

**CAREER GUIDANCE SERVICES AS PREDICTORS OF COURSE
SATISFACTION AMONG TRAINEES IN TECHNICAL VOCATIONAL
EDUCATION AND TRAINING INSTITUTIONS**

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DECLARATION AND APPROVAL

DECLARATION BY THE CANDIDATE

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DEDICATION

The PhD thesis is dedicated especially to my husband, Caleb, and children Moses, Brian and Donna for their encouragement.

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LIST OF ABBREVIATIONS AND ACRONYMS

BTVC	Butere Technical and Vocational College
BTTI	Bushiangala Technical Training Institute
CBET	Competency Based Education and Training
CDACC	Curriculum Development and Certification Council
CLP	Career and Life Planning
CSC	College Career Services
CTE	Career and Technical Education
DSS	Direct Subsidy Schools
GER	Gross Enrolment Ratio
KUCCPS	Kenya Universities and Colleges Central Placement Services
NP	National Polytechnic
OECD	Organization for Economic Co-operation and Development
RIAT	Ramogi Institute of Advanced Technology
SNP	Sigalagala National Polytechnic
STTI	Shamberere Technical Training Institute
TTI	Technical Training Institute
TVC	Technical and Vocational College
TVET	Technical Vocational Education and Training
TVETA	Technical and Vocational Education Training Authority
UNESCO	United Nations Educational Scientific and Cultural Organization
WSA	Whole School Approach

ABSTRACT

Students' course satisfaction plays a critical role in acquisition of relevant skills, competence and attitude. Students who get advice with regard to career options are likely to be satisfied with the courses they choose to study. Technical Vocational Education and Training (TVET) institutions have established offices of career services to assist trainees choose courses in line with their interest, capabilities, and aptitude. Therefore, the objectives of the study were to: establish the relationship between orientation services and course satisfaction among trainees, determine the relationship between appraisal services and course satisfaction among trainees, find out the relationship between education services and course satisfaction among trainees, examine the relationship between information services and course satisfaction among trainees in TVET institutions. Holland's theory of vocational choice guided the study. Concurrent Triangulation design within the mixed methods approach was adopted. The study targeted a total of 12807 trainees, 4 Registrars, 4 Deputy Principals in charge of academics and, 4 Guidance and Counseling Coordinators from TVET institutions in Kakamega County. Trainees' sample size of 388 was determined using Yamane (1967) formula for calculating sample size. Stratified proportionate sampling was used to get the number of participants from each department within each Institution, and simple random sampling was used to select 388 trainees from the 4 institutions while 4 Registrars, 4 Deputy Principals and 4 Guidance and Counseling Coordinators were purposively sampled. The total sample size for the study was therefore 400. Data was collected by use of questionnaire and interview schedule. Piloting of the instruments was done among 39 trainees from Kisiwa TTI in Bungoma County. Validity of the instruments was ensured by seeking expert advice from 2 university lecturers. Internal consistency of reliability, which was measured using Cronbach's alpha had values ranging from 0.784 to 0.869, suggesting that the instruments had adequate reliability for the study. Statistical Package for Social Sciences (SPSS) version 26 aided in quantitative data analysis presented in the form of frequencies and percentages while qualitative data was analyzed thematically. Pearson's Product Moment Correlation Coefficient, Multiple regression analysis, t-test for independent samples and ANOVA was used for inferential statistics. Specifically, regression coefficient was used to test the hypotheses at 0.05 level of significance. The results of the study established that there is direct relationship between career guidance services and course satisfaction though the various aspects of career guidance services contribute differently in influencing course satisfaction among TVET trainees. Education services had the highest influence (Beta = 0.255) on trainees' course satisfaction while information services had the least influence (Beta = 0.166) on trainees' course satisfaction. Career guidance services was confirmed as significant predictors of course satisfaction among TVET trainees in Kakamega County. Based on the findings, the study recommends the implementation of comprehensive and inclusive career guidance services and Curriculum Development and Certification Council (CDACC) should strengthen the case of career guidance offices in TVET institutions.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Student course satisfaction is a critical indicator of the quality of learning experiences since satisfied students are more likely to be retained in college, and ultimately, complete their studies than unsatisfied students (Tessema, Ready, & Yu, 2012). According to Kuo, Walker, Belland and Schroder (2013) student satisfaction refers to student perceptions of learning experiences and perceived value of a course while course satisfaction is an overall measure of students' perceived benefit from a course (Sanford, Ross, Rosenbloom & Singer, 2017). The problem of occupational choice is a reality to every individual and many students encounter it when they are required to choose study programmes (Nyamwange, 2016). Provision of career guidance services may help inspire students towards success by enabling them to make informed decisions from the many choices open to them. Without guidance students are likely to choose courses of study without directly relating them to their interests and abilities. Thus, career guidance services is critical in enabling students to identify courses of their satisfaction which match their ability, interest and personality.

According to Sun and Yuen (2012), career guidance helps students to address any misunderstandings in career choices, in selection of study paths, and in identification of potential strengths in preparation for employment. Supporting students in making informed choices about courses provides them with confidence and a more positive outlook in life. According to Gacohi, Sindabi, and Chepchieng (2017) in Kenya, students should choose study programmes after they have been provided with adequate information for the choices to be beneficial in their future careers

Guidance is a kind of direction or leadership given an individual to help him or her make decisions (Dabone, Graham, & Fobea, 2015) while career guidance is helping individuals to choose between available opportunities, in relation to an individual's unique personality (McMahon, 2014). Career guidance has also been defined as the process of assisting students in making career choices based on abilities, interests, skills, attitudes and available job openings (OECD, 2004). Career counselling on the other hand is about supporting the individual to know him/herself so that the individual can use this information for the benefit of the community (Crişan, Pavelea, & Ghimbuluţ, 2015). Thus, career counselling may be interpreted as a sub set of career guidance and it is for this reason that in some instances the terms career guidance and counseling, career guidance, and career counseling have been used either individually or synonymously by different researchers. In the current study, career guidance is operationalized to mean assistance given to trainees to help them make informed decision on course of study from the many different courses offered in TVET institutions based on their ability, interest, skills, and attitude.

Career guidance services are explained in different ways by various researchers, but all serving one purpose. Lunenburg (2010) identified the four core areas that constitute any guidance program as assessment, information, placement and follow-up, and counseling assistance services. While according to Balcı (2018), career guidance services include guidance, advising, placement, coaching, and mentoring in educational setting. Hossain and Faisal (2013) listed the components of guidance and counseling program as orientation service, information service, counseling, career and placement service, referral service, remedial service, follow-up service, and evaluation service. According to Oberoi (2012), the services of guidance and counseling provided in learning institutions includes: orientation services, placement

services, appraisal services, education and information services. Despite the many descriptions of guidance and counselling services provided by different researchers, the current study concentrated on orientation services, appraisal services, education services and information services which are all offered while students are still in the institution.

As an aspect of career guidance, education services is conceptualized in this study as assistance given to trainees in their academic programmes and co-curricular activities to enable them make informed decision in choosing the course to study that match their interest and abilities. Co-curricular activities are important aspects of learning experience. According to Martini, Verby-Verutis, Grose, Clarke, and Elder (2019) co-curricular activities help students develop career relevant skills such as communication, critical thinking, teamwork, and leadership.

The level of development of career guidance differs from country to country. In America, comprehensive school counseling program with a bias in career, academic and social development is used in many states (Anctil, Smith, Schenck & Dahir, 2012). A comprehensive guidance program assists students to acquire relevant personal, educational and social competencies that promote their academic success (Gysbers, & Henderson, 2001). Although career guidance is often taken as the school counsellors' responsibilities (Whiston, Mitts, & Li, 2019), current state national directives focusing on academic achievement removed critical counseling facilities away from career guidance with the school counselors giving less time to career guidance than preferred (Schenck, Anctil, Smith, & Dahir, 2012).

In Canada, there is lack of career service providers with relevant educational background. Although, currently, career counselling services provision to high school students especially on choosing academic majors in universities has gained a lot of interest (Domene & Isenor 2017).

A weakness in the provision of career guidance services is evident in Russia where there is low efficiency of career guidance largely because there is no unified career guidance system. The scattered activities are not effective, and existing methods for career guidance can only concentrate on the current interests and qualities of the student (Kurbatova, Bicheva, Ivanov, Zaitseva & Krasilnikova, 2019).

However, adequate provision of guidance is evident in Finland where guidance and counselling services, and career information are offered mainly by two established government funded systems. Career education and guidance is a mandatory subject with time allocation in students' timetables in comprehensive and upper secondary level education. Though schools have full-time professional counsellors with legally defined requirements and qualifications provision of guidance and counselling services vary in quantity and quality in higher education. (Vuorinen & Kettunen 2017).

Similarly, in Germany, career guidance services are provided by both learning institutions and employment agencies with a high concentration of the services in lower track than in the middle track. School-based counseling also varies in type and quantity according to regions (Fitzenberger, Hillerich-Sigg & Sprietsma, 2020). Thus, the career guidance services in Germany exist in two distinct groups: educational, and vocational guidance. However, this distinction is losing its meaning as integrative and

lifelong guidance provision is becoming more popular across all sectors (Jenschke, Schober & Langner, 2014). The key goal of career guidance offered by employment agencies is to support the transition into apprenticeship (Fitzenberger, Hillerich-Sigg & Sprietsma, 2020).

In China, the Whole-School Approach (WSA) model of career counseling that involves all teachers in assisting students with issues and challenges was introduced in 1990 (Hui, 2002). Career education has been made an integral part of the schools' curriculum with rapid expansion and adaptation of career interventions and theories from Western nations. Career and Life Planning (CLP) grants is provided to all public-sector schools and Direct Subsidy Schools (DSS) with a senior secondary level to improve teachers' capacity to specifically cater for students' career-related developmental needs. Currently, there is a model shift in the responsibilities of career guidance teachers considered not only as information disseminators but also as counselors who guide students toward formulating and attaining their academic and vocational goals in accordance with their interests, abilities, and orientations (Wong, & Yuen 2019).

However, in Chinese universities, career planning is largely dominated by employment guidance and only a few universities are implementing effective career planning. The methods of career guidance include open employment guidance courses and employment policy, recruitment fairs, ad hoc lectures and individual counseling. Further, the tools used for career services are developed from Western theories and measurement scales which lack local relevance for Chinese situations due to the cultural differences between the West and China (Sun & Yuen, 2012).

Like in most countries, career guidance development is at a relatively low level in Pakistan and integration of the services is shaped by the country's Islamic religion and cultural features (Zahid, Hooley, & Neary, 2020). According to Abidi and Malik (2020), a disconnect is evident between policy and career guidance implementation in schools and colleges especially in government institutions where absolute absence of the services exists. Consequently, students turn to family, teachers and, and to their friends for guidance. Career guidance relies on borrowed theories instead of approved practices developed within the country to meet specific local needs. Pakistan's collectivist culture means many people seek career guidance services from their family and community but not from professionals (Zahid, Hooley & Neary 2020).

In Africa, according to Omoniyi (2016) provision of career guidance is inadequate. In Nigeria, guidance and counselling has not been given its appropriate position in the various levels of schools. The implementation of the programmes in institutions of learning is confronted with challenges that include poor location of counselling offices, shortage of professionally trained counselors, insufficient psychological testing and lack of occupation information. Raji (2019) attributed high drop-out rate and exam wrong doings in schools to the fact that adolescents select their subject combination with no professional guidance. The central counselling centres existing in higher education institutions do not offer the required services to students (Okolie, Nwajiuba, Binuomote, Osuji, Onajite & Igwe, 2020).

Similarly, in Ghana, in most schools, there are no organized guidance and counselling services (Kemetse Nyarko-Sampson, Nkyi, and Nyarko, 2018). Historically, career guidance within senior high schools has been given low rating and less financial support in comparison to other areas in the curriculum. In most instances, only one

untrained counselor is tasked with delivering career guidance to students (Upoalkpajor, 2020).

Inadequate provision of career guidance is experienced in Ethiopia where the existing career guidance does not respond to students' career development and fails to ensure quality education (Likisa, 2018). In the universities, guidance and counseling services are very much overlooked (Legas and Mengistu 2018). Ethiopian tertiary education admission system does not take into consideration students' career choice, interest or aptitude which are critical factors affecting their academic success. The system only relies on university entrance examination results and affirmative action targeting female students, students with physical disabilities and students from 'developing' regions (Getachew & Daniel 2016).

According to Gudyanga, Wadesango, Manzira, & Gudyanga (2015) guidance and counselling was a privilege of former Asian, European and coloured schools in Zimbabwe until the country got independence in 1980. With the development of educational opportunities, came the introduction of guidance and counseling in all schools in the country. The objective was to help learners to improve their attainment and optimize their ability for the benefit of the society. However, there is still low enactment of the guidance and counselling activities

In Tanzania, although professional guidance and counseling was introduced in schools in 1984 appropriate policies for development and implementation of the services are still lacking and there are setbacks to implementation of the services (Eliamani, Richard, & Peter, 2014). In most universities, career guidance and counselling are at the elementary stage with the emphasis more on the academic and

social welfare than career-related matters. Colleges and universities offer different induction programmes but all career related matters are handled by the Dean of Students. In some instances, students' orientation services are offered once to students upon joining the university with little information given regarding the chosen course. Other universities plan an induction programme for students both prior to and after they join the university (Amani & Sima, 2015).

Provision of guidance and counseling services in Kenyan schools is equally inadequate. Formal guidance and counseling was introduced in the 1970s following the recommendations of the Report of the National Committee on Educational Objectives and Policies (The Republic of Kenya 1976) but implementation of guidance and counselling programmes is faced with challenges including lack of models to guide counseling, regulated training syllabus, ethical standards, and clarity of roles (Wambu & Fisher 2015). The provision of the services is still limited because they are offered in a manner that is neither coordinated nor all inclusive (Ombaba, Keraro, Sindabi & Asienyo, 2014) and fails to look entirely in the areas of individual growth, career guidance and coaching in education. The role of the school counsellor is unclear and majority are still engaged in teaching duties in addition to counselling assignments (Gysbers & Henderson, 2001). Further, inadequate provision of counseling and career information still exist in schools (Wambu & Fisher 2015).

Guidance services are offered though majority of schools implement different programmes (Orege 2011). Career guidance as an aspect of guidance and counseling is meant to assist students understand their potentials for optimal development (Ombaba et al. 2014), and to help them make right subject choice (Barker, Omoni, Wakasiaka, Mathai, & Lavender, 2013). In Kenyan schools students start identifying

their preferred careers in third form with the selection of subjects. Despite the existence of these services in schools, there are reported weaknesses in the implementation of the programmes. Some of the weaknesses are: career counselors inadequate training on career counseling (Ngunjiri 2013), poorly established career guidance services that are ineffective in providing students with enough exposure on the services (Oigo & Kaluyu 2016), low level of guidance services and students' negative attitude towards guidance and counseling services (Ali 2014). The weaknesses indicate that students joining colleges are still in need of the services to help them make the right choices of courses to study.

Students' course dissatisfaction is evident despite the existence of career guidance services in learning institutions. Change of course of study may imply lack of satisfaction with the chosen course. According to Koech, Bitok, Rutto, Koech, Okoth, Korir, and Ngala (2016), when students enroll for programs not in line with their interest they end up changing after discovering their fields of their interest. They discover that their course preferences do not match their interest and ability. Students may also change their initial course because of indecision (Pabalinas, Saturnino, Aldwin, Teves & Karen, 2015), peer influence (Mtemeri 2017), poor performance (Ombaba et al 2014), career guidance (Muraguri, 2011), dislike for initial course and financial problems (Shumba & Naong 2012).

The findings from a study by Kanyingi-Maina (2020) in Kenya revealed that change of study programme is common among students. Further, according to Ayiro (2016) twenty to fifty percent of university students changed their study programmes. In addition, a study by Kemboi, Kindiki, and Misigo in Kenya (2016) revealed that

change of study programme is allowed in universities and students are accorded opportunity to make application for inter-faculty transfer.

However, similar situation is experienced in TVET institutions. Over the years, trainees' admission in TVET institutions was the responsibility of the training institutions on receiving applications from the prospective trainees. From 2016 placement of trainees in TVET institutions by Kenya Universities and Colleges Central Placement service (KUCCPS) was introduced. The trainees admitted through the service are placed in courses they had previously selected and are entitled to government sponsorship in the form of capitation. However, majority of trainees referred to as "walk-ins" still seek direct admissions from the institutions. The period within which change of course is permitted for both category of trainees is one academic term though the policy is flouted in most cases in the interest of promoting access as per Government of Kenya (2012). Many people are of the view that the services of career guidance are not relevant within TVET since entry to a vocational course means that a student has made a career decision (Watts & Unesco-Unevoc, 2013) but this view is not accurate since the courses may have been selected ignorant of a student's interest, ability and capability.

Considering that TVET's goal is provision of the much needed skilled man power necessary for a country's industrial development it is expected that TVET trainees study courses of their choice to completion. Skill based training is a topic for global debates and government priorities for education and national development agendas because of its potential in influencing development. Countries like South East Asia, Cambodia, Indonesia, Malaysia and Philippines have made TVET a national agenda and are putting in place strategies to revitalize and strengthen it (Paryono, 2017). In

Africa, for instance, Salabson (2018) in Nigeria reported that vocational and technical education is the key to economic development in any nation and the solution to the problem of poverty and youth unemployment. Kenya like other countries has given prominence to TVET because of its pivotal role in the attainment of the county's development goals. TVET Policy Framework (2012) stressed the importance of skills based training and provided framework for improvement and promotion of skills training.

While studies have been undertaken on career guidance in primary, high schools and universities, limited research have been conducted on career guidance services in TVET institutions despite the importance the government has placed on skill based learning. Since change of course which is a sign of dissatisfaction with the initial course occurs in TVET institutions and directly affects the number of TVET graduates, the study therefore sought to investigate career guidance services as predictors of course satisfaction among trainees in TVET institutions.

According to Kanyingi-Maina, (2020) change of courses in a study programme occurs where an initial preferred course had been chosen but the student revokes the first choice in favour of a different one. Eight public TVET institutions were sampled within the country with the aim of establishing the rate of change of course to inform the location of the study. The data collected from the institutions were as shown in Table 1.

Table 1: *Trainees' change of courses between 2016 and 2018 in selected TVET institutions in Kenya*

Institution	Enrollment	No. of trainees who changed course	%
Kisii National Polytechnic	11732	739	6.3
Ramogi Institute of Advanced Technology	5386	42	0.8
Shamberere Technical Training Institute	2117	154	7.3
Ekerubo Gietai Technical Training Institute	881	37	4.2
Kabete National Polytechnic	5748	25	1
Coast Institute of Technology	3714	57	2
Bushiangala Technical Training Institute	1463	140	10
Kaiboi technical Training Institute	2302	119	5

Source: Registrars in selected TVET institutions in Kenya, 2020

The highest percentage of trainees who changed course between 2016 to 2018 after staying in the institutions between one and two academic terms was from Bushiangala TTI and Shamberere TTI in Kakamega county with averages of 10% and 7.3% respectively, followed by Kisii National Polytechnic in Kisii county at an average of 6.3%, Kaiboi TTI in Nandi county at 5%, Ekerubo Geitai in Nyamira county with 4.2%, Coast Institute of Technology with 2%, Ramogi Institute of Advanced Technology in Kisumu county with 0.9% and Kabete National Polytechnic with 1% of change of course. It is for this reason that the study was conducted in Kakamega County.

1.2 Statement of the Problem

Course satisfaction is important to all students as it contributes to one's success, and it can only be realized when the chosen courses are in line with the student's interest, ability and values. Further, full development of any nation demands that positions be manned by skilled and well-matched individuals. Trainees with skills acquired from courses that match their interest and ability will therefore be useful to the attainment of the country's development goals. It is therefore expected that trainees enrolled in TVET institutions which are charged with the mandate of producing technologists, technicians and artisans critical for the attainment of the country industrialization should choose courses in line with their interest and acquire the much needed relevant skills. However, many trainees are undecided about the courses to study as is evidenced by the number that change courses. Unless trainees study courses that match their interest and ability and acquire the much needed skills they may not be able to contribute to the country's development. Career guidance services are meant to help trainees in making informed decisions about choice of course by making them aware of the course options in relation to their interests and abilities. Despite the existence of career guidance services in TVET institutions, indecisions by students on the course to study is still evident. It is against these concerns that the need for this study arose to investigate career guidance services as predictors of course satisfaction among trainees in TVET institutions in Kakamega County.

1.3 Purpose of the Study

The purpose of the study was to investigate the relationship between career guidance services and course satisfaction among trainees in TVET institutions in Kakamega County, Kenya.

1.4 Objectives of the study

The following research objectives guided the study conducted in TVET institutions in Kakamega County:

- i) To establish the relationship between orientation services and course satisfaction among trainees in TVET institutions in Kenya.
- ii) To determine the relationship between appraisal services and course satisfaction among trainees in TVET institutions in Kenya.
- iii) To find out the relationship between education services and course satisfaction among trainees in TVET institutions in Kenya.
- iv) To examine the relationship between information services and course satisfaction among trainees in TVET institutions in Kenya.

