degree programmes offered both in public and private universities early, say in form one, The rationale is that they can use this to gauge their ability and their suitable career fields by calculating their aggregate points and weighted cluster every time they do an examination, hence work harder to improve or seek alternative career choices early enough.

This will reduce the number of students who:

   a) Chose careers at form four hurriedly without enough information;

   b) Have to revise their choices when JAB announces because they did not qualify for the chosen ones;

   c) Need to be considered for courses they did not choose because they shied away due to the high weighted cluster;

   d) Are admitted into any course because it was the only available that they qualified for, irrespective of their liking;

e) Decide to change courses when they are already enrolled after realizing they did not consider all that the course entails and it does not suit them.

There is even another category that does a course at the university while still undecided on their career path. (Daily Nation, April14, 2011).

A study on "the effect of provision of career information in secondary schools on choices of degree programmes among second year students in Moi University" found out that majority(54%) settled on the degree programme to pursue when they were already in form four (Lugulu, 2011). This is rather late as career decision-making should be a process involving several steps (as shown in figure 3) and not a onetime last minute event (Mwikwabe and Kurgat, 2005).Careers information gives intrinsic motivation for academic performance (MoE, 2009). If learners are given proper career information in terms of subjects required for specific careers, level of passing and the benefits of the careers, (which include power, money, status, discipline, command among others), this would trigger high motivation to work hard, thus leading to high academic performance. Ogol (2000), states that lack of career guidance lowers students' performance.

Kazadi (2006) revealed that students of French foreign language in Kenya are instrumentally motivated due to being made aware of what is at stake in job market for those with knowledge of French. Likewise, Whiston et al,(2009); Omusonga et al, (http:/www.google.coke) and Christie (2001) found out that students who participated in school counseling interventions tended to score higher than those who did not.

Krumboltz and Kolpin (2002), Schimidt (2003) and Eaodin (2000) also touched on guidance and performance. Many schools in Kenya post such poor results that they

send very few students or none to Universities. Among those who join university to pursue courses such as medicine, engineering, law and commerce, a very high percentage comes from particular schools year in year out. There is e a need to strengthen career guidance in schools where it exists and install it where it is non-existent so as to increase the valence and expectancy of learning outcomes as suggested by Vroom's model of motivation.

2.4 Critique and Research Gap

Among the areas researched on is the role of counseling and the counselor. Among the researchers are: Ndug'u (2000, Wanjira (2007), (Mwaura, 2010; Muriithi, 2007; Ireh, 2001; Ojege, 2007 and, Ireh and Mitterdorff, 2011).While Ndung'u dealt with the role of career guidance on career awareness and planning in public secondary schools, Wanjira looked at head teachers' and teacher counselors' role perceptions in public primary schools.

Mwaura only dwelt on the role of the counselor while Muriithi only dealt with the effect of career guidance on entrepreneurship. Ojege was mainly concerned with the matching of personalities with careers and considered those who were already in the job market as he was measuring job satisfaction. Ireh and Mitterdorff looked at difficulties encountered by career counselors.

Career guidance and performance has been dealt with by Ogol (2000), Kazadi (2006), Whiston et al (2009), Christie (2001), Krumboltz and Kolpin (2002), Schimidt (2003), Eaodin (2000) among others. Career Decision-making, which is a component of career

development process has been done by Lugulu (2011), OVAE (2000), Majilla & Jerald (2005), Gunkel et al (2010), Sonja & Katja (2007), Salami & Aremu (2007), Thuo (2000), Wanjihi (2011), Modern Machine Shop (2002), Osoro (2002) and MoE (2007). The effect of provision of career guidance on choice of degree programme was dealt with by Lugulu (2011). However her population unlike this study was male and female second year university students.

The effect of stereotyping on career choice among women has been dealt with by Omamo and Abagi (2001); Keriga and Bujra (2009), Daphne (2010), Yahya (2004), Hardy Women's Research (2008). Abagi and Omamo centered on ICT careers and targeted women who were already working. Daphne concentrated on those who were already in the science, mathematics and technology careers aged between 20 to 30 years while Keriga and Bujra looked at the effects of social policy on inequity and poverty. Yahya and Moshe (2004) compared patterns of decision-making difficulties among males and females in three groups of Arab students: Those under Palestinian rule; Those in East Jerusalem and, those in Israel. These studies have covered various aspects of career guidance. Most of the works were essentially post –facto studies.

However, Mukwana (2005) looked at factors hindering effective implementation of career guidance in public secondary schools in Vihiga County. This study will therefore be a sequel to Mukwana's (2005) study as it seeks to find out how implementation of career guidance coupled with stereotyping affects career choices and enrolment of girls in university and their under-representation in some courses. This study was therefore anchored on this premise. The study has shed light on the nitty gritty of career guidance that need to be included in the education system. These include a career guidance

department in every school, trained career guidance teachers who is paid for the extra duties and, a curriculum. The curriculum should be broken down to class levels with specific theoretical, practical/field activities, programmes and processes. These should be timetabled on the school calendar and master timetable.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

The chapter consists of the philosophical worldview adopted by this research, methodology and design. The various philosophical world views have been discussed and those best suited for adoption by this study selected. Likewise, the methodology and design for the study has been identified, justified and described. The chapter also presents the study area, population and sample, sampling techniques, data collection instruments and research procedure. The validity and reliability of research instruments have been described and reasons for their suitability given. The chapter also presents the data analysis procedures that were employed.

3.2 Philosophical Paradigm

The study was based on pragmatism philosophical paradigm. Philosophical paradigm (worldview) refers to the basic set of beliefs that guide actions, also known as paradigms, epistemologies and ontologies (Creswell, 2009). It is the general orientation about the world and the nature of research that the researcher holds, which leads to the researcher embracing either qualitative, quantitative or mixed methods approaches. It consists of philosophical assumptions that guide and direct thinking and action. There are four different worldviews known as: post positivism, constructivism, and advocacy/participatory and pragmatism. Post positivism holds that causes determine effects or outcomes and that knowledge develops through careful observation and

measurement of objective reality that exists out there in the world. It deals with testing laws and theories to verify or confirm so as to understand the world. Hence it advocates for quantitative approaches.

Constructivism holds that meaning is constructed by human beings as they engage with the world whereby the searchers' and respondents' experiences, contexts and culture contribute to meaning. Hence social constructivism embraces qualitative research. Advocacy holds that research should be intertwined with a political aspect with an action agenda for reform, addressing issues such as empowerment, oppression and inequity. Thus participants are engaged as active collaborators.

Pragmatism is not committed to any one system of philosophy. Instead, it focuses on the research problem and uses all approaches available to solve it. Hence mixed methods strategy is used, allowing the use of qualitative and quantitative techniques either sequentially or concurrently. This research embraced the pragmatic worldview, hence mixed methods design due to the versatility that it offers. It enabled the use of quantitative techniques to gather data by survey, analyze using inferential statistics to generalize the findings to the population. In addition pragmatism enabled use of qualitative techniques to gather information by interviews and observation, through which both the researchers' and respondents' views, attitudes and experiences were explored.

3.3. Research Design

Kothari (2006) says research design is the conceptual framework within which the research is conducted, or, the blue print. It ensures collection of relevant evidence with minimal expenditure of effort, time and money. Creswell (2009) calls it the plan or proposal to conduct research.

This study was based on the pragmatic philosophical worldview hence enabled use of mixed methods design. In pragmatism, instead of focusing on methods, researchers emphasize the research problem and use all approaches available to understand the problem. The concern is with applications, that is, 'what works', and solutions to problems. Creswell (2009) states that for the mixed methods researcher, pragmatism opens the door to multiple methods, different world views and different assumptions as well as different forms of data collection and analysis. This approach was appropriate so as to utilize the strengths of both quantitative and qualitative approaches. Secondly, career guidance being a social issue is complex hence the use of either quantitative or qualitative approaches by themselves would be inadequate to address this complexity. Thirdly, their combined use provided an expanded understanding of the research problem. Creswell (2009) states that mixed methods research involves combining or associating both qualitative and quantitative forms so that the overall strength of a study is greater than either qualitative or quantitative research. The strategies of inquiry used in mixed methods are:

a) Sequential mixed methods-The study begins with either a quantitative approach followed by the quantitative aspects or vice versa.

b) Concurrent mixed methods-The researcher converges or merges quantitative and qualitative data in order provide a comprehensive analysis of the research problem. Both forms of data are collected at the same time and the information interpreted.

c) Transformative mixed methods-the researcher uses a theoretical lens (i.e. a pattern or naturalistic generalization such as focus on feminism, racial or class issues) as an overarching perspective within a design that contains both quantitative and qualitative data. The data collection method could be sequential or concurrent (ibid).

This study used the concurrent embedded strategy (Creswell, 2009). This involved collection of both quantitative and qualitative data in the same phase simultaneously. It involves the use of a primary method that guides the study and a secondary method that provides a supportive role. The method given less priority (qualitative or quantitative) is therefore embedded within the predominant method. The rationale for this is that embedding is suitable for the rigorous time-consuming process of mixed methods as it helps in reducing the scope and enhances management of time and resources. In this study, qualitative was embedded within quantitative approaches. Concurrent triangulation enabled collection of qualitative and quantitative data for comparison to determine convergence, differences or combination.

Wiersma (2000), quoting Krathwohl (1993) says that qualitative research describes phenomena in words instead of numbers while quantitative research describes phenomena in numbers and measures instead of words. The description shows that the

most outstanding difference is in the way the data is presented. Other differences are as follows:-

Quantitative uses closed-ended questions (questionnaires) while qualitative uses open–ended questions (interviews). Quantitative has post positivism philosophical assumptions, emphasizing facts, relationships and causes while qualitative has constructivism assumptions, with great concern for the impact of processes. Quantitative uses experiments and survey strategies while qualitative use case studies. Quantitative collects data on instruments while qualitative collects data through observing a setting (Creswell, 2009; Wiersma, 2000).A summary of the characteristics of these approaches is given in the sections below.

3.3.1Quantitative Approach

According to Creswell (2009), this is a means of exploring and understanding objective theories by examining the relationships among variables. The variables are measured on instruments, so that numbered data can be analyzed using statistical procedures. The final written report has a set structure consisting of introduction, literature review, theory, methods, results and discussion. Those who engage in quantitative research have assumptions about testing theories deductively, building in procedures against bias, controlling for alternative explanations, and being able to generalize and replicate the findings. Common modes of enquiry in quantitative research include:

a) Experimental modes which includes true experimental, quasi-experimental and single subject mode.

b) None experimental modes which include descriptive, comparative, correlation, survey and Ex Post Facto modes (MacMillan and Schumacher, 2001).

3.3.2 Qualitative Approach

Qualitative research follows a naturalistic paradigm that research should be conducted in the natural setting and that meanings derived are specific to that setting and its conditions (Wiersma, 2000). This approach seeks to explore and understand the meaning that individuals or groups ascribe to a social or human problem (Creswell2009). It does not emphasize a theoretical base at the beginning of the study but a theory may emerge as the research is conducted. The process involves emerging questions and procedures, data collection in the participants' setting, data analysis inductively, building from particulars to general themes, and the researcher making interpretations of the meaning of the data. The final written report has a flexible structure (ibid).

MacMillan and Schumacher (2001) classify the modes of inquiry under qualitative approach as: interactive-ethnography, phenomenology, case study, grounded theory, narrative research, and, critical studies; no interactive/analytical research (concept analysis and historical analysis).

3.4 Study Location

This study was conducted in secondary schools in Vihiga County in Western Kenya. The county was chosen owing to an earlier study done in the area by Mukwana (2005) on implementation of career guidance. This study sought to expound on specific aspects of career guidance and their effect on performance and career choice. Vihiga County comprises of Sabatia, Hamisi, Vihiga and Emuhaya constituencies. The county is among those that lack a public university or university college. To make matters worse,

none of the private accredited universities was situated in this county by the time of this study. Access to higher education is therefore limited not only for the girls but all locals in the county. This emanates from the fact that those who would for instance wish to undertake the Module II option in universities are inhibited by travel expenses to universities in other counties, not to mention the exorbitant accommodation costs. Lack of a university in this county has also deprived the students of the external motivation drawn from visiting institutions of higher learning and general role modeling provided by a university in the vicinity.

Due to this unfortunate situation, the Commission for Higher Education recently recommended the establishment of Kaimosi Friends University College in the county to the Education cabinet secretary (http://www.news24.co.ke).To show how urgent the matter is, the college will not start off as a constituent college of any other university but will start off as an independent university college. The article by http://www.news24.co.kesays that Masinde Muliro University will only mentor it in academics as it will be solely independent. Career guidance to girls in this county will therefore create in them the need to work hard in addition to making the much needed informed career choice so to compete successfully for the limited spaces in public universities.

Vihiga County is largely rural as it has no major urban centers. It is the second smallest in the country with an area of about 135,000 acres (http://jamhurimagazine.com/index.php/counties/index./html).The population is high but the economic status low as majority of the people are subsistence farmers. According to the data compiled by the Revenue Allocation Commission, the county has

a population of 554,622 people and a poverty index of 41.8%, meaning, 41.8% of its people live in poverty (Sunday Nation, December 18, 2011).However, according to the strategic plan of 2012, more than 62% of the people in Vihiga County live in absolute poverty.

This is corroborated by a study by Mango, et al., (2004) known as, "Social Aspects of Dynamic Poverty Traps", which was done in Vihiga, Baringo and Marsabit Districts. The study found out that low level of education, lack of land or land that is too small for economic agricultural exploitation, bloated family size and a high-level of dependency were the major causes of the high rate of poverty. They found out that in Vihiga, households that had escaped poverty were those that had a member of the family with a well-paying job either in the government or in the private sector. There couldn't be a better reason for effective career guidance than this.

With the 62% poverty level and rampant unemployment at an index of67% (www.myNews24.com/Kenya, daily Nation, April 11, 2013), there is need to look into ways of enhancing the girls' access to career information and employment since they are largely culturally marginalized. Hence, investing in education that leads to a well-paying job/career is the most important strategy for escaping poverty. Career guidance will bring investment in education to fruition. The area has high rainfall but it is not agriculturally productive due to impoverished land as a result of overpopulation, overcrowding, land fragmentation and overuse. Furthermore, most of Emuhaya and Hamisi constituencies are hilly and rocky, leaving little room for farmland. There are no major urban trading centers and no large-scale economic activities. This leaves education and subsequent gainful employment into careers as the only option out of

poverty. The county has a total of 121 secondary schools out of which only 15 are exclusively girls' schools, 27 boys' schools and 94 mixed schools (Vihiga County Education Office, 2013). The study was limited to career guidance in girls' and mixed secondary school in Vihiga County.

Odini (2009) in a study known as, "Empowering Rural Women in Kenya to alleviate Poverty through Provision of Information" found out that women in Vihiga County live in absolute poverty. The study identified factors such as lack of income due to poor occupation, lack of family property and lack of political and social participation. Some of the contributory factors include the impediments paused by biological and cultural roles and the gender- insensitive property ownership rights. The study by Odini further reported that out of the 150 respondents, only 14%owned their own property while 88%said all family property was owned by their husbands. Therefore career guidance for the girl child will help them make the most out school and get into careers that will help them escape the cyclical poverty situation.

3.5 Target Population

The target population for this study was form four girls in secondary schools in Vihiga County. At the time of data collection, there were 15 girls' schools and 97 mixed secondary schools giving a total of112 schools with a total of 4,628form four girls in Vihiga County (Vihiga District Enrolment Lists, 2013). Girlswere the target for this study since they generally perform dismally in KCSE (ElimuYetu Coalition, 2003); Sessional Paper No.1 of2005; KESSP 2005- 2010). Girls generally perform poorly in

subjects like science, mathematics and technology (UNESCO, 2005), and hence are under-enrolled in universities and other tertiary institutions (Keriga and Bujra, 2009).

Mukui (2005) asserts that: "the relatively low access of girls to post–secondary and tertiary educational institutions and employment is largely determined by the performance at the end of the primary and secondary school cycle. Girls tend to perform better than boys in arts while boys out-do girls in sciences and technology, with more boys achieving grades that earn them a place in post-secondary training. The distribution of number of girls' and mixed secondary schools in Vihiga County is illustrated intable3.1.

Table 3.3: Number of girls' and mixed secondary schools in Vihiga County

Constituency	Mixed schools	Girls' schools	Total
Sabatia	23	5	28
Hamisi	28	5	33
Vihiga	22	3	25
Emuhaya	24	2	26
Total	**97**	**15**	**112**

Source: Former District Education Offices of the current constituencies;
 2011, Enrollment Lists.

This data shows that there were a small number of girls' schools in the county while mixed schools were the majority. Most of the girls' schools were provincial schools. These schools admit girls from Vihiga and other counties. Hence many of the girls in Vihiga County enroll in the mixed schools, majority of which are day schools.

3.6 Sampling Procedure and Sample Size

According to Kothari (2003), an optimum sample is the one that fulfills the requirements of efficiency, representativeness, reliability and flexibility. This sample should be in a range of 10%-30%. A representative sample of 30% was drawn from each proportion of the girls and mixed secondary schools in the County to satisfy these requirements of optimality and representativeness. Thirty percent (30%)of the 112 schools gave 33.6.This was adjusted to 30.Therefore a total of 30 secondary schools out of the 112were studied. Head teachers were chosen purposively and therefore 30 head teachers participated in this study. Stratified random sampling using constituencies as the basis for stratification was used to get a proportionate sample of schools from each of the constituencies. Since there are four constituencies in Vihiga County, The Proportional allocation ensured that no sub-population was omitted and no overloading was done in certain sub-populations as is stated by Wiersman, (2000).School principals and career guidance teachers were purposively selected. Therefore, a total of 30 principals and 30 career guidance teachers were sampled for the study. The county director of education and four district quality and standards officers were also purposively selected.

The sample size of the students was determined by using the formula indicated by Kathuri and Pals (1993). The formula is as follows:-

$$S=X^2NP (1-P)/d^2 (N-1) +X^2p (1-p)$$

Where

S-Required sample size

N-The given population size (in this case, 4,628)

P-Population proportion of 0.50

D-Degree of accuracy (in this case, amount error of 0.05)

X^2-Chi-square value for one degree of freedom at a confidence level of 0.95.

Kathuri and Pals (1993) developed a table based on the above formula detailing the sample size selection for various finite populations (Appendix 8).The population of the female students in the selected secondary schools was 4,628. From the table, the sample size for a population of 4,628 is 357. For comparison purpose, the Yamane formula (Yamane 1967) was also used to calculate sample size as shown below :) $n_Y = N / (1 + Ne^2)$

Where N = known population and

 e = error level or % percent confidence interval or alpha level. For 0.95 confidence interval, e = 0.05.

Hence

$n_Y = N / (1 + Ne^2)$

$=4628/ (1+4628*0.05^{2)}$

$=4628/ (1+4628*0.0025)$

$=368.18$

Since the general rule is that a sample size of 30 would allow an adequate observation to take the benefits of the Central limit Theorem,(i.e. at n = 30, we start to see the bell shape curve if the data is normally distributed), the researcher chose to use 180 as the sample size for the study (180 was obtained by halving the average of the Kathure and Pal calculation and that of Yamane formula(357+366)/2=362.5.
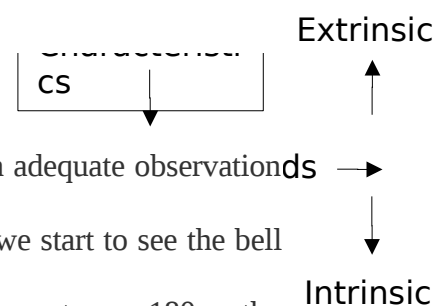
362.5/2= 181.25.This was rounded down to 180 students.

Random sampling was used to select 6 students from each of the 30 schools.

Since there were four constituencies in Vihiga County, Proportional allocation ensured that no sub-population was omitted and no overloading was done in certain sub-populations as is stated by Wiersma, (2000).Hence the schools were selected per constituency as shown in table 3.2.

Table 3.2: Sampling of schools per Constituency

Constituency	Total number of schools	Number selected
Sabatia	28	8
Hamisi	33	9
Vihiga	25	6
Emuhaya	26	7
Total	**112**	**30**

The whole sample for the study was thus constituted as shown in table 3.3.

Table 3.3: Total Sample for the Study

Category	Sampled Population
Students	180
Head Teachers	30
Guidance and counseling teachers	30
County education Directors	1
District Quality and Standards Officers	4
Total	**245**

3.7 Instrumentation

Research instruments for this study were questionnaires, interview schedules, observation and document analysis.

3.7.1 Questionnaires

A questionnaire is a set questions or statements to which the subjects respond. Questionnaires were used to gather data from the students, career guidance teachers and head teachers as it is a suitable method for large samples, due to its economy on time and money. In addition, the respondents were literate. They are easy to administer and score, can be anonymous, provide time for the subjects to think about the responses and are standard (MacMillan and Schumacher, 2001).However they have disadvantages of high none response if mailed and, inability to probe and clarify. To overcome these, questionnaires were delivered personally, significance of the research explained and, other methods of data collection used for triangulation.

Both closed–ended and open-ended questions were used. Closed ended were used to obtain specific information while open-ended ones were used to elicit more in-depth information. Some closed ended items involved ticking in provided boxes against provided answers while others involved rating scales of Likert ranging from strongly agree to strongly disagree.

3.7.2 Interview schedule

An interview is a vocal questionnaire whereby there is interaction between the researcher and respondent. Interviews were used to get information from education officers as these were few. Its suitability for the study was due to the flexibility and adoptability whereby responses could be probed, followed up, clarified and elaborated to achieve specific accurate responses. In addition, none verbal behavior could be noted and used to motivate the respondents. These ensured a high response rate (Macmillan and Schumacher, 2001).

Weaknesses of interviews include the fact that they are costly, time consuming, prone to bias and subject/inter viewer effects, not anonymous and the possibility of leading questions exists. Some of these were overcome by having a manageable sample size, establishing rapport, assuring confidentiality, avoiding leading questions, looking out for cues suggesting discomfort or misunderstanding, and training of research assistants. Both structured and semi structured questions were used to provide a high degree of objectivity and uniformity but allow for probing and clarification (ibid).The interview schedule was used to get information from the county education officer and the quality and standards officers.

3.7.3 Document analysis

According to Creswell (2002), during the process of qualitative research, documents may be collected. These may be public documents like newspapers, minutes of meetings, official reports or private documents such as personal journals and diaries, letters and e-mails. He also cites another category of qualitative data which consist of audio visual material, in form of photographs, art, objects, videotapes or any form of sound.

The documents and records include not only the typical paper products such as memos, reports and plans but also computer files, tapes,(audio and video), and other artifacts, which the researcher use to give the necessary background of the situation and insights into the dynamics of everyday functioning. The method measures the semantic content or the "what" aspect of a message. This was used to obtain information on JAB admissions and check career programs in the schools and university. Specific documents analyzed included:

1. School Timetables

2. Career Guidance Departmental Files

3. JAB Admission List for 2012 for The Whole Country: JAB ADMISSIONS DOUMENT 2013/2014(Document One)

4. JAB Admission List for the sampled Girls' and mixed schools showing the 2012 intake for girls

5. KNEC center numbers for Vihiga County

6. Vihiga County Education Day Booklets (2007-2013)

7. Sabatia, Hamisi, Emuhaya and Vihiga District Education Day Edition (2007-2013)

 The advantages are that the documents are readily available hence the researcher economic on time and money and the method has no effect on what is being studied. However, access to the documents needs to be negotiated for and the researcher needs to be sensitive to restrictions by law and privacy.

3.7.4. Observation schedule

This was used to establish existence of career guidance facilities and personnel. These included the HODs office, counseling rooms, computers, careers books, journals and office files and documents showing types of processes and programmes of the career guidance department. This was suitable for the study as it enabled collection of first-hand information.