1.5 Null and Alternative Hypotheses

The following null hypotheses were tested:

- Ho₁: There is no significant relationship between orientation services and course satisfaction among trainees in TVET institutions in Kenya.
- Ha₁: There is significant relationship between orientation services and course selection among trainees in TVET institutions in Kenya
- Ho₂: There is no significant relationship between appraisal services and course satisfaction among trainees in TVET institutions in Kenya.
- Ha₂: There is significant relationship between appraisal services and course satisfaction among trainees in TVET institutions in Kenya.
- Ho₃: There is no significant relationship between education services and course satisfaction among trainees in TVET institutions in Kenya.
- Ha₃: There is significant relationship between education services and course satisfaction among trainees in TVET institutions in Kenya.

Ho₄: There is no significant relationship between information services and course satisfaction among trainees in TVET institutions in Kenya.

Ha₄: There is significant relationship between information services and course satisfaction among trainees in TVET institutions in Kenya.

1.6 Significance of the Study

The Ministry of Education may be able to come up with strategies for improving the attractiveness of TVET. In addition, Curriculum Development and Certification Council (CDACC) may also use the findings to strengthen the case for career guidance in TVET curriculum. The institution administrators may use the findings to encourage and promote comprehensive career guidance services. It is also expected that the study will expand to the existing body of knowledge in the field of career guidance in learning institutions.

1.7 Scope of the Study

The career guidance services studied included orientation, appraisal, education and information services. The study confined itself to both male and female trainees enrolled in public TVET institutions in Kakamega county between 2018 and 2020. All trainees at different levels (artisan, craft and diploma) in Technical and Vocational Colleges and National Polytechnic were included in the study. Both commuters and non-commuters were included in the study. Private TVET institutions were not included in the study for fear of their possible unwillingness to share confidential information.

1.8 Limitations of the Study

Limitations are aspects of research that may influence the research negatively but which the researcher has got no control over (Mugenda & Mugenda 2003). Kombo and Tromp (2006) also refers to limitations as challenges anticipated or faced by the researcher. Questionnaire being about self-reporting, the respondents might have favoured themselves by assessing themselves more positively. Interview schedule relies on an individual's memory as at the time of the interview. The challenge was that the respondents might forget important information. To counter the challenge, the researcher probed the respondents in order to get more specific and clear answers.

1.9 Assumptions of the Study

In this study, the following assumptions were made:

- i. Career guidance services are offered in TVET institutions.
- ii. All respondents would cooperate.
- iii. Trainees choose courses that provide them with satisfaction.
- iv. Trainees in TVET institutions are unique with individual differences.
- v. Respondents would give honest and accurate responses.
- vi. The findings can be generalized to other regions not considered in the current study.

1.10 Theoretical Framework

This study was based on Holland (1997) theory of Vocational choice. According to Holland, behaviour is determined by an interaction between personality and environment. People seek environments that are aligned with their personality types and engage in activities that utilize their abilities. In choosing a career, people search for environments that will let them use their skills and abilities, and express their

attitudes and values. This approach suggests that people are attracted to a given career that has similar qualities to their peculiar personalities and other background variables.

Holland (1997) stated that people fall within six personality types: Realistic(R), Investigative(I), Artistic(A), Social(S), Enterprising(E) and Conventional(C) (RIASEC). Personality types differ according to the activities that are related to abilities and competencies of an individual. Realistic types seek environments that allow them to work with tools, objects, animals, or machines, and they tend to avoid environments that require a good deal of social interaction. Investigative types prefer settings in which they can observe and systematically examine physical, biological, or cultural phenomena, and they tend to avoid environments that require a good deal of persuasive activities. Artistic types prefer ambiguous unstructured activities that allow them to create art from physical, verbal, or human materials, and they tend to avoid environments that require clerical and computational activities. Social types prefer working with others to teach, develop, or cure them, and they tend to avoid work with things such as machines. Enterprising types prefer persuasive and leadership roles, and they tend to avoid science. Conventional types enjoy the systematic examination of data, and they tend to dislike environments that require ambiguous unstructured activities.

According to Holland (1997) each personality type seeks out, and is attracted by, environments that offer the satisfaction of needs associated with that type. Investigative types, therefore, would be expected to seek out investigative environments, while social types would be expected to seek out social types of environments. Holland (1997) used the concept of “congruence” to denote the status

of person-environment interaction. A high degree of congruence between a person's personality and interest types and the dominant work environmental types is likely to result in vocational satisfaction and stability, and a low congruence is likely to result in vocational dissatisfaction and instability.

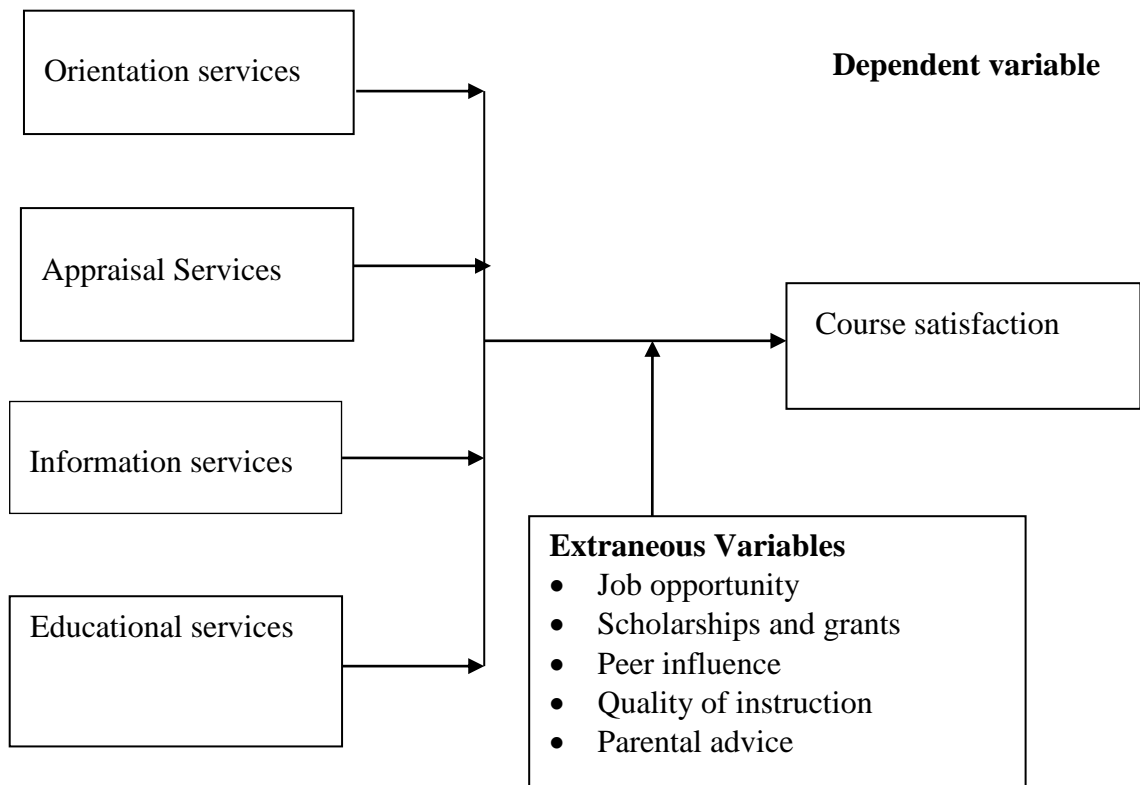
The implication of Holland's theory to the present study is that trainees realize course satisfaction when they make well-informed choices in line with their interests, capacities, and aspirations. A high degree of congruence between a trainee's qualities and the course of study will result in trainee course satisfaction. While a low degree of congruence between a trainee's qualities and course of study will result in dissatisfaction with the chosen course. Through career guidance, trainees are assisted to choose courses of study from a wide range of study programmes offered in the institutions congruent with their interest and ability. The personality types relevant to the study are realistic, social and enterprising. In TVET institutions, trainees with realistic personality types should be assisted through career guidance services to opt for courses that have practical orientation like Mechanical engineering, Electrical and Electronics engineering, Building and Civil engineering, Clothing and Textiles technology, and Food and Beverage technology. The social personality type of trainees who prefer working with others to teach, develop, and tend to avoid working with machines should opt for Social Work and Community Development courses that provides them with opportunities for educating, sensitizing, and helping people. While enterprising personalities who prefer persuasive and leadership roles should avoid engineering and science courses and choose management courses like Business Administration, Business Management and Human Resource Management.

1.11 Conceptual Framework

The Conceptual framework is a network of interlinked concepts that together provide comprehensive understanding of a phenomenon or phenomena. The concepts that constitute a conceptual framework support one another, articulate their respective phenomena, and establish a framework-specific philosophy (Jabareen, 2009). The conceptual framework for the present study is presented in Figure 1

Independent Variables

Career Guidance services



Source: Researcher, 2020

Figure 1: Relationship between career guidance services and trainees' course satisfaction

The conceptual framework shows that the independent variables, career guidance services provided in the form of orientation services, appraisal services, information service and education services are predictors of trainees' course satisfaction. Career

guidance assists trainee to know about congruence of one's view of self with course preference. Provision of orientation services to trainees introduce them to college services that support their educational and personal goals, and also assist them in gaining the knowledge, attitudes, and skills necessary for informed course choice that result in satisfaction. Appraisal services that involve collecting and analyzing individual's data make the trainee to understand him/herself better in terms of interest, strength, potential and weaknesses which influence course choice translating to course satisfaction. Information services equally influence trainees' course satisfaction, provide trainees with information on courses, careers, and employment that affect their course choice. Career guidance services should assist trainees in making informed decisions about course of study. Course satisfaction is more likely when trainees are assisted to choose courses of study that match their interest, ability, skills, and capability.

However, other factors also influence trainees' course satisfaction but they were not studied in the present study. These extraneous variables are job opportunity, scholarships and grants, peer influence, quality of instruction and parental advice. The independent variables interact in one direction to influence course satisfaction. The effects of the extraneous variables were controlled through randomization as a process of selecting the study respondents and through the process of validation of the data collection instruments.

1.12 Operational Definition of terms

The following terms have been defined as used in the study:

Appraisal services: In the study context, it refers to services meant to help trainees identify and clarify their interests, ability and values in line with their preferred course of study through assessment of student's performance.

Career: In the study context, it refers to a trainee's work expectation in training categories in line with courses offered in TVET institutions such as accounting, electrical engineering, mechanical engineering agriculture, institutional management or business studies.

Career guidance: In the study context, it refers to assistance given to trainees to help them make informed decision on course of study based on ability, interest, skills, and attitude from the many different courses offered in TVET institutions.

Career guidance services: In the study context, it refers to services provided to trainees in order to increase the quality of their potential and enable them make informed decisions on the choice of course to study in line with their interest, ability and values.

Counselor: In the study context, it refers to a trainer with skills of helping trainees deal with issues affecting them in the institution by creating a relationship with them.

Course satisfaction: As used in the study, it refers to the fulfillment trainees get from studying courses in line with their interest, ability and values.

Educational guidance: As used in this study, it refers to assistance given to trainees in their curriculum and co-curricular activities to enable them realize academic success.

Guidance: As used in this study, it refers to advice offered to trainees to assist them make informed decisions on academic matters such as choosing courses that provide them with satisfaction.

Information services: As used in this study, it refers to provision of accurate and current information on academic programmes, co-curricular activities and occupations.

Orientation services: As used in this study, it refers to services offered to trainees to equip them with knowledge on the college facilities, formal and co-curricular programmes to help them adjust to the college environment and choose courses of study that match their interest and abilities.

Technical Vocational Education and Training: As used in this study, it refers to skill-based training aimed at equipping trainees with skills in science, engineering and technology courses.

Trainee: As used in this study, it refers to an individual above 18 years of age enrolled in TVET institution to acquire either practical or theoretical skills under the guidance of instructors or trainers.

Vocational Guidance: As used in this study, it refers to the process of choosing a course of study that leads a trainee to the occupation of his/her choice.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents literature review of the study. The literature has been reviewed on the basis of the four objectives of the study; To establish the relationship between orientation services and course satisfaction among trainees in TVET institutions in Kenya; To determine the relationship between appraisal services and course satisfaction among trainees in TVET institutions in Kenya; To examine the relationship between information services and course satisfaction among trainees in TVET institutions in Kenya; and To find out the relationship between education services and course satisfaction among trainees in TVET institutions in Kenya. The research gaps from the reviewed literature have also been highlighted.

2.2 Orientation Services and Course Satisfaction among Trainees in TVET institutions

Orientation services help trainees adjust better to school environment and is key to students' success as it provides the student with information relevant to his/her stay in the institution. The programmes aim to not only introduce students to college life and the services available, but also to introduce them to other students and make them feel like they are part of the college community, which in turn helps to create a comfortable place for learning (Fitz, Wyeth, Tjondronegoro, & Johnson, 2014).

According to Sandoval-Lucero, Antony, and Hepworth (2017), orientation services promote successful transition to college for new students by offering first opportunity for the students to know about the college, and to create relationships that enhance student development, and completion. The identified goals of student orientation

programmes as reported by Atkinson (2015) are to help freshmen succeed academically, to assist students attain holistic adjustment by introducing them to campus life and the importance of active participation on campus, and to provide opportunities for faculty and staff to learn more about joining freshmen.

Sandoval-Lucero et al. (2017) in America investigated critical role played by student orientation services in students' transition to post-secondary learning environments. The study concluded that orientation services improves students' understanding, skills, and confidence perception. New students who went through orientation were retained at a higher rate than those who never took part in orientation and earned higher GPAs than the average student. High student retention implied that the students were satisfied with their programs. However, the current study was necessary to explicitly find out how the various components of career guidance services were related to trainees' course satisfaction.

In another study in the United States, Chin, Cohen and Hora (2018) conducted a mixed methods case study that investigated the experiences of undergraduate students with career services and decision-making processes at a school of business in a large university. Data was collected from 2500 registered undergraduate students by use of an online survey tool and focus group discussions. The study was based on the pivotal role played by College Career Service Centers (CCSC) in assisting students to be competitive in a rapidly changing global economy. The findings revealed that students relied more on socio-cultural resources than on institutional factors such as CSC programs and services to get career information. The results revealed that students were very satisfied with the CSC programs, tools and services that improved their

employability and were less satisfied with the CSC's integration of students' backgrounds and interests during advising.

Online surveys do not allow for explanation or clarification and may present the possibility of discouraging participants from responding. In the reviewed study, the online survey tool was shared with 2500 students with a return rate of 372 (14.8%). The current study bridged the gap in data collection instrument by having questionnaires and interview schedules administered by the research assistants and researcher respectively. The questionnaires were administered to 388 respondents with a return rate of 342 (88.1%). The high return rate could be attributed to the fact that the research assistants were able to provide clarifications accordingly.

Similarly, a study was conducted among students of public liberal arts in America by Bishop (2016) on relationship between retention and college counseling for high-risk trainees. The study cohort consisted of 180 male and 249 female students from incoming class of 2006. Students cited by the study as being at risk of dropping out of college were those with mental illness, those with poor social integration, and those from low socio-economic families. High school academic performance was cited in the study as the biggest determinant to college success. The reviewed study by Bishop (2016) suggested that college counseling had positive influence on college retention. The study only sampled one cohort of students from incoming class of 2006. Further, the study was undertaken in a small size institution. The current study included both institutions with small (1145) student population and those with large (8757) student population, and the sample sizes comprised trainees in first, second, and third years of their study.

In addition, importance of student orientation was reported by Rose (2016) who conducted a study among students of Delaware Technical Community College in the United States to create an Online New Students Orientation service (ONSO) that allows all students to participate in orientation programs and services. The pilot ONSO design, developed by the researcher, comprised of academic services, business services and computer services. Data was collected through administration of ONSO test and interview guide. ONSO uptake was reported to be low. However, the orientation was beneficial to students and assisted them with confidence in locating information on their own and also served as one of the first steps towards student retention and eventual completion. The reviewed study adopted a pilot ONSO design. The current study addressed the gap by using questionnaire and interview schedules that were first pretested to guarantee collection of more accurate and reliable data.

Affirmative findings were also reported by Atkinson (2015) among students at one Midwestern community college in America. The aim of the research was to investigate new student orientation and to identify improvements to support students' success on entry into the institution. The study reported that college students are often unsure about their choice of major or long-term goals and may be less likely to achieve their goals unless direct, intrusive support is offered. Therefore, the need for programs that provide students with support in navigating through the college transition process while attending to their individual needs was recommended. The former study adopted participatory action research method that is inherent to ambiguity according to Anderson and Herr (2005). Based on this, concurrent triangulation design which yielded more comprehensive findings was used in the current study.

Career orientations are important moderators in the relationship between job satisfaction and turnover as reported by Tschopp, Grote, and Gerber (2014) in a study conducted in Switzerland. According to the study, career orientation represents general values and attitudes such as advancement, mobility, and assistance towards possible career paths. The longitudinal data was collected through telephone interviews in the spring of 2007, 2008 and 2009 with 431 and 255 participants in the first and last phase of the research respectively. The study revealed that career orientation influences career intentions resulting in career choice and career path. The reviewed study by Tschopp, Grote, and Gerber (2014) adopted longitudinal design hence there was loss of participants from 431 in 2007 to 255 in 2009. However, the present study adopted concurrent triangulation design that took shorter period for data collection since both quantitative and qualitative data were collected at the same time. There was therefore no loss of participants.

Inconsistent findings were reported indicating that most students did not know about the existence of career counselling and orientation centers at Transilvania University of Brasov-Romania. Palade and Constantin (2012) undertook qualitative research to determine students' opinions on the process of personnel recruitment, the compatibility with a job and use of counselling and vocational orientation services. Individual semi-structured in-depth interviews were used to collect data on a sample of 17 students in economics and business administration. The study concluded that counselling and vocational orientation are necessary for the students' careers management as they offer opportunities and reliable services. In addition, the students agreed that the services were beneficial but they did not know about their existence. The researchers in the reviewed study reported that the sample of 17 students used in the study was not representative of the entire population of students. The current study

bridged the gap by having a representative sample of 388 (10%) from a population of 12807 students.

Another study by Crişan, Pavelea, and Ghimbuluţ (2015) on students' career guidance and career counseling programs at Babes-Bolyai University in Romania agreed with the findings by Palade and Constantin (2012). The study revealed that close to half of the students had not benefited from the services of career counselors on alternatives of programs offered. Students were not informed of the existence of career center, and they had no idea about the services offered. Since they were not provided with information about job opportunities, they lacked clear expectations for the future. The study participants in the reviewed study comprised of 60 first year students, 46 second year students and 14 third year students from the faculties of Political, Administrative and Communication Science only. The current study filled this gap by including all students enrolled in both engineering and business studies departments since the training curriculums are different. More than half of the engineering curriculum is practical based providing engineering students with a different experience.

Another indirectly related study was conducted by Tahir, Arshad, Khan and Basit (2018) to establish effects of career counseling and vocational guidance on employment in TVET sector in Pakistan. The study population comprised two thousand TVET graduates from 396 institutions who are already in employment. Findings revealed that TVET graduates did not benefit from counseling and most of them are employed without guidance from their institutions. Lack of career-related information exists among graduates contributing to lack of future direction and reduced performance. The study by Tahir et al. (2018) is relevant to the present study

since career guidance services offered to students while they are still in college is interlinked with employability of graduates.

The sample for the reviewed study comprised TVET graduates already in employment and are no longer receiving career counselling services from TVET institutions while the current study used a sample of trainees currently registered in TVET institutions and current beneficiaries of career guidance services.

Related findings were also reported by Atmarno, Yusuf and Akhyar (2020) from a study conducted in a high school in Sukoharji Rejency in Indonesia with a purposive sample of 416 students from two classes (XII and XI). The findings revealed that students' level of satisfaction with guidance and counseling services was low due to the fact that the counselors were unqualified and they provided poor services. The study concluded that guidance and counseling services have not helped students to develop their full potential. While the earlier study used purely descriptive statistics to analyze data, the current study used both inferential and descriptive statistics that allowed the researcher to make inferences on the parent population of study which the reviewed study did not do.

According to a study conducted by Bidyalakshmi (2016) in India, career guidance and counselling is adjustmental since it assists the students to make appropriate adjustment to situations in educational institutions and occupational fields. By implication, unless students are assisted through career guidance to overcome the challenges they encounter and be well adjusted they may fail to make informed decisions about the course of study and thus not achieve satisfaction. While the study was a descriptive survey the current study was a mixed method one that integrated

both quantitative and qualitative approaches to investigate the relationship between the study variables. Integration provided more confidence in the results and the conclusions drawn from the study (Mckim 2017).