3.8 Data Collection Procedure

The researcher requested for an introductory letter from Moi University. This letter assisted in getting permission from the National Council for Science and Technology (NCST) to conduct the research. Permission was also sought from the county director and county education office to conduct research in schools in the county. First visits were made to the schools to seek permission from the principals to involve them in the study. Principals who were available and willing were interviewed, after which the career guidance teacher/ teacher in charge wasinter viewed. Available career guidance facilities were then observed as the students filled in the questionnaires. Where permission was not granted on the first visits, appointments were sought and the procedure conducted on the given dates. In other instances, questionnaires were left in the schools and collected at a later date. Data was also collected from the Jab offices at the University of Nairobi after obtaining KNEC center numbers for the sampled schools from KNEC offices from. The researcher identified and trained two research assistants who assisted in administering the questionnaires to the respondents.

3.9. Validity of the Study Instruments

The researcher scrutinized the tools to ensure that they were valid. The researcher consulted lecturers from the department of Educational psychology Moi University to make criticism and comments on the format of the instruments. Their comments were incorporated in the questionnaires before the final administration of the instruments on the participants of the study.

3.10 Reliability of the Study Instruments

A Pilot study was conducted to establish the reliability of the instruments. It involved test-retest. The instruments were administered to respondent in 5 schools in the county which were not involved in the study sample twice at an interval of ten days. The reliability index of the instruments was calculated using Pearson's product moment correlation (r) from the test-retest scores. The results obtained from the teachers' questionnaire was a reliability coefficient of r = .76, career guidance teachers' was .72 while that of the students was r = .68. According to Macmillan &Schumacher (2001), a value of r<.35 shows very low correlation hence not reliable. The two writers state that an optimum r=.70 to .90.Hence the instruments reliable and suitable for use. For the content analysis reliability was determined through agreement and covariation.

3.11 Data Analysis

Descriptive statistical techniques such as percentages, frequencies, mean scores and standard deviations were used. To test the null hypotheses derived from research questions, t-test, Analysis of Variance (ANOVA) and Correlation were used.

Both quantitative and qualitative data analysis techniques were employed. Qualitative data was transcribed, coded and categorized into patterns, themes and descriptions. Interrelationships were then drawn in order to derive meanings from it. Quantitative data was analyzed in form frequency counts and percentages. Karl Pearson Product Moment Correlation coefficient was computed to establish the relationship between study variables. T-test was used to find out if there existed significant differences with reference to career choice between the means of students who would have accessed career guidance and those who would not have accessed it. Analyzed data was presented in form of tables, charts and graphs.

3.12 Ethical Considerations

The researcher requested for an introductory letter from Moi University which assisted in getting a research permit from the National Council for Science and Technology (NCST) to conduct the research. This was provided vide permit number NACOSTI/P/13/8547/487.Permits were also obtained from the county commissioner and the county education offices. Respondents were informed of all the aspects of the research with honesty and openness so as to earn their willingness to participate, as suggested by McMillan and Schumacher (2001). Respondents were informed that confidentiality would be ensured and that individuals' or institutions' names would not be used in the study. Informed consent was obtained by having respondents sign a consent form. However, respondents were informed of the opportunity to terminate their participation at any time with no penalty in the vent that they felt uncomfortable with the exercise. Respondents were also made aware of the significance of the research to them. Furthermore a pilot study conducted prior to the research helped to detect any

form of marginalization, as stated by Creswell (2009).Sensitive and private questions were avoided and only those permissible were incorporated for purposes of data collection.

CHAPTER FOUR: DATA PRESENTATION, ANALYSIS, INTERPRETATION

AND DISCUSSION

4.1 Introduction

This chapter presents analysis and findings of the study as set out in the research methodology. The study targeted 30 schools. This was obtained as an average of the 20-30% of the 112mixed and girls' schools in the county at the time of data collection. Kothari,(2003) states that 20-30 %of the population is representative enough for a study. From this, 30 head teachers, and 30 career guidance teachers were purposively sampled. The response rate is as shown in the table below. A total of 180student respondents were randomly sampled, out of which176 responded and returned their questionnaires, contributing to 97.77% response rate as illustrated in table 4.1.

Table 4.1: Response Rate

Category	Sampled Population	Respondents	Percentage
Students	180	176	97.77%
Head Teachers	30	27	90.0 %
Career Guidance teachers	30	28	93.3%
County education Directors	1	1	100%
District Quality and Standards Officers	4	3	75%
Total	**245**	**235**	**95.92%**

Source: Author, 2014

The table shows that out of the 30 head teachers and career guidance teachers sampled, 27 head teachers and 28 teachers responded. In addition, 176 out of the 180sampled students responded to the questionnaires.

This response rate was excellent and representative and conforms to Creswell's (2009) stipulation that the key to accurately arguing that those responding are similar to those not responding is a high response rate of 70% to 80%. This response rate is considered accurate and it reflects its population. He further stipulates that a high response rate is mandatory for a survey sample. The response rate of the study was 95.92%.

This commendable response rate was due to extra efforts that were made via personal calls and repeated visits to remind the respondent to fill-in and return the questionnaires. The topic of the research also greatly appealed to many respondents as it resonated well with them. According to the responses received, the analysis and the interpretation of data is hereby given.

4.2 General information about the school, head teachers, teacher counselors and students

4.2.1 General Information for the schools

The study was conducted in 30 high schools in Vihiga County. The composition (by gender), type (government/public owned or privately owned) and rank (as per government grading of the schools as District, County and National) are shown in table 4.2.

Table 4.2: Background Information

The table shows the background information of the 30 schools that were selected for this study.

District	Composition	Type	Rank
Vihiga	Girls boarding	Public	District
	Mixed day	Public	District

	Mixed boarding	Public	District
	Girls boarding	Public	District
	Mixed day	Public	District
	Girls boarding	Public	District
Emuhaya	Girls boarding	Public	National
	Mixed boarding	Public	District
	Mixed day	Public	District
	Mixed day	Public	District
	Girls boarding	Public	District
	Mixed boarding	Public	District
	Mixed day	Public	District
Hamisi	Girls' boarding	Public	District
	Girls boarding	Public	District
	Mixed day	Public	District
	Mixed day	Public	District
	Mixed day	Public	District
	Mixed day	Public	District
	Girls boarding	Public	District
	Mixed day	Public	District
	Mixed day	Public	District
Sabatia	Girls boarding	Public	District
	Mixed day	Public	District
	Mixed day	Public	District
	Mixed day	Public	District
	Mixed day	Public	District
	Girls boarding	Public	District
	Girls boarding	Public	National
	Mixed day	Public	District

Source: Author, 2014

The table shows that the schools selected for the study were all public schools from four different districts in Vihiga County namely Vihiga, Emuhaya, Hamisi and Sabatia. There were eleven girls' schools and nineteen mixed schools. All the schools except one were district schools. In all the schools selected, the study focused on the female students for the purpose of this research. The ratio of the mixed schools to the girls' schools is shown in figure 4.1
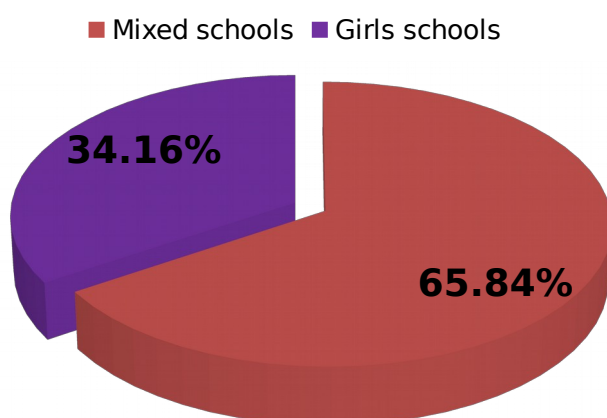
Figure 4.3Pie Chart Showing the Ratio of Mixed Schools to Girls' Schools in the Sample that responded

From the figure above, there were 66% mixed schools and 34% girls' schools in the sample covered.

4.2.2 General Information on Head teachers

The sampled heads of schools were 30.However, only 27responded. The study sought information about the head teachers' gender. The findings were as shown in table 4.3.

Table 4.3: Gender of Head teachers

Measurement	Category	Frequency	Percentage
Gender of the Head teachers	Female	15	55.5%
	Male	13	44.5%
	Total	27	100%

Source: Author, 2014

According to the table above, majority of the head teacher respondents (55.5%) were females while the rest (44.5%) were males. Out of the 30 schools, 15 schools had female head teachers while 13 schools had male head teachers. The higher number of female head teachers is due to the fact that some of the mixed school had female principals. This is beneficial and motivational to the female students as they feel they have a female role model to whom they can look up to. With gender disparity on the rise, there is low participation of women taking up responsibilities at the higher levels of education, governance, administrative and management. This has been related at the grass root of the female students lacking female role models to look up to and to lead the way for young brilliant female minds that have ability to lead.

4.2.3. General Information on Career Guidance Teachers

4.2.3. 1. Gender of Career Guidance Teachers

The research investigated the gender of the career guidance teachers. The findings were as shown in table 4.4.

Out of the 30 schools sampled, 28 teachers responded to this question**.**

The table shows the frequency of the male and female career guidance teachers in the sampled schools

Table 4.4: Gender of Career Guidance Teachers.

Measurement	Category	Frequency	Percentage
Gender of the Career Teachers	Male	20	71.4%
	Female	8	28.6%
	Total	28	100%

Source: Author, 2014

Out of the sampled population, 20 schools had career guidance teachers who were male accounting for 71.4% while 8 schools had female career teachers who accounted for 28.6%.The guidance and counseling plays a significant role in the overall growth and development of a high school student and is therefore an essential part of school curriculum. This is because high school students are at the stage of adolescence which is characterized by many physical and psychological changes which pose a number of personal, social and educational challenges (Mutie and Ndambuki, 2009). Having male career teachers to guide these female students could lead to some sort of stereotyping if the male teachers are chauvinist hence discourage female students to pursue some careers thought to be the domain of males, engineering courses and other science based and technological courses.

4.2.3.2 Age of career guidance teachers

The study sought to find out the age of the teacher counselors. The findings were as shown in table4.5.

Table 4.5: Age in years of the teacher-counselors interviewed

Age Bracket	Frequency	% total
Below 30	0	0
30-35	0	0
36-40	6	21.4

41-45	10	35.7
46-50	8	28.6
Above 51	4	14.3
Total	28	100

Table 4.5 shows that majority (35.7 %) of the teacher counselors were aged between 41 to 45 years, 28.6% are between 46- 50 years and 21.4 % are between36 and 40 while only 14.3% are above 51 years.

4.2.4. General Information about the Students

Further, the study categorised the number of students from mixed schools and girls' school who responded to the questions. Sixty two of the girls were from the girls' schools while one hundred and eighteen were from mixed schools. The findings were as indicated in figure 4.2.
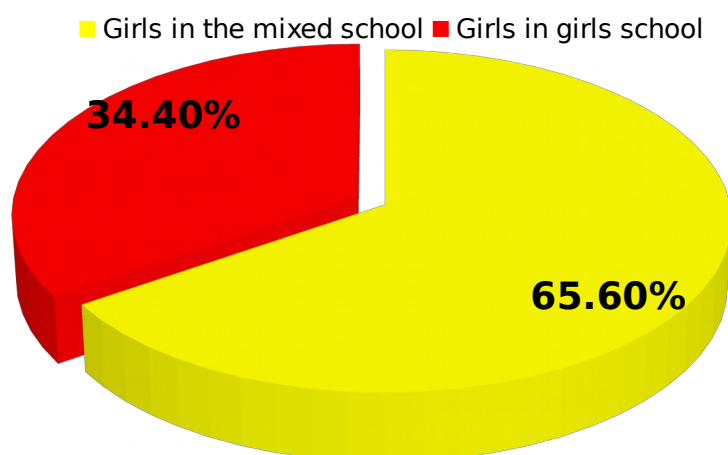
Figure 4.2.A Pie Chart Showing the Ratio of Girls from Mixed Schools to those from Girls' Schools in the Sample

The pie chat shows that majority (58%) of the girls were from mixed schools with 34% being in girls' schools.

4.3. Presentation of Findings per Objectives

4.3.1. Objective One: Forms of Career Guidance services Offered to Girls in Secondary Schools.

4.3.1.1. Students' Responses

4.3.1.1.1Students' Responses on services offered

The study sought to find out from the students the career guidance services offered to girls in secondary schools in Vihiga County. The students' responses were as shown in table 4.6.

Table 4.6: Services provided by career departments-according to students

Category	Percentage	
	Yes	No
Filling of form one careers information form during orientation	46.3%	53.7%
Filling of careers declaration and progress forms	48.3%	51.7%
Calculation of weighted cluster points after every exam	34.7%	65.3%
Individual students counseling	68%	32%
Group counseling sessions	71.4%	28.6%
Class counseling lessons	83.3%	16.7%
Career fairs	60.5%	39.5%
Role model speeches at school	44.2%	55.8%
Visits to universities and workstations	22.8%	77.2%
Apprenticeship	16.3%	83.7%
Job Shadowing	12.6%	87.4%
Volunteer work	18.4%	81.6%

Mentorship	67.3%	32.7%
Exposure to scholarship opportunities	15.3%	84.7%

The study established services that are provided by the career department in the secondary schools as follows:

Majority of the students (53.7%) indicated that they do not fill in form one career information form during form one orientation. In addition, 51.7% of the respondents indicated that they do not fill in career declaration and progress forms. Only 34.7% of the respondents indicated that they calculate weighted cluster points after every examination. Thus there is little tracking as far as student's attainment of cut-off points for their preferred careers. 68% of the respondents indicated that career counseling sessions were done for individuals students; 71.4% of the respondents indicated that career counseling sessions was done as group sessions; 83.3% of the respondents indicated that career counseling sessions were carried out as class counseling lessons; 60.5% of the respondents indicated that services such as career fairs were provided in schools; 55.8% of the respondents indicated that the role model speeches were provided at schools; 77.2% of the respondents indicated that the career department does not provide visits to universities and workstations; 83.7% of the respondents indicated that the career department does not provide apprenticeship; 87.4% of the respondents indicated that the career department does not provide for job shadowing; 81.6% of the respondents indicated that the career department does not provide for volunteer work; 67.3% of the respondents indicated that the career department provides mentorship for the students while 84.7% of the respondents indicated that the schools do not expose students to scholarship opportunities.

What stands out from the findings is the low usage of cluster- point calculation (34.7%) in tracking students' performance versus their chosen careers. The findings also reveal poor linkage between secondary schooling and, higher learning/career/workplace practices as shown by the high percentages for lack of visits to universities to create awareness of courses offered (77.25%), lack of apprenticeship (83.7%),lack of job shadowing and volunteer work(87.4%and 81.65% respectively)and, lack of exposure to scholarships(84.7%). Career declaration and progress form also had a low score for yes (48.3%) while 51.7% said yes, indicating lack of tracking of students' career interests versus ability for the same.

The issue of filling the career declaration and progress form in the table above was paused to students again as a stand-alone question by showing them the form(students' questionnaire, section III, question 6).Table 4.7 shows the findings:

Table 4.7: The use of the career declaration and progress form by students

Measurement	Category	Frequency	Percentage
Filling of career	Yes	49	27.84
declaration and	No	104	59.09
	No response	23	13.06
progress form from	**Total**	**176**	**100%**
form one to form			
four			

Source: Author,

The table shows that career declaration and progress forms were not used a lot to track and improve performance and guide students on their career choices as 59.9% (n=104)

answered no while only 27.84%(n=49) answered yes and 13%(n= 23) did not respond to the question.

The question on the use of career declaration forms and performance progress to track and guide students was also paused to the career guidance teachers. Out of the twenty eight teachers, 18 (64.28 %) said no while 10(35.71%) answered in the affirmative.

4.3.1.1.2 **Ways in which career guidance has helped students**

The students were asked to state ways in which career guidance has helped them. Their responses were as shown in table 4.8.

Table 4.8: Other ways in which the careers department has contributed to their performance in school

Response	frequency	percentage
No response	80	45.45
No contribution/no way	10	5.6
Low performance due to not guiding us	3	1.7
Provided study skills/ exam tips	7	3.9
Improved my public speaking skills	1	0.5
Helped me improve in subjects like math/positive attitude	9	5.1
Learning from role models/motivational speakers	21	11.7
Performance/mean grade improved	23	13
Helped to be serious/more responsible/focused/disciplined	10	5.6
Helped in subject choice/ to choose my best career	16	9.09
Academic outings/benchmarking	5	2.8
Total	**176**	**100**

The table shows that 52.75 %(n=93) of the sampled population did not appear to benefit from the careers department in their schools as shown by responses from the

first three rows. However, an equally big portion of the population said they benefited from careers department. This includes those who said they were able to learn from role models (11.7%) and those whose performance improved as a result of the department (13%).

4.3.1.2 Career guidance Processes in Schools: Teachers' Responses

4.3.1.2.1. Use of UNESCO Steps Cycle for career Guidance

The study sought to find out how the career guidance processes were conducted in schools. This was done by rating the extent to which career guidance teachers use UNESCO steps cycle of career guidance during career guidance on a five point Likert scale. The range was 'frequently' (5) to 'never' (1).

The scores of 'Never' had an equivalent mean score of 0 to 2.5 on the continuous Likert scale; ($0 \leq N < 2.4$). The scores of 'Rarely' had an equivalent mean score of equivalent to a mean score of 2.5 to 3.4 on the continuous Likert scale: $2.5 \leq R < 3.4$).The score of 'Sometimes' had an equivalent mean score of 3.5 to 4.4 on a continuous Likert scale; $3.5 \leq S < 4.4$). 'Frequently' had an equivalent mean of 4.5 to 5.0

A standard deviation of >1.5 implies a significant difference on the impact of the variable among respondents.

Table 4.9: Rating the extent to which career guidance teachers' use UNESCO steps during career guidance

Steps	Mean	Std. Dev
UNESCO recommends the use of a 6-step career development cycle shown below for the career counseling process		
Developing self-awareness in students	3.63	.675
Linking self-awareness to occupations exploration	3.89	.731
Researching occupational possibilities	3.68	.275
Making careers decisions	3.77	.471
Setting goals	3.78	.575
Planning job search	3.63	.355
I conduct the counseling sessions for		
Individual students	2.73	.032
Group sessions	3.67	.257
Class lessons	4.02	.114
The following activities are carried out by my department		
Career fairs		
Career fairs	2.37	1.023
Role model speeches at school	1.26	1.042
Visits to universities and workstations	1.15	1.142
Apprenticeship	1.32	1.261
Job Shadowing	2.43	1.135
Volunteer work	1.13	1.237
Mentorship	3.27	1.135

Source: Author, 2014

On seeking to establish whether career teachers follow the recommended 6-step career development cycle of the UNESCO career counseling process, the study found out that developing self-awareness in students; linking self-awareness to occupations exploration; researching occupational possibilities; making careers decisions; setting goals and planning job search was done sometimes as indicated by means of 3.63, 3.98, 3.68, 3.77, 3.78 and 3.63 respectively.

The study found out that counseling sessions for individuals students was carried out sometimes in the schools indicating a mean of 2.73. Moreover, the study established that group sessions and class lessons were frequently conducted as indicated by a mean of 3.67 and 4.02 respectively.

The study further found out the activities carried out by the department of career guidance. The study established different activities that were rated according to how often they were carried out. Rarely did the respondents use career fairs in the schools. This was indicated by a mean of 2.37.Respondents indicated never did the schools use role model speeches mean of 1.26, visits to universities and workstations mean1.15, apprenticeship mean of 1.32 and volunteer work mean of1.13. The schools sometimes used Mentorship mean of 3.27 as an activity carried out by the career department.

4.3.1.2.2. Calculation of Weighted cluster Points for Chosen Careers

Career guidance teachers were also asked if they guided their students in calculation of weighted cluster points for all the exams they did in an effort to check if they were meeting the average cut off- points for their chosen careers. Out of 28 teachers, 14(50%) said they did while 14(50%) said they did not.

4.3.1.2.3. Do you Guide students in Subject Selection?

The teachers were also asked if they guided students at form two during subject selection. This was found to be the question with the highest response in the affirmative as 24(85.7%) out of 28 answered yes while only 4(14.3%) said they did not.

4.3.1.2.4. Parental Involvement in Students Career Selection

The level of parental involvement in career guidance, subject choices and subsequent career choice was also investigated. The study found out that 19(67.8%) teachers involved parents while 9(32.2%) did not. Those who involved the parents were asked to state the degree of parental involvement. Out of the 19 who said they involved parents, 12(63.15%) said they invited parents to school for talks before involving them in career choices while 7(36.85) said they only sent the students with information about subjects choices and careers to their parents for them to be assisted by their parents at home.

4.3.1.2.5 Evaluation of performance of career and guidance department by the school principals

The study sought to find out how the head teachers perceived the performance of career and guidance department (to evaluate how successful the department is).The findings were as shown in table 4.10.

Table 4.10: Evaluation of performance of career and guidance department by the school principals

Measurement	Category	Frequency	Percentage
Evaluate	Most effective	-	-
	Effective	6	22.2%
performance of	Average	18	66.7%
	Less effective	3	11.1%
career guidance	Not effective	-	-
	Total	27	100%
department			

Source: Author, 2014

As shown in the table, the study found out that the performance of career and guidance department was mainly rated average accounting for 66.7%. On the other hand, 22.2 % of the respondents' rated career and guidance department in their school effective while 11.1% rated career and guidance department less effective. The study found out the methods of evaluation of the performance of career and guidance department included reference to school routine, subject selection, questionnaires, aptitude tests, KCSE performance, and career choices of students, end term and weekly reports. One of the head teacher indicated that there were no established parameters to evaluate performance of career guidance department. These points to the fact that there is no clear cut content, no specific objectives against which the department can be evaluated.

4.3.2. Objective 2: To Establish the Professional Training Levels and Experience of Career Guidance Teachers

4.3.2.1. Professional training for the teacher counselors

The study sought to find out the professional training of the teacher counselors and found out as shown in table 4.11.

Table4.11: Professional training for career guidance teachers as careers counselors

Response	Frequency	% total
Yes	16	57.2
No	12	42.8
Total	28	100

The table shows that42.8 % of the respondents are not professionally trained counselors while 57.2 % were trained. This implied that a high number of teachers were carrying out the career guidance function without the prerequisite training. The trained career counselors were then asked to state their level of training in career counseling .All had certificate level qualification .The duration of training was found to be three months. Some were trained at National Council for Churches in Kenya while others were trained at Western institute for Professional studies.

4.3.2.2 Attendance of in-service training

Career guidance teachers were asked if they attend in-service training. Their responses are as shown in figure 4.3.
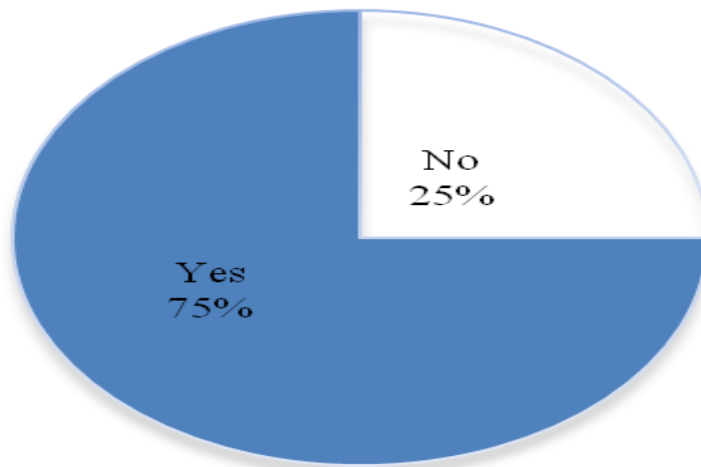
Figure 4.3 Attendance of guidance and counseling in-service training

According to figure 4.3 above, 75% of the teacher counselors had attended in-service training while 25% had not.

4.3.2.3 Sponsorship for in-service training

The career guidance teachers were asked who sponsored their in-service training. The responses were as shown in table 4.12.

Table 4.12: Who sponsored teacher counselors for in-service training?