Arhin and Wangeri (2018) in Ghana, conducted a correlational study that investigated the relationship between orientation programs and student retention in distance learning at the University of Cape Coast. The findings revealed that orientation programs play a key role in retaining students. Though retention implies students' satisfaction with study program, the reviewed study considered distance learning where students and teachers are separated by space. Experiences and challenges of students in distance learning are different from those in face-to-face academic programs. Therefore, the current study focused on trainees in TVET institutions who enter college after completion of primary or high school and attend classes on campus.

Similarly, in Ghana, Amoah, Kwofie and Agyeiwaa (2015) in their mixed method study sought to find out if the role of the school counsellor had influence on high school students' career choice. The target population was all 2328 final year students in Agona West Municipality. The study concluded that the school counsellor had influence on students' career choice through provision of appropriate career education and guidance. Although Amoah et al. (2015) adopted mixed methods approach like the current study, the study was conducted in high schools in Ghana. Cultural diversity may render the results not applicable to the Kenyan context particularly in Kakamega County. As a result, the current study was necessary among trainees in TVET institutions in Kenya.

In another study conducted in Nigeria, Bem-Bura (2015) reported the significance of library orientation services to students. The reviewed case study examined students' perception of library orientation programme in Benue State University. The library orientation programme is intended to expose fresh students to library information resources, and how to use the resources efficiently. The study reported that students benefited immensely from the library orientation programme in areas such as library rules, regulations, layout, facilities and opening as well as closing hours. The study recommended giving adequate time to library orientation programme. The study by Bem-Bura (2015) focused only on student's library orientation and did not look at other forms of orientation services. The current study looked at orientation services more comprehensively and how the services serve as predictors of course satisfaction among trainees in TVET institution.

Career guidance is an important strategy that aids students in making informed decision on college education. Malinda and Mandyata (2021) in Zambia explored the role played by career guidance in preparing secondary school pupils for tertiary education. Questionnaires were administered to career guidance teachers while the head teachers were interviewed by the researcher. Results of research by Malinda and Mandyata (2021) indicated that resources were available in the career guidance departments and the services help pupils to understand the disadvantages of anti-social behaviour in tertiary education though there were barriers that hindered effective provision of the services. The reviewed study concluded that career guidance contributes in the preparation of secondary school pupils for tertiary education.

Though the reviewed study by Malinda and Mandyata (2021) reported the significance of career guidance services in schools, it used purposive sampling which

is a non-probability sampling. The sample studied was, therefore, may not have been representative of the population. The current study used proportionate stratified and simple random sampling which yielded a more representative sample.

Kamenye, Iipinge, and Du Plessis (2016) explored and described the factors that contribute to change of course among student nurses at Welwitschia University in Namibia. The study population comprised 101 students undertaking Bachelor degree in Nursing Science who opted for different field of study before registering at the university. Interviews were administered to a sample of 55 student nurses. Some reasons for change of course included denial of admission into the preferred option, difficulty of course and preference to work in a hospital environment. The findings revealed that many students enrolled for a course just to keep themselves busy while some were forced by their families to study courses that they did not like. Further, some schools lacked career guidance programmes and those that did, started providing the services late to learners in the course of their study and this was reported as one of the reasons for change of course of study.

However, the study had some limitations, like utilizing only students undertaking nursing degree from one university. This limited representativeness of the study findings in the case of students undertaking different courses in different settings. The current study filled the gap by having a representative sample of students undertaking both engineering and business studies courses.

In the local context, Ali (2017) conducted a study that investigated stakeholder's perspectives on status of the orientation programme for first year students at the University of Dodoma (UDOM) in Tanzania. Ali (2017) found that many students

drop out of their studies because of inability to cope with life and activities at the university, many do not finish their programmes in time, and the few who survive do not attain the desired academic success as a result of ineffective orientation programme. The interviews and focus group discussions were conducted in Kiswahili and responses were translated into English language. The findings showed that the orientation programme offered at the university focused on social adjustment than academic performance. The study by Ali (2017) revealed that the current orientation programme at the university placed much focus on developing students' social behavior. Academic survival, on the other hand, was given less attention in the orientation programme.

The reviewed study involved language translation from Kiswahili to English which could have missed out some data collected by failing to produce the original response from participants as some words in Kiswahili could not have found their parallels in English. The present study addressed this gap by conducting both questionnaires and interviews exclusively in English with no translation.

Similarly, Kanga, Nyaga, Barchok and Ngari (2015) conducted a descriptive study that sought to find out whether guidance and counseling services played an effective role in improving students' adjustment to social environment in public boarding secondary schools in Kenya. The target population was 36,671 that comprised of 35,659 form 3 students, 506 form 3 class teachers and 506 teachers in charge of guidance and counselling from boarding secondary schools in Kitui, Nyeri and Nairobi counties. According to Kanga et al. (2015), guidance and counseling is effective in promoting student adjustment to school environment. The researchers reported that well adjusted students make independent decisions, are able to withstand

peer pressure and maintain better relationship between students and staff. The reviewed study by Kanga et al. (2015) was conducted with form three students in public boarding schools while the current study was conducted in tertiary TVET institutions with a population of higher age group students.

In addition, Oigo and Kaluyu, (2016) conducted a study in a private university in Kenya that sought to establish the influence of career guidance on students' readiness to make career choices. The findings revealed that career guidance services had little influence on students' readiness to make career choices. The study attributed this to not well established and ineffective career guidance that did not provide students with enough exposure about the career guidance services.

The reviewed study focused on students from a private university in Kenya. Private universities in most cases have the advantage of better facilities and favourable student-lecturer ratio. Majority of students in the private universities are from financially advantaged backgrounds. Thus findings from the reviewed study limited to private institutions may not be applicable to students in public colleges. The current study focused on trainees in public TVET institutions with diverse financial backgrounds.

2.3 Appraisal Services and Course Satisfaction among Trainees in TVET

Institutions

Appraisal is about collecting and analyzing data or information for clearer understanding of the individual. According to Gibson and Mitchelle (2014) appraisal services, also referred to as individual inventory or assessment, promotes client's self-understanding, and also aid helping professionals to understand clients better.

Kanyingi-Maina (2020) from a study conducted in Kenya reported that career assessment tests or surveys are tools used to help students in identification and clarification of their interests in line with possible programmes of study, courses and careers. Helping students define and realize their spheres of interests is a significant component of career guidance since each person has his or her talents and inclinations (Sabauri, 2017). The special skills and inclinations can be brought to light or better perceived by means of consultants or test procedures.

Research linking appraisal services and course satisfaction among students has been undertaken in learning institutions. Saxon and Morante (2014) conducted a study on effective entering student assessment and placement in the United States. The study expressed the need for quality and mandatory assessment, placement, and advising system to help students succeed in academics by matching them to relevant beginning courses and offering support to college academic standards. The researchers emphasized that the challenge of student placement for entering students is a significant one for post secondary institutions that require providing an integrated system encompassing every aspect of the college experience vital to the students' education. The study highlighted the weaknesses in the assessment and placement process which includes lack of prior information and preparation for assessment, failure to include other measures in student assessment, inappropriate use of test scores and imperfect assessment instruments.

Saxon and Morante (2014) reported that their study limited itself to previous articles from journals of developmental education and educational psychology in data collection. Use of secondary data has the risk of researcher bias and reliance on out of date material that might not have led to comprehensive study findings. Further,

secondary data provides less opportunity for error correction, if any. The current study addressed this gap by using primary data from interview schedules, and questionnaires that provided current information. The use of primary data provided the researcher with opportunity for error correction through pilot studies. Thus, the current study yielded more comprehensive study findings.

A study by Hilling (2017) in America was conducted with the aim of examining whether post-secondary planning group influenced the 11th grade students perceived preparedness for post-secondary plans. Study participants included ten 11th grade students who were categorized into two groups. Identical pre and post-test Likert scaled questionnaire was used to collect data. The two sets met for five weeks daily for 30 minutes in the counselor's office. The results from the intervention revealed that students perceived readiness for post secondary plans was increased by a post-secondary planning groups.

The reviewed study used a small sample size of 10 and was conducted in a developed country, United States. The small sample size could have increased the likelihood of type II error and hence the current study adopted a larger sample of 388 from a population of 12807 trainees in a developing country.

In a different locality, Cajucom, Campos and Mina (2019) conducted a descriptive research that appraised and analyzed how students make decision in choosing college courses among Management and Business Technology freshmen in a university in Argentina. The study by Cajucom, Campos and Mina (2019) reported that the students' influencers for their choice of course were personal choice (15%), parental advice (47.39%), inspiration from high school teacher (19.91%) and peers (17.54%).

The reviewed study relied only on questionnaire for data collection. The present study used both questionnaire and interviews to collect data which yielded more comprehensive data.

Mini, Christopher and Janetius (2020) carried out a longitudinal study with a sample of 460 college students, 265 parents, 140 teachers and 84 new employees working in textile industry to identify the magnitude of career-related confusion among college students in India. The findings revealed that there was no clear knowledge among students regarding aptitude and interest while selecting a specific course in college leading to career confusion in the final year. Educational institutions did not offer necessary psychometric testing and guidance services to help students realize course satisfaction. The reviewed literature employed convenience sampling which could have resulted in selection bias and a sample that was less representative of the population. The current study used stratified random sampling considered the least biased method of sampling to generate estimates of population parameters (Jawale, 2012).

A descriptive study was undertaken by Kaneez and Medha (2018) in Mauritius among 400 students to investigate effect of career choice among fourth year secondary students. The participants were in 10th grade and predominantly 14 years old. Data collected through the questionnaires was analyzed by use of Microsoft office 2010. The results revealed that over 50% of students did not benefit from career guidance services since they were unaware of their existence. Further, 39.63% of participants prefer being counseled by their friends, followed by their parents and teachers. The participants in the reviewed study by Kaneez and Medha (2018) were averagely 14

years old compared to participants in the current study who were in the 18 – 22 years age group.

Chireshe (2012) conducted a qualitative study at a South African university that investigated the role of career advisors. Findings from the study revealed that the career advisors play a critical role in helping students in decision making but the services they offered were not adequate due to lack of career counselling centers in the university, inability of career advisors to administer psychological tests, staff shortage, and lack of librarians involvement.

The reviewed study by Chereshe (2012) was qualitative in nature conducted in a university South with a sample size of three career advisors participating in the study. The use of few participants can be subjective and may limit generalization of the findings (Howitt & Cramer, 2011). The current study adopted concurrent triangulation design with larger sample size of 400 ensured that the sample was representative of the study population of findings was possible.

In Ghana, Asirifi (2016) conducted a cross-sectional study that investigated the effect of career guidance on career improvement of students and staff of Koforidua Polytechnic. The study population was 338 staff and 5126 students with corresponding sample size of 2500 students and 210 staff. The findings revealed the existence of an effective career guidance program and majority of students (1640) and 186 out of 208 staff admitted to visiting and patronizing the services. Further, majority (1120) of students chose their careers as a result of the counselling they had been offered and 172 (82.7%) staff respondents indicated that career counseling contributed to their choice of study programmes. The study found a positive

relationship between career guidance and career choice. The reviewed study was conducted in Koforidua Polytechnic in Ghana, a TVET institution, with similar programmes and courses as the TVET institutions in Kenya. The students enrolled in the polytechnic also possess similar characteristics in terms of age and gender. However, the study by Asirifi (2016) was conducted in one institution while the current study was undertaken in more than one TVET institution which resulted in more representative findings.

The appraisal services can reduce mismatch between course taken and an individual's talent or potential, and reduce wastage and stagnation. In assertion to the argument, Okoye and Okwelle (2013) in a study of complex mix of socio-political synergy on TVET in Nigeria gave a picture of an electrical/electronics graduate who cannot distinguish compartments of a simple transistor radio, and auto-mechanic graduate who cannot repair the transmission system of a motor car as a result of wrong course selection. When students enroll for courses they are not suited for the result is unemployable skills and wastage.

Takahashi (2016) conducted a study on Career Guidance in Rwanda and Kenya with a focus on Career Decision-Making Process. This study looked into 400 upper secondary students from Rwanda and 400 Form 2 students from Kenya respectively. The study revealed that career education still needed some improvement in Rwanda. In most schools, ordinary teachers were doing supplementary work as counselors though only few teachers gave career advice to students. The teachers admitted that neither did they know much about career choices, nor about the requirements necessary to attain these occupations. Most teachers admitted that their main interest was to ensure students passed the national exams and therefore they put more

emphasis on students' desire, encouraging them to make efforts for their preferred career paths, even though their choices were unrealistic. The study revealed that Rwanda needed more functional career guidance. The reviewed study was conducted in two countries: Rwanda and Kenya with a sample of 400 Form 2 or secondary 4 students from each of the two countries respectively. Interpretation of instructions from English to Kinyarwanda was necessary because of language barrier. The use of interpreter could have posed the risk of loose of direct meaning of responses. The current study used only English language with the data collection tools and therefore the risk of inaccurate responses was minimized.

In the Kenyan context, findings linking appraisal services and students' course satisfaction were reported. For example, the mixed methods study by Kemboi (2016) established the effect of personality types on undergraduate students' career choice of Moi University. Five schools, and a sample size of 399 participants were selected through multi-stage sampling. The findings established that students' career choice was affected by their personality types. Majority of students enrolled in the University studied courses that do not match their unique personalities. In addition, the study found that 73.2% were satisfied while 26.8% were not satisfied with the courses they were undertaking.

The study by Kemboi (2016) used multi stage sampling to select 399 first year students as the sample size. Although multi stage sampling saves time and money it introduces considerable degree of subjectivity and potential for bias. The current study used simple random sampling to minimize bias to ensure characteristic of the population (gender) is distributed proportionately in the sample.

In another indirectly related study, Obura and Ajowi (2012) investigated gender and students' perceptions on career aspirations on high schools in Kisumu Municipality through descriptive research. The study used purposive sample to select 8 public secondary schools, while stratified random sampling to select the participants from form four students. The results showed marked gender distinctions in certain student career aspirations, and that gender and gender stereotyping significantly influenced students' choice of courses

The reviewed study did not address appraisal services as predictor of course satisfaction among trainees. Some of the form four graduates stereotyped on courses transit to TVET institutions where both engineering and business courses are offered. Unless such students receive appraisal services they may end up selecting courses that do not match their ability, interest or aptitude, and thus fail to realize satisfaction and fulfillment from their courses of study. The current study, therefore, sought to establish whether career guidance services influenced trainees' course satisfaction in TVET institutions.

2.4 Education Services and Course Satisfaction among Trainees in TVET Institutions

Student achievement is important not only to students but to educational institutions as well, and is understood as satisfaction, academic improvement, satisfaction, obtaining of desired skills, competencies and knowledge persistence, and realization of educational goals (TeWierik (2015).

The study by TeWierik (2015) in Netherlands sought to find out the relationship between career guidance and student success in a university of applied sciences. The

study was in two parts: the first part was based on a data set containing 1317 records of full-time first-year students of entry cohort 2008, and the second part of the research was a cohort analysis of 7808 records. Findings revealed that career guidance contributed to students' persistence during their first year of study. Attainment of good grades in the first year enhanced academic success and degree completion.

The reviewed study involved only first year students from a Dutch university where learning and cultural environments are different from those in Kenya. Netherlands is a developed country that provides better training facilities. The rest of the students enrolled in the university did not participate in the research. Thus, the current study targeted all trainees enrolled in TVET institutions in Kakamega County in different years of study whether part-time or full-time.

A survey by Fitzenberger, Hillerich-Sigg and Sprietsma (2020) in Germany sought to find out the effect of career guidance activities on career plans of secondary school students. The reviewed study noted that career guidance helps students in making educational decisions through counseling and mentoring. The population of study comprised of students, parents and teachers. Data collection tools were questionnaire and interviews schedules. Findings revealed that there were distinct variations in uptake of career guidance services within schools and classes. Further, the findings suggested that provision of career guidance services can improve students' career planning. The reviewed study by Fitzenberger, Hillerich-Sigg and Sprietsma (2020) was conducted in Germany, a developed country. Students' educational experiences are different in a developed country due to exposure to better facilities and advanced technology. The current study was conducted in Kenya, a developing country.

Similar findings were also reported by Safargaliev, Zinurova, and Safargalieva (2020) from a survey to find out the effectiveness of career guidance in Russian. The survey involved all the 19 educational institutions and 552 school children aged 14 to 17 years. The study reported that where career guidance exists in Russian schools, it is mainly traditional in nature and is carried out in the form of scattered and haphazard events. Most students chose their professions with little information on all advantages and disadvantages of each profession. The findings revealed that inadequate career guidance provision contributed to school graduates poor understanding of the opportunities available to them, profession and labour market requirements. The reviewed study adopted descriptive survey design that limits free expression of respondents' opinion and feelings. The current study addressed this gap by adopting concurrent triangulation design.

In Turkey, Seren, Bacaksiz and Baykal (2017) conducted descriptive cross-sectional study on the career orientations of student nurses in two public and four privately owned universities in Istanbul. The study adopted a cross-sectional design with study population of the 3rd and 4th year students enrolled in the nursing programme. The findings revealed that students preferred nursing because of availability of jobs. Guidance was not provided to majority of the students enrolled in state universities throughout their education while those in privately owned universities were exposed to more of the services.

In the reviewed study by Seren (2017), 950 out of 961 students received questionnaires with a response rate of 53.2%. This response rate is considered inadequate based on recommendation by Creswell (2014) and, Oso and Onen (2009) a response rate of 60% is adequate, 70% is good and, 80% and above is excellent for

analysis and reporting in a survey study. Low response rate could have led to biased estimates. The current study realized excellent questionnaire return rate of 88.1% and hence a reduced likelihood of bias.

In a separate study in Portugal, Do Ceu and De Nazare (2014) examined the effectiveness of career self-management seminar designed to help undergraduate students from university and polytechnic settings prepare for next life career changes and goal attainment. Participants were 428 higher education students in Northwestern Portugal. The participants attended a seminar of nine weekly small group sessions of 120 minutes each. The results indicated that the seminar was beneficial in improving the career exploratory exploration and behaviours of the students. The reviewed study by Do Ceu and De Nazare (2014) adopted quasi-experimental design with non-random assignment which could have led to systematic biases. The current study addressed this gap by using concurrent triangulation design which minimized systematic biases in the study findings.

In addition, Mansor and Rashid (2013) conducted a quantitative study that utilized cross-sectional survey method to compare several factors on career indecision among students of one National Youth Training Institute (IKBN) in Malaysia. The population of study was 1600 students from which 310 were randomly sampled. The study found out that students at IKBN were not decided about their careers, there was no significant difference between both genders on career indecision, and no significant difference between levels of academic achievement on career indecision. The reviewed study by Mansor and Rashid (2013) was quantitative and therefore employed the use of numbers and accuracy but might have missed out on lived experiences and human perceptions. The findings from this study could have been

less comprehensive. The current study adopting mixed method approach where both quantitative and qualitative data was collected and analyzed for a better understanding of career guidance services as predictors of course satisfaction among trainees in TVET institutions.

In Iran, Shaterloo and Mohammadyari (2011) conducted an in depth investigation to establish the influence of guidance and counselling on enhancing the academic achievement of students. The study reported that effective counselling programs improve student achievement. Counselling services assist students in their academic life, increase interpersonal competencies and academic achievement. The study recommended provision of facilities such as counseling offices, magazines, audio and video tapes, inclusion of guidance and counselling in school timetables and budgets, and employment of trained counsellors in every school to strengthen guidance and counseling.

The study by Shaterloo and Mohammadyari (2011) limited itself to articles gathered from scholarly journals. Use of secondary data has the risk of researcher bias and reliance on out of date material that might not have led to comprehensive study findings. Further, secondary data provides less opportunity for error correction, if any. The current study addressed this gap by using primary data from interview schedules, and questionnaires that provided current information. The use of primary data provided the researcher with opportunity for error correction through pilot studies. Thus, the current study yielded more comprehensive study findings.

In India, Renuka Devi, Devaki, Madhavan, and Saikumar, (2013) explored the impact of college counselling experience on students' academic achievement. The study

sample was 54 students. Assessment was done to the student respondents to clearly understand their problems before they were subjected to individual counseling. The findings revealed that the counselling support offered to students created positive effect on their academic performance. The second part of the study revealed a significant correlation between counselling sessions and academic performance: The more counselling sessions attended the more improvement was realized in grades. The reviewed study by Renuka Devi et al. targeted only freshmen who because of their short stay at the college may not have provided a fair representation of the student population. The sample of the current study included all students enrolled in TVET institutions from first years to third years.

Sangma and Arulmani (2013) conducted a survey on career development orientations in a region occupied by scheduled tribes in India. The total number of schools were 256 with an average student enrolment of 40 per school. A total of 59 schools were sampled from 256. Socioeconomic Status Questionnaire (SESQ), Career Preparation Status Questionnaire (CPSQ) and Academic Achievement Motivation Test were adopted for data collection.