Sponsor	Frequency	% Total
School/ Government	10	35.7
Self-sponsored	16	57.1
Other (NGO/Church)	2	7.2
Total	**28**	**100**

According to table 4.12 majority (57.1%), of the teacher counselors who attended in-service training were self-sponsored, a significant 35.7 % were sponsored by the institution or central government while 7.2 % were sponsored by other organizations like NGOs, and churches.

4.3.2.4. Frequency of Professional counselors visits to schools

Career guidance teachers were asked if the head teacher often invited professional counselors to talk to students. Their responses were as shown in figure 4.4.
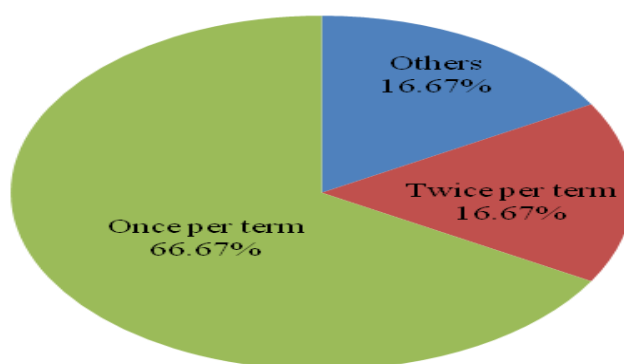
Figure 4.4: How often head teachers invite professionals to offer counseling to students

The figure shows that majority, (66.67%) of the teacher counselors indicated that their head teachers invited professional counselors at least once per term, 16.67% twice per term while 16.67% indicated that it happens when necessary.

When teacher counselors were asked which needs the head teachers refers students to them for counseling, they mainly indicated, moral, academic, performance and family problems. Career guidance was noticeably missing from the list. This is a likely indicator that this response came from teachers who were guidance and counseling masters, with career guidance as just a minor aspect of their duties.

4.3.2.5. Highest level of education of career Guidance teachers

The study further sought to find out the highest education level of teacher counselors. The findings were as shown in table 4.13.

Table 4.13: Highest level of education of teacher counselors (as teachers)

Education level	Frequency	% total
Diploma	8	28.5
Degree	2	7.2
Master	12	42.9
Other (Not trained)	6	21.4
Total	**28**	**100**

The table shows that minority (21.4 %) of teacher counselor respondents were untrained teachers, 7.2% were degree holders and 42.9% masters' level, while only 28.5% were diplomas holders.

4.3.2.6.Teaching Experience of career guidance teachers

The study sought to find out the number of years the career guidance teachers had served as teacher. The findings were as shown in table 4.14**.**

Table 4.14: Teaching experience of career guidance teachers

Years	Frequency	% total
1-4	0	0
5-9	0	0
10-14	10	35.7
Over 15	18	64.30
Total	28	100

From table 4.14 above, all (100%) the teacher counselor respondents had a teaching experience of over 10 years.

4.3.2.7. Number of years teacher shave served as career counselors

The study investigated the number of years the teacher counselors had served as career counselors. The findings were as shown in figure 4.5.
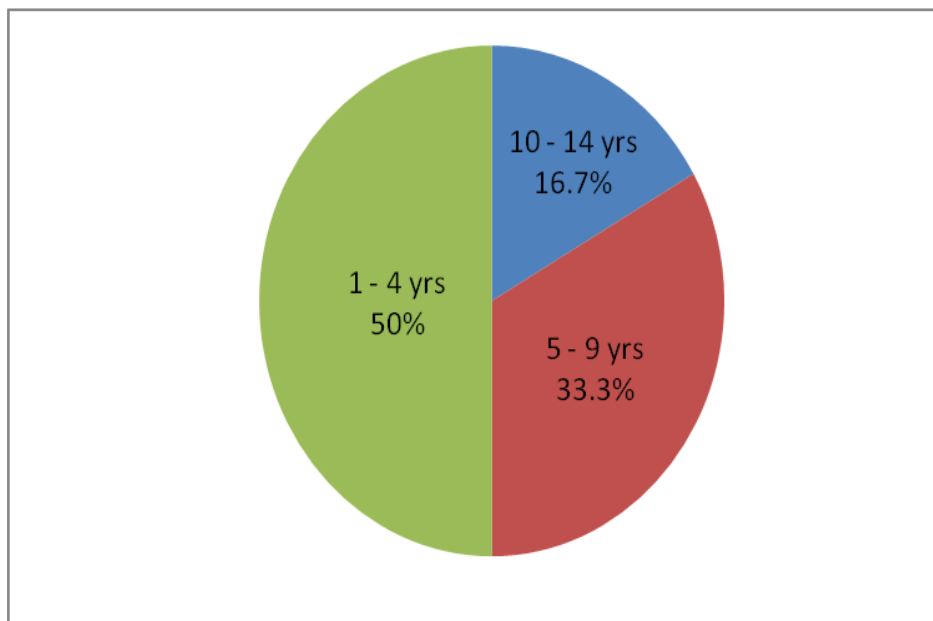
Figure 4.5: Number of years served as teacher-counselors

According to figure 4.5, 50% of the teachers had a served as counselors between 1 and 4 years. 33.3% had served for 5 to 9 years while 16.7% had served for 10 to 14 years.

4.3.2.8. Who appointed the career guidance teacher

The study sought to find out who appointed the career guidance teachers and the responses were as shown in figure 4.6.
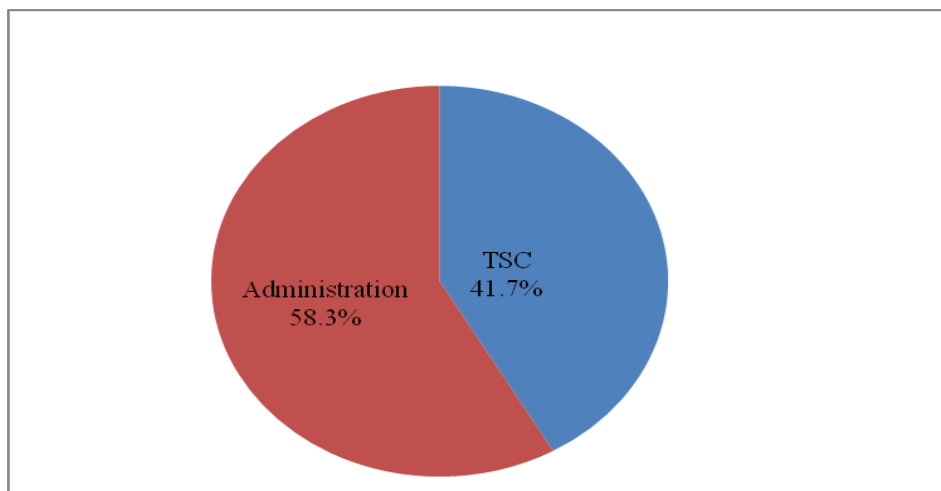
Figure 4.6: A pie chart showing who appointed and designated the teacher counselors

From figure 4.6, majority (58.3%) of the teacher counselors were appointed by the school administration while 41.7% were appointed by TSC. The findings are in line with what Wango (2006) states, that many policy documents give no clear procedure and qualification for selection of guidance and counseling teacher. These include the Ominde report (1964), the Gachathi report (1976), Kamunge report (1988), Koech report (1999) and the 1997 chief inspector of schools guidance and counseling circular to schools. They all state that a responsible senior teacher be appointed to coordinate guidance and counseling. The heads manual states as follow: "the overall

responsibility of ensuring that the school offers guidance services to all students lies squarely with the head s of schools." Therefore, even though TSC advertises interviews and recruits guidance teachers, the head can delegate guidance duties to all subject teachers and appoint a teacher counselor (who may in all probability not be a specialist in guidance).The manual then states that it is important to select someone who shows interest in the subject and who is mature and stable in character and shows sympathy to the problems of learners. The problem arising from this is that those appointed by TSC get a letter of appointment and are promoted one job group higher while those appointed by the heads of schools are not entitled to this. Hence the laxity in undertaking the duties in some cases, considering the workload issue.

4.3.2.9. Subjects taught by the career guidance teachers

The study established the subjects taught by the career guidance teachers in their current schools. The findings are as shown in table 4.15.

Table 4.15: Subjects Taught by Career Guidance Teachers

Subjects Taught	Frequency	Percentage
Biology/Chemistry	2	7.41%
History/CRE	2	7.41%
Agriculture/Biology	4	14.81%
Biology	1	3.70%
English/English Literature	9	33.33%
Business Studies	1	3.70%
Mathematics/Business	1	3.70%
Mathematics	2	7.41%
Kiswahili/Geography	4	14.81%
Chemistry/Mathematics	1	3.70%
History/Kiswahili	1	3.70%
Total	**28**	**100.00%**

Source: Author, 2014

The table shows that majority of the career guidance teachers taught a combination of subject English and English Literature. This accounted for 32.1% of the career guidance teachers. 14.81% of the career guidance teachers taught a subject combination of Agriculture/Biology and Kiswahili/Geography as the second most popular subjects taught by majority career guidance teachers.

4.3.2.10. Number of lessons taught by career guidance teachers per week

The researcher investigated the teacher counselors'' workload. The findings are as shown in table 4.16.

Table 4.16: Career Guidance Teachers' workload

Lessons	Frequency	Total %
Less than 10	0	0
10-18	6	21.4
19-25	18	64.3
Over 26	4	14.3
Total	**28**	**100**

The table shows that majority(64.3%) of the teachers counselors teach 19-25 lessons per week while 14.3 % teach more than 26 lessons per week. This is likely to impact negatively on their efficiency in their career guidance duties due to time constraints. The finding concurs with the findings of Mukwana (2003), Wotuku (2002) and Rajinder (2010) concerning heavy teaching workload which leaves little time for counseling. In Kenya, the Heads' Manual which spells out the documentation, roles, procedures and processes for schools is silent on teaching workload for guidance and counseling

teachers. While it states that heads of schools and their deputies should teach a reasonable teaching load, it only spells out the non- teaching workload of the guidance teacher, which are not few, but is silent on the teaching workload. The roles stated are:

- Establishing Guidance and counseling programmes;

- Completing careers forms;

- Keeping pupils records

- Advising on subject choice for KCSE

- Providing careers information

- Helping the head teacher with leaving certificates and references.

The guidance and counseling teacher is one of the Heads of departments, whose teaching roles should be reduced to leave room for the above duties. However, the reduction of workload is at the school heads' discretion. It also depends on individual schools' circumstances like staff establishment.

At international level, where schools have a chancellor who deals with counseling alone, the issue of workload is measured by student: counselor ratio. The America School Counselor Association recommends 250:1 ratio. However, the average ratio by 2012 was 457:1 and seemed to be on a rising trend as by 2013 it was 470:1.To add to the high number of students they attend to, some of the American school counselors are also called upon to perform additional duties such as monitoring the school cafeteria and protection of examinations due to economic constraints.

4.3.2.11. Number of years that the career teachers have been in service in their current

stations

The study sought to establish the length of time career teachers have been in service in

their current school. The study established that the number of time ranged from as low

as 3 months to 20 years. Table 4.17 shows this.

Table 4.17: The number of years the career teachers have served in their current

schools

Range of time	Frequency	Percentage
Below 1year	2	7.14%
1-5years	14	50.00%
6-10 years	7	25.00%
11-15 years	4	14.29%
16-20	1	3.57%
Total	**28**	**100%**

The table shows that majority of the teachers had served in the school long enough as

more than 50% had served for more than one year. This is long enough for them to

either have been inducted into career system in the schools if they exit or to have

initiated such programmes if they found none. However, the latter would depend on the

teachers' training in careers guidance.

4.3.2.12. Other Responsibilities for Career Guidance

The study further sought to find out if the career guidance teachers had other school

responsibilities apart from career guidance. Table 4.18 shows the findings.

Table 4.18: Other Responsibilities of Career Teachers

Measurement	Category	Frequency	Percentage
Other	Senior Master	2	10.53%
	Class Teacher	4	21.05%
responsibilities	HOD of another department(not career		
of career	department)	2	10.53%
	Christian Union Patron	1	5.26%
teachers	Drama Teacher	2	10.53%
	Games Master	1	5.26%
	Director of studies(DOS)/curriculum		
	supervisor	2	10.53%
	Deputy Principal	2	10.53%
	Students coordinator	1	5.26%
	Club and Society Patron	1	5.26%
	Librarian	1	5.26%
	Total	**19**	**100.00%**

Source: Author, 2014

Out of the 30career teachers, 19 indicated that they had other responsibilities they carried out apart from career guidance. Majority indicated that the other responsibility they carried out was as class teachers, accounting for 21.1%. The other responsibilities that the career teachers indicated were student masters, HOD, DOS, drama teacher, and deputy principal. Each of these responsibilities had two career guidance teachers as shown in the table above accounting for 10.5% of the respondents for each. The other responsibilities listed were C.U patron, games master, students' coordinator, clubs and societies and librarian, each of which accounted for 5.3% of the careers teachers. The rest of the nine career teachers did not have any other responsibility besides career guidance. Some of the additional responsibilities like DOS and deputy are so involving that the teachers concerned cannot have much extra time to dedicate to career guidance. The fact that career guidance is allocated to teachers who already have other heavy responsibilities points to the fact that the department is considered as not so significant.

This, coupled with the burden of heavy teaching load as seen in table4.6 above could be one among the factors causing apathy in career guidance leading to poor motivation, poor performance and uninformed career choices among girls.

4.3.2.13 Challenges facing teacher counselors.

The career guidance teachers were asked if they faced challenges their duties. Their responses were as shown in table 4.19.

Table 4.19: Responses on whether there are challenging areas while executing career guidance

Response	Frequency	% total
Yes	28	100
No	0	0
Total	**28**	**100**

From table 4.19, 100% of the teacher counselors indicated that there are challenging areas while executing guidance and counseling. When asked what their challenging areas were, they cited: - Unreachable parents hence lack of parental involvement in students' academic and social life, inadequate knowledge, heavy workload, students fear to disclose their problems and lack of career guidance and counseling facilities. They also cited limited support from school administration and inadequate resources,

negative thoughts fed to students, lack of adequate time allocation, lack of dreams and visions hence difficult to guide students, lack of role models for the students, indecisiveness of the students, influence of mass media, lack of facilities and students entry behavior among others.

The findings are in line with MoE (2009) which stated that although there is conflict of interest amongst parents, teachers and learners in terms of choice of subjects, teachers are the best placed to provide career guidance. However, many teachers are inadequately equipped. The Ministry of Education is supposed to post trained guidance and counselling (which has a component of career guidance) teachers to all schools. However, many schools are yet to receive such teachers. When asked to recommend areas the head teacher would assist in to improve career guidance, they cited, reduced workload, sponsorship for in-service training and provision of adequate material resources.

4.3.2.14. Students rating of adequacy of assistance by career counselors

Students were asked to rate the performance of the teacher counselors. Their responses were as shown in table 4.20.

Table 4.20: Responses of student's rating of adequacy of assistance by teacher counselors

Rating	Frequency	% total
Very Good	35	19.9

Good	55	31.3
Fair	60	43.1
Poor	20	11.4
Not sure	6	3.4
TOTAL	**176**	**100**

From table 4.20, it is clear that the student's rating of adequacy of assistance by teacher counselors is generally fair since a majority (43.1%) of the students said that they find it fair, 31.3 % said it was good, 20% indicated that they find it very good, while only 11.4 % said it was poor. However, 3.4 % were not sure.

4.3.3 Objective Three: To investigate existence of structures that can enhance career guidance in schools and its subsequent effectiveness

Data on this objective was collected in regard to:

Section1- availability of physical structures for career guidance

Section2- administrative support to the department and career guidance teachers by heads of schools.

Section 3-Adequacy of Head teacher's support

Section 4-Respondents suggestions on how career guidance can be improved

Section 1

4.3.3. 1. Existence of general guidance and counseling department–Head teachers' responses

The head teachers were asked if their schools had guidance and counseling department. All of the head teachers indicated that their schools had general guidance and counseling departments.

4.3.3.2. Existence of an independent Career Guidance Department: -Head teachers'
responses

The study sought to determine whether the schools had a career guidance department independent of the guidance and counseling department from the principals, the careers teachers and the students. The results are depicted in the tables below.

Table 4.21: Career Guidance Department-Principals' responses

Measurement	Category	Frequency	Percentage
Does your school	Yes	18	66.67%
have a career	No	9	35.33%
	Total	**27**	**100%**
guidance			
department?			

Out of the 27 principals who responded, 18(66.67%) said their schools had career guidance departments separate from the general guidance and counseling department. On the other hand, 9(33.33%) answered in the negative.

4.3.3.3 Personnel in charge of career guidance issues in schools without career guidance departments.

The study sought to find out from the head teachers, who takes care of career guidance issues in schools without a career guidance and counseling department'. The results were as shown in table 4.22.

Table 4.22: Person In-charge of career guidance issues in schools without career guidance departments and career guidance teachers

Measurement	Category	Frequency	Percentage
Who takes care of career guidance issues?	Director of Studies (D.O.S)	7	77.78%
	Guidance and Counseling teachers	1	11.11%
	Class teacher	1	11.11%
	Total	**9**	**100.00%**

Source: Author, 2014

As shown from the table above, the study established that the majority of the secondary schools accounting for 77.8% have a D.O.S who takes care of career guidance issues. Other secondary schools 1(11.1%) have guidance and counseling teachers while the same percentage of schools had the class teachers in charge of career guidance. The

three categories of teachers have duties that occupy them fully hence may not give career guidance enough time. For instance, the DOS has the responsibility of coordinating studies and examinations right from timetabling, administering and analysis. On the other hand teachers in charge of the larger guidance and counseling tend to concentrate more on counseling related to life problems and social issues, an area that seems to demand more urgent attention than career guidance. Leaving career guidance to class teacher may not be the best option as individual teachers may choose to do it at their own discretion. The study deduced that there may not be enough career guidance going on in some schools. Head teachers view on resources available

4.3.3. 4.Resources the schools have for career guidance and counseling: Head Teachers' Responses

The head teachers were asked to state the resources their schools had for career counseling. Their responses were as shown in table 4.23.

Table 4.23: Response of Head teachers on what resources the schools has for career guidance and counseling

Response	Frequency	% Total
Text books and stationery	14	50
Careers counseling office	7	25
Trained committee members	6	25
Total	27	100

Source:

According to table 4.23, majority (50 %) of the Head teachers indicated that they have

books and stationery, 25% said they have career guidance and counseling office while 25 % said they have trained personnel for guidance and counseling departments in their schools.

4.3.3.5. Usage of available resources

The head teachers were asked to rate the extent of usage of resources available for career guidance. Their responses were as shown in figure 4.7.
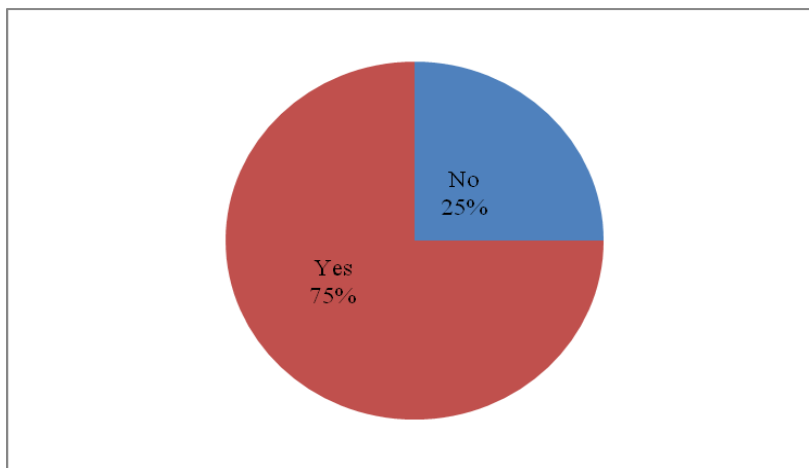
Figure 4.7: A pie chart showing whether career guidance and counseling material available in schools are regularly utilized

According to figure 4.7, 75% of the head teachers indicated that guidance and counseling facilities in their schools were regularly utilized while 25% said they are not regularly utilized

4.3.3.6 Career Guidance structures-Career Guidance Teachers' responses

To the question of existence of a career guidance department, 17 teachers' response was yes while 11 said they did not. The data is as shown in the table 4.24.

Table 4.24: Career Guidance Department-Career Teachers' responses

Measurement	Category	Frequency	Percentage
Does your school have a career guidance department?	Yes	17	60.71%
	No	11	39.29%
	Total	**28**	**100%**

Source: Author, 2014

The table shows that out of the 28 career guidance teachers who responded, 17 (60.71%) said their schools had career guidance departments that were independent of the guidance and counseling department while 11(39.29%) said their schools did not have such a department.

There was a degree of agreement between the principals' and career teachers' responses to this question as they did not differ by far, i.e. 66.67%versus 60.71% for yes and, 35.33% versus 39.29% for no.

4.3.3.7 Facilities Available for Career guidance: Teachers' Responses

The career guidance teachers were then asked to tick against a number of facilities that were available in their schools for career guidance. Table 4.25 shows the responses.

Table 4.25: Facilities Available for the Career guidance department

Facility	Frequency	Percentage
Career guidance departmental office	12/28	42
Counseling room	7/28	25
Videos	4/28	14
Computer	4/28	14
Internet	3/28	10
Careers library	7/28	25
Careers books	7/28	25
Journals	11/28	39
Career magazines	11/28	39
No response	8/28	28

Source:

The table shows that none of the facilities was available in all the schools as none of them had a score of 100%.Availability of the departmental office had the highest frequency of 12,(42%) while all the other facilities had percentages of below 50.Of great concern is the low percentage of internet (10%). In this era of knowledge explosion, availability of internet would be a great source of careers information for both students and teachers, considering that this is an area that has not been widely written about.

4.3.3.8 Career guidance Department-Students' Responses

The students were asked if their schools had a list of structures and resourcesfor career guidance. Their responses are shown in the table 4.26.

Table 4.26: Existence of Career Guidance Department-Students' Responses

Category	Frequency		Percentage	
	Yes	No	Yes	No
CG department	85	62	57.82%	42.18%
CG Teachers	117	28	80.95%	19.05%
CG office	68	79	46.26%	53.74%
CG books	62	85	42.18%	57.82%
CG journals and magazines	51	96	34.69%	65.31%
Internet services for students	45	51	30.61%	69.39%

Source: Author, 2014

The results in the table show that: 57.8% of the respondents indicated that the schools had career guidance department; 81% of the respondents indicated that the schools had career guidance teachers; 53.7% of the respondents indicated that the schools did not have career guidance office while 57.8% of the respondents indicated that the school had no career guidance books. As for journals and internet services, those who answered in the affirmative were 34.7% and 30.6% respectively. The response concerning existence of a careers department is in congruence with the principals' and career teachers' responses. The three groups indicate that slightly more than half of the schools had career guidance departments. Existence of careers' teachers scored the highest (81%) creating the impression that the department is sufficiently equipped. However, this is negated by the response to the question on existence of a careers' room whereby only 46.3% had such a room. This implies that majority of the schools had

nowhere to keep their materials and conduct their careers' business. The findings also show inadequacy of reference materials as indicated by the 42.2%for books, 32.7% for journals and 30.6% for internet services. The study deduced that the many of the schools were not adequately equipped to efficiently and sufficiently carry out career guidance.

The researcher observed that a few of the schools had rooms clearly marked and set aside for career guidance. The schools had separate office for general guidance and counseling and another one for career guidance, each with a different office holder.

4.3.3.9 Objectives of Career Guidance Department

The study sought to determine the objectives of career department in various secondary schools. The study established that some of the objectives of career departments include:

to guide students in achieving their academic goals, to work towards achieving their potentials, to assist students in subject selection suitable for courses at the university level, to prepare students to be placed in marketable careers, to assist the students achieve better performance and career placement, prepare learners for job expectations and university requirements, to ensure the students are morally raised and disciplined, to create awareness on career opportunities, sharing information about careers with students, to ensure the learner remains focused on career choice and to ensure the learner is in a stable state of mind for proper growth and learning.

4.3.3.10 Career Guidance Timetable

The study sought to find out if schools had career guidance time-tabled. The responses were as shown in table 4.27.