Findings from this study showed that high school students from the study location had negative attitude about career and low levels of academic motivation. The study recommended strengthening career guidance programmes in schools. The sample of study by Sangma and Arulmani (2013) was from scheduled or socially disadvantaged tribes in India. The socially disadvantaged tribes comprise low-income families and face discrimination. Students from such backgrounds do not have the privilege of attending well equipped learning institutions and, therefore, their learning experience may be inferior to that of socially advantaged students. The present study addressed

this gap by conducting the study in public TVET institutions with inclusive student enrolment from both advantaged and disadvantaged backgrounds. The current study therefore yielded more representative findings.

In the African context, Likisa (2018) sought to find out the contribution of career guidance in quality education in Harar and Woliso Technical and Vocational colleges in Ethiopia. The study adopted descriptive survey design that used random sampling to select 93 instructors and 190 third year students while guidance personnel were purposefully sampled. The study revealed that no assistance was offered to students regarding educational and vocational choices by setting realistic objectives in academic and career goals. Systematic career guidance programmes were lacking with scarcity of facilities for career guidance.

The reviewed study by Likisa (2018) relied on numerical data collected through questionnaires. Though quantitative data is concerned with numbers, the study missed out on human perception and beliefs. Therefore the study could have provided less comprehensive results. The current study employed mixed methods approach that used questionnaire and interview schedules to collect data. Both quantitative and qualitative data sets were analyzed separately and triangulated. This provided a more trustworthy picture of the relationship between study variables.

In yet another study in Ghana, Kemetse Nyarko-Sampson, Nkyi, and Nyarko, (2018) sought to find out the influence of the guidance services on students' academic success in senior high schools. Three hundred and seventy six students and 21 counsellors were selected to participate in the study using multistage sampling. Reduced absenteeism, improved study patterns, low number of dropouts, reduction in

academic failures and improved academic planning were reported as some of the benefits of guidance and counseling programme. The reviewed study used multistage sampling which is subjective and time consuming and could have compromised internal validity. The current study used both stratified proportionate and simple random sampling that gave more reliable and detailed information about the sample.

An earlier study in Ghana by Dabone, Graham and Fabea (2015) revealed that guidance and counseling positively affect students' academic achievements and should be provided to all students. The target population were Senior High school students in Dormaa Municipality while the study sample was drawn from second year students. Experimental design was adopted for the study. A one-month treatment process with twenty individual and group guidance and counseling sessions of thirty five minutes on the average was initiated. Although the findings from the study by Dabone et al. (2015) revealed positive effects of guidance and counseling on students' academic achievements, controlling and manipulating variables could have produced findings that are not consonance with real life situations. This study therefore adopted concurrent triangulation design with no manipulations to provide robust conclusion on career guidance services as predictors of trainees' course satisfaction.

Co-curricular activities is a critical component of education services. Through career guidance services students who have interest and talent in sporting activities are guided in choosing what will provide them with satisfaction. In a recent study, Hammond (2017) sought to find out the effect students' sports participation on their academic performance s of University of Education in Ghana. The quasi-experimental study participants were 250: 125 student-athletes and 125 non student-athletes. Findings revealed that sports participation had no influence on the academic

achievement of student. The reviewed study relied on a small sample size of 250 students which increased the likelihood of type II error hence the current study with a larger sample size of 400.

In their study, Orewere and Ojochogu (2020) investigated the effect of guidance and counselling services on career choice among 200 senior secondary school students in Nigeria. The results indicated that guidance and counselling services significantly affected students' career choice, and that limited or lack of the services contributed to wrong career decisions. The reviewed study used four-point Likert scale questionnaire which has a weakness of forcing respondents to go to one direction and could have distorted the findings by providing less reliable data. The current study addressed this gap by using five-point Likert scale questionnaire that allowed respondents who did not feel strongly one way or another to express their opinion such as "neutral" or "undecided", and provided more accurate data which yielded more reliable findings.

In Nigeria, Adeusi, Olujide, and Omotola, (2017) study explored the relationship between career guidance and counseling and students' motivation and educational outcome. The sample of 289 randomly drawn from first year students was used for the study. The findings revealed that students who had benefitted from guidance and counselling services were more adjusted and motivated towards school compared to those who had not benefitted from the services. Ex post facto design adopted by the reviewed study presents the difficulty of making inferences or interpretations which can be characterized as valid or reliable. The current study adopted concurrent triangulation design that used both interviews and questionnaire for data collection. Since the data collection instruments were examined for reliability and validity, the findings were more representative of the parent population.

A study by Atsuwe (2018) explained the influence of guidance and counselling programme on the academic performance of secondary school students in Nigeria. The study used a sample consisting of 196 students, ten teacher counsellors and ten head teachers selected through random sampling. The findings indicated a positive impact of guidance and counseling programmes on educational outcomes of students. Atsuwe's (2018) study only used questionnaires in data collection. Though quantitative data is concerned with numbers, the study missed out on human perception and beliefs. Therefore the study could have provided less comprehensive results. The current study employed mixed methods approach that used questionnaire and interview schedules for data collection. Both quantitative and qualitative data sets were analyzed separately and triangulated. This provided a more trustworthy picture of the relationship between career guidance and course satisfaction.

An earlier study in Nigeria by Ali (2014) reported significant influence in academic performance of students who had received guidance and counselling services in comparison to those who had not received the services. The survey was conducted in Kogi State University with a sample size of 500 drawn from a population of 20369 final year students. The results revealed that the provision of guidance services was low and students had negative attitudes toward guidance/counselling services. The study concluded that guidance services assists students overcome academic failure and attain success and good skills to enable them get lucrative jobs. However, the study population in the reviewed study by Ali (2014) was only from one learning institution, Kogi State University. This limited representativeness of the findings in the case of other learning institutions or universities. Against this background, the study population for the current study comprised of trainees from four institutions.

A separate study reported contradictory findings in Nigeria. Remie and Bethel-Eke (2020) used a descriptive study based on wrong career choices and students' academic performance. Simple random sampling was used to select 399 participants from a population of 66,164 secondary school students. The study sought to find out if wrong career choices influenced the choice of career and academic achievement of students in secondary schools. There was no significant influence of educational counselling services on students' career choice and academic achievement.

A mixed methods research conducted in Zimbabwe by Samanyanga and Ncube (2015) sought to investigate the provision of guidance and counselling services to students in Gwanda urban and peri-urban secondary schools for proper moral and career development. Both convenience and random sampling procedures were used in the choice of 8 senior teachers, 14 teachers and 4 school's heads as respondents. Data collection tools were questionnaires, interview schedules, observation guide and focus group discussion. The reviewed study by Samanyanga and Ncube (2015) concluded that the student support services were inadequate as the guidance and counselling teachers who were holders of general diplomas in education lacked professional training in counselling, and limited time was allocated to students for guidance and counselling lessons. Though the reviewed study employed mixed methods design like the current one, it targeted secondary schools. There was need to conduct a related study in technical training institutions to draw institutional differences on career guidance and course satisfaction.

Findings from a study conducted in Rwanda by Mporananayo (2015) established that provision of career guidance services to students improves their academic performance. The descriptive study was conducted in public health and medicine

college with a population of 13543 students and 215 staff members. Purposive and stratified random sampling were used as sampling techniques while data was collected through questionnaire. Although the reviewed study showed the relationship between career guidance services and students' academic performance, it relied solely on questionnaire for data collection. Quantitative data did not capture respondents' perception and beliefs and as a result could have provided less detailed picture of the relationship between the study variables. The current study filled this gap by adopting triangulation through use of questionnaires and interview schedules in data collection. The use of both quantitative and qualitative data enriched the study findings.

Ddumba (2019) conducted collaborative action research on improving career guidance and counselling practices in building construction at Nawanyago Technical Institute in Uganda. Eighteen students of building construction, 3 instructors and 3 administrators were purposively sampled. The study proposed strategies for improving guidance and counselling programmes which included conducting career talks, integration of career guidance and counselling during teaching, learning and in displaying general workshop rules and regulations in building workshop. The previous study was conducted in one institution and only one department within the institution. This limited representativeness of the findings in the case of students undertaking different courses. The current study included students taking all courses offered in TVET institutions in the sampled institutions.

Similar sentiments were reported by Kituyi (2014) that the services of guidance and counselling as practiced did not meet the required standards in academic performance. The descriptive study by Kituyi (2017) conducted in Kenya looked at guiding and counselling practice as applied in secondary school in relation to strategies towards

academic excellence. The study employed both random and purposive sampling to arrive at a sample size of 3282 which comprised of 40 Principals, 40 Deputy Principals, 40 Directors of Studies, 40 Guidance and Counseling Departmental heads, 102 form three class teachers and 3060 form three students. The reviewed study only considered secondary schools and specifically form three students. The current study filled this gap by using a sample from all students enrolled in TVET institutions in Kakamega county.

2.5 Information Services and Course Satisfaction among Trainees in TVET Institutions

Provision of career information is central among the career guidance services in relation to occupations, learning opportunities, employment, changing supply and demand (Akkok, 2015; Watts, & Unesco-Unevoc. 2013). The aim of information service is to assist the students with relevant and meaningful information to enable them make informed decisions on academic programme, occupation, or a social activity (Lunenbug 2010). According to Gladding (2014), limited information is a contributing factor to students' difficulties in making career decisions. Information services comprise different types of information such as student information, educational information and information on personal-social skill (Hossain & Faisal, 2013).

In the United States, Aley and Levine (2020) carried out a study on young adults vocational anticipatory socialization ("VAS") information to find out students' knowledge on their career paths. The population of study was from a large Midwestern university from which a sample of 254 students were selected. The participants completed a survey where they were required to indicate the names of

network contacts. The study concluded that the use of the participants' network provides new insight into the pursuit of career-related messages and gives understanding on how to create participants' network. Though the study participants were college students with average age of 20.33 years, the study was conducted in a developed country and therefore the experiences of students could not be directly applied to students in Kenya, a developing country. In addition, the study focused only on students from one university. The current study used trainees from four TVET institutions to examine career guidance services as predictors of course satisfaction among trainees in TVET institutions.

Usher, Kwong and Mentanko (2014) qualitative study investigated the efficacy of practices across Canadian Career Services Offices (CSOs) and how CSOs choose to prepare students for workforce at Canadian colleges and universities. A sample size of 35 informants was chosen from twenty-five universities based on their overall satisfaction score in the 2021 Canadian University Report issued by the *Globe and Mail*. The 25 institutions had a wide variety of outcomes: below-average, average and above-average levels of student satisfaction. Among the key informants were supervisors or Directors. Data was collected using in-depth telephone interviews.

The results revealed little evidence to suggest satisfaction was related to organizational structures or mandates, or even the size of the career service office. The study identified provision of job seeking skills and information on job opportunities as one of the habits of highly effective university CSOs. The study focused on the effectiveness of university CSOs but did not explicitly show how provision of job seeking skills and information on job opportunities was a predictor of trainees' course satisfaction which has been emphasized in the present study.

Shen, Fois, Nissen and Saini (2014) conducted a study in Australia whose objective was to establish career views of students and factors that contribute to their decision to study. The study population was final year students from 3 Australian universities. A sequential mixed methods approach was adopted where a quantitative cross-sectional survey was undertaken followed by a qualitative semi-structured interview. Findings revealed mixed responses from students on whether they were satisfied with their choice of pharmacy. Further, they cited different reasons that informed their decision to choose pharmacy. Important factors for studying pharmacy included opportunity to help patients, career growth and prospects of earning good salary. Students who opted to study pharmacy due to prospects of earning good salary exhibited more dissatisfaction with the choice compared to other students who based their decision on different reasons.

The reviewed study by Shen et al. (2014) adopted sequential mixed methods approach that took a long time since data was collected in two phases: initial phase of qualitative data collection and analysis followed by a phase of quantitative data collection and analysis. To fill this gap, the current study adopted concurrent triangulation design that took a shorter time because both qualitative and quantitative data were collected at the same time and analyzed separately but at the same time.

A study conducted in five senior schools in Parepare, Indonesia by Syakir, Mahmud and Achmad, (2016) in Indonesia advocated for integration of ICT in career counselling to assist students in decision-making and career aspirations. Testing was done twice: first testing involved 50 students and second testing involved 150 second grade students to establish if career service system known as LIK-ICT was beneficial to students in choosing their careers. The results portrayed that students who were

exposed to LIK-ICT exhibited better career decision-making skills than those who had no experience with the ICT information system. The former study focused on ICT-based career information and students' decision making and did not relate it to student course satisfaction. Therefore, the current study sought to find out career guidance services as predictors of course satisfaction among trainees in TVET institutions.

In yet another study in Indonesia, Arliani and Farozin (2020) conducted an experimental study to establish whether students were inspired by career service information to continue with higher education. The findings revealed that career information services assisted by interactive video and live modeling are effective in increasing the career understanding of students. Further, career planning is very effective if students are provided with career information that provide them with the latest information and in accordance with their need. The results indicated that provision of career information services significantly increased students' motivation to pursue higher education. Although the findings by Arliani and Farozin (2020) reveal the importance of information services for students' course satisfaction, it used purposive sampling which is a non-probability sampling. The sample studied was, therefore, less representative of the study population. The present study used proportionate stratified and simple random sampling which yielded a more representative sample.

In India, Gogoi and Das (2014) conducted a survey that explored the role of Career Counselling Cell (CCC) in learning institutions. The study sample comprising of the coordinators of Career Counselling Cell and 5th semester students was drawn from four out of 16 colleges. Structured questionnaires were administered through mobile

phones and emails. From the findings, only students from one college believed that their CCC was helpful with relevant equipment while students from the remaining three colleges were dissatisfied with their CCC. They reported that the sources of information in their colleges were inadequate. The main sources were periodicals, books, internet, newspapers and newspaper clippings. The reviewed study used online surveys which is a convenient and an inexpensive means of obtaining data. However, this method of collecting data is prone to communication problems consisting of wrong interpretation of certain items by respondents, errors in filling of tables, information distortion, and inadequate response to questions. threats of incomplete or limited online information, perception as junk mail, and respondent's lack of online experience or expertise resulting in low response rates (Evans & Mathur, 2005). In the current study, paper-and-pencil questionnaires were administered by the Research Assistants which provided opportunity for clarification of items. The data collected was therefore more accurate and comprehensive.

In yet another study in India, Sunilkumar (2018) conducted a research on students' and researchers' usage of career information resource center at University of Mysore. Questionnaires were used to collect data from a sample of 130 students and research scholars. The study reported the availability of career information resources needed for the students and research scholars in print, audio visual or electronic format. Majority of the respondents 43(46.24%) preferred print format, followed by 12(12.90%) respondent who preferred electronic version while 38(40.86%) preferred both print and electronic version of information resources. The quantitative data was presented in tables and analyzed by use of a simple statistical technique. The reviewed study was quantitative and lacked participants' feelings and experiences which may have been provided by qualitative data. This could have resulted in less

comprehensive findings. Therefore, the present study adopted mixed method approach to provide a comprehensive picture of career guidance services as predictors of course satisfaction among trainees in TVET.

Attaphut and Wongkungwan (2020) evaluated the satisfaction of students participating in the career guidance activities in Thailand. The motivation to conduct the study was the fact that lack of career information contributed to students' choice of professions not consistent with their goals or interest. A total of 400 participants were selected through quota sampling Suan Sunandha Rajabhat University according to faculties and colleges. The respondents were 95.75 percent students, and 4.25 percent general public. Data collected by use of questionnaires was subjected to descriptive statistics for analysis. The study emphasized necessity for career information services especially on job and employment opportunities since students are interested in working and increasing their income while studying. The reviewed study used quota sampling which is non probability technique and could not have ensured that the sample was representative of the population (Etikan & Bala 2017). The current study addressed this gap by using stratified proportionate and random sampling which reduced the potential for human bias in the selection of participants for the sample (Sharma 2017).

Uleanya, Uleanya, Naidoo, and Rugbeer (2020) investigated different methods of communication used to inform prospective students about career guidance services in two universities in South Africa. Quantitative method was used for the study. The reviewed study by Uleanya et al. (2020) reported that the students from Durban University of Technology were more aware of various available careers and had access to good career information while most of the student participants from

University of Zululand were not well-informed about available careers. Uleanya et al. (2020) study was quantitative and lacked participants' feelings and experiences which may have been provided by qualitative data. Hence, the current study adopted a mixed method approach that relied on the strengths of both qualitative and quantitative studies, whilst reducing their weaknesses for comprehensive results of the study (Halcomb & Hickman, 2015) of career guidance as predictors of course satisfaction among trainees in TVET.

In Cameroon, Bama and Borokonda (2019) conducted a descriptive study to establish the influence of career guidance on students' career choice. A five-point Likert scaled questionnaire was used to collect data which was analyzed using both descriptive and inferential statistics. The reviewed study reported that career information, career fairs and school career days positively influenced decisions that students make about their careers. While the reviewed study was a descriptive survey the current study was a mixed method research that integrated both quantitative and qualitative approaches resulting in more confidence in the results and the conclusions drawn from the study (Mckim 2017).

Findings similar to those of Bama and Borokonda (2019) had been reported by Abubakar (2017) in Nigeria which indicated that students' involvement in career guidance activities was low and there was no difference in participation pattern among genders. The study had a sample size of 387 secondary school students drawn from 21 randomly selected schools from three education zones in Kano metropolis. Participation trend depicted that students did not make full use of the activities to identify their value, skills and aptitude and they also failed to explore careers in line with their individual personalities. The participants in the reviewed study by

Abubakar (2017) were students only which could have resulted in less representative findings. The current study addressed the need to establish the views of Guidance and Counselling Coordinators, Registrars and Deputy Principals who were believed to have rich information on career guidance activities and students' course satisfaction by including them in the study.

Upoalkpajor (2020) carried out a study in Ghana on implication of career guidance on students' career choices. The study was a descriptive survey that used qualitative approach. Convenience sampling was used to select 13 students while purposive sampling was used to select 2 counsellors from the selected schools. The study reported that poor delivery of guidance services especially in the form of career information has led to incorrect career path decisions by students translating into absence of interest and dissatisfaction in selected fields. It emerged from the findings that with career information acquired, the students are able to match what they learned with their interests, capacities, aspirations.

The reviewed study employed qualitative approach which is not concerned with numerical representativeness, but with in-depth and illustrative information (Queirós, Faria, & Almeida, 2017). Therefore, the reviewed study could have provided less comprehensive results. The current study employed mixed methods approach that used both quantitative and qualitative data. The use of the two data sets provided a more trustworthy picture of the study variables.

Findings from a separate study in Ghana by Lawer (2015) revealed that career guidance programme was not given the necessary priority in colleges and the available sources of career information were inadequate. Thus, students did not reap

full benefits from the services since they only had some information about self, but had very limited knowledge on employment opportunities. The present study looked at career guidance services as predictors of course satisfaction among trainees in TVET institutions in Kakamega County.

Mabula (2012) compared career services provision between public and international schools in Tanzania. The results from the study showed that provision of career services was inadequate in public schools and students had minimal access to the services. Students' experience with career services was different in international schools where different programs were offered that provided the students with knowledge on career opportunities. The population of study was students in six secondary schools with a sample size of 322 students.

A study done in Tanzania by Onditi (2018) investigated the knowledge of young Tanzanian Kuria males on identifying careers, sources of career information and the influence of significant others on their choice of career. The sample size was 258 form four and form three Kuria male students selected from secondary schools in Tarime district. The study revealed available sources of career information as radio, newspaper, teachers, books, parents, television, relatives, friends, and computer-internet. Kuria males were well assisted in selection of opportunities in employment though they still preferred armed forces careers. The population of the reviewed study included only Kuria male students. There was need to establish the views of students from other ethnic groups on career guidance services from different ethnic groups. The current study filled this gap by undertaking the study in public TVET institutions with multi-ethnic trainee population.

Angelista (2018) conducted a survey in Tanzania with the aim of finding out impediments to the implementation of career guidance in secondary schools in relation to students' future employment options. The study attributed inadequate provision of career guidance to the fact that the teachers in charge of the programs lacked relevant professional training and could not competently offer the required services. Further, the teachers had limited knowledge about other professions and as a result provided minimal or no guidance completely to their students on what they wanted to be. Students selected the subjects to study without guidance and they ended up with wrong subject combinations or studying to become what they did not want to be. The students ended up studying courses they were dissatisfied with. The reviewed study was on career guidance and students job choices in secondary schools in Tanzania. The present study looked at career guidance and trainees' course satisfaction in TVET institutions in Kenya.

In Uganda, Kabunga (2020) conducted a causal-comparative study that investigated the association between career information and occupational choices among secondary schools in Mbarara district, Uganda. Eighteen schools were selected through simple random sampling. Kabunga (2020) asserted that strong knowledge and complete information play critical role in assisting learners to match their career choice with individual personality type, interests, abilities, desires, and values. The more information the learners receive the more they make the best choices concerning career choices. The reviewed study by Kabunga (2020) targeted form six learners. The current one filled the gap by targeting all trainees enrolled in TVET institutions in Kakamega County.