Table 4.27: Response of head teachers on whether schools have set aside specific time for career guidance and counselling.

Response	Frequency	% Total
Yes	7	25
No	21	75
Total	**28**	**100**

According to table, most schools do not have specific time allocated for career guidance as confirmed by a majority 75%, while 25% indicated that there was time allocated for that.

4.3.3.11Time for career guidance in schools with no time table for career guidance

The study sought to find out what time the schools that did not have career guidance on the timetable carried out this activity. The findings as per the responses of the head teachers are as shown in table 4.28.

Table 4.28: When is career guidance done in schools without time tables for career guidance?

Measurement	Category	Frequency	Percentage
When is career	Teachers discretion	4	22.2%
	During Subject selection	2	11.1%
guidance done in	When Need arises	1	5.6%
	After class hours	3	16.7%
schools with no time	Thursday evenings	2	11.1%
	Once in a while	1	5.6%
table for career	During guidance and counseling	2	11.1%
guidance	sessions (No time specified)		
	End term parade and release of	1	5.6%
	exams		
	No response	2	11.1%
	Total	**18**	**100%**

Source: Author, 2014

The study found out that out of the 28 schools, 18 schools did not have career guidance timetabled but they indicated that they offered career guidance at varied unspecified time. Four schools (22.2%) indicated that the career guidance teachers made the decision to have career guidance sessions for the students. Some of the responses such as during subject selection, some Thursday evenings, during guidance and counseling sessions accounted for 11.1% respectively were indicated by 6 schools. The study deduced that there is lack of seriousness attached to career guidance as shown by the responses such as career guidance is offered once in a while, when need arises and at the teachers own discretion.

4.3.3.12. Class course work for career guidance department

The study sought to find out from career teachers and head teachers whether the secondary schools have class course work for career guidance. The table 4.29 shows the findings:

Table 4.29: Class course work for career guidance

Measurement	Category	Frequency	Percentage
Does the school have class course work for career guidance?	Yes	24	42.3%
	No	32	57.7%
	Total	**56**	**100%**

Source: Author, 2014

As shown in the table, the study found out that 57.7% of the schools had class course work for career guidance and 42.3% of the schools do not have any class course work for career guidance. The study deduced that the majority of the secondary schools did not have any class course work for career guidance.

4.3.3.13. Schemes of work for career guidance

The study sought to find out from both career guidance teachers and head teachers whether the secondary schools have class course work for career guidance. Table 4.30 shows the findings.

Table 4.30: Schemes of work for career guidance

Measurement	Category	Frequency	Percentage
Does the school use schemes of work for career guidance?	Yes	2	3%
	No	44	78%
	No Response	10	17%
	Total	**56**	**100%**

Source: Author, 2014

As shown in the table, the study found out that 78% of the schools do not use schemes of work for career guidance while 3% of the schools make use of schemes of work for career guidance. The study deduced that majority of the secondary schools do not make use of schemes of work for career guidance.

SECTION 2:

4.3.4. Head Teachers' Support to Career Guidance and Counseling.

4.3.4.1. Availability of a counseling office

Career counselors were asked if they had a counseling office. The responses were as shown in table 4.31.

Table 4.31: Teacher counselors' response on whether there is a counseling office

Response	Frequency	% Total
Yes	22	78.6
No	6	21.4
Total	**28**	**100**

From table 4.31 above, 78.6% of the respondents said that there was a career counseling office or room in their school, while 21.4 % indicated there were no such

offices. However, further probing revealed that the counseling office/ room in most of the schools was used for general guidance and counseling and not career guidance alone.

4.3.4.2 Other resources provided for career guidance by the head teacher apart from the office

Career guidance teachers were asked to state other resources provided by their head teacher. Their responses were as shown 4.32.

Table 4.32: Other resources provided by the head teacher for career guidance

Resource	Frequency	Total	Percentage %
Textbooks	16	28	57.1
Stationery	28	28	100
Funds	14	28	50.0

According to table 4.32, all (100%) of the teacher counselors are provided with stationeries, 50 % are provided with funds while 57.1 % are provided with textbooks

SECTION 3:

4.3.5 Adequacy of Head teacher's support

4.3.5.1. Rating of performance of career guidance in schools

Career Counselors were asked to rate the performance of career guidance in their schools.

Their responses were as shown in table 4.33.

Table 4.33: Rating of the performance of guidance and counseling in schools by career guidance teachers

Rating	Frequency	% Total
Very high	4	14.3
High	8	28.6
Moderate	10	35.7
Low	6	21.4
Total	**28**	**100**

According the table 4.33 above, 35.7 % of the teacher counselors rated the performance of guidance and counseling in their schools as moderate ,28.6% said it was high ,14.35% very high and21.4% of the teacher counselors rated it low.

4.3.5.2 Head teacher's personal participation in implementation of career guidance and counseling programs

The career guidance teachers were asked to rate their head teachers' participation in career guidance programs implementation. Their responses were as shown in table 4.34.

Table 4.34: Do head teachers personally participate in the implementation of career guidance and counseling programs?

Response	Frequency	% Total
Yes	7	25
No	21	75
Total	**28**	**100**

According to table 4.34, majority (75%) of the teacher counselors indicated that their head teachers do not personally participate while 25% indicated that they personally participate in the implementation of guidance and counseling.

4.3.5.3 Rating of head teachers involvement in career guidance activities on a Likert scale

The career guidance teachers were asked to rate their head teachers' involvement in specific career guidance activities on a Likert scale. The responses were as shown in table 4.35.

Table 4.35: Rating of head teachers' involvement in various activities related to career guidance and counseling using a 4 point scale.

Strongly Agree (SA), Agree (A), Disagree (D), Strongly Disagree (SD).

Statement	SA		A		D		SD	
	Freq	**% value**	**Freq**	**% value**	**Freq**	**% value**	**Freq.**	**% value**
The head teacher always provides all resources needed for effective career	0	**0**	7	**25**	21	**75**	0	**0**

guidance and counseling all the times.							
The head teacher always attends career guidance and counseling department meetings to discuss student 'issues	0	**0**	7	**25**	14	**50**	7	**25**
The head teacher has intervened to reduce my teaching load thus giving me time to counsel students.	3	**10.7**	6	**21.4**	9	**32.2**	10	**35.7**
The head teacher always sponsors me for career guidance and counseling related training.	4	**14.3**	10	**35.7**	14	**50**	0	**0**

Summary of findings from the table

The head teacher always provides all resources needed for effective career guidance and counseling all the times – 75% disagreed while 25% of the teachers agreed. No one strongly agreed or strongly disagreed.

The head teacher always attends career guidance and counseling department meetings to discuss student's wellbeing- 50% disagreed, while 25% agreed, and another 25% strongly disagreed while no one strongly agreed.

The head teacher has intervened to reduce my teaching load thus giving me time to counsel students – there was an interesting reaction here because majority 35.7 % strongly disagreed. 32.2 % disagreed 21.4 %% just agreed, while 10.7 % strongly

agreed.

The head teacher always sponsors me for career guidance and counseling related training – 50% of the teacher counselors disagreed with this statement, 35.7 % agreed, while 14.3 % strongly agreed. No one strongly disagreed. For all the statements, very few agreed. It shows that for most f the career guidance functions, the principal's role was not outstanding.

4.3.5.4 Level of support by head teachers

Basing on the head teachers' participation in career guidance activities, career guidance teachers were asked to rate the head teachers' overall support for the department. Their responses were as shown in figure 4.8.

HEADTEACHER SUPPORT IN G&C
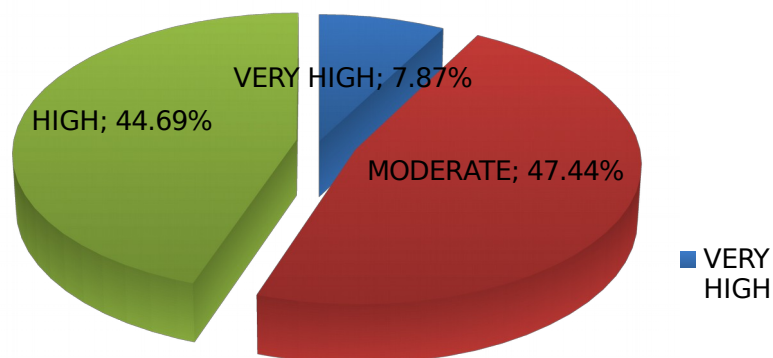
Figure 4.8: Level of support by head teachers to guidance and counseling in school

Figure 4.8 shows that 47 % of the teacher counselor rated the level of support by the head teachers to guidance and counseling as moderate, 45 % felt it was high 8 % indicated it was very high but none said that there was no support at all.

Section 4:

4.3.6 Respondents Suggestions on Structures That Should Be Put In Place to Enhance Career Guidance in Schools

The principals and career guidance teachers were asked to suggest ways in which the ministry of education, KIE, TSC, DQASO, the schools, career guidance teachers, parents, students and the community could enhance career guidance. The respondents suggested ways in which career guidance can be enhanced by different stake holders. Among the suggestions, those with the highest frequency included the following:

The ministry of education could train and post-career guidance teachers to schools (30.9%); KIE/KICD should give more relevant curriculum and teaching materials (61%); the TSC could increase surveillance and have refresher courses for career teachers (63.6%). The DQASO could give sustained guidance to career teachers (65.4%); the schools to hold career days attend career exhibitions and give career talks to students. However, the highest percentage was for timetabling and supervision of career guidance (38%). The career teachers should be updated with current trends. (30.9%); the students should have goals (63%) but also have peer career counseling and discuss career information with teachers. The parents should get involved (50.9%) and give guidance at home, for instance, by exposing students to positive internet usage in search for information. Among the responses for the role of the community, provision of careers centers and programmes had the highest percentage (should provide good opportunities to the students (23.4%).

The findings from the county education and district education offices reveal that at policy level, career guidance is yet to be given the attention it deserves. The four respondents at policy level indicated that apart from the career guidance booklet which is now outdated, no clear ministerial and county or district guidelines are in place spelling out how and when career guidance should be conducted in all the schools. It was found that an insignificant number of teachers are trained in career guidance. The training entailed occasional seminars or trainings that lasted not longer than three months, for which they obtained certificates. The teachers do not often attend refresher courses in career guidance probably due to failure to allocate funds to Career guidance because of limited resources allocated to the career and guidance department in majority of the schools. The schools that do not have career and guidance departments relegate the duties of career guidance to class teachers, director of studies, examination masters or the guidance and counseling teacher.

The study sought to establish whether the K.I.E/Government prescribed any content for career guidance in secondary schools. The study established that the government prescribed content career guidance in secondary schools but it is not in form of class texts for form one to four.

The study sought to find out ways in which career guidance can be enhanced by different institutions as suggested by county education directors and district quality and standards officers/education officers. The findings, as shown in the table include:

a) The ministry of education should introduce career guidance in school curriculum and train teachers in career guidance;

b) KIE/KICD should formulate curriculum/syllabus and conduct pilot survey in schools;

c) The TSC should post teachers of guidance to schools;

d) DQASO should carry out inspections in guidance department;

e) The schools should draw programmes for career guidance in the school's routine;

f) Career teachers should be trained always be with the students;

g) Students should organize peer guidance amongst themselves to encourage other students;

h) parents should guide their children but allow them to make independent choices;

i) The community is also accountable to provide resources like libraries and resource persons of the students.

Measures have been put in place to bridge the gender gap in public university enrolment.

The joint admission board (JAB) has affirmative policy of admitting female students with a point lower than their male counterparts. The ministry of education has gender policy in place to eliminate stereotyping in learning materials, in class/schools and at home so as to facilitate girls' empowerment through education. The gender policy document of 2007 states that enrolment in public universities is characterized by a wide gender disparity in favor of males. The policy aim at eliminating stereotyping of female students .In spite of these being policies in place, there is still low participation of women in the world of work. For instance, in the ministry of education, there is low participation in lecturing, research, governance, management and administrative responsibilities at the university level.

4.3.7 Objective 4: To assess the relationship between career guidance services and academic performance and, subsequent aligned career choice among girls.

The relationship was assessed from the point of view of:

1: The career guidance activities/programmes in schools from form one to four versus performance and career choice.

2: The total number of structure, facilities and personnel versus performance and career choice.

The findings were as described below.

4.3.7.1 Activities Carried Out by the Career Guidance Department

The study sought to find out from the career guidance teachers the activities carried out by the careers department. Out of the 30 secondary schools, 15 schools provided information on the activities that are carried out by the career guidance departments in their schools from form one to form four. Of the 15 schools, three of them had a comprehensive range of career guidance activities running from form one to form four as shown in the table below:

Table 4.36: Career guidance activities from form one to form four

Name of School	Activity by career guidance department
A	Form 4: external motivational speakers and career materials
B	Form 1 term 3: Academic tours
C,D, E,F	Form 2 term 2: Choosing Subjects Form 4 term 3: Filling JAB forms
G,H	Form 1 term 1: career awareness Form 2 term 2: subject selection Form 2 term 3: strategy to actualize one's career Form 4 term 3: Filling- in JAB forms

I	Career guidance throughout the year
J,KL,M	Form 1: Orientation
	Form 2: career guidance, career week and subject selection
	Form 4: career choice and filling in JAB forms
N	Form 1-4: Peer counseling
	Form 4: career guidance
O	Form 1: Orientation and subjects' relation to careers
	Form 2: Subject selection
	Form 3: Subject choices used to register KCSE
	Form 4: Career talks, career choices and JAB registration
	Writing & reading articles in Career column in the school magazine(form 1to 4)
P	Form 1: Orientation, career information and career choices
	Form 2: Parents students career meeting and subject selection
	Form 3: Career guidance
	Form 4: Career choice and JAB registration
	Regular Career –based motivational talks for all students, reading careers magazines the school has subscribed to

Data obtained from the schools on performance in KCSE and admission to public universities (2006-2012) and that obtained from JAB on the 2012 JAB admissions was compiled and analyzed in relation to career guidance activities in each school. The data showed that the three schools with comprehensive career guidance activities were leading in KCSE performance and JAB admissions. Excerpts from the two tables are shown below.

Tables.4.37: Relationship between intensity of career guidance and admission into public universities

(a) Schools with comprehensive career guidance programmes

Schools with comprehensive career guidance programmes	Performance(KCSE-C+ and above, 2006-2012) according to data from the schools	JAB admissions for 2006-2012 according to data from the schools	2012 JAB Admissions as per the data obtained

			from the JAB office
O	1548	925	179
P	710	300	92
G	723	223	82

It can therefore be hypothesized that the number and types of career guidance processes influence performance and subsequent public university admission. A similar table was compiled for some of the schools without comprehensive career guidance services as shown below:

(b) Schools without comprehensive career guidance programmes

Schools without comprehensive career guidance programmes	Performance(KCSE-C+ and above , 2006-2012) according to data from the schools	JAB admissions for 2006-2012 according to data from the schools	2012 JAB Admissions according to data from the JAB office
A	0	0	0
B	0	0	0
C	0	0	0
D	-	0	0
E	-	1	0
F	0	0	0

The table shows that inadequate career guidance goes hand in hand with poor performance and subsequent low admittance into public universities.

The head teachers were asked the same question on career guidance activities. The activities they listed include organizing career guidance talks for students, arranging programmed meetings for the students, giving guidance for students on academic performance and helping the students especially in form two in subject selection. The department also organizes visits based on career choices for the students and guides the

students in filling in Joint Admission Board registration for University admissions. The department offers academic counseling and advisory role on key subjects, advice on future life requirements and mentorship. The activities of guidance and counseling department extend to peer counseling, social matters and spiritual growth of the students.

4.3.7.2. Career Guidance, Performance in KCSE and JAB Admissions by Cluster Points

The study sought to find out the relationship between career guidance, performance in KCSE and career choice from the head teachers who provided information on the number of grades A to C+, number of female students admitted to public universities and the courses they are admitted to. The study investigated the performance of the sampled schools in KCSE from 2006 up to 2012.

Out of the 28 schools 26 schools provided the information on the number of girls who scored grade C+ and above from 2006 to 2012; the number of girls admitted to public universities in the course of the seven years and the courses the female students were admitted into. However, four out of the 28 did not provide information on those who scored C + and above. In addition the schools that had more than five students qualifying for public universities did not have data on the degree courses the students were admitted into. This was attributed to the fact that JAB communicates directly to the students about courses they are selected for and the schools have not set mechanisms to get this information either form JAB or the students. This is also due the fact that the students are admitted to diverse number of universities and the information is communicated to students directly and not through their schools. The researcher

considered this a point of weakness on the part of the schools .This is because keeping a clear up to date records of their students' career choices and the courses they proceed to do at university is an important tool to gauge the effectiveness of careers department and the school at large. The study made an observation from the results obtained from the 19 schools that the most common course that the students were admitted to was Bachelors of Education followed closely by Bachelors of Science in Environmental Science. The approximate number of girls from the 26 schools that were admitted to public universities in the last seven years from 2006 to 2012 was about 1,810 basing on the data provided by the schools. This is a very small number considering that it is for a period of seven years and from 28 schools.

The researcher sought more data on admission of female students from Vihiga County from the joint admissions board (JAB). The sampled schools KNEC centre numbers were obtained from the Kenya national examination council and provided to the JAB office at the University of Nairobi. The number of female students admitted by JAB from the sampled schools and a few others for the year 2012 was provided by JAB.

The data shows that apart from a few schools, there is dismal enrolment of girls from secondary schools in Vihiga County into public universities. It was observed that only the girls' schools send a substantial number of students to public universities while mixed schools send very few girls to public universities. Except for one school, all the mixed schools had a higher number of boys than girls admitted into public universities.In order to gain insight into the type of degree programmes that girls from the sampled schools usually get admitted into, JAB admission list for the entire county of Vihiga for the year 2012 was obtained and analyzed. The degree programmes were classified into two groups as shown below:

Group1: Courses that required a cluster point cut-off above 45 and,

Group2: those whose cut-off was below 45 points.

The number of candidates admitted by JAB from the sampled schools into each of the

two categories was then obtained and tabulated as shown in table 4.38.

Table 4.38: 2012 JAB intake

School	School Type	Total admitted by JAB in 2012	Number of girls Admitted into courses of highest weighted Cluster points (>45)
A	Girls'	197	>40
B	Girls'	92	5
C	Girls'	82	9
D	Girls'	62	2
E	Girls'	30	2
F	Girls'	17	1
G	Girls'	14	1
H&I	Girls'	5 each	0
J	Girls'	3	0
K	Girls'	1	0
L&M	Mixed	3 each	0
N&O	Mixed	2 each	0
P,Q,R	Mixed	1 each	0
S	Mixed	1	1
T,U,V,W, X,Y& Z	Mixed	0 each	0

The data shows that although a few of the girls' schools sent a reasonable number of

girls to public universities in 2012, very few got admitted into courses with high cluster

cut off points. The findings also revealed that out of the 19 mixed schools in the study

sample, only 10 girls were admitted into public universities, out of which none qualified for course of cluster points above 45.

4.3.7.3. The total number of structure, facilities and personnel versus performance and JAB admissions.

Data on this was collected using the observation checklist (appendix VIII) for career guidance resources in the schools. The study made observation for the following career guidance resources: existence of career guidance department, departmental structures, personnel and departmental files. Out of the 28 schools, 26 facilitated the researcher to make observations of facilities and records for career guidance. A summary of the findings is given in appendix 1.

From the observation checklist, none of the schools had all the facilities. Schools such as School E had all the facilities except a guiding career room and B secondary school had all the facilities except videos and CDs. Some schools lacked 3 or more facilities as shown in the table of facilities. Schools such as A, M and O Schools had no facilities for career guidance. The three schools were also found not to have had any student enrolled into public university between 2006 and 2012.

The study sought to find out the departmental personnel that were available in different schools. The findings show that50% of the schools lacked a senior HOD, more than 50% had no assistant HOD, career counselor and peer counselors and, none of the schools had a receptionist for the careers office where one existed. The schools that did not have any of the departmental personnel included: School A, I and M.

The study sought to determine the departmental files that were available in the careers department. The study found out that only five secondary schools had all the departmental files for questionnaires, circulars, correspondence, KCSE, Exams and university applications. Out of the departmental files investigated, majority of the schools had examinations and university application files.

The study further determined other departmental files that were available in the secondary schools. These included files for subject selection, careers department budget, careers handouts, enrolment, and general files. Form the observation checklist, schools such as B, H and K schools had other departmental files while schools such as A, D and I schools did not have these departmental files. The study observed that majority of the schools had subject selection and enrolment files. On the other hand, the budget file was missing in most schools.

A total of all the facilities and personnel for career guidance available in the schools were observed (according to the observation schedule) and analyzed. Out of the twenty five items, the number that was missing in every school was established. This was then put in juxtaposition with the performance in KCSE (2012) and the number of students admitted into public universities in 2012 by JAB from each of the schools. The table in appendix II shows this. The data shows that schools that were missing most of the structures, facilities and personnel for career guidance had poor performance hence less or no girls admitted to public universities in 2012 than those that had more resources.

The researcher sought to find out the influence of not only existence of structures but also of the processes carried out in career guidance on performance and JAB admissions over a period of time.

Existence of the career guidance department, each facility and every personnel was itemized as 1, giving a total of 15 items. On the other hand, existence of every career guidance departmental file was taken to represent a career guidance process that is carried out in the department and itemized as 1, giving a total of 11 career guidance processes. Hence, the department, the facilities, personnel and departmental files (representing the career guidance processes) together formed 26 career guidance items against which the performance and subsequent entry into public universities was measured. The performance and number admitted to public universities was found to be positively proportional to the career guidance items available. The table in appendix II and graph in figure 4.9 illustrates this.
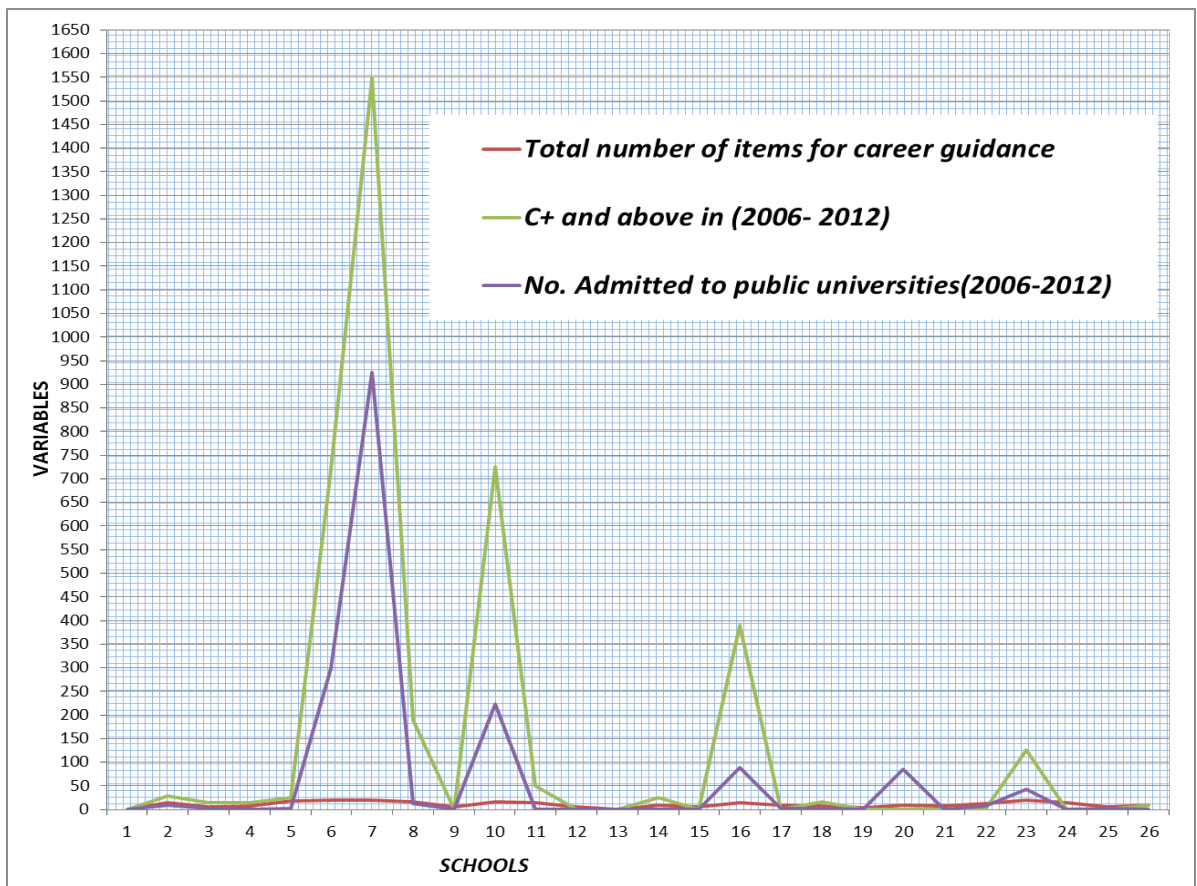
Figure 4.9: Line Graph showing relatioship between number of career guidance resourcess,personnel processes and, performance and subsequent JAB enrolment.