Findings confirming the relationship of career information and study programmes were also reported in the Kenyan context. For example, Kanyingi-Maina (2020) reported the relationship of career information and students' course selection. The study investigated the influence of career guidance programmes on change of study programme among first-year undergraduate students in Kenyan universities. The population of study was 68,545 first year undergraduate students with a sample size of 397 students from selected seven universities. Provision of career information assist students choose courses that give them satisfaction. The findings indicated that career guidance influenced change of programme of study among first-year undergraduate students. However, the population of the reviewed study by Kanyingi-Maina (2020) was only first-year undergraduate students in Kenyan universities. The current study included all students, from first to third year, enrolled in TVET institutions in Kakamega County.

Supportive findings suggesting that career information was related to choice of study program were reported in Kenya by Gacohi, Sindabi, and Chepchieng (2017). According to the reviewed study, information on careers involved provision of accurate and usable facts concerning careers, employment opportunities, nature and work conditions, salary and benefits. The study reported that career information positively influenced the choice of degree programme by students in public universities.

The reviewed study adopted ex post facto design that was useful in establishing the causal relationship between career information and students' choice of degree program. Ex post facto design presents the difficulty of making inferences or interpretations which can be characterized as valid or reliable. The current study

adopted concurrent triangulation design that used both interviews and questionnaire. Since the data collection instruments were examined for reliability and validity, the findings were more representative of the parent population.

In another study, Ombaba et al. (2014) in Kenya supported the provision of information services to students by highlighting that lack of it makes students become frustrated, dissatisfied and some are forced to change from initial careers as a result of under achievement. The researchers opined that different methods and activities including exhibitions should be employed in gathering and disseminating career information to students. The reviewed study by Ombaba et al. (2014) was descriptive cross-section survey. In surveys, data is self-reported. Respondents may fail to provide honest and accurate information about themselves. To address this weakness, the current study used concurrent triangulation where both quantitative and qualitative data were collected at the same time minimizing any limitation arising from the use of one data set.

2.6 Summary of Literature Review

Majority of the reviewed studies indicated a relationship between career guidance services and trainees' course satisfaction. Specifically, the reviewed studies revealed that students who benefit from career guidance services are likely to achieve course satisfaction. However, these services are not very adequate as most institutions do not have comprehensive orientation programmes, and in other institutions where orientation services are offered, little attention is given to academic programmes. On appraisal and students' course satisfaction, the reviewed studies reported that services are critical in helping students in identifying and clarifying their interest in relation to their programme of study but provision of the services are faced with challenges

including weaknesses in assessment, students' lack of knowledge regarding aptitude and interest, and counsellors' inability to use the tests. Education services influence students' course satisfaction and the need for strengthening the services in learning institutions was reported. The reviewed studies reported various forms of information services including electronic and print versions.

However, most of the reviewed studies were conducted among primary school, high school and university students while limited research was conducted on tertiary students, specifically TVET institutions. This necessitated the study among students in TVET institutions. In addition, the literature reviewed covered different regions with some studies undertaken in developed countries with varied economic, social and cultural settings in comparison to the experiences of students in the Kenyan context, particularly in Kakamega county. Some of the reviewed studies used online surveys, observation guides and focus group discussions only for data collection. Used alone, each of these tools have limitations and may not have yielded conclusive findings. Therefore, the researcher in the current study used questionnaires and interview schedules for more conclusive findings. While the current study concentrated on proportionate stratified and simple random sampling, some of the reviewed studies used non-probability sampling techniques such as convenience, purposive and quota sampling which are prone to biases resulting in less representative samples.

Further, some of the reviewed studies adopted longitudinal design that is prone to loss of participants, and experimental design that could have produced findings not reflective of real life situations due to manipulation. The researcher, therefore, embarked on the current study to fill these gaps by adopting concurrent triangulation design for more comprehensive findings.

CHAPTER THREE

RESEARCH METHODOLOGY

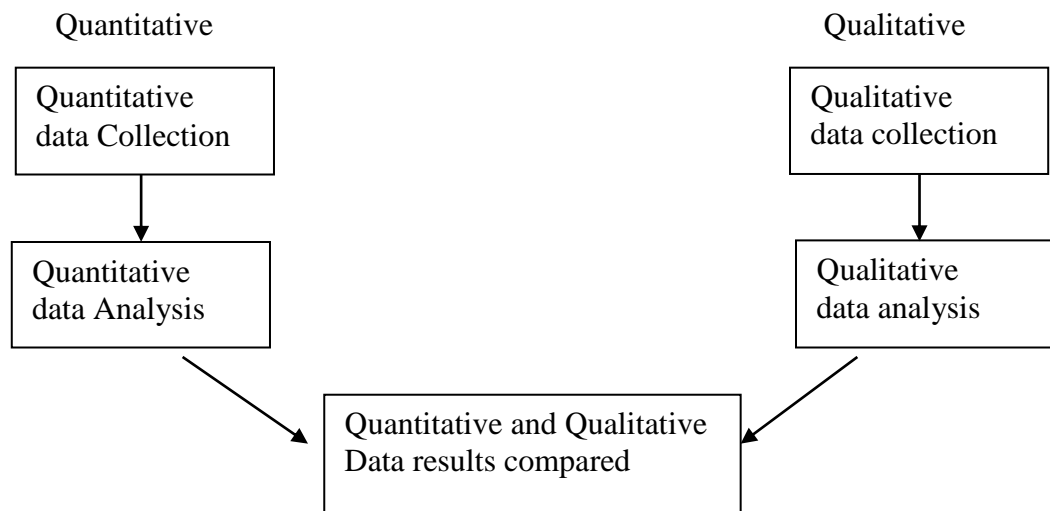
3.1 Introduction

This chapter described the methodology that was used to carry out the research. Research methodology is a way to systematically address the research problem. The chapter comprised research design, area of study, target population, sampling techniques and sample size, instruments for data collection, data collection procedures and data analysis.

3.2 Research Design

The study adopted concurrent triangulation design within the mixed methods approach. According to Creswell and Creswell (2017) in concurrent triangulation, both quantitative and qualitative data is collected concurrently and the two data bases are compared to determine if there is convergence, differences or some combination. The combination of qualitative and quantitative research provided a better understanding of career guidance services as predictors of trainees' course satisfaction (Bulsara, 2015) as the weakness of one method was overcome with the strengths of another (Gunasekare, 2015). Further, concurrent triangulation was less time consuming because both qualitative and quantitative data were collected at the same time. Quantitative approach employs use of numbers and accuracy (Rutberg & Bouikidis, 2018) and enables the researcher to establish how much of the attribute or characteristic is present (Oso & Onen 2011). Qualitative approach is concerned with aspects of reality that cannot be quantified with the objective of producing in-depth and illustrative information in order to understand the various dimensions of the problem under analysis (Queiros & Almeida, 2017).

Trainees' questionnaire elicited quantitative data while qualitative data was obtained from the interview schedule for Guidance and Counseling Coordinators, Registrars and Deputy Principals of TVET institutions in Kakamega County. Issues that quantitative method would not capture were compensated for by qualitative method and vice versa. The design enabled the researcher to collect and analyze both data at the same time of the study as shown in Figure 2



Source: Creswell & Creswell, 2017 p. 210

Figure 2: Concurrent Triangulation Design

3.3 Area of Study

The study was conducted in Kakamega County, Western Kenya. Kakamega County borders Vihiga County to the South, Siaya County to the West, Bungoma County to the North and Nandi County to the East. The 12 constituencies that constitute the County are Butere, Ikolomani, Khwisero, Likuyani, Lugari, Lurambi, Malava, Matungu, Mumias East, Navakholo and Shinyalu (Appendix G) with a population of 1,867,579 as at 2019. The national TVET institutions within the county are The Sigalagala National Polytechnic, Shamberere Technical Training Institute, Bushiangala Technical Training Institute, Butere Technical and Vocational College, Mumias West Technical and Vocational College, Wanga Technical and Vocational

College, Kongoni Technical and Vocational College and Navakholo Technical and Vocational College. Only 4 institutions were included in the study out of the 8 TVET institutions only 4 (Sigalagala National Polytechnic, Shamberere TTI, Bushiangala TTI and Butere TVC) were included in the study. The remaining 4 were left out since they had been in operation for less than two years and were not yet fully equipped in terms of infrastructure and trainers to offer the engineering courses. They still concentrated on the Business Studies courses. For instance, apart from the business courses Kongoni TVC only offered Building Construction as an engineering course while Mumias West TVC only offered Electrical Engineering course apart from the engineering courses. Further, the 4 institutions did not have Guidance and Counselling Coordinators. Data from 8 sampled TVET institutions in Kenya on trainees who changed from their initial course of study between 2016 to 2018 as shown in table 1 revealed that Shamberere TTI and Bushiangala TTI in Kakamega county had the highest average percentage of trainees who changed courses compared to other institutions from Coast, Uasin Gishu, Nyamira, Nairobi and Kisumu counties. This necessitated the choice of Kakamega county as the location for this study. Major economic activity in this county is farming, though a considerable number of the population is involved in juakali, bodaboda, brick making and mining among others.

3.4 Target Population

The study targeted a total of 12807 trainees from national TVET institutions; (8757 from Sigalagala National Polytechnic, 1489 from Shamberere Technical Training Institute, 1416 from Bushiangala Technical Training Institute, and 1146 from Butere Technical and Vocational College (Table 2), 4 Registrars, 4 Guidance and Counseling Coordinators, and 8 Deputy Principals from the four TVET institutions.

Table 2: *Study population from TVET institutions*

TVET institutions	Male	Female	Total
Bushiangala Technical Training Institute	859	557	1416
Sigalagala National Polytechnic	4480	4277	8757
Shamberere Technical Training Institute	918	571	1489
Butere Technical Training Institute	651	494	1145
Registrars	03	01	04
G & C Coordinators	02	02	04
Deputy Principals	04	-	04
Total	9617	5902	12819

Source: Ministry of Education, DTJET, Kakamega County, 2019 (Appendix A)

The total study population from the TVET institutions was 8757 from Sigalagala NP, 1489 from Shamberere TTI, 1416 from Bushiangala TTI and 1145 from Butere TVC. Enrolment of female trainees was portrayed as 5899 while male trainees' enrolment was 6908. Four registrars, 4 Guidance and Counselling Coordinators, and 8 Deputy Principals from the TVET institutions were also included in the study.

Registrars are in charge of all trainees' registration issues and therefore key as far as trainees' enrolment is concerned. Guidance and Counseling coordinators are critical to the present study as they help trainees with different issues including course choice. Wanga TVC, Kongoni TVC, Mumias West TVC and Navakholo TVC were not included in the study because they were new institutions and not well developed in terms of facilities and staff. They therefore did not attract trainees in a way

comparable to the older institutions. All the four institutions did not have guidance and counselling coordinators. The four institutions selected for the study are well established and have substantive guidance and counselling department.

3.5 Sample Size and Sampling Technique

A sample is a part of the population to represent the larger group from which they were selected (Creswell, 2014). The sample size for the trainee population was estimated by adapting a formula by Yamane (1967) for calculating sample size. Yamane's formula is appropriate for large populations, assuming a normal distribution with 95% confidence level, and was considered appropriate for determining an appropriate sample size for the trainees.

Using Yamane (1967) formula, the sample size was calculated as follows:

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

Where:

n = represents the sample size

N = represents the population size

e = represents the acceptable sampling error (the error of 5% points 0.05)

Using the formula, the trainee sample size was found to be 388.

Stratified proportionate sampling was used to determine the number of participants from each institution. This method was appropriate in producing a representative sample since the trainees' enrolment was different in each of the institutions

Proportionate Stratified Random Sampling Formula: $n_h = (N_h / N) * n$

n_h = Sample size for h^{th} stratum

N_h = Population size for h^{th} stratum

N = Size of entire population

n = Size of entire sample

Hence the trainee sample from each TVET institution was:

$$\text{Bushiangala TTI: } \frac{1416}{12807} \times 388 = 43$$

$$\text{Sigalagala NP: } \frac{8757}{12807} \times 388 = 265$$

$$\text{Shamberere TTI: } \frac{1489}{12807} \times 388 = 45$$

$$\text{Butere TVC: } \frac{1145}{12807} \times 388 = 35$$

$$\text{Total} = 388$$

Further, stratified proportionate sampling was used to get the number of participants required from each department within an institution based on the identified stratum (gender and study programme) based on Igwenagu (2016). In this case, each stratum sample size was directly proportional to the population size of the entire population of strata. Finally, simple random sampling was used to get the participants from each institution.

However, for the purposes of in-depth interview, the Registrar, Guidance and Counselling Coordinator and the Deputy Principal in charge of academics for each of the four TVET intuitions were selected for the study using purposive sampling method. Subsequently, the sample size consisted of 388 trainees, all the 4 Registrars, the 4 Guidance and Counselling Coordinators, and the 4 Deputy Principals in charge of academics. The 4 Registrars, 4 Guidance and Counselling Coordinators and 4 Deputy Principals in charge of academics were purposively sampled because they are

in-charge of trainees' registration, academic affairs, and their adjustment to the college environment respectively and thus possess required information on career guidance services as predictors of course satisfaction among trainees in TVET institutions. This is supported by Alvi (2016) and Andrade (2020) that the characteristics of a purposive sample are selected with predefined criteria of elements for inclusion in the study for a purpose that is relevant to the study. Table 3 shows the sampling frame used for the study.

Table 3: *Sampling Frame*

Respondents	Population	Sample	Percentage
Trainees	12807	388	3.0
Registrars	04	04	100
G & C Coordinators	04	04	100
D/Principals-Academics	04	04	100
Total	12819	400	

3.6 Data Collection Instruments

The current study used questionnaires and interview schedules for data collection. The questionnaire was used to collect data from trainees while data from Guidance and Counselling Coordinators, Registrars, and Deputy Principals in charge of academics was collected by use of interview schedules. Triangulation was the most appropriate method since the combination of multiple methodological practices, empirical materials, perspectives, and observers in a single study adds rigor, breadth complexity, richness, and depth to any inquiry (Denzin, 2012) as corroborated by Almalki (2016) that triangulation provides opportunities for convergence and corroboration of results that are derived from different research methods. By use of

two data collection instruments the current study obtained data in both text and numbers that was critical for deeper understanding of the relationship between career guidance services and trainees' course satisfaction.

3.6.1 Questionnaire for trainees

The Likert scaled questionnaire that was administered to 388 trainees was formulated according to the study objectives and contained items meant to elicit responses from trainees (Appendix B). Structured questions were used to get information by providing a list of alternatives for respondents to select answers that best described their opinions. The questionnaires were administered to the 388 trainees in their institutions by the two research assistants who were trained for four days for one hour daily on understanding the components of questionnaire constructs (career guidance and course satisfaction) and how to explain anonymity, ensure confidentiality, seek informed consent and explain what participants did not understand. The research assistants who were students undertaking their Masters programmes in the Department of Psychology and Educational Foundations were selected because of their interest and knowledge in the same field of psychology.

The questionnaire was divided into two sections. Section A had items focusing on respondent's Bio-data information while section B which consisted of five parts elicited responses on the study variables. Section B Part II collected data on orientation services (8 items); Part III collected data on appraisal services (10 items); Part IV collected data on education services (10 items); Part V collected data on information services (10 items); while part F collected data on course satisfaction (15 items).

The statements were rated on five-point Likert scale where the participants indicated whether they *Strongly Agree* (SA) with the statement with a score of 5, or *Agree* (A) with a score of 4, or *Undecided* (U) with a score of 3 or *Disagree* (D) with a score of 2 or *Strongly Disagree* (SD) with a score of 1. Likert scale is one of the most fundamental and frequently used psychometric tools to quantify the subjective preferential thinking, feeling and action in a validated and reliable manner (Joshi, Kale, Chandel & Pal, 2015). Further, Likert scales are reliable and have widespread popularity (Cohen, Swerdlik & Kumthekar, 2014). The respondents (388) were given consent forms to fill before the questionnaires were administered by the Research Assistants (Appendix F). Anonymity and confidentiality was achieved by assuring respondents that disclosure of name was optional (Appendices B and F). A pilot study was carried out on 39 (10% of 388) trainees from Kisiwa Technical Training Institute in the neighbouring Bungoma County which is also a public TVET institution.

3.6.2 Interview schedules

Interviewing is a qualitative tool which allows the researcher and the participant freedom to negotiate their own meanings and also allow the researcher to explore in depth interesting issues through conversations (Raburu, 2010). The present study employed semi-structured interview schedule to conduct in-depth interviewing on career guidance services and trainees' course satisfaction in TVET institutions. The interviews were administered by the researcher. According to Stangor (2014), interviews allow the researcher to develop a close rapport and sense of trust with the respondent which in turn may motivate the respondent to continue with the interview and may lead to more honest and open responding. This justified the use of interviews in the current study since unless motivated the respondents could not freely have given trainees' personal information. The researcher personally conducted the

interviews to develop rapport with the participants, easily engage with participants, make meaning from gestures and facial expressions and get firsthand information.

The current study interviewed 4 Guidance and Counseling Coordinators (Appendix C), 4 Registrars (Appendix D) and 4 Deputy Principals in charge of academics (Appendix E) from the sampled institutions. The responses were audio taped and transcribed verbatim for analysis to enable the researcher maintain the content of the interview. To ensure confidentiality each respondent was informed that participation in the interview was voluntary and they were given consent forms (Appendix F) to sign before the start of the interview indicating willingness or unwillingness to participate in the study (Appendices C – F) and anonymity was ensured using pseudonyms (Creswell, 2014): Guidance and Counseling Coordinators were coded GCC1 to GCC4, Registrars were coded R1 to R4 while Deputy Principals were coded DP1 to DP4. Each interview session conducted by the Researcher in the respondent's office lasted between forty-five minutes to one hour. According to Alshenqeeti (2014), an interview is expected to last at least one hour for the interviewer to unravel the investigated phenomenon.

3.6.2.1 Interview schedule for Guidance and Counseling Co-coordinators

The interview items solicited responses on the relationship between career guidance services, appraisal services, education service, information services, and trainees' course satisfaction. Respondent's opinion on trainees' problems at the institution was also asked for. Before conducting the interview, informed consent of the participants was sought. Each respondent was informed that participation in the interview was voluntary and they were given consent forms to fill and sign indicating willingness or unwillingness to participate in the study (Appendix F). Only participants who gave

consent participated in the study. The participants were assured of confidentiality by informing them that any information provided would not be divulged to a third party but would be used only for the purpose of the study (Appendix C) and anonymity was ensured by using pseudonyms (Creswell, 2014): Guidance and Counselling Coordinators were coded GCC1 to GCC4.

3.6.2.2 Interview schedule for Registrars

The interview schedule examining research objectives on the relationship of career guidance services and course satisfaction among trainees (Appendix D) was administered to 4 Registrars from the sampled institutions by the researcher with an aim of getting information on career guidance services as predictors of course satisfaction among trainees in TVET institutions.

Before conducting the interview, informed consent of the participants was sought. Each respondent was informed that participation in the interview was voluntary and they were given consent form to fill and sign indicating willingness or unwillingness to participate in the study (Appendix F). The participants were assured of confidentiality by informing them that any information provided would not be divulged to a third party but would be used only for the purpose of the study (Appendix D) and anonymity was ensured by using pseudonyms (Creswell, 2014): The Registrars were coded R1 to R4.

3.6.2.3 Interview Schedule for Deputy Principals

The interview schedule examining research objectives on the relationship of career guidance services and course satisfaction among trainees (Appendices E & F) was administered to 4 Deputy Principals in charge of academics from the sampled

institutions with an aim of getting their views on orientation services, appraisal services, education services, information services and trainees' course satisfaction. In addition, it also solicited their views on causes of poor performance, drop-outs, absenteeism and drunkenness among trainees. The responses were audio taped and transcribed verbatim.

Participants were given consent form to fill and sign indicating willingness or unwillingness to participate in the study before the interviews commenced (Appendix F). The participants were assured of confidentiality by informing them that any information provided would not be divulged to a third party but would be used only for the purpose of the study (Appendix E & F) and anonymity was ensured by using pseudonyms (Creswell, 2014). The Deputy Principals were coded DP1 to DP4.

3.7 Piloting

A pilot study was conducted to examine data collection instruments that were to be used in the main data collection. It was important that any tools of data collection was pre-tested in order to identify and correct any problems of overlap of categories, as suggested by Cohen et al. (2005). Hence, the reasons for the pilot study was to give the data collection a trial run under realistic conditions and to get as much information as possible from the study respondents about how they interpreted and reacted to the researcher's questions. Reliability and validity of the questionnaire were reported from the pilot data. The reliability coefficient of the questionnaire items was computed to yield figures above 0.784 and considered reliable.