The line representing career guidance (items) resources hardly rises to make peaks, indicating under-provision of resources for career guidance even in the schools that had some. The graphs show that the schools that had many of the career guidance items, like school number 6,7,10 and 16 also had higher performance and hence sent more students to public universities. On the other hand, those schools with few or no facilities at all had poor performance and sent no students to public universities. These include school number 1, 9, 12, 13,19,21,24 and 26.

4.3.7.4. **Career Choice**

The study sought to find out whether the students had chosen careers by the time they were completing form four. The findings are shown in table 4.39.

Table 4.39: Choosing Career

Measurement	Category	Frequency	Percentage
Have you chosen	Yes	137	77.84%
your career yet?	No	39	22.16%
	Total	**176**	**100%**

Source: Author, 2014

The data shows that majority of the students (137) had already chosen a career while only a few (39*).*

The study established that majority of the students had chosen careers' accounting for 77.84% of the respondents while 22.16% indicated that they had not fully decided on their career choice yet. Considering that these were form four students completing their KCSE, 22.16% of the population not having chosen career shows that the career guidance function was not effective in some schools. Hence there is a need to revamp this service in all schools to benefit all students.

4.3.7.5. At What Point Did Students Choose a Career

The study further sought to find out at what point in the students' life they chose their careers. The responses are shown in table 4.40.

Table 4.40: Point in time that students chose their career

Measurement	Category	Frequency	Percentage
When did you choose your career?	No response	10	5.7%
	Primary	55	31.25%
	Form one	46	26.13%
	Form two	21	11.93%
	Form three	19	10.79%
	Form four	25	14.20%
	Total	**176**	**100.00%**

The data show that majority of the students indicated that they chose their careers while still in primary schools and form one level of education. These findings are in line with the Self-Concept Theory of Career Development by Super(1942-1957 and Ginsberg(1974).The theory states that career development occurs in a series of stages, the second stage (exploration stage) occurring at age 15-24 years during which individuals seek an occupation. This study shows the age to be primary age up to form one age as these had majority of respondents (31.25%and 26.13%, respectively).Implication for practice therefore calls for career guidance starting at an early age so that students do not choose careers based on childhood fantasies and fascination but based on proper information. For instance, many young children express desires to be pilots, nurses, soldiers and doctors due to the smart uniform yet at their age; they may not know what the jobs entail and the prerequisite conditions for the job. The minority students had not yet chosen careers until form three level and form four. This calls for strengthening of the career and guidance function in schools so that by fourth form, all students have an idea of what they want to do.

4.3.7.6. Career choice: same or changed?

The study sought to find out whether the students chosen their career early had changed their career choice as they progressed to form four or it remained the same throughout the four years. Table4.41 shows the responses.

Table 4.41: Change of career choice

Measurement	Category	Frequency	Percentage
Is the career choice	Same	107	60.87
	Changed	69	39.13
you made still the			
	Total	**176**	**100%**
same or you			
changed?			

Source: Author, 2014

The study established that majority of the students 60.87% had not changed their careers while 39.13% of the respondents had changed their careers. The reason for changing their career choice could be attributed to the exposure by the career and guidance department broadening the students' line of thought.

4.3.7.7. Reasons for not having chosen a career

Students who said they have not yet chosen a career were asked to give a reason for the delay in making a decision about their career. Their responses were as shown in table 4.42.

Table 4.42: Reasons for not having chosen a career

Reason	Percentage
I am not aware of the options available/ our school does not provide any information on career guidance	31.25%
I am confused about the many options available	15.63%
I do not know which one suits my ability	32.81%
I do not know what my area of interest is	6.25%
No response	9.38%
I am waiting for KCSE results so that l decide	4.69%
Total	100.00%

Source: Author

The table shows varied reasons for delay in career choice. The highest frequency was lack knowledge about careers that suit one's ability and lack of awareness of the options available. The data was presented in a pie chart as shown below.

The data shows that even though those who had not chosen careers are few, their reasons indicate that they have not benefitted from adequate career guidance. This is indicated by the big percentage that did not know the options available (31.25%), confused (15.62%) and those who were not aware of courses they could qualify for in view of their ability (32.81%). For instance, those who said they do not know which career is in line with their ability cannot possibly have had access to JABs selection criteria over the years. On the other hand, those who said they were waiting for KCSE results in order to decide were also not properly guided as career choice should be guided by many factors apart from performance, some of which include interest, and passion. In addition, students whose performance has been tracked using the career declaration versus performance form will have an idea of what their KCSE performance is likely to be and hence have no problem choosing a career before results are out.

4.3.7.8. Career guidance influences on performance and career choice

The study sought to find out whether the respondents thought that career guidance influences performance and career choices for the students. The findings are as shown table 4.43.

Table 4.43: Career guidance influence on performance: Principals' and Career Teachers' Responses

Measurement	Category	Frequency	Percentage
Career guidance	Yes	47	85
	No	0	0
influences	No response	8	15
	Total	55	100
performance			

Source: Author, 2014

  Majority of the respondents (85%) indicated that career guidance influences performance for the students while none said no. Those who did not respond to the question comprised 15%.The respondents said that career guidance makes students to have a goal to work toward sand that when guided well, students work hard towards joining their preferred career choices thus improving their performance. Capable students attain grades for desired career as career guidance helps them understand what they want in life and students remain focused on specific goals. The study established that career guidance influences performance since it gives learners direction and motivates them to work hard. Students also responded to this question and their responses were as shown in table 4.44.

Table 4.44: Career guidance influence on career choice-Students 'Responses

Measurement	Category	Frequency	Percentage
Career guidance	Yes	119	**67.61%**
influences career	No	30	**17.04%**
	No response	27	**15.34%**
choice	**Total**	**176**	**100.00%**

Source: Author, 2014

Majority of the respondents (67.61%) indicated that career guidance influences performance for the students while17.94%. said no. Those who did not respond to the question comprised 15.34 %of the sample. Among those who said career guidance does not affect performance and career choice, one student stated that it has not influenced performance and career choice by 'not guiding them'.

4.3.7.9. Efficacy of Career Guidance with regards to Performance in KCSE and Career Choice.

The head teacher and students responses on the efficacy of G/C programmes were analyzed descriptively and the findings are as depicted in the tables 4.45(a) and (b).

(a) Students responses on efficacy

Table 4.45(a): Responses on Students' evaluation of efficacy of counseling services in schools

Responses	Frequency	Percentage (%)
Strongly Agree	11	6.25
Agree	26	14.77
Disagree	58	32.95
Strongly Disagree	81	46.02
Total	**176**	**100**

The table shows that majority of the students (32.95%and 46.02% for disagree and strongly disagree respectively) felt the career department did not have the capacity to produce the desired results.

(b)Students responses on adequacy of resources

Table 4.45(b): Students' responses on availability of counseling resources for teacher counselors

Counseling Resources	Frequency	Percentage (%)
Sufficient	08	26.67
Insufficient	22	73.33
Total	**30**	**100**

Concerning adequacy of resources, majority (73.33%) of the students said they were insufficient.

(c)Head teachers' responses on efficacy of career guidance

The study sought to establish from the head teachers **the** roles and efficacy of career Guidance and Counseling Programmes in Secondary Schools. Their responses were as shown in table 4.46.

Table 4.46: Head Teachers Responses on the Roles and efficacy of career Guidance and Counseling Programmes in Secondary Schools

Items	Agree	%	Disagree	%	X	Total (%)
Personal Growth	19	63.33	11	36.67	30	100
Self-Understanding	17	56.67	13	43.33	30	100
Academic Performance	23	76.67	07	23.33	30	100
Career Decision-making	25	83.33	05	16.67	30	100

The head teacher' responses on the roles and efficacy of career guidance programmes showed that they agreed that the programmes influenced personal growth (63.33%), self-understanding (56.67%), and career decision-making (83.33%). Majority (76.67%) agreed that they impact academic performance.

The analysis for questionnaires for head teachers and students inferentially brought forth the following results:

Table 4.47: Pearson's Correlation of Career and Academic Performance

Variables	Statistics	Attitude towards career	Academic Performance
Attitude towards career	Pearson Correlation Sig. (2- tailed) N	1 86	.336(**) .000 86
Academic Performance	Pearson Correlation Sig. (2- tailed) N	.336(**) .000 86	1 86

Examination of Table4.47 indicates that there was a positive and significant relationship between attitude and academic performance ($r = .336$, $p < 0.01$). Since $p < 0.01$, there is a significant relationship between students' attitude toward career guidance and

academic performance. This suggests that the higher the level of attitude of the students towards career guidance (effectiveness of guidance and) in their schools, the higher was their level of academic performance, and vice versa. Students who valued career guidance were more likely to seek for the services of the guidance and in addressing their academic challenges and therefore end up making rational academic decisions.

4.3.8 Objective 5: Stereotyping and Its Effect on Subject and Career Choices

4.3.8.1. Students' Favorite Subjects and the reasons

The study sought to find out the favorite subjects of the students and the reasons for the subjects being their favorite. Their responses were a myriad of permutations based on personal likings and career aspirations. The study revealed that the students indicated a variety of subject combinations as their favorite. The subject combinations with the highest frequency were those of humanities/arts subjects. For instance, the combination History, CRE, Business Studies had a frequency of 25; English and CRE, 19; Eng, Hist, CRE 16; Bio, CRE 15; Eng, Geog, CRE,14; Eng, Kisw, CRE, 13; Eng and Kisw 11; Eng, Kisw Hist 10. On the contrary, subject combinations comprising the sciences had very low frequencies. For instance, frequency for the combination Mathematics, Chemistry, Biology and Physics was a paltry 1.The implication is that majority of the students would end up in mainly arts oriented careers. This finding is in line with that of Keriga and Bujra (2009), DeBeckerand Nelson (2000) and the Simmons College study(2011).The data was further analyzed and ranked to show the subject mentioned the most number of times to the least mentioned. The table 4.48 shows this.

Table 4.48: Favorite subject in descending order

Subject	Frequency	Percentage
C.R.E	118	19.77%
English	109	18.17%
History	86	14.32%
Kiswahili	77	12.81%
Biology	52	8.63%
Business studies	36	6.03%
Math	31	5.19%
Geography	30	5.03%
Chemistry	21	3.52%
Physics	12	1.93%
Home science	10	1.68%
Agriculture	8	1.34%
French	7	1.26%
Music	1	0.17%
Art	1	0.17%
Total	**597**	**100.00%**

NB: Total and percentage is not calculated out of 176(sample size) as some students mentioned more than one subject as their favorite hence totaling to 597 cases.

The subject indicated by the highest number of students as their favorite was C.R.E (19.7%) followed by English (18.1%) and History (14.3%) while the least mentioned were art and music with rating of 0.1% each. The low popularity of Art concurs with what Agak and Indoshi (2009) found out, that many students drop the subject due to lack of proper career guidance. The same can be said about music. The subject is not considered important and among those that lead to a rewarding and fulfilling career yet

cases are known of people who have mellowed the academic professional careers they studied for to pursue music as a full time career. These include David Mathenge (Nameless) who is an architect and his wife Wahu Kagwi who is a mathematics graduate, Cecilia Wairimu (Amani) who studied international business administration but is more involved in music, Achieng Abura who has a bachelor's degree in chemistry and masters in environmental studies but is more known for music, Wendy Kimani who studied computer science but is in the music industry (Wikipedia) .The list would be incomplete without the mention of Peterson Githinji (Pitson) of the 'Lingala Ya Yesu' fame who quit his job as a banker at Stanchart bank to venture fully into music. He is a bachelor of Commerce graduate from Jomo Kenyatta University of Agriculture and Technology (JKUAT) (www.nation) Hence more career guidance is required in schools to point to students that those aspects of their lives that appear early as just hobbies, talents and passions are potential lucrative and fulfilling careers worth developing.

4.3.8.2. Reasons for students' favorite subjects

The study compiled and ranked the various reasons why the above subjects were the students' favourite.

A summary of the reasons is as shown in table 4.49.

Table 4.49: Reasons for favorite subjects

Reason	Frequency	Percentage
Related to my career choice	42	23.86%
Easy/I pass	110	62.5%
Are interesting/I like them/feel pleased to read them	7	3.97%
For fluency/Other subjects are taught in it(English)	3	1.7%
Inspiring Teacher	4	2.27%
National language(English)	1	0.57%
Spiritual enrichment(C.R.E)	5	2.84%
Blank	4	2.27%
Total	**176**	100.00%

The table shows that a variety of reasons were given, with the response with highest frequency being that "the subjects are easy". Among the reasons was that the subjects were easy (62.5%) and are in line with their career choices (23.86%).It is disturbing that a very small percentage of the sample related their preference for certain subjects to their career choices/aspirations. This is a likely indicator that not enough subjects versus career choice sensitization had been made as should be done by the career guidance department.

4.3.8.3. Students responses on the most difficult subjects

On Seeking to establish the effect of stereotyping and its effect on subject and career choices, the study enquired from the students the subjects they felt were too difficult for girls. The findings were as shown in table 4.50.

Table 4.50: The Subjects That Girls Find Difficult

Most Difficult Subject	Frequency	Percentage
Mathematics	100	56.81%
Physics	95	53.97%
Chemistry	81	46.02%
Geography	31	17.61%
Biology	21	11.93%
French	17	9.65%
Business Studies	11	6.25%
Kiswahili	5	2.84%
History	4	2.27%
C.R.E	2	1.13%
English and Agriculture	1	0.056%
Home science/computer	0	0.00%
Total	**368**	**100.00%**

NB: Total frequency is 368 and not 176 as students mentioned more than one subject as

difficult.

It was established from students' responses that the most difficult subjects for girls are

Mathematics(56.81%), Physics(53.97%),Chemistry(46.02%), Geography(17.61%) and

biology (11.93%) in that order as seen from the table. These findings are in line with

those of the study by Simmons College which found out that girls were not only less

interested in STEM(science, technology, engineering and math) careers but also

perceived less support than boys for their interest in STEM careers. While only 10% of

the girls chose a job in STEM, 32% of boys would. Low performance in mathematics

and science subjects is also highlighted in SESSIONAL PAPER NO.5 of 2005.The The

findings also confirm what 'Career World' magazine (September-December) states,

that geography is among the subjects perceived to be difficult.

4.3.8.4. Stage at which subjects became difficult

The researcher sought to find out the point in time at which students started experiencing difficulty in the subjects above. The findings were as shown in table 4.51.

Table 4.51: Stage at which subjects became difficult

Stage at which subjects became difficult	Frequency	Percentage
Primary	6	3.40%
Form one	32	18.18%
Form two	80	45.45%
Form three	31	17.61%
Form four	23	13.06%
No response	4	2.27%
Total	**176**	**100.00%**

The table shows that majority of students started experiencing difficulties at form two level of secondary education (45.45%). This being the stage at which secondary subjects becomes more intense after the form one introductory topics, it calls for concerted effort in academic/career guidance. This is in order to sustain the enthusiasm that students join form one with and help maintain a positive attitude to all subjects to avoid bias and stereotyping. Form two is the point at which students in many schools select subjects that will lead to their specialization. This calls for more subject/career guidance.

4.3.8.5 Reasons associated with difficulty in some subjects

The study investigated some of the factors linked to the difficulty in the named subjects and obtained the following findings:

Table 4.5: Reasons associated with difficulty in some subjects

Can you link the difficulty in the subject to any of the	Frequency	Percentage

following?		
Only boys are good at such subjects	36	20.45%
I just believe I cannot do well	68	38.63%
My friends/class mates also say it is difficult	36	20.45%
My parents also said it is difficult for girls	5	2.84%
My teachers said it is difficult for girls	6	3.40%
Other reasons	15	8.52%
No response	10	5.68%
Total	**176**	**100.00%**

The number of students who said the difficulty of the subjects was linked to just believing they cannot do the subject was the highest (38.63%) followed by their friends and classmates influence(20.45%),only boys are good at such subjects (20.45%),teachers' influence(3.40%) and parents (2.84%) .The findings concur with those of the Simmons College in Collaboration with girl Scouts movement which stated that although girls 'scouts are told to do what pleases them by the scout movement, they live in a gendered world which affects their choices. Discriminations based on gender stereotype surface in many ways in the school context. It may occur, for example, through teachers' samples of group placements and activity assignments, the content of compliments and criticism. Examples range from the treatment of females in textbooks and curriculum materials to differential treatment of males and females in the classroom, to mistaken beliefs about attitudes and cognitive abilities (Martorella et al. 2005; Saitoti, 2005).

This is also in line with Daphne, (2010) who discussed that despite women having knowledge and skills, they find themselves in 'female' oriented service jobs. This stems from the fact that women are underrepresented and discriminated in formal education and even in school text books, especially those in mathematics, science and engineering. Many (predominantly male) teachers say girls cannot think or work

scientifically and that science is too mechanical and technical for girls. This research gathered evidence of stereotyping scenarios whereby pictures of only male students and teachers were portrayed working out math/science problems yet the schools were mixed schools.

The picture shows a boy only rushing to school on the left and a boy appearing to explain something in the middle while on the right is a male teacher explaining mathematics concepts. Considering that this is a mixed school, the picture appears gender insensitive hence not so inspiring to the female students in the school. These tallies with what the study on the scout's movement by Simmons College in collaboration with the Girl Scout of Eastern Massachusetts (GSEM) on middle scholars in New England, New York and Pennsylvania in (2011) referred to as a gendered environment. The study found out that although the scouts' movement encourages girl scouts to "do what makes the happy", the girls live in an environment full of stereotypes which work against this motto. Worse still, the study found out that even some of the scouts reading materials, games and activities were gender biased against females, spelling out certain activities for males and others for females.

4.3.8.6 Respondents' Rating of extent of stereotyping's effect on subject and career choice

The respondents were asked to rate the extent to which they agreed on stereotyping and its effect on subject and career choices in a five point Likert scale. The range was 'strongly disagree' (1) to 'strongly agree' (5). The scores of strongly disagree and disagree had an equivalent mean score of 0 to 2.5 on the continuous Likert scale ;($0 \leq$ S.D/D <2.4). The scores of undecided had an equivalent mean score of 2.5 to 3.4 on

the continuous Likert scale: 2.5≤U<3.4). The score of agree and strongly agree had an equivalent mean score of 3.5 to 5.0 on a continuous Likert scale; 3.5≤S.A/A<5.0). A standard deviation of >1.5 implies a significant difference on the impact of the variable among respondents.

The study established that the respondents agreed that very few girls choose sciences, computer and geography with a mean of 3.94.The respondents indicated that they agree that very few girls in the school pass in math, sciences and geography and that they believe the female students term the subjects as too difficult. This was indicated by a mean of 4.12 and 4.61 respectively. The respondents agreed that girls believe only boys can handle such difficult subjects with a mean of (3.78) and they disagreed that that girls are intimidated by boys from such subjects (1.2).However, they agreed that girls are discouraged by male teachers (4.23) but disagreed that lack of female role models reinforces stereotyping (2.45).They disagreed that stereotyping originates from their homes (mean of 2.34) but agreed that it starts from the communities(mean 4.67). Very few girls in choose sciences and technology based careers (mean of 3.56) and girls affected by stereotyping generally perform poorly in school (mean of 4.04).

The findings are in line with Gottfredon's theory which posits that individuals gradually eliminate careers from their list of choices basing on their gender and prestige and, also make compromises on some which would suit them. The article ("What's gender to do with it?") is based on research done by Simmons College in collaboration with the Girl Scout of Eastern Massachusetts (GSEM) on middle scholars in New England, New York and Pennsylvania in (2011).The study established that children establish gender stereotypes as early as age two and an emerging career identity by middle school. The

reason for this is that children live in a gendered environment which affects them. The example given by the study is that during these formative years, children are surrounded by a gendered media which shapes their thinking.

The study by Simmons College described above found out that girls were not only less interested in STEM (science, technology, engineering and math) careers but also perceived less support than boys for their interest in STEM careers. While only 10% of the girls chose a job in STEM, 32% of boys would. Discriminations based on gender stereotype surface in many ways in the school context. It may occur, for example, through teachers' samples of group placements and activity assignments, the content of compliments and criticism. Examples range from the treatment of females in textbooks and curriculum materials to differential treatment of males and females in the classroom, to mistaken beliefs about attitudes and cognitive abilities (Martorella et al. 2005; Saitoti, 2005).

The study then carried out an independent t-test to determine the statistical significance of the differences in responses on effects of stereotyping on subject and career choices according to head teachers. The findings were that at there are significant differences among the sample under study. Since all the significance levels of the t-test were all less than 0.01 (p<0.01) it implies that the values were significant and therefore the study concludes that there is significant differences between the respondents from schools with adequate career guidance and those without, with respect to the stereotyping and its effect on subject and career choices. For the statement that very few girls in this school choose physics, computer and geography t-value was ($t_{(283)} = -9.574$, $p<0.01$), for the statement that very few girls in this school pass in math, sciences and

geographyt-value was (t $_{(273)}$ = -4.275, p<0.01). Further, for the statement that the girls believe the above subjects are too difficult t-value was(t $_{(271)}$= -6.716,p<0.01) and for the statement that lack of female role models reinforces the girls ' beliefs that some subjects and careers can only be done by males t-value was(t $_{(315)}$= -6.716,p<0.01) and finally for the statement that girls affected by stereotyping generally perform poorly in school t-value was(t $_{(311)}$= -9.574,p<0.01). This confirms the above findings that stereotyping affects students subject and career choices.

4.3.8.7Careers Chosen by Students

The study sought to find out what career fields the students had chosen and the reasons behind their choices. The data reveals that majority of the girls preferred careers in fields in humanities(law, teacher) and those perceived to be female friendly like care givers (nursing ,doctor, nutritionist) and the beauty industry. The findings conquers with what Osumba (2010) said, that women shy away from certain careers for fear of losing femininity. It also affirms the findings of Daphne (2011), Yeung (2011) and Abagi et al (2009).N line with this is what was reported in the Daily nation of 25th January 2015 concerning two female school head teachers in Elgeyo Marakwet County. The paper reported that a principal was forced to step down from her position after her husband asked her to choose between family and job. A second principal, the paper reports was threatened with divorce if she dared take the position of County Executive Committee Official for information and communication technology and Public Service. The woman had emerged as the best candidate after rigorous interview and vetting. The paper thus caped the story by stating: "Gender equity suffers a blow". With regard to this scenario, what Osumba (2010) can be paraphrased to read as follows: "some girls

and women are forced to steer away from some subjects ,careers and positions for fear of losing their femininity".

4.3.8.8 Reasons given for choice of careers

The reasons given for their choice of careers were analyzed and presented in a table as shown in table 4.53.