A Likert scaled questionnaire, which was used in the final study, was used during pilot study to collect data from TVET trainees. A sample of 39 (10% of 388) TVET trainees and the Guidance and Counselling coordinator from Kisiwa Technical Training Institute in the neighbouring Bungoma County were piloted. The use of 10% is in line with the recommendation by Connelly (2008) and Lancaster (2015) that pilot sample should be 10% of the study sample. After getting permission to collect data from the institutions, the identified participants were given prior notice based on the dates and time suitable for them during the week.

The participants were first informed that they would participate in pilot study. The questionnaires were administered to the selected trainees at the agreed time after which the researcher confirmed the respondents' interpretation of the questions. Each participant was given between 15-20 minutes, and the time taken by each participant was noted. The pilot study assisted the researcher to know how to work out the procedures of the main data collection and looking at anything that needed to be modified or changed. It also helped to create new and important ideas to the tool of data collection.

The following points were initial concerns and issues the researcher noted during the pilot study.

- Some TVET trainees were reluctant to participate in the study, complaining of time and other commitments. The researcher had to arrange time within the programme of those who accepted. However, completely uncooperative trainees were excluded from the pilot study.

- Some respondents were unable to finish filling their questionnaires within the 15 minutes and were given extra time. Hence, it was noticed that time assigned to the respondents was shorter than it was expected; therefore, time limit was removed.
- The items in all the sub-scales were found to be easily comprehensible and most of the respondents found it easy to answer without any assistance by the researcher. Therefore, items were appropriate for use.
- However, there were four concerns raised by the respondents on the questionnaire. Some of the respondents thought the items in each subscale were too wordy. Others, complained of overlapping items found in the subscales. The researcher resolved to shorten the items and revise the overlapping items. Hence, the sentences were shortened, but without interfering with their meanings. In Part A, short courses lasting less than 6 months were not included under the level of courses undertaken, and also Institutional Management, Social Work, and Information Communication Technology (ICT) were not captured under type of programme of study. The researcher inserted the omissions before the final questionnaire was produced.

3.8 Reliability and Validity of Research Instruments

This section examined reliability and validity to the data collection instruments.

3.8.1 Reliability of the Instruments

Reliability according to Bryman (2012) is concerned with the question of whether the results of the study are repeatable. It refers mainly to stability, internal consistency and equivalence of a measure (Souza, Alexandre, & Guirardello, 2017).

To enhance reliability of the questionnaire, a pilot study was carried out to 39 (10%) trainees from the Kisiwa Technical Training Institute in the neighboring Bungoma County with similar characteristics while to pretest the interview schedule the instrument was administered to the Guidance and Counseling Coordinator in the same institution. Ten percent of the sample (39) was appropriate for pilot study because the number of cases in pretest is between 1% and 10% depending on the sample size (Mugenda & Mugenda 2003). Connelly (2008) also suggested that a pilot study sample should be 10% of the sample projected for the parent study. Cronbach Alpha was used to determine a reliability index. The SPSS computer software version 26 aided in working out the Cronbach Alpha value achieved. According to Oluwatayo (2012) a reliability index of at least 0.7 is considered ideal for the study. The researcher took note of time taken to respond to the questionnaires, checked on the clarity of the items, instructions and layout. Items that were ambiguous, too wordy or overlapping were revised accordingly.

Cronbach's alpha coefficient analysis was used to investigate the internal consistency of the measures since it is the most reliable test of inter-item consistency reliability for Likert scaled or rating scaled measures (Creswell & Plano, 2011). The reliability for multi-item opinion items were computed on an individual basis for each of the subscales in the questionnaires and the coefficient alpha of these variables were reported in Table 4.

Table 4: *Cronbach's Alpha Results for the Questionnaire*

Scale	No. Items	Cronbach's alpha (α)	Item (s) deleted	Conclusion (Reliable/Unreliable)
Orientation Services	8	.784	None	Reliable
Appraisal Services	10	.865	None	Reliable
Education Services	10	.869	None	Reliable
Information Services	10	.812	None	Reliable
Course Satisfaction	15	.842	None	Reliable

Source: Author (2021), SPSS Analysis

Table 4 reveals that all the measures reached the required level of internal consistency of reliability, with the Cronbach's alpha values ranging from the lowest of 0.784 (Orientation Services questionnaire) to the highest of 0.869 (Education Services questionnaire). The Cronbach's alpha for all the measures revealed that the instruments had adequate reliability for the study. Nachmias and Nachmias (2004), Oso and Onen (2009) and Creswell (2014) all agree that coefficient > 0.8 as excellent, coefficient between 0.7–0.8 as very reliable, coefficient between 0.6–0.7 as of acceptable reliability and coefficient $< .6$ as not acceptable reliability. In this regard, it was concluded that the instrument had sufficient inter-item consistency reliability.

3.8.2 Validity of the Instruments

Validity refers to judgment regarding how well a tool measures what it purports to measure. The judgment has important implications regarding appropriateness of inferences made (Cohen, Swerdlik, & Kumthekar, 2014).

Validity Analysis

The questionnaires were presented for expert advice to two supervisors in the Department of Psychology and Educational Foundations, Jaramogi Oginga Odinga

University of Science and Technology to ensure face, content and construct validity and their recommendations were considered before developing the final questionnaire. Internal validity of the constructs was tested by subjecting the survey data to suitability tests using the Kaiser-Meyer-Okin measure of sampling adequacy (KMO Index) and the Bartlett's Test of Sphericity, as explained by Gravetter and Wallnau (2000) and Li, Huang, and Feng, (2020). In this regard, the internal validity of the questionnaire's data set for analysis was assessed for each sub-scale and the results were summarized as in Table 5.

Table 5: *KMO and Bartlett's Test*

Sub-scale	Kaiser-Meyer-Oklin (KMO index)	Bartlett's Test for Sphericity		
		Approx. Chi-Square	Df	Sig.
Orientation Services	.755	685.163	28	.000
Appraisal Services	.875	1222.353	45	.000
Education Services	.904	1182.440	45	.000
Information Services	.796	1391.802	55	.000
Course Satisfaction	.885	2080.894	105	.000

Source: Survey data (2021), SPSS Analysis

The results of the Kaiser-Meyer-Oklin, which measures sampling adequacy (KMO Index), and the Bartlett's Test for Sphericity indicated that the measures for each sub-scale had adequate internal validity. The KMO statistics ranges from 0 to 1, where a value of 0 suggests that the sum of partial correlations is large relative to the sum correlations, indicating diffusion in the pattern of correlations. On the other hand, a value close to one suggests that the pattern of correlations are relatively compact, implying that the variables measure the latent constructs under the sub-scale. Field (2005) and Howell (2007) point out that the Kaiser-Meyer-Oklin measure of sampling adequacy values between 0.5 and 0.7 as acceptable, between 0.7 and 0.8 as good, between 0.8 and 0.9 as very good and values above 0.9 are excellent. From Table 5 all the KMO index values were above 0.7, implying that the data had good internal validity. Likewise, Field (2005) recommends that Bartlett's Sphericity test statistic

should be less than 0.05 for an adequate internal validity. From the results, Bartlett's test for Sphericity are highly significant ($p < .05$) for all the sub-scales of the questionnaire. This further substantiates that the questionnaires were of adequate internal validity.

3.8.3 Trustworthiness of Qualitative Data

Trustworthiness of qualitative data is considered as an influential criterion of the quality of social research (Chowdhury, 2015). It is the standard of rigor in conducting qualitative research and is considered the extent to which the reader can trust that the results and interpretations are grounded in the data (Merriam, 2009). To ensure trustworthiness of qualitative data, the current study adopted the four criteria proposed by Lincoln and Guba (1985) which are credibility, transferability, dependability and confirmability and employed different strategies as reported in Table 6.

Table 6: *Lincoln and Guba's Four Criteria for Trustworthiness*

Quality Criterion	Strategies employed by Researcher to ensure trustworthiness of qualitative data
Credibility	Random sampling of informants Researcher having prolonged engagement at the site Debriefing of interviewees Having satisfactory cultural familiarity of participants and institutions involved Triangulation through the use of different methods, different types of informants and different sites
Transferability	Provision of background data to establish context of study and description of phenomenon under study that will allow comparisons to be made.
Conformability	Keeping an accurate, comprehensive record of the approaches and activities to be employed in the study In-depth methodological description to allow integrity of research results to be scrutinized
Dependability	Employment of overlapping methods.

Source: Lincoln and Guba, (1985)

3.9 Data Collection Procedures

The researcher obtained research authorization permit from National Commission for Science, Technology and Innovation (Appendix J) through the Board of Post Graduate Studies of JOOUST. The Researcher and two Research Assistants then visited the sampled institutions for introductory meeting with the Guidance and Counseling Coordinators, Registrars and Deputy Principals explaining the research purpose and requesting their consent to participate in the study. Establishing rapport with participants prior to the interview was important to create a positive effect on the subsequent development of the interview (Gill, Stewart, Treasure & Chadwick, 2008).

At agreed dates the questionnaires to the sampled student respondents were administered by the Research Assistants. The interviews were conducted by the Researcher in the participants' offices within the institutions.

3.10 Data Analysis

Data analysis is the use of statistical techniques to the collected data to reduce the large collection of information gathered to enable interpretation (Bryman, 2012). Data analysis was done in two ways as described below.

3.10.1 Quantitative Data Analysis

Quantitative data obtained from the closed ended items were analyzed using descriptive statistical tools such as frequency tables and percentages. Pearson correlation coefficient was used to establish relationship between variables at a significance level of 0.05 while regression analysis was used to determine the degree of influence of independent variable on the dependent variable. Statistical Package for

Social Sciences version 26 was used to analyze the data. Table 7 indicates how the quantitative data was analyzed.

Table 7: *Quantitative Data Analysis Matrix*

Research objectives	Independent Variable	Dependent Variable	Statistical Tests
To establish the relationship between orientation services and course satisfaction among trainees in TVET institutions in Kenya	Orientation services	Course satisfaction	Frequencies and Percentages Pearson Correlation Regression Analysis
To determine the relationship between appraisal services and course satisfaction among trainees in TVET institutions in Kenya	Appraisal services	Course satisfaction	Frequencies and Percentages Pearson Correlation Regression Analysis
To find out the relationship between education services and course satisfaction among trainees in TVET institutions in Kenya	Education services	Course satisfaction	Frequencies and Percentages Pearson Correlation Regression Analysis
To examine the relationship between information services and course satisfaction among trainees in TVET institutions in Kenya	Information services	Course satisfaction	Frequencies and Percentages Pearson Correlation Regression Analysis

Source; Researcher (2020)

Diagnostic Tests

The study used trainees' data for inferential statistics. Hence, it was diagnosed to ascertain its suitability for multiple regression analysis. This was done through testing the assumptions of normality, multi-collinearity, independency, heteroscedasticity and homoscedasticity.

Test of Normality of Data

Normality assumption, which must be met before parametric test is conducted, is that the residuals should be normally distributed about the predicted dependent variable scores. In line with the advice of Gravetter and Wallnau (2000), the study employed the use of Skewness, Kurtosis and Shapiro-Wilk's test (S-W) to interpret the normality assumptions of the variables. Shapiro-Wilk's test is analogous to the correlation between a given data and its corresponding normal scores, with $S-W = 1$ when their correlation is perfectly normal (Shapiro & Wilk, 1965; Field, 2005). This implies that a significantly ($p < .05$) smaller S-W than 1 implies that the normality is not met and normality condition is met when S-W is greater than .05. Razali and Wah (2011) commend the use of Shapiro-Wilk's test for small and medium samples up to $n = 2000$. Table 8 is SPSS output showing Skewness, Kurtosis and Shapiro-Wilk tests results.

Table 8: *Tests of Normality of the Data Set*

Variable	Skewness		Kurtosis		Shapiro-Wilk		
	Value	SE	Value	SE	Statistic	Df	Sig.
Orientation Services	-0.340	0.132	0.317	0.263	0.929	342	0.049
Appraisal Services	-0.160	0.132	0.287	0.263	0.933	342	0.066
Education Services	-0.451	0.132	0.278	0.263	0.921	342	0.037
Information Services	-0.131	0.132	0.130	0.263	0.989	342	0.215
Course Satisfaction	-0.238	0.132	0.233	0.263	0.949	342	0.101

Source: Survey data (2021), SPSS Analysis

A Shapiro-Wilk's test ($p > .05$) and a visual inspection of their histograms, normal Q-Q plots and box plots showed that all the variables were approximately normally

distributed, except in orientation services and education services data. However, full normality of data in these two variables were achieved by a transformation using Logarithmic (Log 10), $NEW X = LG10 (K - X)$, to remove skewness that were observed in the original data before it was used in the inferential statistics, as suggested by Tabachnick and Fidell (2007) and Howell(2007). It is evident that all the other variables followed normal distribution given that there were no statistical significant differences (sig. < 0.05) noted in any of them with their corresponding normal scores, that is their sig. values were greater than the prior set value of .05. In addition, when Skewness and Kurtosis were each divided by their respective standard errors, values within the range of -1.96 and 1.96 were established, suggesting normality of the data, as explained by Tabachnick and Fidell (2007).

Assumptions of Multi-Collinearity and Singularity

Multi-collinearity and singularity refer to the relationship between the independent variables. Multi-Collinearity exists when the independent variables are highly correlated, that is, where there is a predictor variable in the multiple regression model that could be linearly predicted from the other variables with a substantial degree of accuracy. As a rule of the thumb, Gravetter and Wallnau (2000) insist that multi-collinearity is violated when $r = .9$ and above. This implies that there is unreasonably high level of inter-correlation among the independent variables in a study, such that the effects of the independent variables on the dependent variable cannot be separated from each other. Singularity occurs when one independent variable is actually a combination of the other independent variables. Both singularity and multi-collinearity do not contribute to a good regression model. Although, correlation matrix is sometimes used to investigate the pattern of inter-correlation among the variables, its use is not adequate. Hence, this study investigated multi-collinearity

assumption by examining tolerance and the Variance Inflation Factor (VIF). Table 9 shows SPSS output indicating tolerance and Variance Inflation Factors.

Table 9: *Tolerance and Variance Inflation Factor (VIF) Statistics*

Model	Collinearity Statistics	
	Tolerance	VIF
Orientation Services	0.633	1.580
Appraisal Services	0.554	1.805
Education Services	0.472	2.118
Information Services	0.714	1.400

a. Dependent Variable: Course Satisfaction

Source: Survey data (2021), SPSS Analysis

Tolerance is an indicator of how much of the variability of the specified independent variable is not explained by the other independent variables in the model and is calculated using the formula $1-R^2$ for each variable, while VIF is its reciprocal. A small tolerance value implies that the variable under consideration is nearly a perfect linear combination of other independent variables already in the equation and that it should not be added to the regression equation because its contribution to the model is insignificant (Cohen & Cohen, 1983). In the argument of both Tabachnick and Fidell (2001) and Yoo, et al., (2014), a variable whose tolerance values are less than 0.10 and VIF value greater than 10 may need to be investigated. However, from Table 9, it is evident that multi-collinearity nor singularity was not a concern in all the measures (Orientation Services *Tolerance*=.633, *VIF*=1.580; Appraisal Services *Tolerance*=.554, *VIF*=1.805; Education Services, *Tolerance*=.472, *VIF*=2.118 and Information Services, *Tolerance*=.714, *VIF*=1.400) indicating that there were no violation of the assumption of multi-collinearity which is a requirement for multiple regression analysis.

Test for Independence of Observations

This assumption is that the observations in the sample are independent from each other, meaning that the measurements for each sample subject are in no way influenced by or related to the measurements of other subjects. As suggested by Fox (1991), the Durban-Watson test was used to check if the assumptions of regression that the observations are independent were met. Test independence was necessary to ensure that the results from the study sample reflect what would be found in the entire population of trainees in TVET institution in Kakamega county with regard to influence of career guidance services on course satisfaction. To see if the residual terms are uncorrelated the Model Summary Table 10 shows the Durban-Watson value.

Table 10: *Test of Independence: Model Summary*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.627 ^a	0.393	0.386	0.48624	1.962

a. Predictors: (Constant), Information Services, Orientation Services, Appraisal Services, Education Services

b. Dependent Variable: Course Satisfaction

Source: Survey data (2021), SPSS Analysis

Thomson (2000), and Keppel and Zedeck (1989) were in agreement that although Durban-Watson values can be anywhere between 0 and 4, but acceptable value in order to meet the assumption of independent errors should be close to 2. As a rule of the thumb, Tabachnick, Fidell, and Ullman (2007) assert that if the Durban-Watson value is less than 1 or above 3 then it is considered as being significantly different from 2, thus not meeting the assumption. In this regard, the data met the assumption of independent errors (*Durban-Watson value* = 1.962), as it is between 1.5 and 2.5.

This implies that the data was not auto-correlated, indicating that the assumption of independence was not violated.

Heteroscedasticity and Homoscedasticity

The study also investigated the assumption of heteroscedasticity, which describes a situation in which the error term is the same across all values of the independent variables. Gravetter and Wallnau (2000) affirm that if a model is well-fitted, then there should be no pattern to the residuals plotted against the fitted values. This was shown using graphical method by fitting residuals versus fitted (predicted) values, as shown in Figure 3.

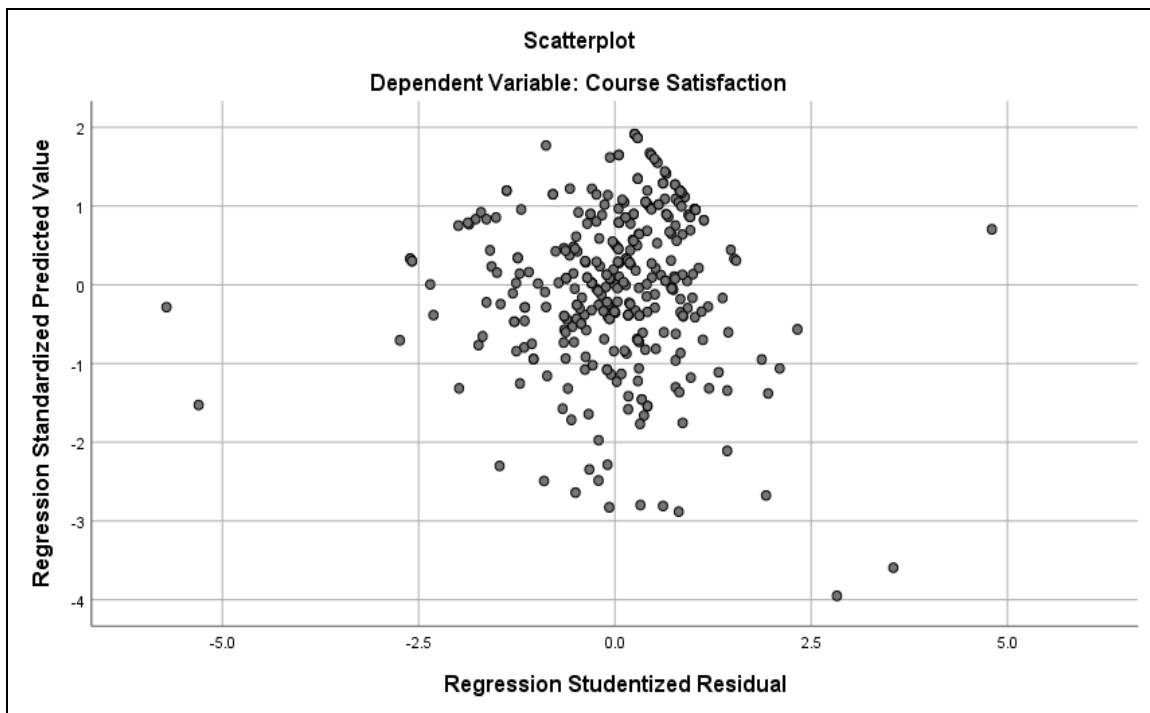


Figure 3 Scatter-plot of standardized residuals against standardized predicted values.

Source: Survey data (2020), SPSS Analysis

Heteroscedasticity is implied when the scatter is not even and have no definite patterns. Figure 3 shows that the data points formed nearly a patternless cloud of dots.

The scatter-plot has no evident pattern, the points seem to be equally distributed above and below zero on the X axis, and to the left and right of zero on the Y axis, suggesting lack of pure heteroscedasticity. Therefore, the assumption of homoscedasticity, which refers to equal variance of errors across all levels of the independent variables was not violated. This means that the assumption that errors were spread out consistently between the variables, indicating that the variance around the regression line was the same for all values of the predictor variables was upheld. This implies that the regression model used in this study is homoscedasticity across all values of the predicted value of the dependent variable, suggesting that the model's ability to predict a student course satisfaction is consistent across all values of career guidance services measure.

3.10.2 Qualitative Data Analysis

Qualitative data collected from interviews from Registrars, Guidance and Counseling Coordinators, and Deputy Principals of TVET institutions in Kakamega County was analyzed using thematic approach according to Braun and Clarke (2006). Alhojailan (2012) stated that thematic analysis is used to analyze classifications and present themes (patterns) that relate to the data in great detail and deals with diverse subjects through interpretations. Table 11 below shows the 6 phases of thematic analysis by Braun and Clarke (2006):

Table 11: *Phases of Thematic Analysis*

No.	Phase	Process
1	Familiarizing yourself with data	Reading and re-reading textual data, listening to audio recordings or watching video data and making notes
2	Generating initial codes	Coding identified patterns and meanings of basic raw data that can be interpreted in a meaningful way regarding the phenomenon
3	Searching for themes	Collapsing or clustering codes that seem to share some unifying feature into themes, and drawing thematic maps or table outlining candidate themes.
4	Reviewing potential themes	Checking themes against the collated extracts of data (Level 1), reviewing the themes in relation to the entire data set (Level 2), and generating a thematic map of analysis
6	Producing the Report	Final analysis with convincing and clear yet complex extracts with themes that connect logically and meaningfully without repetition.

Extracted from Braun and Clarke, (2006, p. 60-69)

The study used 5 phases of thematic analysis that included verbatim transcription of the recorded interviews. Initial codes were generated and transcribed texts collapsed into primary themes and sub- themes, and thematic relationship and identified patterns were described. The codes were evaluated according to research objectives, theoretical framework and the reviewed literature in a meaningful way regarding career guidance services as predictors of course satisfaction among trainees in TVET institutions. In the process the raw data was connected to the quantitative data phase.

A Sample of themes, codes and interview excerpts is presented in the Table12 below.

Table 12: *Sample of themes, codes and interview excerpts*

Interview excerpts	Codes	Themes
<i>“We have departmental orientation for own students with members of that department and chaired by the HOD. At G & C, there is vocational counselling-guiding new trainees how to choose their courses appropriately. They are given 2 weeks to think through the courses they’d wish to take and encouraged to take those that they have a high aptitude for; those they desire to do; have a potential for” (GCC 2)</i>	GONS	General orientation of new students
<i>“There are appraisal services at admission or registration of new students - there is a part in admission form where the new trainees indicate their hobbies and it stops at that. Even during co-curricular events, sports/games are done for competitions with other institutions, not because a trainee loves the sport, but because it in the calendar of events” (GCC 4)</i>	ADA	Appraisal during admissions
<i>“The education services help the trainees to get experience and confidence. The education Services help the trainees to achieve course satisfaction as they are placed in the right level of the course by looking at their qualifications” DP 3)</i>	AT	Academic training
<i>“We have information that is provided to the students regarding the course requirements and this give detailed information to the trainees on what they should expect in each course. This has helped the trainees so that they can settle well in their courses” (GCC 3)</i>	CRI	Course Requirements Information

Source: Researcher, 2021

Table 12 shows example of the use of thematic analysis in the current study that included verbatim transcription of recorded interview, codes generated (GONS, ADA, AT, and CRI), and the themes that emerged from the transcribed texts

3.11 Ethical Considerations

Protection of participants' privacy and assurance of confidentiality are critical in research according to Creswell (2008). According to Orb (2001), any kind of research should be guided by the principles of respect for people, beneficence, and justice and respect for people is the recognition of participants' rights, including the right to be informed about the study, the right of free participation in the study, and the right to withdraw from the study at any time without penalty. On confidentiality, the participants were assured that participation was voluntary and the information provided would not be divulged to a third party. Further, participants were assured that the findings were to be presented in ways which would ensure individuals could not be identified and the information provided would only be used for the specific purposes of the study (Appendix B).

Anonymity was achieved through use of pseudonyms to hide real identities where Guidance and Counseling Coordinators were coded as GCC1 to GCC4, Registrars as R1 to R4, Deputy Principals as DP1 to DP4. It was also clearly stated to respondents in the questionnaire that disclosure of name was optional (See Appendix F). Before the data collection exercise the respondents were briefed fully and meaningfully on the nature and purpose of the study and how the findings were to be used, after which their freely volunteered informed consent was sought. Informed consent implies that the consent to participate in research is given after learning about the study, including

possible risks and benefits (Taylor, Peplau & Sears, 2012). The data was stored in a locked cabinet in the researcher's office to be destroyed two years after graduation.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the findings and interpretation of the study as indicated in the research methodology. The chapter starts with discussion on the dependent variable, course satisfaction, to give understanding of what is being measured. It is sub-divided into sections and subsections. The research findings are presented on the basis of the study objectives and hypotheses. The data was analyzed using both descriptive and inferential statistics. Descriptive statistics yielded frequencies, percentages, means and standard deviations while inferential statistics aided in making inferences and drawing conclusions. Pearson Product-Moment Correlation and Regression analysis were used to investigate the relationship between the variables. All tests of significance were computed at $\alpha = 0.05$. The Statistical Package for Social Sciences (SPSS) version 26.0 aided in data analysis.

4.2 Questionnaire Return Rate

Table 13 which shows the summary of return rate of questionnaires from the respondents, reveals that the questionnaires were adequate for the study.

Table 13: *Questionnaire Return Rate*

Respondents	Questionnaires administered	Questionnaires returned	Return rate (%)
Trainees	388	342	88.1

Source: Survey data (2021)

The study sampled a total of 388 trainees from national TVET institutions in Kakamega County to whom the questionnaires were administered. From 388 questionnaires, a total of 342 were returned, translating to an overall response rate of

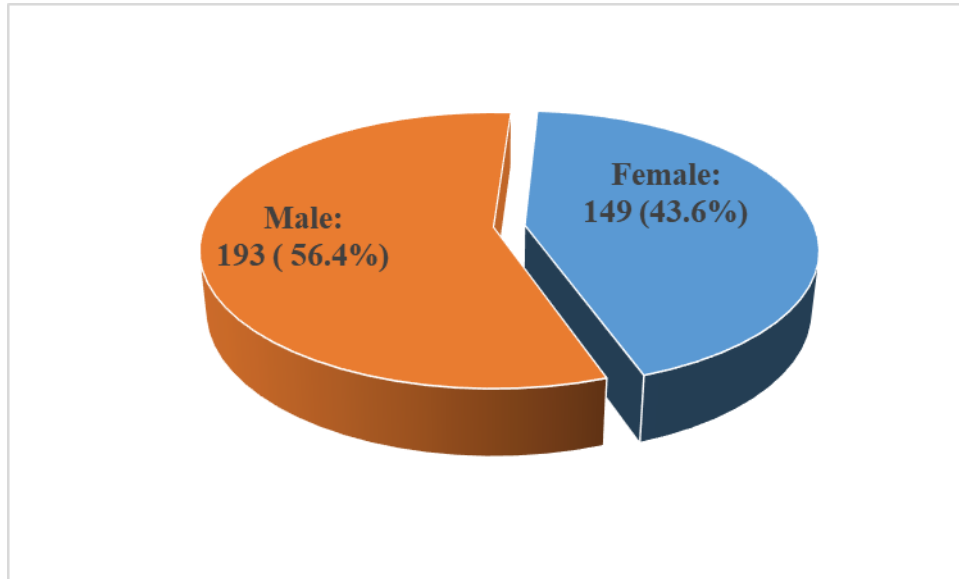
88.1%. This was considered excellent based on recommendation by Creswell (2014) and, Oso and Onen (2009) that a response rate of 60% is adequate; 70% is good and; 80% and above is excellent for analysis and reporting in a survey study. It was, therefore, considered sufficient representative of the target population. The high response rate recorded was attributed to the fact that the questionnaires were administered by the research assistants to the respondents and subsequent follow ups made via phone calls. In addition, the questionnaire items were developed in such a way that they were easy to comprehend and respond to by the trainees.

4.3 Demographic Information

The study sought to investigate the background information of the trainees who took part in the study. Demographic information of respondents helps the researcher to identify and consequently understand similarities as well as differences that may occur in categories of respondents. The demographic information investigated included: Respondents' gender, age, year of study, level of course undertaken and type of programme of the study.

4.3.1 Gender of the Respondents

Figure 4 shows summary of gender distribution among the trainees in TVET institutions in Kakamega County which were sampled for the study.



Source: Survey data (2021)

Figure 4: Gender Distribution of the Trainees

The analysis of the background information of the respondents indicated that a large number (56.4%) of the respondents were males compared to females (43.6%), reflecting disparity in gender among the TVET trainees. Given that the sampling procedures employed in this study gave equal opportunities for participation to both gender, it can be inferred that TVET training is generally dominated by males. All the same, both gender were represented in the study implying that the results of this study were representative of the target population.

4.3.2 Age of the Respondents

The study explored the age of the respondents and the findings were summarized as in Table 14.

Table 14: *Respondents' Age.*

Age	Frequency	Percent
Below 18 Years	5	1.5
18 – 22 Years	200	58.4
23 Years and Above	137	40.1
Total	342	100.0

Source: Survey data (2021)

On their ages, the results of the study established that a majority 200 (58.4%) of the respondents were in the age group of 18-22 years, while 137 (40.1%) of them were 23 years and above. Only 5 (1.5%) of them were under 18 years of age. Nonetheless, the fact that respondents with varied ages were represented in the study implies that the results of this study can be applicable across all ages of trainees with very minimal precaution.

4.3.3 Respondents' Year of Study

Table 15 shows the summary of the years of study of the respondents. This was necessary because year of study of a trainee could have a bearing on how they perceive benefit from a course.

Table 15: *Respondents' Year of Study.*

Year	Frequency	Percent
First Year	178	52.0
Second Year	125	36.5
Third Year	39	11.4
Total	342	100.0

Source: Survey data (2021)

With respect to the respondents' year of study, the results of the survey show that trainees of all years of study took part in the survey. This was revealed by the fact that although majority 178 (52.0%) of sampled trainees were first year students, 125 (36.5%) and 39 (11.4%) were in their second year and third year of study, respectively the sample was representative as it was obtained through stratified proportionate sampling.

4.3.4 Respondents' Level of Course Undertaken

The study sought to examine the respondents' level of course undertaken and the findings were summarized in Table 16.

Table 16: *Respondents' Level of Course Undertaken.*

Level of Course	Frequency	Percent
Diploma	172	50.3
Certificate	143	41.8
Artisan	23	6.7
Short course (< 6 months)	4	1.2
Total	342	100.0

Source: Survey data (2021)

It was established from the results of the survey that about a half 172 (50.3%) of the trainees who took part in the survey were doing their diploma programmes. Those who were doing certificate courses formed 143 (41.8%) of the TVET trainees who took part in the survey, and some 23 (6.7%) and 4 (1.2%) were doing artisan and short courses, respectively. This finding indicates that majority of the respondents were training in diploma courses.

4.3.5 Type of Programme of Study

This section sought to find out the type of programme of study of the trainees who took part in the survey and the findings were summarized in Table 17.

Table 17: *Type of Programme of Study.*

Programme	Frequency	Percent
Engineering	76	22.2
Institutional Management	83	24.3
Business Studies	73	21.3
Social Work	8	2.3
Agriculture and Applied Sciences	46	13.5
Information Communication Tech.	56	16.4
Total	342	100.0

Source: Survey data (2021)

From the analysis of the responses, it was established that all the study programmes were represented in the survey. However, Institutional Management, Engineering and Business Studies programmes took relatively higher representation in the study. For instance, 83 (24.3%) of respondents were from Institutional Management programmes, 76 (22.2%) and 73 (21.3%) others were from Engineering and Business Studies programmes, respectively. Other programmes represented include, Agriculture and Applied Sciences 46 (13.5%), Information Communication Technology 56 (16.4%) and Social Work 8 (2.3%). This suggests that students of varied levels of perceptions of learning experiences and perceived value of the chosen course took part in the study.

4.4 Course Satisfaction among the TVET Trainees

This section sought to investigate the level of course satisfaction among the TVET trainees. Course satisfaction is the dependent variable of the study, hence it is important to explore it so as to create understanding on it.

4.4.1 Views of the Respondents on Course Satisfaction

Course satisfaction was operationalized by indicators that measure trainees' perceived benefit from a course. Hence, a 15-itemmed Likert-scaled questionnaire which was administered to the sampled trainees had their constructs interrogating the views of the trainees on their attitudes and feelings regarding their experience and outcome in line with the courses they were undertaking. The respondents indicated their level of agreement with the statement in the scale of 1 to 5, with 1 denoting strongly disagree (Very dissatisfied) and 5 denoting strongly agree (Very satisfied). Their views were summarized in percentage frequencies and means with their standard deviations, as shown in Table 18.

Table 18: *Response on Course Satisfaction among the TVET Trainees*

Items	5	4	3	2	1	ME AN	SD
1. I am happy with my course that am undertaking at the college.	235 (68.7%)	88 (25.7%)	12 (3.5%)	3 (0.9%)	4 (1.2%)	4.72	1.29
2. With my course, my opportunity for promotion is unlimited.	100 (29.2%)	132 (38.6%)	39 (11.4%)	41 (12.0%)	30 (8.8%)	3.68	1.25
3. I have confidence that the course I'm undertaking will lead me to my dream career	98 (28.7%)	153 (44.7%)	51 (14.9%)	28 (8.2%)	12 (3.5%)	3.87	1.03
4. My course is compatible with my desires.	150 (43.9%)	155 (45.3%)	28 (8.2%)	6 (1.8%)	3 (0.9%)	4.30	0.76
5. My course encourages competitive spirit.	156 (45.6%)	149 (43.6%)	28 (8.2%)	5 (1.5%)	4 (1.2%)	4.31	0.78

6.	I am satisfied with the success I have achieved in my course.	138 (40.4%)	123 (36.0%)	59 (17.3%)	16 (4.7%)	6 (1.8%)	4.08	0.96
7.	I am satisfied with the progress I have made towards meeting my goals in my course.	127 (37.1%)	154 (45.0%)	40 (11.7%)	14 (4.1%)	7 (2.0%)	4.11	0.91
8.	I am satisfied with the progress I have made towards meeting my overall course goals.	128 (37.4%)	146 (42.7%)	45 (13.2%)	17 (5.0%)	6 (1.8%)	4.09	0.92
9.	I am satisfied with the progress I have made towards meeting my goals for advancement.	123 (36.0%)	137 (40.1%)	49 (14.3%)	22 (6.4%)	11 (3.2%)	3.99	1.02
10.	I am satisfied with the progress I have made towards meeting my goals for the development of new skills in my course.	132 (38.6%)	144 (42.1%)	36 (10.5%)	20 (5.8%)	10 (2.9%)	4.08	0.99
11.	After receiving career guidance, I feel highly interested in the course I am pursuing.	153 (44.7%)	122 (35.7%)	28 (8.2%)	20 (5.8%)	19 (5.6%)	4.08	1.12
12.	The introduction to different programmes has given me confidence and satisfaction with the course I had selected.	140 (40.9%)	127 (37.1%)	40 (11.7%)	22 (6.4%)	13 (3.8%)	4.05	1.06
13.	Knowing about my interests, skills, aptitude, ability, values and preferences has made me settle for the course that gives me satisfaction.	131 (38.3%)	170 (49.7%)	27 (7.9%)	9 (2.6%)	5 (1.5%)	4.21	0.81
14.	Occupational, educational, and employment information provided has contributed to my satisfaction with the course I am undertaking.	145 (42.4%)	141 (41.2%)	32 (9.4%)	17 (5.0%)	7 (2.0%)	4.17	0.93
15.	Given another chance to begin my studies, I would still pursue my current course of study.	174 (50.9%)	118 (34.5%)	31 (9.1%)	9 (2.6%)	10 (2.9%)	4.28	0.94
Mean rating on the level of course satisfaction							4.13	0.62

Key: 5- Strongly Agree, 4- Agree, 3- Undecided, 2- Disagree and 1- Strongly Disagree

Source: Survey data (2021)

The survey results show that on the scale of 1 to 5, TVET trainee course satisfaction is at a mean of 4.13 with a standard deviation of 0.62. The finding suggests that although majority of trainees hold positive attitude towards their course and are satisfied, some of the trainees are not satisfied with the courses they do. This may be against the backdrop of the effort TVET institutions make in paying more attention to meet the expectations and needs of their trainees. Some of the respondents decry that their expectations and perception on quality of service are not met by the courses they do.

For instance, when the respondents were asked whether they were generally happy with the courses they were undertaking at the college, the response attracted a mixed reaction as reflected by a fairly large standard deviation of 1.29, though with high mean of 4.72. While 235 (68.7%) and 88 (25.7%) strongly agreed and agreed respectively that they were generally happy with the course they were undertaking some others were not happy. This was revealed by 12 (3.5%) of the surveyed trainees who remained non-committal and 7 (2.1%) others who asserted that they were never happy at all with the course they were undertaking.

It emerged from the results of the study that some of the trainees were not happy with their courses because of perceived lack of opportunities. For example, whereas 100 (29.2%) and 132 (38.6%) of the surveyed trainees strongly agreed and agreed, respectively, that with their course, their opportunity for promotion is unlimited, more than one out of every five 71 (20.8%) of them felt that they would not have opportunity for promotion with the kind of course they were doing (Mean=3.68; SD=1.25). However, 39 (11.4%) of them remained undecided on the matter.

On whether the respondents had confidence that the current course will lead them to their dream career, the results of the survey show that a respectable proportion of the trainees responded in the affirmative. This was interpreted from a mean response of 3.87 (SD=1.03), with 98 (28.7%) strongly agreeing, 153 (44.7%) agreeing, 51(14.9%) being undecided, 28 (8.2%) disagreeing and 12 (3.5%) of the respondents strongly disagreeing that they don't have confidence that the courses they are undertaking will lead them to their dream careers. However, 150 (43.9%) of the sampled trainees strongly agreed and 155 (45.3%) of them agreed that their course is compatible with their desires (mean=4.30; SD=0.76), but 28 (8.2%) remained undecided, while some 9 (2.7%) others insisted that their course is not compatible at all with their desires.

Similarly, the results of the study revealed that although majority 205 (89.2%) of the trainees who took part in the survey were in agreement (mean=4.31; SD= 0.78) that their courses encourage competitive spirit, some 28 (8.2%) of them remained undecided but 9 (2.7%) others disagreed with the claim that their courses encourage competitive spirit. This means that a respectable proportion of the trainees are dissatisfied with their course because of lack of competitive spirit inspired by the course they are doing.

On the same vein, the results of the survey indicate that while 138 (40.4%) and 123 (36.0%) of the respondents strongly agreed and agreed respectively that they are satisfied with success they have achieved in their course, 59 (17.3%) remained undecided and 22 (6.5%) of them either disagreed or strongly disagreed that they are satisfied with the success they have achieved in their courses. This was reflected by a mean response rate of 4.08 (SD=0.96), confirming that some of the respondents were not satisfied with the success they had achieved in their courses.

Equally, whereas a majority of 281 of the respondents translating to 81.1% either agreed or strongly agreed that they were satisfied with the progress they have made towards meeting their goals in their course, 21 (6.1%) of them are in disagreement that they are satisfied with the progress they have made towards meeting their goals in their course. This response attracted mean rating of 4.11 with a standard deviation of 0.91, implying that while many of the trainees are satisfied with the progress towards meeting their goals, some others are not satisfied at all. These findings indicate that some of the trainees were dissatisfied with their course because they were not happy with the progress they have made towards meeting their overall course goals. Similarly, 33 (9.6%) of the surveyed trainees indicated that they were not satisfied with the progress they have made towards meeting their goals for advancement. Only at a mean rating of 3.99 (SD=1.02), some of the respondents alluded that they were satisfied with the progress they have made towards meeting their goals for advancement.

On development of new skills, the results of the survey revealed that although majority of the trainees are satisfied with the progress they are making towards meeting their goals for the development of new skills in their course, some of them bluntly indicated that they are not satisfied at all. This was mirrored by analysis of their response on this item where a mean response rate of 4.08 (SD=0.99) was established, with 132 (38.6%) of the sampled trainees strongly agreeing, 144 (42.1%) agreeing, 36 (10.5%) were undecided, 20 (5.8%) disagreed and 10 (2.9%) strongly disagreed that they are satisfied with the progress they are making towards meeting their goals for the development of new skills in their course.

What came out clearly from the results of the survey is that 275 (80.4%) of the trainees who took part in the survey either strongly agreed or agreed that after receiving career guidance, they are feeling highly interested in the course they are pursuing (Mean=4.08; SD=1.12). However, 28 (8.2%) of the respondents were undecided but 20 (5.8%) and 19 (5.6%) disagreed and strongly disagreed respectively that they feel more interested in the course they are pursuing upon receiving career guidance. This suggests that some of the trainees interest are not affected by guidance and counseling.

Similarly, at a mean rate of 4.05 with a standard deviation of 1.06 there was a general agreement that introduction to different programmes had given many of the trainees' confidence and satisfaction with the course they had selected. This was corroborated by 140 (40.9%) and 127 (37.1%) of the respondents who strongly agreed and agreed respectively that introduction to different programmes has given them confidence and satisfaction with the course they had selected. However, 40 (11.7%) of them were undecided on the matter, but 22 (6.4%) disagreed and 13 (3.8%) strongly disagreed with the statement suggesting that a significant proportion of the respondents are dissatisfied with course they are undertaking.