Table 4.53: Reasons given for choice of careers

Reason	Frequency	Percentage
Mainly chosen by women/feminine	50	14.08%
Time for family	21	5.92%
Less travelling	23	6.48%
Less strength	21	5.92%
Prestigious	66	18.59%
Helping people	66	18.59%
High income	67	18.87%
Course takes a short time	20	5.63%
No reason	8	2.25%
Passion for the career	7	1.97%
Deal with people	6	1.69%

4.3.8.9. People that influenced career choice of students

The study investigated the individuals that influenced career choices of students. The findings are as follows:

Table 4.54.Individuals who influenced Students' Career Choices

Individual who influenced Career choice	Frequency	Percentage
Parents	45	25.56%
Career guidance teacher	41	23.29%
Friends	5	2.84%
Role models	77	43.75%

Class teacher	5	2.84%
Nobody	16	9.09%
No response	7	3.97%
Total	176	100%

The findings show that the career guidance teachers 'influence (23.29%) was below the parental influence (25.56%) and the role model influence (43.75%). The class teachers' influence was2.84 nobody 9.09%, and no response 3.97% .The findings of this study tally with those of the study by Ferris state University Career Institute of 2002.The Ferris study found out that out of a sample of 809 students, 78% said their career choice was influenced by both their parents, 10% by the teachers 5% by other people while 5% were undecided. The implication of the findings of this study is that the career guidance in schools needs to be revamped to have greater influence on learners' career choice. Likewise, parental knowledge on careers should be improved since they are not only the first source of information to their children but also role models. The place of role models cannot be overemphasized as shown by the 43% influence. Hence, there is need for both schools and households to expose students to a variety of role models as they search for careers information to base their career choices upon.

4.4 Null Hypothesis

The null hypothesis stated that there is no statistically significant correlation between career guidance and counseling services in secondary schools on academic performance and career choice. To test this hypothesis, head teachers', teachers' and the students' questionnaire was administered to the participants and their responses scored. The scores generated data on an interval scale of measurement. To test whether the two sets of scores correlated significantly, Pearson product moment correlation was conducted to

determine correlation coefficient. The result of the analysis indicated that there was a statistically significant correlation among the two sets of scores, $r = .51$, $p < .05$. From this result, it was concluded that there is a relationship between students' perception of effects of career guidance and counseling on academic performance and career choice. Students more favorable perception of effects of guidance and counseling services performed better in academics and pursued their careers than those with less favorable perception. Hence the null hypothesis there is no significant relationship between career guidance services, performance and subsequent career choice was rejected.

4.4.1. Regression Analysis of Career Guidance, academic achievement and Career Choice

Regression analysis was utilized to explore the correlation between secondary school career guidance and subsequent career choice among secondary school girls in Kenya. These included an error term, whereby a dependent variable was expressed as a combination of independent variables. The unknown parameters in the model were estimated, using observed values of the dependent and independent variables (Stoodley, Lewis and Staint on, 1980). The regression model summary is as shown in table 4.55.

Table 4.55: Regression Model Summary of the Effect of forms, professional, alignment, structure, stereotyping and academic achievement and career choice.

Model

Summary

Model	R	R Square	Adjusted R Square	Std. Error of the

			Estimate
0.756	0.5724	0.5611	0.5628
6			

Predictors: (Constant), forms, professional, alignment, structures and stereotyping

Dependent variable: Academic achievement, career choice alignment.

In this model, the value of R, 0.7566 is the multiple correlation coefficients between all of the predictor variables and the dependent variable. It shows that there is great influence by the predictor variables on the dependent variable. From the results shown in the table above, the model shows a goodness of fit as indicated by the coefficient of determination (R^2) with a value of 0.5724. This implies that the independent variables: forms of career guidance, professional qualification of career guidance teachers, career guidance structures and stereotyping explain 57.24 percent of the variations of academic achievement and aligned career choices.

The study therefore identifies the forms of career guidance, professional training of career guidance teachers, structures for career guidance and stereotyping as critical factors for enhancing academic performance and career choice alignment.

The ANOVA table from the analysis was as shown in table 4.56.

Table 4.56: ANOVA Table

	Types of CGS	Profes-sional CGS	Career choices alignment	structur es	Stereoty-ping	*F*	*Significa-nce F*
Regre s-sion	0.0452	477801.3	477801.3	0.0362	258628 0	0.55423 4	0.510605

Resi-dual	0.0362	2586280	862093.3	0.0814	3064081	0.6721	0.622100
Total	0.0814	3064081	13,6772.44	0.0452	477801.3	1.32241	1.67821
	Coefficients	*Standard Error*	*t Stat*	0.0362	2586280	*P-value*	*Lower 95%*
Intercept	1810.758892	3250.84	0.557013	0.0452	477801.3	0.616376	-8534.86

Source: Author, 2014

Decision Rules:

> If F-test $\geq$ F$_{0.05}$; k; n-k-1, The Null Hypothesis is rejected.

> If F-test $<$ F$_{0.05}$; k; n-k-1, The Null Hypothesis is accepted.

Since F-test $\geq$ F$_{0.05}$ the study rejects the null hypothesis that there is no statistically significant relationship between career guidance services and appropriate career choice and academic performance and accepts the alternative that there is a statistically significant relationship between career guidance services and academic performance and subsequently, appropriate career choice

The regression coefficients were as shown in the table below.

Table 4.57: Coefficients of the regression analysis.

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	0.864	0.103		5.379	0.000
Forms of career guidance	0.719	0.046	0.185	2.236	0.055
Professional training level	0.643	0.020	0.186	1.764	0.450
Career choice alignment	0.862	0.045	0.138	1.376	0.453
Structure in career guidance	0.972	0.022	0.173	1.202	0.388
Stereotyping	0.912	0.036	0.194	1.106	0.324

a. Dependent Variable: Academic achievement aligned with career choices

Regression Coefficients

The following model represents the regression equation representing the relationship between career guidance services and academic performance and, subsequent career choice among secondary school girls in Vihiga County as a linear function of the independent variables (forms of career guidance services, professional training levels of career teachers, career guidance services and academic and career choice alignment, structures of career guidance and relation between stereotyping and career choice), with $\acute{\varepsilon}$ representing the error term. $Yi = \alpha + \beta_1(FCGS) + \beta_2(PTLC) + \beta_3(CCA) + \beta_4(SCG) + \beta_5(S) + \acute{\varepsilon}$. When $\beta_5 = 0$......Equation 1

(Equation 1: Regression Equation)

Where; Yi=Academic achievement and aligned career choices

FCGS= Forms of career guidance service

PTLCT=Professional training level of career teachers

CCA=Career Choice Alignment

SCG=Structures in Career Guidance

S=Stereotyping

$\acute{\varepsilon}$ *representing the error term*

Incorporating the values of the Beta values into equation 1 we have:

$Yi = \alpha + 0.719(FCGS) + 0.643(PTLCT) + 0.862(CCA) + 0.972(SCG) + 0.912(S) + \acute{\varepsilon}....Equation\ 2$

(Equation 2: Regression Equation with Beta Values)

The βi's in the above equation represents the estimated parameters.

4.5 Discussion

4.5.1 Forms of career guidance offered to secondary schoolgirls

The study established that the main career guidance activities carried out included group counseling sessions(71.5%),class counseling sessions(83.3%) and career fairs(60.5%).Activities such as filling of form one careers form(46.3%),careers

declaration and progress form(48.3%),role model speeches(44.2%) and calculation of weighted cluster points (34.7%) were minimal. These findings concur with those of Mukwana (2005) who found out that there was ineffective implementation of career guidance programmes in Vihiga due to several reasons. This study found out that career guidance was not assigned a special room in some schools (21.4%).In Mukwana's study, teachers said career guidance was conducted in places that are not conducive. For instance, 61.9% reported lack of rooms and 66.7% cited lack of all the other necessary resources. Time allocation was also an area of concern as 75% of the head teachers said it is not allocated on the time table. The findings concur with Mukwana's as he found out that 33.3% said career guidance was not assigned any time at all and 33.% said it was allocated from 4 to5 P.M.

4.5.2. Professional training and experience of career guidance teachers

The study established that there was inadequacy in the number of trained teachers and quality of career guidance training for the teachers. Only 57.2% of the teachers were trained in career guidance while 42.8% were not. The mode of training was found to be inadequate as it involved short trainings of not more than three months. In addition, 75% had attended in-service training while 25% had never. Funding for training was found to have been provided by self (57.1%), schools/government (35.75) and NGOs (7.2%). A high percentage of teachers sponsoring themselves for career guidance training raises questions about the government's commitment to training and deployment of career guidance teachers countrywide. The study by Mukwana found out that49.9% of the teacher's assigned career guidance responsibilities were either indifferent or unwilling to conduct this duty. The reasons for this included lack of

training and in-servicing, negative attitude, lack of remuneration for the extra responsibility and, heavy workload. He found out that 57.1% of teachers had not received any training and that of those who had any training; only 4.8% had undergone training for three months and above. On the question of adequacy of the training, 61.9% found the training inadequate. The findings also concur with those of a study by Murithi (2007). He found out that a career guidance training piloted in Laikipia meant to cascade to other counties may not have succeeded.

4.5.3. Structures available and, those that should be put in place to enhance career guidance

The study established that even though all the schools had guidance and counseling department, not all of them had a career guidance department. Only 66.67% head teachers, 60.71% teachers and 42% of the students said they had a career guidance department separate from the guidance and counseling one. Therefore, career guidance in many schools, career guidance was carried out by teachers who had other departmental responsibilities such as director of studies, class teacher and even deputy principals. In addition to inadequacy in administrative structures, physical facilities for career guidance were in short supply. Less than 50% of the career guidance teachers said they had the items for career guidance listed in the questionnaire. These were: Career guidance departmental office, Counseling room, Videos, Computer, Internet, Careers library, Careers books, Journals and Career magazines. The study established from the respondents that majority of the schools did not have budgetary allocation for career guidance and those that had a budget allocated very minimal sums. Therefore,

the study identified the following needs for enhancement of the career guidance department:

Establishment, funding and equipping a department for career guidance to function independently from the larger guidance and counseling department;

Train and post career guidance teachers to all schools in the country to all schools;

Entrench career guidance into the curriculum; Allocate time for career guidance on the timetable.

The findings are in line with those of Mukwana (2005). In a study on implementation of career guidance in Vihiga County, 61.9% career guidance teachers reported lack of rooms and 66.7% cited lack of all the other necessary resources.

4.5.4. Relationship between career guidance, performance and subsequent career choice

The study found out that schools that had adequate resources for career guidance and comprehensive career guidance programmes had higher KCSE grades and enrolled more students into university(figure 4.10).The null hypothesis "There is no statistically significant relationship correlation between career guidance and academic performance and subsequent career choice was tested and gave r=.51,p<.05.This showed that there is a relationship between career guidance academic performance and career choice.

Regression model showed an R value =0.7566 indicating great influence on the dependent variable by the predictor variables. The model gave an R^2=0.5724,a value

that implies that the predictor variables: forms of career guidance, professional training of the teacher, career guidance structures and stereotyping explain 57.24% of the variations in academic performance and career choice alignment among secondary school girls. The findings of this study concur with those of Mehmood, Rashid and Azeem (2011). According to these researchers guidance and counseling has an impact on academic performance. Their study was conducted using t-test of differences and Analysis of Variance (2-group) to ascertain the effect of change between the control and the treatment groups. There was no significant difference of pre-test scores of experimental and control group. However, there was a significant difference of post-test scores of experimental and control group. This implies that the post test results of the experimental group were due to the counseling treatment. The findings of this study however differ with those of Okobiah, and Okorodudu, (2004).

On the concepts of guidance and counseling in Benin City in Nigeria, they revealed that there was no statistically significant difference between students who had undergone counseling treatment and those had not. They however added that even though there were no statistically significant differences, there existed some marginal difference in the mean scores of the two groups. Nwachukwu, (2007) agrees to the findings of Okobia and Okorodudu. He also concluded that there was no significant difference between students who had had counseling and their counterparts who had not with regards to academic performance.

Eyo, Joshva, & Esuong (2010) joins compliments to the finding of this study when they found that there is significant difference between post-test scores of experimental and

control group with regards to academic performance. They made this known in a study they carried on the attitude of secondary school students towards guidance and counseling services in Cross River State.

Ladipo's 2000 study also agrees with the finding of the study. He found out that significant differences existed in the academic performance of students who had undergone counseling and those who had not undergone counseling. Experiments that apply same kind of treatment can apply a test or measurement in two places: before the treatment, which is a *pre-test* and after the treatment, which is a *post-test*. This allows for identifying change caused by the treatment by comparing before and after results from a similar test (for example a change in skill, attitude, etc.). One way to compare the groups on differences between post-test and pretest, sometimes called change scores or gain scores which can be carried out in a number of equivalent ways:

- t-test of the differences;
- 2-group ANOVA of the differences,
- Repeated measures analysis of variance.

The study used the first two techniques along with descriptive analysis to analyze the data by using SPSS version 12.

H1: There is no significant difference of experimental and control group students' achievements in pre-test. Table 1.Pre test score (total group)

	N	Mean	Std: Deviation	df	Mean Difference	t-value	Sig.
Experimental	24	30.50	12.24	45	2.67	.719	0.476
Control	23	27.83	13.25				

- The analysis of data shows that there is no significant difference of pre-test scores of experimental and control group. Since the mean difference is very small i.e. 2.67. Therefore, the two groups are statistically same.

- **H2: There is no significant difference between the experimental and control group in their academic performance at the end of treatment.**

	N	Mean	Std: Deviation	df	Mean Difference	t-value	Sig.
Experimental	24	36.92	9.82	45	6.83	1.87	0.068
Control	23	30.09	14.81				

The analysis of the data shows that there is no significant difference of post-test scores of experimental and control group. However, the mean difference 6.83 is greater than the mean difference of pre-test scores of experimental and control groups. It reflects that the mean difference is due to the impact of guidance and counseling of the experimental group. The mean score of experimental group is 36.92 while control group is 30.09. It means, the mean score of experimental group is 6.83 more than control group. It reflects that there is increase in achievement of experimental group students". The increase in achievement is due to various factors including impact of guidance and counseling. Therefore, the treatment improves the achievement of students.

H5: There is no significant impact of guidance and counseling on female students achievements.

	N	Mean	Std: Deviation	df	Mean Difference	t-value	Sig.
Experimental	9	32.44	6.27	15	16.32	4.44	0.00
Control	8	16.12	8.80				

The results of analysis show that there is significant difference of the post-test scores of female students of experimental and control group. Therefore, the null hypothesis "There is no significant impact of guidance and counseling on female students" achievements" may be rejected. Analysis shows that guidance and counseling have great impact on female students" performance.

The study revealed that career guidance and counseling services have a positive effect on female students' academic achievements. As far as the results of the study are concerned, it is concluded that:

1. There is no significant difference of pre-test scores of experimental and control group.

2. There is significant difference of post-test scores of experimental and control group.

4.5.5. Relationship between Stereotyping and career choice

The study established that negative attitude towards some subjects could be a likely cause of biased subject preferences and choices which later result in a tendency in more female students to enter into arts –based careers. Out of the 176 student respondents, 67.04 %(n= 118) and 61.93(n= 109) of the students said CRE and English were their

favorite subjects respectively. On the contrary, only 6.8 %(n=12) and 11.9%(n=21) said their favorite subjects were physics and chemistry respectively. The applied subjects were the least liked as shown by the low ratings of home science 5.6 %(n=10), agriculture4.5% (n=8), music and art0.5 %(n= 1) each. Indoshi and Agak (2009) found out that lack of proper career guidance on art and design curriculum was the cause of a high number of students dropping the subject. The study also identified aspects of stereotyping in career choice. Majority chose nursing, law, teaching, doctor, nutritionist and the beauty industry. Reasons for their choice included sentiments such as, the careers are feminine, allow time for family and involve less travelling. The findings are in line with those of Daphne (2010) who found out that a strong environmental support and high self-efficacy were correlated with a tendency to get into science –math-technology careers. It also concurs with Osoro et al (2000) who found out that girls mainly chose careers such as law, nursing and teaching. Yongo (2010) also found out that girls career choices are influenced by negative attitudes and perceptions.

4.5.6 Conclusion

This chapter has discussed the main findings of the study and related it to previous studies. The findings of the study were found to concur with those of several earlier studies, including that of Osoro (2002), Mukwana (2005) and Mehmood, et al. (2011). However, the findings of this study differ with those of Okobiah, and Okorodudu, (2004) who found no significant relationship between career guidance and career choice.

Based on the findings, the study concludes that there is low academic performance by majority of the female students. However, career guidance and counseling programmes

have a positive impact on the academic performance of students and their subsequent career choices. From the above conclusions, it is necessary that all schools should have a well-equipped and staffed career guidance department. Career guidance should not just a small component of the guidance and counseling department but an independent department. Secondly, teacher counselors should be trained and they should implement all the services required for career guidance and counseling programmes. Career Guidance programmes should be strengthened given the obvious advantage of such programmes.

Thirdly all education stake holders ranging from the policy makers at both ministry of education level and county government level to policy implementers and consumers of education should consider career guidance as a core curricular activity and not extra-curricular. Hence, it should be allocated content, time funds, personnel and the requisite physical structures. Fourthly, the gender policy should be enforced in schools and communities and achievement of the targets of SDG number 5should be attempted through provision of adequate careers information to all.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1introduction

This chapter provides a summary of the main findings and gives conclusions and recommendations emanating from the results of the study. The implications of the findings are discussed and suggestions made on areas of further research.

5.2 Summary

The study problem, methodology and findings peer each objective are summarized as shown in the sections below.

5.2.1 Summaryof the study problem and methodology

Low enrollment of girls into university and into science, math and technology-based career is perpetual in Kenya (GOK 2013, Kinami et al (2013), Wosyanji, 2003, Keriga & Bujra 2009). There is therefore a need for strengthened career guidance for girls to:

1.   Inform and motivate them to work hard so as to qualify for university admission.

2.   Help them in career decision-making so as to have aligned career choices

The concept of career guidance originated in the USA in the 1900s where Frank Person started the first career institution. China picked up the tempo to establish a Chinese Career Guidance Association (CCGA) by 1994.

In Kenyan society today, the concept of career guidance is yet to be given the prominence it deserves. Studies by Mukwana (2005), Ojege (2007) and Lugulu (2011) show that career guidance is still wanting in our schools. At the domestic fronts, it is thought to be the role of teachers. At most, parents only suggest careers to their children

which they deem prestigious and lucrative without much thought on their suitability to the child's ability, personality and interest.

In school, career guidance is not part of mainstream curriculum. Learners mainly get into careers by default as a function of performance. Those who don't meet the cut off points get into any other available option.

Most studies have been done on guidance and counseling which concerns social problems mainly discipline-based. Studies on career guidance have mainly been conducted on individuals already out of school. This study was different as it focused on female students still in school. The purpose of the study was to find out if there existed a relationship between career guidance, performance and subsequent career choice hence university admission.

The study sought to highlight the significance of career guidance as crucial in information provision to identification of suitable career paths and motivation for high performance. Important variables identified from reviewed literature which were possible indicators of effective career guidance included, career guidance departments and facilities; trained career guidance teachers; time and budgetary allocation to the career guidance process. These were investigated versus their influence on performance and subsequent university transition.

The study was conducted in selected girls' and mixed secondary schools in Vihiga County, targeting girls only. Purposive, systematic and stratified random sampling methods were used to obtain a sample of 28 schools, 28 principals and career guidance

teachers, 180secondary schoolgirls, one county education officer and 4 district quality assurance officers.

Descriptive and inferential statistics were used to analyze and interpret data.

5.3 Summary of the Main Findings of the Study per objectives

5.3.1 Objective one: Forms of career guidance services

Among the services offered by the career guidance departments, class counseling was highest with an 83.3% .This was mainly done in form four during the filling of JAB forms for university selection. Individual students counseling was moderately done(68%). Filling of form one career information forms, career declaration and, progress form and calculation of weighted cluster points for every exam were not seen as significant services as they were not adequately done as shown by the percentage 46.3%, 48.3% and, 34.7% respectively.

On usage of UNESCO-6-step counseling process, career guidance teachers reported that they sometimes used it as indicated by a mean score of 3.6 to 3.9 on a Likert scale of 0 (never) to 5 (frequently).

85.7% of the career guidance teachers said that they guide students' subject selection while 14.3% did not. On parental involvement in career choice 67.8% involved parents while 32.2% did not.

Half of the teachers 14 (50%) said they calculated the students weighted cluster points after every exam while the other 50% did not. This means inefficient tracking down of students' continuous performance versus their preferred career choices.

5.3.2. Objective 2.Professional Training Levels of career Guidance Teachers

Concerning career teacher straining, 42.8% were trained and 57.2% were not trained. The low number of trained teachers means low skills/ knowledge hence inadequacy in career guidance. On, training according to principles, 75% career guidance teachers were trained through in-service while 25% had not. The principals said 57.1% were self-sponsored, 35.7% sponsored by the schools and 7.2% were sponsored by non-governmental institutions for the training. The training was found inadequate as it involved not more than 3-months certificate courses.58.3% of the career teachers were appointed by the school while 41.7% by the Teachers Service Commission (TSC). Those appointed by the schools do not get extra pay for the extra career guidance work, hence lack of commitment to their career guidance duty.64.3% of the career teachers had 19-25 lessons per week, while 14.3% had more than 26lessons per week. Other responsibilities carried out by career guidance teachers were: class teachers, senior masters, heads of other departments, director of studies, drama club patron and deputy principal, Christian union, games master, clubs and societies and library master. Therefore, heavy workloads combined with additional responsibilities are possible cause of ineffective career guidance

5.3.3. Objective three: Availability of Structures for Career Guidance

Although all the head teachers said they had guidance and counseling departments, not all of them had a separate department for career guidance. Only 66% said their schools had career departments separate from guidance and counseling. Likewise, 60.7% career guidance teachers and 57.8% students said there was career guidance department. The study established that 78.5% of the schools had a counseling office while 21.4% did not. However the office was for general guidance and counseling and not specifically for career guidance. On other resources for career counseling all head teachers said stationary was provided, 50% provided funds and 57.1% provided text books. The learners generally disagreed (77.22%) that the guidance services were efficient and (73.33%) that the resources were adequate

Principals' evaluation on performance of career guidance department was mainly average (66%). This is an admission that the career guidance department is yet to get to the highest level of performance.

Principals response to whether schools had timetabled career was 75% no and 25% yes. This implies lack of adequate commitment to the department. When asked when career guidance was done in the view that it was not timetabled, many said it is done at the class teachers' discretion (22.2%) while others said after class (16.7%).

5.3.4. Objective four: Relationship Between career guidance, KCSE performance and career choice

On Average, JAB intake for 2012 for sampled schools revealed low total admission from the schools. The school with the highest had 197 girls admitted out of which less than 40 qualified for courses with a cluster point above 45.

A comparison of the number of students that transit to university in relation to intensity of career guidance process was done. Schools with comprehensive career guidance programmes from form one to four sent more students to university and vice versa.

An observation checklist used by the researcher showed that none of the sampled schools had all the facilities and resources for career guidance. This concurred with the responses from students and career guidance teachers. Likewise, none of the schools carried out all the career guidance process.

A pattern could be described showing that schools with more resources and more career guidance process had better performance and more students' enrollment by JAB to universities as shown in appendix 1.

The null hypothesis "there is no statistically significant correlation between students' perception on effects of career guidance and counseling services and academic performance and career choice was tested. The result r=0.51, p<0.05 showed that there was a statistically significant relationship between student's perception of effects of career guidance and counseling on academic performance and career choice. This has practical implications for the ministry of education and schools to revamp career guidance services.

A regression analysis yielded a coefficient of determination (R^2) value of 0.5724. This indicated that the independent variables forms of career guidance, professional qualification of teachers, career guidance structures and stereotyping explain 57.24% of

the variation in academic achievements and aligned career choice. This calls for the need to strengthen career guidance programmes and processes in schools.

Pearson's correlation of career and academic performance showed a positive and significant relationship between attitude and academic performance (r= 0.336, p< 0.01). Since p< 0.01, then there is a significant relationship between students' attitude towards career guidance and academic performance.

Majority of the principals and career guidance teachers (85%) were of the opinion that career guidance influenced performance and career choice. Majority of the students (66%) were in agreement. This conclusion should therefore act as a basis for revamping career guidance.

5.3.5. Objective five: Relationship between Stereotyping and, subject and career choice

 Majority of the students gave C.R.E as their favorite subject followed by English, History and Kiswahili. Although the sciences were not liked, the applied subjects (home science, Agriculture, Music and Art) and French ranked lowest. The trend of the girls preferring humanities to sciences and mathematics was clearly shown. In addition, applied subjects (Agriculture, Music, Art) were seen to be neglected.

Analysis of the girls' most difficult subject showed Mathematics to be at the top (56%) followed by Physics (53.24%), Chemistry (45.35%) and Geography (17.18%). The least difficult were C.R.E (1.16%), History (2.5%), English and Agriculture (0.05%).The

main reasons given for difficulty of the subjects were:- "I just believe so (38%), friends and classmates influence (20.2%) and only boys were good (18%) among others."

On career choice, 78.23% of the students had chosen a career while 21.77% had not. Of those who had chosen, majority said they chose at primary level (32.87%) and form one 25.63%. Implications for this are that career guidance needs to be done early to coincide with stage of career exploration. This concurs with super theory which state that career exploration stage is fifteen to twenty four years. The students who had not chosen a career had a variety of reasons, among them being "not aware of the options" (31.25%) and "indecision about the options" (15.63%).

Stereotyping was also investigated using Likert scale as shown below:

On a Likert scale of strongly disagree to strongly agree of 1-5, students, career guidance teachers and head teachers agreed to the statements:-

"Few girls chose sciences, computer and geography (mean 4.12). Girls believe the subjects are difficult (mean 4.61). Girls are discouraged by male teachers (mean 4.23). Stereotyping originates from their communities (mean 4.67)."

Types of careers chosen by the learners were mainly in the fields of humanities: law, teaching, care- giving (nursing), doctor and nutritionist. Reasons for their choice included: the careers are feminine, leave time for family and involve less travelling. These responses indicate a high level of stereotyping in career choices.

The students' responses on who influenced their career choice were: role models (45.63%), parents (25.3%) and career teachers (23.10%). This calls for provision of

more information to parents and their involvement in career guidance and choice since they are major players. Role models in society and school talks are also crucial.

Opinions of the principals and career guidance teachers on ways of improving career guidance included; training and posting teachers to school by the Ministry of education Formulation of career guidance curriculum by ICICD, provision of materials and thorough inspection by the quality and standards assurance office.

5.4 Conclusion

In view of the findings, the study made the following conclusions:

Career Guidance and counseling is necessary for all students. It improves the accomplishment of students asthere is a strong relationship between career guidance, performance and career choice. However

many schools are not adequately equipped and staffed for career guidance. Learners are therefore not benefiting enough from the department as shown by the findings. These were that:

1. The main career guidance process was class guidance on filling JAB forms at form four. Crucial processes such as weighted cluster calculation, career progress form and UNESCO process of career guidance were minimal. Personality testing & matching with careers is not done.

2. There is inadequacy in trained career guidance teachers in the schools. Furthermore Teacher training in career guidance was wanting as it involved 3months certificate training at most.

3. Departments, structures & facilities for career guidance were inadequate in many schools and totally absent in some. Career guidance was not timetabled in most schools and was done at the schools' and teacher's discretion. There was also no curriculum for career guidance and class content per level.

There was minimal or no budgetary allocation for career guidance as it was not in strategic plans .It was done when need arose.

4. Schools with an independent career guidance department, trained career guidance teachers, more structures and processes for career guidance post better results and send more students to university for a variety of courses.

5. Stereotyping had great influence on subject and career choice as majority chose nursing, teaching, nutritionist, beauty, doctor and law. Reasons given included suitability of the careers for women, they leave time for family, involve less training time and, less energy.

5 .5 Recommendations to policy makers and implementers

From the research findings and conclusions, following recommendation were made:

(i)   There is need to rejuvenate career guidance and counseling programmes in secondary schools in such a way that is appealing to the students. The government of Kenya should consider employing teacher counselors in schools so that students realize the importance of the services.

(ii) The government could initiate courses at certificate, diploma, degree, and masters up to PhD level in career guidance to provide adequate and skilled

personnel. There should be a comprehensive career guidance and counseling workshops; conferences and in service of career guidance teachers who are already in service. This will help in equipping them with adequate knowledge and skills required in carrying out the services, particularly on the qualities of a counselor and his/her qualification. Appointing full time career counselors in each school will address the career problems of students.

(iii)   All schools should be facilitated to develop a career guidance department with all the requisite facilities. Even though the Kenya Institute of Curriculum development has produced content for career guidance, it is yet to be fully implemented at school level. Career Guidance programmes should be seriously embedded in the curriculum of our schools, like was the case for social ethics education(form 1&2) &and the recent introduction of HIV-AIDS. This should be time tabled to be taught as a subject. The above could be done by adopting what Story Moja has produced, known as Story moja's Careerpaedia as teaching content. It has two work books:

- 1.Discover your career workbook-form 1&2
- 2.Find your job workbook-form 3 and 4

(iv) Personality identification and calculation of cluster points for every exam done will improve the career guidance effectiveness in tracking suitability of chosen careers.

(iv)   Gender sensitization should be stepped up in schools, learning materials and activities, homes and communities so as to stem stereotyping. The use of female role models should be enhanced too. In addition, Career guidance should be extended to parents through parents meetings, chiefs' barazas and the mass

media as they play a role in either enhancing stereotypes or providing support to those girls who show interest in careers deemed masculine

5.6 Areas for Further Research

Regional or a nationwide study should be undertaken to give a much broader view of the subject understudy.

A longitudinal study should be done to track the career guidance, career choices and career growth among selected students in schools with a strong career guidance tradition and those without.

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**APP
ENDICES**

APPENDIX 1: Table of Facilities

School	Hods office	Counseling room	Computer	Internet	Library	Books	Journals	Videos	CDs
A	X	X	X	X	X	X	X	X	X
B	√	√	√	√	√	√	√	X	X
C	√	√	X	X	X	X	X	X	X
D	√	X	√	√	√	√	X	X	X
E	√	X	√	√	√	√	√	√	√
F	√	√	√	X	√	√	/	X	X
G	√	√	X	X	√	√	√	√	√
H	√	X	√	X	X	√	X	X	X
I	√	√	X	X	X	X	X	X	√
J	√	√	X	X	√	√	√	X	X
K	√	√	√	X	√	√	X	X	√
L	√	√	√	X	√	X	X	X	X
M	X	X	X	X	X	X	X	X	X
N	√	√	√	√	X	X	X	X	X
O	X	X	X	X	X	X	X	X	X
P	X	×	X	X	√	√	X	X	X
Q	X	X	√	X	X	X	X	X	X
R	X	X	√	√	√	X	X	X	√
S	√	X	X	X	X	X	X	X	X
T	X	X	X	X	X	X	X	X	X
U	X	X	X	X	X	X	X	X	X
V	X	√	√	X	√	√	X	X	X
W	√	X	√	√	√	√	X	X	√
X	√	√	X	X	X	√	X	X	X
Y	X	X	X	X	X	X	X	X	X
Z	X	X	√	X	√	X	X	X	X

Source: Author, 2014

Appendix ll: Number of Career Guidance Resources missing Versus Performance and Public University Enrolment (2012) For Sampled Schools in Vihiga County

School(s)	Number of C.G. resources missing	Number admitted by JAB (2012 admission)
1	24	0
2	6	3
3	22	2
4	19	0
5	16	2
6	3	82
7	3	197
8	11	3
9	17	0
10	8	62
11	10	0
12	15	1
13	20	(2013 first KCSE)
14	12	2
15	19	0
16	8	30
17	14	14
18	5	5
19	13	5
20	12	3
21	7	2
22	22	1
23	22	2
24	18	1
25	18	2
26	13	2
27	18	0
28	21	0
29	18	0
30	16	0

Source: Sampled schools and JAB

Appendix III:

School	Facilities for career guidance										Personnel for career guidance					...ance 11)Departmental Filesidance Processes in	...nce Total number of items-Processes-Facilities	Performance 2012)C+ & above (2006-	...rsitiesAdmission to 2)No. Admitted to public
	C.G department	HODs office	Counselling room	Computer	Internet	Library	Careers books	Journals	videos	CDs	Senior HOD	Assistant HOD	Career Advisors	Receptionist	Peer counselors				
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
2	1	1	1	1	1	1	1	1	0	0	0	0	0	0	1	5	14	29	10
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	15	2
4	1	1	1	1	1	1	1	0	0	0	0	0	1	0	0	0	8	15	1
5	0	1	1	1	0	1	1	1	1	1	1	0	1	0	0	8	18	26	2
6	1	1	1	1	0	1	1	1	0	0	1	0	1	0	1	10	20	7200	300
7	1	1	0	1	0	1	1	1	1	0	1	1	0	0	1	10	20	1548	925
8	1	0	0	1	0	1	1	0	0	0	1	0	0	0	1	11	17	189	12
9	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	4	6	0	0
10	1	1	1	0	0	1	1	1	0	0	0	0	1	0	1	9	17	725	223
11	1	1	1	1	0	1	1	0	0	0	1	0	0	0	0	8	15	50	1
12	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	5	-	-
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	o	0	-
14	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	8	10	26	0-
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	0	0
16	1	0	0	0	0	1	1	0	0	0	1	1	0	0	1	9	15	390	89
17	1	0	0	1	0	0	0	0	0	0	1	0	0	0	0	5	9	-	2
18	1	0	0	1	1	1	0	0	0	1	0	0	0	0	0	3	8	17	2

19	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4	-	0
20	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	7	9		85
21	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	6	8	0	0
22	0	0	1	0	1	1	1	0	0	0	0	0	1	0	1	6	12	-	8
23	1	1	0	1	1	1	1	0	0	0	1	0	1	0	1	10	19	126	43
24	1	1	1	0	0	1	1	0	0	0	1	1	1	0	1	5	14	-	-
25	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	3	5		2
26	1	0	0	1	0	1	0	0	0	0	0	1	1	0	1	4	10	9	0

APPENDIX IV: COVER LETTER

Dear Sir/Madam,

RE: COLLECTION OF DATA ON CAREER GUIDANCE

My name is Mabel Ambogo Mudulia. I am a Doctor of Philosophy student at Moi

University. I'm carrying out a research on the effect of career guidance and stereotyping

on performance of girls and their career choice. This area has not received enough attention from the education stakeholders and hence the need to re-assess and revamp it. The research is of great significance to the education sector as its findings will be used to improve learning outcomes among girls and bridge the gender gap in education and employment.

I am therefore requesting for your voluntary participation in my research. By completing the questionnaire you are signifying your informed consent to participate and granting the researcher permission to utilize the data. If at any time you feel uncomfortable in answering a question, skip that question and move to the next or you may withdraw from this study entirely, without any penalty or consequence. All individual responses and specific school identities will be kept confidential. The researcher is the only person allowed to keep, examine, and analyse the data in its original form. Should you wish to get an electronic copy of the research findings, please indicate your e-mail address in the space provided at the end of the questionnaire? If you have any questions, please contact me on +254722909133 or email me at mmudulia@gmail.com.

I hope you find this survey an interesting and worthwhile experience.

Yours faithfully

Mabel Ambogo Mudulia.

APPENDIX V HEAD-TEACHERS' QUESTIONNAIRE

PART I: Background Information (Tick the appropriate box)

What is the name of you school? …………………………….............................

The school is: Mixed Day ☐ Mixed Boarding Girls ☐ Day Girls Boarding ☐

Your school is: Public Private ☐

Your school is: National School ☐ County school ☐ District school ☐

What is your gender?   Male   ☐   Female   ☐

Which subjects do you teach? ………………………………………………………

……………………………………………………………………………………………

PART II: Existence of Structures Dedicated To Career Guidance

1.   Does your school have a career guidance department, independent of the

guidance and counseling department? Yes   ☐   No ☐

2.   If the answer to (5) above is no, who takes care of career guidance issues

Principal   ☐   Deputy Principal ☐   Guidance and counseling teacher

Class teacher   ☐   others (Specify)………………………………………………

3.   If the answer to (5) above is yes, do you have a trained career counselor?

4.   Yes☐   No ☐

5.   What activities does the department carry out? ……………………………………

6.   Does the school have class textbooks/course work for career guidance?..............

………………………………………………………………………………..

7.   Does the school make use of schemes of work for career guidance? ……………

………………………………………………………………………………..

8.   What are the objectives of the careers department?………..………………….

9.   How do you evaluate the performance of the department? …………………….

10.   What is your annual budgetary allocation for the department?…………………

………………………………………………………………………………..

   a) Is career guidance time timetabled in your school?...

   b) If   the   answer   to   (a)   above   is   yes,   what   times   is   it   offered?

………………………………………………………………………….

11.   If the answer to question 13 above is no, when are career guidance activities

carried out? ………………………………………………………………………….

PART III: Relationship between Career Guidance, Performance in KCSE and Career Choice

1. Please fill the table below showing the KCSE performance of the **girls** for the last 7 years.

YEAR	2006	2007	2008	2009	2010	2011	2012
School Mean grade							
Number of grades A to C+ (girls)							
Number admitted to public universities(girls)							
Courses admitted for/number of girls admitted per the course							

Choose: 1=strongly disagree, 2=disagree, 3=undecided, 4=agree, 5= strongly agree	1	2	3	4	5
2. Our school has very elaborate career guidance programmes					
3. The excellent performance in KCSE and subsequent high enrolment in public universities can be attributed to the comprehensive career programmes offered in our school					
19.The poor performance in KCSE and subsequent low enrolment into public universities is due to inadequate career guidance programmes					
20.Our girls are guided on career choices right from form one to form four					
21. Career selection is done at form: One　　　　　　　　Two					

Three					
Four					
22. Our female students mainly choose careers based on:					
The career teachers' guidance					
Interest					
Peer influence					
Academic ability					
Ability and interest					
Parental influence					
Societal influence					
23. Most of our female students qualify for the courses they chose in their first JAB application					
24. Most of our female students are called upon by JAB to revise their degree course after failing to meet cut-off points for those they chose first round					
25. Most girls are admitted by JAB for courses they did not choose					
26. Many girls are admitted by JAB for courses they do not like					
27. None of our girls have qualified for JAB admission in the last ten years					

ART IV: Stereotyping and Its Effect on Subject and Career Choices

Choose 1=StronglyDisagree,2=Disagree,3=Undecided,4=Agree,5= Strongly Agree	1	2	3	4	5
1. Very few girls in this school choose sciences, computer and geography					
2. Very few girls in this school pass in math, sciences and geography					
3. The girls believe the above subjects are too difficult					
4. Girls believe only boys can handle such difficult subjects					
5. Girls are intimidated by boys and shy away from the above subjects					
6. Girls are discouraged by male teachers who show chauvinism.					
7. Lack of female role models reinforces the girls' beliefs.					
8. Stereotyping originates from their homes					
9. Stereotyping originates from their communities					
10. Very few girls in choose sciences and technology based careers					
11. Girls affected by stereotyping generally perform poorly in school					

PART Vl: Structures That Should Be Put In Place To Enhance The Career Guidance Function In Schools

    1.   Suggest ways in which career guidance can be enhanced by the following:

The ministry of Education …………....………………………………………..

KIE ……………………………...…………………………………………..

TSC…….....…………………………….…………………….……………….

DQASO ……………………………....……………………………………….

The school.…………………………………………………………………..

The careers Teacher.…………………………...…………………………..

Students.………………………………………………………………….

Parents …………………………………………………………………..

The community.…………………………………………………………..

APPENDIX VLL: CAREER GUIDANCE TEACHERS' QUESTIONNAIRE

PART I: Background Information

1. What is the name of your school?

2. The school is: Mixed Day ☐   Mixed Boarding ☐ Girls Day ☐ Girls ☐ Boarding

3. The school is: A national school ☐   A county school ☐   A district ☐ school

4. The School is: A public school ☐   A Private school ☐

5. What is your gender? Male   Female ……………………………………………

6. Which subjects do you teach? …………………………………………………….

7. How many lessons do you teach per week? …………………………………

8. What are your other responsibilities in the school? …………………………….

9. For how long have you been in this school? …………………………………

PART II: Existence of Structures Dedicated To Career Guidance

1. Does your school have a career guidance department, independent of the larger guidance and counseling department?   Yes ☐   No ☐

2. Are you a trained career counselor? Yes ☐   No ☐

3. If your response to question (11) above is yes, what is your qualification?

4. Certificate ☐ Diploma ☐ Degree ☐ Masters ☐ PHD ☐

5. Other (specify)………..……………………………………………………….

6. Where were you trained? ....

7. How long did the training take? <1year ☐ 2years ☐ 3years ☐ Other ……………………………………………………….

8. How often do you attend career guidance seminars and workshops?

9. Very often ☐   rarely ☐   never ☐

10. For how long have you been?

   a) A career counselor? …………………………………………………………

   b) A career counselor in this school? ……………………………………………

11. Do you have career guidance course work text books/class texts?

   Yes ☐   No   ☐

12. Do you prepare schemes of work and record of work covered for career activities?

13. What are the objectives of the careers department?

14. What yearly/termly activities do you carry out for every class?(Fill these in the table below).

	Term one	Term two	Term three
Form one			
Form two			
Form three			
Form four			

15. Do your students fill career guidance /career declaration forms during form one orientation?

   a. Yes ☐   No ☐

16. Do you conduct personality assessment tests for students when helping students to choose careers?   Yes ☐   No ☐

17. Are your students guided through subject election at form one and two regarding the possible careers that certain subjects will lead to? Yes ☐ No ☐

18. Is there parental involvement in the procedure in number 16 above?

   Yes ☐   No ☐

19. If the answer to question 23 above is yes, explain the degree of involvement of parents

20. (Tick one):

a) They are sent a form on which they choose subjects for/with their children…………………………………………………………………………

b) They are invited to school for meetings to discuss subject choices with the staff and students after which they assist their children to choose subjects ………………………………………………………………………………….

21. Are your students guided in calculation of weighted cluster points   for the examinations they take? Yes ☐ No   ☐

Does your school have?

a) Career advisor   Yes ☐ No   ☐

b) Peer advisors   Yes ☐ No   ☐

c) A departmental receptionist Yes ☐ No   ☐

21 What facilities do you have in the careers department, among the following?

An office ☐ A counseling room ☐ Videos ☐ Computer   ☐

Internet   ☐ Careers library ☐ Variety of books journals   ☐

Career magazines ☐ None of the above   ☐

22.What other facilities do you have in the careers departments which are not listed above? …………...………………………………………………………………..

22. What additional facilities do you require but are not on the list in item (26)

above ……………………………....…………………………………………..

Tick against the most applicable to you in the following statements by using the key: **Never =1, Rarely=2, Sometimes=3, Frequently=4**				
1. UNESCO recommends the use of a 6-step career development cycle shown below for the career counseling process. Indicate how often you use the steps during career guidance	**FREQUENCY OF USE**			
	1	**2**	**3**	**4**
a) Developing self-awareness in students b) Linking self-awareness to occupations exploration c) Researching occupational possibilities d) Making careers decisions/ e) Setting goals/ f) Planning job search				
2. How often do you use the following career counseling theories? a) Trait factor theories b) Lifespan theory c) Social cognitive learning theories d) Systems constructivist theory e) Theory of work adjustment f) Theory of vocational personality in the work place g) Self-concept theory h) Theory of circumscription and compromise				
3. I conduct the counseling sessions for: a) Individual students b) Group sessions c) Class lessons				

PART III: Relationship between Career Guidance, Performance in KCSE and Career Choice

1. Do you think career guidance influences performance and career choice?

   Yes ☐   No ☐

   Explain ………………………………………………………………………

2. The table below shows a career declaration and progress form which can be used to track and improve performance and guide students on their career choices. Does the department make use of such?   ☐ Yes

   No ☐

Adm. No.	Name of Student	Class	Career choice	Signed	Academic Progress by Grades				Remarks
					Year 1	Year 2	Year 3	Mocks	

3. In which other way does your careers department contribute to academic performance? ...……………………………………………………………………

Choose: 1=StronglyDisgree,2=Disagree,3=Undecided,4=Agree,5 = strongly agree	1	2	3	4	5
1. Our school has very elaborate career guidance					

programmes					
2. The excellent performance in KCSE and subsequent high enrolment in					
3. public universities can be attributed to the comprehensive career programmes offered in our school					
4. The poor performance in KCSE and subsequent low enrolment into public universities is due to inadequate career guidance programmes					
5. Our girls are guided on career choices right from form one to form four					
1. Career selection is done at form: a) One b) Two c) Three d) Four					
2. Our female students mainly choose careers based on: a) The career teachers' guidance b) Interest c) Peer influence d) Academic ability e) Ability and interest f) Parental influence g) Societal influence					
3. Most of our female students qualify for the courses they chose in their first JAB application					
4. Most of our female students are called upon by JAB to revise their degree course after failing to meet cut-off points for those they chose first round					
5. Most girls are admitted by JAB for courses they did not choose					
6. Many girls are admitted by JAB for courses they do not like					
7. None of our girls have qualified for JAB admission in the last ten years					

Choose: 1=Strongly Disgree,2=Disagree,3=Undecided,4=Agree,5= Strongly Agree [tick against the statements most applicable to you]	1	2	3	4	5

1. Very few girls in this school choose sciences, computer and geography					
2. Very few girls in this school pass in math, sciences and geography					
3. The girls believe the above subjects are too difficult					
4. Girls believe only boys can handle such difficult subjects					
5. Girls are intimidated by boys and shy away from the above subjects					
6. Girls are discouraged by male teachers who show chauvinism.					
7. Lack of female role models reinforces the girls' beliefs.					
8. Stereotyping originates from their homes					
9. Stereotyping originates from their communities					
10. Very few girls in choose sciences and technology based careers					
11. Girls affected by stereotyping generally perform poorly in school					

PART IV: Stereotyping and Its Effect on Subject and Career Choices

Are there other aspects of stereotyping among the

a) students concerning

   i.   Subject choices……………………………………………………

   ii.   Career choices? …………………………………………………..

    (a) If the answer to (a) above is yes, list some of the aspects

……………………………………………………………………………

(b) How does stereotyping affect performance and career choices?

……………………………………………………………….…………

(c) As a counselor, how do you deal with stereotyping?

……………………………………………………………….…………

12. List the challenges you face in career counseling ……………………………….

……………………………………………………………………………….

PART V: Structures That Should Be Put In Place to Enhance the Career Guidance Function in Schools

1. Suggest ways in which career guidance can be enhanced by the following:

   a) The ministry of Education…………………………………………………...

   b) KIE…………………………………………………………….....................

   c) TSC………………………………………………………………….............

   d) DQASO…………………………………………………………….......

   e) The school……………………………………...

   f) The career Teacher…...……………………...

   g) Students…………………………………………………………............

   h) Parents………………….…………………………………….............

   i) The community………………………………….................................

Part Vl: Rating of head teachers' involvement in various activities related to career guidance and counseling using a 4 point scale. Strongly Agree (SA), Agree (A), Disagree (D), Strongly Disagree (SD).

Statement	SA	A	U	D	SD

The head teacher always provides all resources needed for effective career guidance and counseling all the times.									
The head teacher always attends career guidance and counseling department meetings to discuss student 'issues									
The head teacher has intervened to reduce my teaching load thus giving me time to counsel students.									
The head teacher always sponsors me for career guidance and counseling related training.									

APPENDIX VILL: OBSERVATION CHECKLIST FOR CAREER GUIDANCE RESOURCES IN SCHOOLS

(To tick against those available)

Facilities

	HOD's Room	Counseling Room	Computer	Internet	Library	Books	Journal	Video	CD
To tick against those available									

Departmental Structure/Personnel

	Senior HOD	Assistant HOD	Career Advisor	Receptionist	Peer Councilors
To tick against those available					

Departmental Files

	Questionnaires	Circulars	Correspondences	KSCE Registration	Examination Analysis	University applications
To tick against those available						

Departmental Files [cont'd]

	Subject Selection	Budget Work plan	Handouts	Enrolment	General File
To tick against those available					

APPENDIXIX: STUDENTS' QUESTIONNAIRE

PART I: Background Information

1. What is your school name ……………………………………………………

2. Your school is: A National ☐ A County School ☐ A District School ☐

3. The school is: Mixed Day ☐ Mixed Boarding ☐ Girls Day ☐

   Girls Boarding ☐

4. My favorite subject(s) are: English ☐ Kiswahili ☐ French Maths ☐

   Geography ☐ Biology ☐ Chemistry ☐ Physics ☐ History ☐

   Business Studies CRE ☐ Others (Specify)…………………………..

5. Why are the above subjects your favorite?……………………………………

PART II: Existence of Structures Dedicated To Career Guidance: It's Influence on Subjects and Career Choice:-

Does your school have?

a) A career guidance department separate from the guidance and counseling department?

Yes ☐   No ☐

b) A career guidance teacher: Yes ☐   No ☐

c) A career guidance room/office   Yes ☐   No ☐

d) Career guidance books   Yes ☐   No ☐

e) Journals and magazines on career   Yes ☐   No ☐

f) Internet services for students   Yes ☐   No ☐

g) The following services are provided by the careers department: YES ☐   NO ☐

h) Filling Form one career information form during orientation   YES ☐   NO ☐

i) Filling of careers declaration and progress forms ………….   YES ☐   NO ☐

j) Calculation of weighted cluster points after every exam …..   YES ☐   NO ☐

k) Individual students counseling ………………………..………   YES ☐   NO ☐

l) Group counseling sessions ……………………………..…   YES ☐   NO ☐

m) Class counseling lessons…………………………………….   YES ☐   NO ☐

n) Career fairs ………………………………………………..…   YES ☐   NO ☐

o) Role model speeches at school ………………………..…….   YES ☐   NO ☐

YES ☐   NO ☐

YES ☐   NO ☐

YES ☐   NO ☐

p) Visits to universities and workstations …………………………

q) Apprenticeship …………………………………………...…..

r) Job Shadowing …………………………………………..……….

s) Volunteer work ……………………………………….……..

t) Mentorship ……………………………………………………….

u) Exposure to scholarship opportunities……………...………..

PART III: Relationship between Career Guidance, Performance in KCSE and Career Choice?

1. Have you chosen your career yet? Yes ☐ No ☐

2. If the answer to question (8) is yes, at what point in your life did you choose your career?

3. Primary ☐ Form One ☐ Form Two ☐ Form Three ☐ Form Four ☐

   a) Is the career choice you made in primary, form one ,form two or form three still the same in form four or you have changed?

   Same Changed

   b) If you have changed your career choice made earlier on, what were your reasons for changing? …………..

4. If the answer to question (8) above is no, what could be the reason?..................

   ………………………………………………………………………………..

   a) I don't know what career to choose as I'm not aware of the available options

   ……………………………………………………………………….

   b) I am confused about the many options available …………………………

   c) I don't know which one suits my ability ………………………..……

   d) I don't know what my area of interest is ………………………..……

e) Our school does not provide any information on careers………………………

f) Others (specify)…………………………………………………...………..

5. Do you think career guidance has influenced your:

a) Performance? Yes ☐   No ☐

Explain how it has influenced …………………………………………………

b) Career choice? Yes ☐   No ☐

Explain…………………………………………………………………..

6. The table below shows a career declaration and progress form which can be used to track and improve performance and guide students on their career choices.

7. Did you fill such a form from form one to form four?   Yes ☐

No ☐

Adm. No	Name of Student	Class	Career Choice	Year	Signed	Academic Progress By				Remarks
						Year 1	Year 2	Year 3	Mock	

8. In which other ways has your careers department contributed to your academic performance? …………………...

Choose 1=strongly disgree,2=disagree,3=undecided,4=agree,5= strongly agree	1	2	3	4	5
1. Our school has very elaborate career guidance					

programmes					
2. The excellent performance by our school in KCSE is due to the comprehensive career programmes offered in our school					
3. The high enrolment of girls from our school into public universities can be attributed to the comprehensive career programmes offered in our school					
4. The poor performance by our school in KCSE is due to inadequate career/academic guidance					
5. The low enrolment of girls from our school into public universities is due to inadequate career guidance programmes					
6. We were guided on career choices right from form one to form four					
7. My career selection was done at form: One Two Three Four					
8. We female students mainly choose careers based on: Our gender The career teachers' guidance Interest Peer influence Academic ability Ability and interest Parental influence Societal influence					
9. Most girls qualify for the courses they chose in their first JAB application					
10. Most female students are called upon by JAB to revise their degree course after failing to meet cut-off points for those they chose first round					
11. Most girls are admitted by JAB for courses they did not choose					
12. Many girls are admitted by JAB for courses they do not like					
13. None of our girls have qualified for JAB admission in the last ten years					

PART IV: Stereotyping and Its Effect on Subject and Career Choices

a) Which of the subjects below do you feel are too difficult for girls?

English ☐ Kiswahili ☐ French ☐ Math History ☐

CRE ☐ Geography ☐ Biology ☐ Chemistry Physics ☐

Business Studies ☐ Others (Specify) ……………………………………

b) At what point did you start experiencing the difficulty?

c) Primary ☐ Form one ☐ Form two ☐ Form Three ☐ Form Four ☐

d) Can you link the difficulty in the subjects to any of the following?

Only boys are good at such subjects ☐

I just believe l cannot do it ☐

My friends /classmates said it is difficult ☐

My parents said girls normally don't do well in it ☐

My teachers said it is difficult for girls

Others (specify) ……...……………………………

a) What career field are you planning to choose/have you chosen?

Agriculturalist ☐ Teacher Nurse ☐ Nutritionist Doctor ☐

Computer scientist Engineering Pilot ☐ mechanic Accountant ☐

Beauty industry ☐ Military ☐ Law ☐ Politician Business ☐

I do not know others (specify) ……...…………………………………….

b) What led you to choose the career above? (Tick those appropriate to you)

It is suitable for women (feminine) ☐

It the one mostly chosen by women ☐

Requires less strength ☐

Requires less intelligence (Lower grades or Marks) ☐

It leaves one with enough time to take care of the family ☐

☐

☐

☐

It is prestigious

It is a high income career

The course takes a short time

It involves less travelling

It involves people and l like helping/dealing with people

Other reasons (specify) …………………………………..

Who among the following people played the greatest role in influencing your career choice?

My parents ☐ Careers teacher ☐ My friends' Role models ☐

☐ Nobody   Class teacher ☐

Others (specify)……………………………………………………..

PART V: Structures That Should Be Put In Place to Enhance the Career Guidance Function In Schools

In your opinion what should the career guidance department do to improve the services to the students …………………………………………………………………...

APPENDIX X: COUNTY EDUCATION DIRECTOR'S AND DISTRICT

EDUCATION OFFICERS' INTERVIEW SCHEDULE

1. What are the policy guidelines concerning career guidance in high schools as
   per the:-

2. Ministry of Education..............County Education Office..............District
   Education Office…………

a) Are there teachers trained in career guidance in every school in the county/district?

b) ....

....

c) If 2(a) above is yes, what level of training do they have?..............................

d) How often do the teachers attend refresher courses in career guidance?

....

e) If 2(a) above is no, what measures are in place to cater for career guidance in secondary schools?...

a) Are there K.I.E /Government prescribed content for career guidance in secondary schools?...

b) Is there content in form of class texts for form one to for...........................Is the teaching of content for career guidance time-tabled as part of the official school activities/ school time-table...

If the answer in (b) and (c) above is no, how is uniformity in career guidance in schools in the county/district achieved?..

3. What plans are in progress/place with regard to career guidance in the light of devolved   governance?

…………...

4. Suggest ways in which career guidance can be enhanced by the following:

a) Ministry of Education...

b) KIE...

c) TSC...

d) DQASO...

e) The

school…………………………………………………………………

f) The careers Teachers...

g) Students...

h) Parents...

i) The Community..

APPENDIX   XI: DOCUMENTS THAT WERE ANALYZED

1. School Timetables

2. Career Guidance Departmental Files

 3. JAB Admission List for 2012 for the Whole Country: JAB ADMISSIONS

DOUMENT 2013/2014(Document One)

4. JAB Admission List for the sampled Girls' and mixed schools showing the 2012

intake for girls from the sampled schools

5. KNEC center numbers for Vihiga County

6. Vihiga County Education Day Booklets (2007-2013)

7. Sabatia, Hamisi, Emuhaya and Vihiga District Education Day Edition (2007-2013)

APPENDIX XII: WORK PLAN

YEAR	2012			2013			2014			2015			2016			2017		
Proposal writing	▓	▓	▓															
Proposal presentation at the department	▓	▓	▓															
Correction of proposal	▓	▓	▓															
Proposal presentation at the faculty	▓	▓	▓															
Correction of proposal	▓	▓	▓															
Proposal submission to the graduate school	▓	▓	▓															
Correction of proposal	▓	▓	▓															
Data collection ,Coding and Processing				▓	▓	▓							\					
Data analysis and Thesis writing and Examination							▓	▓	▓	▓	▓	▓	▓	▓	▓			
Defense, Correction and Submission																▓	▓	▓

APPENDIX VIII: RESEARCH BUDGET

	Item	Cost (Shs)
i)	**Proposal writing**	
	Travelling and subsistence	20,000
	Literature review	10,000
	Typing and printing	15,000
	Photocopying and binding	15,000
	Flash disks	5,000
	Subtotal	**65,000**
ii)	**Piloting**	
	Travelling and subsistence	20,000
	Telephone charges	10,000
	Analysis of results	15,000
	Subtotal	**45,000**
iii)	**Data Collection**	
	Travelling and subsistence	50,000
	Research Permit	1,000
	Research Assistants	45,000
	Instrument typing and photocopying	15,000
	Travelling and subsistence	20,000
	Subtotal	**131,000**
iv)	**Thesis Writing**	
	Data analysis	30,000
	Typing and printing	20,000
	Binding	10,000
	Subtotal	**60,000**
	Total	**301,000**

APPENDIX XIV: TABLE FOR DETERMINING THE SIZE OF A RANDOMLY

CHOSEN SAMPLE

The table for determining the size of a randomly chosen sample for a given population of N cases such that the sample proportion is within + 0.05 of the population within a 95% level of confidence.

N	S	N	S	N	S
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320

50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	241	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377

Extracted from Kathuri and Pals (1993), Introduction to Educational Research, Njoro: Egerton University Press

APPENDIX XV: MAP OF VIHIGA COUNTY
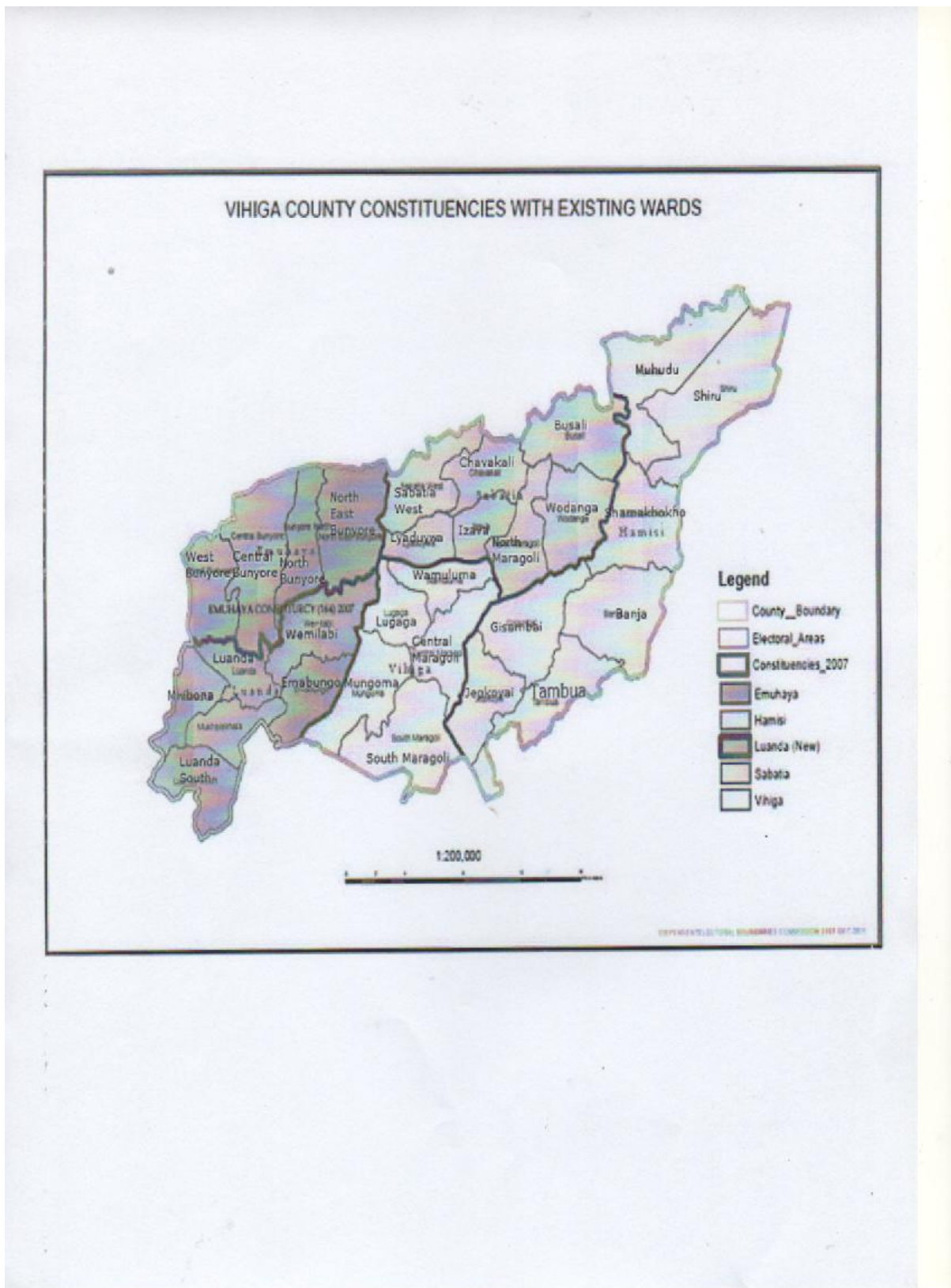
APPENDIX XVI: MAP OF KENYA SHOWING THE COUNTIES

COUNTIES OF KENYA

KEY

1. NAIROBI	8. KERICHO	15. KAKAMEGA	22. HOMA BAY
2. KIAMBU	9. TRANS NZOIA	16. VIHIGA	
3. MURANG'A	10. UASIN GISHU	17. SIAYA	
4. KIRINYAGA	11. ELGEYO-MARAKWET	18. MIGORI	
5. NYERI	12. NANDI	19. KISII	
6. NYANDARUA	13. BUNGOMA	20. KISUMU	
7. BOMET	14. BUSIA	21. NYAMIRA	
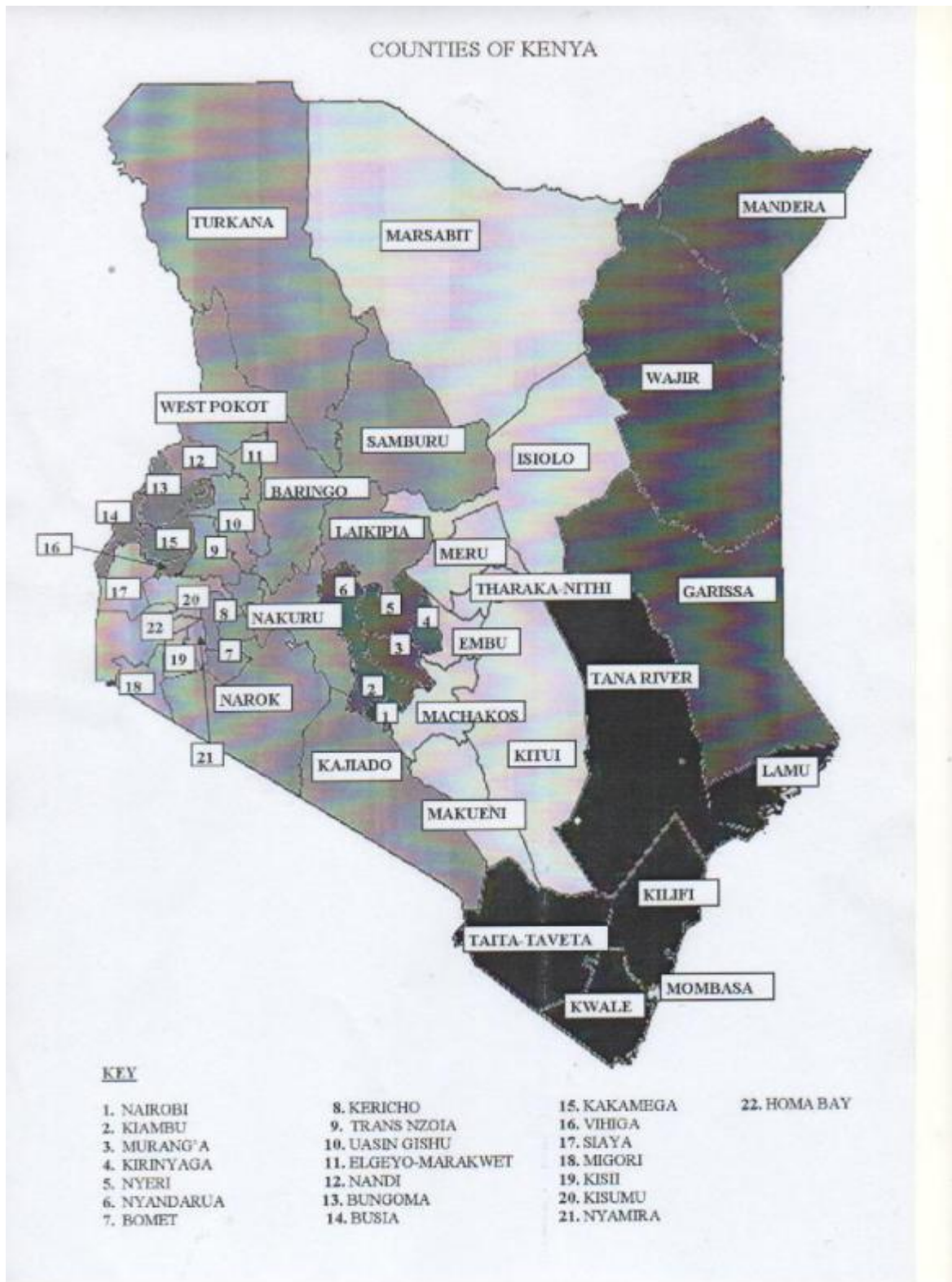
APPENDIX XV: RESEARCH PERMIT

MOI UNIVERSITY
Office of the Dean School of Education

Tel: (053) 43001-8	P.O. Box 3900
(053) 43555	Eldoret, Kenya
Fax: (053) 43555	

REF: MU/SE/PGS/54   **DATE:** 12th November, 2013

The Executive Secretary
National Council for Science and Technology
P.O. Box 30623-00100
NAIROBI

Dear Sir/Madam,

RE: **RESEARCH PERMIT IN RESPECT OF AMBOGO MABEL
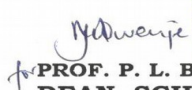MUDULIA   – (EDU/D.PHIL.A/1002/10)**

The above named is a 2nd year Doctor of Philosophy (D.Phil) student at Moi University, School of Education, Department of Educational Management and Policy Studies.

It is a requirement of her D.Phil Studies that she conducts research and produces a thesis. Her research is entitled:

"Exploring the Correlation Between Secondary School Career Guidance and Subsequent Career Choice Among Secondary School Girls in Kenya."

Any assistance given to her to enable her conduct her research successfully will be highly appreciated.

Yours faithfully,

MOI UNIVERSITY
SCHOOL OF EDUCATION
DEAN
1 2 NOV 2013
P. O. Box 3900 - 30100

PROF. P. L. BARASA
DEAN, SCHOOL OF EDUCATION

PLB/db

APPENDIXXVI: RESEARCH AUTHORIZATION

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471,
2241349, 310571, 2219420
Fax: +254-20-318245, 318249
Email: secretary@nacosti.go.ke
Website: www.nacosti.go.ke
When replying please quote

9th Floor, Utalii House
Uhuru Highway
P.O. Box 30623-00100
NAIROBI-KENYA

Date:

Ref: No.

2nd January, 2014

NACOSTI/P/13/8547/487

Mabel Ambogo Mudulia
Moi University
P.O. Box 3900-30100
ELDORET.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on *"Exploring the correlation between secondary school career guidance and subsequent career choice among secondary school girls in Kenya,"* I am pleased to inform you that you have been authorized to undertake research in **Vihiga County** for a period ending **30th November, 2016.**

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

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.

SAID HUSSEIN
FOR: SECRETARY/CEO
NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Copy to:

The County Commissioner
The County Director of Education
Vihiga County.

APPENDIX XVII:NACOSTI RESEARCH PERMIT

THIS IS TO CERTIFY THAT:
MS. MABEL AMBOGO MUDULIA
of MOI UNIVERSITY, 3578-30100
eldoret,has been permitted to conduct
research in Vihiga County

on the topic: EXPLORING THE
CORRELATION BETWEENSECONDARY
SCHOOL CAREER GUIDANCE AND
SUBSEQUENT CAREER CHOICE AMONG
SECONDARY SCHOOL GIRLS IN KENYA

for the period ending:
30th November,2016

Permit No . : NACOSTI/P/13/8547/487
Date Of Issue : 2nd January,2014
Fee Recieved : Kshs khs2000.00

....
Applicant's
Signature

....
Secretary
National Commission for Science,
Technology & Innovation

APPENDIX XVIII:COUNTY COMMISSIONER'S PERMIT

REPUBLIC OF KENYA

OFFICE OF THE PRESIDENT
MINISTRY OF INTERIOR AND COORDINATION OF NATIONAL GOVERNMENT

Email: vihigacc1992@gmail.com
Telephone: Vihiga 0771866800
When replying please quote

COUNTY COMMISSIONER,
VIHIGA COUNTY,
P.O. BOX 75-50300,
MARAGOLI.

REF:VC/ED.12/1 VOL.1/68

18th March, 2015

TO WHOM IT MAY CONCERN

REF: RESEARCH AUTHORIZATION - MABEL AMBOGO MUDULA.

The above named who is a doctorate student at Moi University Eldoret has been authorized by the National Commission for Science, Technology and Innovation to carry out research on *"Exploring the correlation between Secondary school career guidance and subsequent career choice among Secondary school girls in Kenya"* in Vihiga County for the period ending 30th November, 2016.

Kindly accord her all the necessary assistance.

BOAZ K. CHERUTICH
COUNTY COMMISSIONER
VIHIGA COUNTY

Cc;

The Deputy Commission Secretary,
National Commission for Science
Technology and Innovation,
P. O. Box 300623-00100,
NAIROBI.

(Yours Ref.NACOSTI/P/13/8547/487 of 2nd 2nd January, 2014)

APPENDIX XIX: COUNTY EDUCATION OFFICE PERMIT

MINISTRY OF EDUCATION, SCIENCE & TECHNOLOGY
STATE DEPARTMENT OF EDUCATION

Telegrams: ....
Telephone: (056) 51450
When replying please quote

COUNTY EDUCATION OFFICE,
VIHIGA COUNTY,
P.O. BOX 640,
MARAGOLI.

REF: CDE/VCD/GEN/1/VOL 1/61

18/3/2015

TO WHOM IT MAY CONCERN

RE: AUTHORITY TO CONDUCT RESEARCH
MABEL AMBOGO MUDULIA

The above subject refers.

Permission is hereby granted to the above named student from National Commission for science, Technology and Innovation to carry out research on **"Exploring the correlation between secondary school career guidance and subsequent career choice among secondary school girls in Kenya,"** in Vihiga County for a period ending 30th November 2016 to enable her write a project as required of her.

For COUNTY DIRECTOR OF EDUCATION
VIHIGA COUNTY

Anne Kiilu
County Director of Education
VIHIGA COUNTY

C.C
County Commissioner
VIHIGA