The results of study indicate that majority of respondents agreed that knowing about their interests, skills, aptitude, ability, values and preferences has made them settle for the course that gives them satisfaction, as was reflected by a mean rate of 4.21 with a standard deviation of 0.81. Only a few 14 (4.1%) of the trainees who held a contrary opinion alluded that knowing about their interests, skills, aptitude, ability, values and preferences has not in any way helped them to settle for their course. Although 24 (7.0%) of the sampled trainees denied that occupational, educational, and employment

information provided had contributed to their satisfaction with the course they were undertaking, majority 286 (83.6%) of them accepted that these kind of guidance has improved their satisfaction (mean=4.17; SD=0.93) with the course they were undertaking.

Lastly, the study sought to establish whether the trainees would select the same course if given another chance. The results indicate that 174 (50.9%) of the respondents strongly agreed and 118 (34.5%) agreed that given another chance to begin their studies, they would still pursue their current course of study. On the other hand, 19 (5.4%) of the respondents insisted that they would not pursue their current course of study if they were given another opportunity, but 31 (9.1%) others did not divulge on whether or not they would select same course, when given another opportunity.

4.4.2 Distribution of Course Satisfaction of TVET Trainees

The study sought to summarize the course satisfaction among the TVET trainees as derived from the responses from the 15 itemed questionnaire, as shown in Table 19

Table 19: *Descriptive Statistics of Course Satisfaction among TVET Trainees*

	N	Mean	Std. Deviation	Skewness	Kurtosis			
	Statistic	Std. Error	Statistic	Std. Error	Statistic			
Course Satisfaction	342	4.1341	0.03356	0.62060	-0.668	0.132	2.933	0.263

Table 19 shows that, using the scale of 1 to 5, the TVET trainees on average have a course satisfaction level of 4.13 with a small standard deviation of 0.033. The small

standard deviation shows that the levels of course satisfaction among the trainees in various colleges/departments do not differ with a big margin, suggesting that many of them hold almost uniform perception on their satisfaction on their course.

Table 20: *Distribution of the level of Overall Course Satisfaction*

Level	Frequency	Percentage
Very Dissatisfied	2	.005
Dissatisfied	8	2.3
Neither	58	17.0
Satisfied	184	53.8
Very Satisfied	90	26.3
Total	342	100.0

Key: Highly satisfied (4.21-5.00); Satisfied (3.61-4.20); Neither (2.61-3.60); Dissatisfied (1.81-2.60); and highly dissatisfied (1.00-1.80)

Source: Survey data (2021)

Further examination of the course satisfaction index descriptive results shown in Table 20, reveals that the TVET trainees who were very satisfied with their course were only 26.3%, while 2.4% of them were either dissatisfied or very dissatisfied with their course. Some 17.0% respondents were established to be neither dissatisfied nor satisfied, and just about a half of the trainees in TVET institutions were satisfied, as was reflected by 53.8% of the surveyed trainees.

4.5 Findings on the Relationship between Orientation Services and Course Satisfaction among TVET Trainees

Objective one sought to investigate the relationship between orientation services and course satisfaction among TVET trainees. The objective was addressed by using descriptive statistics to explore the views of sampled TVET trainees on orientation services as an aspect of career guidance services. Qualitative data was used to shed more light onto quantitative data and further exploration of the relationship between

orientation services and course satisfaction among TVET trainees. Then, inferential statistics analysis was used to establish whether orientation services have any influence on course satisfaction among the TVET trainees.

4.5.1 Ratings on Trainees' Orientation Services in TVET Institutions

The study operationalized provision of orientation services to trainees as activities that introduce trainees to college services to support their educational and personal goals by assisting them gain the knowledge, attitudes and skills necessary for informed choice of course resulting in course satisfaction. In this regard, eight-itemed questionnaire interrogated the views of the trainees on how they received orientation services in their institutions. The surveyed TVET trainees rated the level of their agreement with the statement in the scale of 1 to 5, with 1 denoting strongly disagree and 5 strongly agree. Their views were summarized in percentage frequencies and means with their standard deviations, as shown in Table 21

Table 21: *Ratings on trainees orientation Services in TVET institutions*

STATEMENTS	5	4	3	2	1	ME	SD
1. Orientation programmes are very elaborate at the College	130 (38.0%)	182 (53.2%)	11 (3.2%)	11 (3.2%)	8 (2.3%)	4.21	0.84
2. Orientation services helps us to adjust to the College environment	164 (48.0%)	144 (42.1%)	15 (4.4%)	13 (3.8%)	6 (1.8%)	4.31	0.86
3. During orientation, trainees are introduced to the courses chosen	152 (44.4%)	130 (38.0%)	19 (5.6%)	34 (9.9%)	7 (2.0%)	4.13	1.03

4. Orientation services are informative on the future of courses	114 (33.3%)	162 (47.4%)	15 (4.4%)	36 (10.5%)	15 (4.4%)	3.95	1.09
5. Orientation services provides data on success of college graduates	112 (32.7%)	153 (44.7%)	23 (6.7%)	29 (8.5%)	25 (7.3%)	3.87	1.17
6. Orientation services provides an option for changing a course at the college	129 (37.7%)	130 (38.0%)	27 (7.9%)	35 (10.2%)	21 (6.1%)	3.92	1.18
7. Orientation services help to introduce students to courses offered	168 (49.1%)	121 (35.4%)	16 (4.7%)	21 (6.1%)	16 (4.7%)	4.18	1.08
8. During orientation, the trainees are made aware, within their career education programmes,	171 (50.0%)	126 (36.8%)	22 (6.4%)	15 (4.4%)	8 (2.3%)	4.28	0.93
Mean ratings of orientation services						4.11	0.65

Key: 5- Strongly Agree, 4- Agree, 3- Undecided, 2- Disagree, 1- Strongly Disagree
Source: Survey data (2021)

Table 21 shows that although TVET trainees received orientation services to assist them adjust better to college environment and make informed decisions in their educational life, the trainees were not fully satisfied with the services. This was reflected by an overall mean rating of 4.11 on a scale of 1 to 5 with a standard deviation of 0.65 implying the services are not very adequate. The findings contradict Palade and Constantin (2012) study in Romania that concluded that most students at Transilvania University in Romania were not aware of the existence of career counseling and orientation centres.

The results of item 1, which *investigated whether career orientation programmes within the institutions are elaborate or not*, indicate that although 130 (38.0%) of the trainees who took part in the survey strongly agreed that orientation programmes are elaborate in their colleges and another 182 (53.2%) agreed that orientation services are elaborate in their colleges, some of the trainees held a contrary opinion. For example, 19 (5.5%) of respondents either disagreed or strongly disagreed that there is elaborate orientation for new trainees in their college and some 11 (3.2%) others remained undecided on the matter. However, the overall mean for this item was 4.21 ($SD=0.84$), which was higher than the composite mean of 4.11 ($SD=0.65$), suggesting that orientation services in most of the colleges are elaborate.

The findings agrees with Atkinson (2015) in the United States which identified goals of student orientation programmes to help freshmen succeed academically, to assist students in their overall personal adjustment to college by introducing them to campus life and the importance of active participation on campus. The results also corroborate the research findings of Sandoval-Lucero, Antony, and Hepworth (2017) study which concluded that the new student orientation increased the participants' understanding, skill levels, and confidence perception in America.

In addition to quantitative data, qualitative data was also obtained from respondents.

Using thematic analysis, four themes were generated; general orientation of new trainees, departmental orientation services, examination's orientation and orientation of new staff.

General orientation of new students.

The general orientation service for new students at the colleges was reported by all the participants of the study. Most respondents reported that this was necessary for new students to make them adjust effectively to the new environments within the college.

Some respondents reported that:

“We have orientation for new students at the Institute. Initially, it was for all trainees..... it was zeroed to new students only. Moreover, it was felt that the function deprived continuing trainees of the learning hours. Done within the first month for the new trainees-1st years only. It is my opinion that even the old trainees also need orientation” (GCC 1)

“There is general orientation- meant to assist new trainees to know about choices of programs, culture of an institution and acquaint themselves with classroom environment. Done by the office of Dean of Students who organizes for the whole Institution. Whole college, different speakers from different departments in the college though rarely attended by old students apart from student leaders who have to attend compulsorily” (DP 2)

“ Apart from scheduled general orientation, HODs organize for orientation for their trainees within the term and can invite guest speakers from industry to talk to trainees.... Get to know more about what they are studying” (DP 3)

“General orientation of new students..., two weeks after opening. It is my opinion that even the old trainees need it too because some may have come/reported late in their first year and didn't attend it. They ask questions about their courses. In short, there are lapses in the courses or information previously given when they were away” (R 3)

From the three interview excerpts (GCC1, DP2 and R3), it is evident that general orientation of new students is done within the first month of reporting but departments are encouraged to carry out departmental orientations. The orientation organized in departments is more detailed with a focus on departmental programmes. Experts from the industry are invited to inform trainees on careers in line with their selected courses. Although orientation targets new trainees continuing trainees are encouraged to attend the exercise. During orientation, each head of department has an opportunity

to talk about his/her department and the requirements. The results were consistent with those of Tschopp et al. (2014) study in Switzerland which revealed that career orientation is an essential driving force behind career intentions and consequently career choice and career path. Further the results corroborates earlier findings by Ali (2017) who reported from a study conducted at the University of Dodoma in Tanzania that as a result of ineffective orientation programmes many students fail to complete their programmes in time, and the few who survive do not attain the desirable performance. A large number of students drop out of their studies due to failure to cope with life and activities at the university. However, the findings are contrary to those of Tahir et al. (2018) which reported that graduates of TVET sector in Pakistan are not properly counseled in their institutions and majority of them are employed without assistance of their institutions. The graduates lack career-related information resulting in lack of future direction and significant decrease in performance.

Participants' responses to the statement that orientation services help trainees in adjustment to the college environment was reflected by a mean of 4.31(SD=0.86). Majority of trainees 164(48.0%) strongly agreed, 144(42.1%) agreed while 13(3.8%) disagreed and 6(1.8%) strongly agreed. The results are in agreement with earlier findings by Atkinson (2015) in United States of America which identified goals of student orientation programmes to help freshmen succeed academically, to assist students in their overall personal adjustment to college by introducing them to campus life and the importance of active participation on campus, and to provide opportunities for faculty and staff to learn more about joining freshmen. The results corroborates earlier findings by Bidyalakshmi (2016) in India who reported that career guidance and counselling is adjustmental in the sense that it helps students to adjust to the current situations in educational institutions, occupational world, and the community.

These results were also consistent with findings by Kanga et al. (2015) that indicated that guidance is effective in enhancing student adjustment to school environment in public secondary schools in Kenya. According to Kanga et al. (2015), students' adjustment was reflected by their independence in decision making, ability to contain peer pressure and improved relationship between students and staff. In addition, whereas 114 (33.3%) and 162 (47.4%) of the trainees who participated in the study strongly agreed and agreed, respectively, that orientation services are informative on the future of courses, 36 (10.5%) and 15 (4.4%) disagreed and strongly disagreed, respectively, with this assertion. This was mirrored by a mean rating of 3.95 ($SD=1.09$), suggesting that although many respondents agreed that orientation services are informative, a respectable proportion held the view that orientation services in their colleges are not informative enough. However, the current result does not support earlier findings indicating that orientation services are not informative on future of courses. For instance, Crişan, Pavelea, and Ghimbuluţ (2015) conducted a study in Romania and reported that students are uninformed about the existence of the Career Center and they have no idea about the center's activity in the University, nor about the services offered. The results also contradicts the findings by Tahir et al. (2018) in Pakistan that graduates of TVET sector are not properly counselled in their institutions and majority of them are employed without the assistance of their institutions.

Similarly, while 112 (32.7%) and 153 (44.7%) of the respondents strongly agreed and agreed, respectively, that orientation services provide data on success of college graduates, 54 (15.8%) registered a contradictory opinion. This shows clearly that 15.8% of the trainees in TVET find it difficult to obtain adequate information on the success of their college graduates from the orientation services offered in these

institutions. This is also interpreted by a mean of 3.87 ($SD=1.17$) which is lower than the composite mean. Findings by Arhin and Wang'eri, (2018) in Ghana indicated similar results by stating that the purpose of orientation programs is to introduce new students to college and university services that support their educational and personal goals, and also to assist them in gaining the knowledge, attitudes, and skills that will help them adjust and make a smooth transition into the college/ university community. Similar confirmatory findings were reported by Amoah et al. (2015) in Ghana asserting that career guidance and counselling, career goal identification, organization of career days and conferences, administration of occupational interest inventory on students were among career intervention roles by the school counsellor that influence their choice of career.

Respondents' opinions were sought on whether orientation services offered to them provides an option for changing course at the college. The results revealed that 129 (37.7%) and 130 (38%) trainees who participated in the study strongly agreed or agreed respectively that options for changing courses are available at their respective colleges while 35 (10.2%) and 21 (6.1%) of the trainees disagreed and strongly disagreed respectively that orientation services in their college provides an option for changing a course. However, 27 (7.9%) respondents remained undecided on this matter. The result supports findings by Fitzenberger, Hillerich and Sprietsma (2016) from a study conducted in Germany that reported the types of career guidance support offered in schools to include discussion of educational and occupational possibilities, and information about vacant apprenticeships. This indicates that students were provided with options of courses offered and relevant occupations to assist them in choosing courses of their choice. These findings are contrary to that of Kamenye, Ipinge, and Du Plessis (2016) in Namibia which revealed that some schools do not

have career guidance programmes and those that do start giving career advice to learners very late in the course of their studies and this was one of the reasons for change of course.

Departmental orientation services

The findings of the study through individual interviews reported that there was departmental orientation for new students who join the institutions. This was meant to help students to know the courses they are meant to study and the available options. Some respondents reported the following regarding departmental orientation services:

“We have departmental orientation for own students with members of that department and chaired by the HOD. At G & C, there is vocational counselling-guiding new trainees how to choose their courses appropriately. They are given 2 weeks to think through the courses they would wish to take” (GCC 2)

“Yes the trainees get to know whether they made the right choices as concerns the course they are taking. The students are given a chance to switch course if they feel their expectations are not met” (R 1)

“It is through the orientation that one is able to ascertain those who have chosen to do a course and those who were told to do a course. The students are engaged through a questionnaire.... feedback helps in decision making. Trainers inform trainees on courses and employment opportunities briefly” (GCC 3)

“Departmental orientation is done after the general trainees’ orientation. Trainees are introduced to trainers, courses and training facilities in the department. They are given opportunity to discuss the courses mentioned.” (DP2)

From the interview results from GCC2, R1, GCC3 and DP1 it can be interpreted that departmental orientation services are evident in most colleges and effective in enhancing course satisfaction among the trainees. Students are provided with information on courses offered, different options and relevant employment opportunities. Thus, students choose courses in line with their interest and ability. The results are inconsistent with earlier findings in Indonesia by Atmarno, Yusuf and

Akhyar (2020) who reported that the service of guidance and counseling in schools were inadequate and has not been able to help the students to develop optimally. Similar findings were reported by Kamenye, Ipinge, and Du Plessis (2016) from a study conducted in Namibia which revealed that some schools do not have career guidance programmes and those that do, start giving career advice to learners very late and this was one of the reasons for change of course of study. However, the results are in agreement with the findings of Kanga, Nyaga, Barchok and Ngari (2015) in Kenya that reported that guidance and counseling is effective in enhancing student adjustment to school environment in public secondary schools.

Similarly, the respondents were asked whether orientation services help to introduce them to courses offered. Majority 168 (49.1%) and 121 (35.4%) of the respondents strongly agreed and agreed respectively, against 21(6.1%) others who disagreed and another 16(4.7%) who strongly disagreed that orientation services help to introduce them to courses offered. However, 16 (4.7%) remained non-committal on the matter. The mean score was 4.18 ($SD=1.08$) against a composite mean of 4.11 with $SD=0.65$. The results are consistent with findings of Rose (2016) in the United States which reported that orientation was beneficial to students and assisted them with confidence to locate information on their own, familiarity with student resources and served as one of the first steps towards student retention and eventual graduation.

However, the results are contrary to the findings of Malinda and Mandyata (2021) which reported that there were barriers that hinder provision of school career guidance services in preparation of secondary school pupils for tertiary education in Zambia. The findings are further contradicted by the results of Oigo and Kaluyu (2016) study in Kenya that revealed that the readiness to make career choices for students had

minimal influence from the career guidance services offered at a private university in Kenya.

Examination's orientation

The findings also indicated that there were orientation services on internal and external examinations for the students. This was to inform the students on the expectations regarding the schedules of examinations, enrollment fees and duration of examinations. This orientation helped the students to be conversant with what is expected of them regarding the examinations. Some respondents reported that:

“We have internal briefing of students/candidates before KNEC exams – requirements for exams, penalties if KNEC regulations are breached, conduct of exams; when it starts and ends. Briefing of KNEC candidates by supervisors and invigilators on conduct of exams and expectations” (GCC2)

“KNEC Examination briefings are done just slightly before the exams begin, e.g. a week before exams in May, July, September and December of every year. There are no exams in Term 1. These dates have since changed because of COVID-19 Pandemic and currently, there are exams in Term 1 (January-February 2021). The briefing was thus done in January” (R4)

“Career services –ask/invite external speakers apart from the orientation time, to enlighten trainees on topics such as youth employability skills, additional skills required by employers such as research, communication, digital/computer skills....” (GCC4)

From the interview results (GCC2, R4 and GCC 4), it can be concluded that examinations orientation services enhanced course satisfaction among trainees in the institutions and this was helpful to them. The findings corroborates earlier findings by Kamenye, Ipinge, and Du Plessis (2016) who reported that some schools do not have career guidance programmes and those that do, start giving career advice to learners

very late during the course of their studies and this was one of the reasons for change of course of study.

Asked whether they were made aware during orientation services and within their career education programmes of TVET options alongside the other options available to them, 171 (50.0%) of those who participated in the study strongly agreed and 126 (36.8%) agreed, 15(4.4%) disagreed and 8(2.3%) strongly disagreed that they are made aware of TVET options alongside the other options available to them. Some 22 (6.4%) of the surveyed trainees remained undecided on the matter, but with a mean of 4.28 ($SD=0.93$), it is evident that many of the trainees are generally made aware of the options available within their career education programmes. The results of the current study contradicts earlier research findings by Atkinson (2015) among college students in the United States of America who reported that substantial content is provided to students during orientation in a too-short time frame and as such their needs are not met. Students may be less likely to achieve their goals unless the orientation program address their needs and characteristics. The results are consistent with findings obtained among participants at lower and middle tracks of secondary schools in Germany that reported that career guidance measures significantly improve students' career planning (Fitzenberger, Hillerich & Sprietsma, 2016). However, the finding is contrary to that of Malinda and Mandyata (2021) from a study conducted in Zambian secondary schools which reported that there were barriers that hinder provision of school career guidance services in preparation of secondary school pupils for tertiary education.

Orientation for New Staff

The findings also indicated that there were orientation services for new staff that were joining the colleges. This was to make them aware of the programmes within the departments and the expectations on their duties as they begin their duties. This orientation was seen to be helpful in assisting staff to adjust easily to the new demands of the environment. Some respondents reported that:

“The Institute also holds orientation for incoming employees, both support and teaching staff .. staff providing essential services (Cooks, librarians and housekeepers) find it difficult to be away from their stations. This affects the attendance during orientation. Trainees’ council officials are also invited. The orientation is meant to help them familiarize themselves with the Trainees, other staff, management, college layout, facilities and to get to know where to get what service” (GCC2)

From the interview findings (GCC2), it is through orientation that the incoming staff get to know information about the college. They are introduced to trainees’ council, heads of departments, college management team, services offered and facilities.

In conclusion, the results of the study revealed that whereas orientation services are provided to trainees in TVET colleges as a process of career guidance, they are not very adequate. Some of the trainees felt that orientation programmes are not elaborate and does not help them to adequately adjust to college environment because orientation services are not informative on the future of courses the students need to choose. Some of the students argued that orientation services hardly provide data on success of college graduates and never help to introduce students to courses offered. Lastly, the study has shown that TVET trainees are never fully made aware of course options alongside the other options available and are not adequately provided with an option for changing the course of study.

4.5.2 Correlation Analysis of Orientation Services and Course Satisfaction

Pearson's correlation analysis was used to determine the degree of relationships between orientation services and course satisfaction among TVET trainees. The scores of both the variables were converted into ratio scaled data by computing mean responses per respondents. The correlation analysis result is presented in Table 22.

Table 22: *Correlation Analysis of Orientation Services and Course Satisfaction*

		Orientation Services	Course Satisfaction
Orientation Services	Pearson Correlation	1	0.473**
	Sig. (2-tailed)		0.000
	N	342	342
Course Satisfaction	Pearson Correlation	0.473**	1
	Sig. (2-tailed)	0.000	
	N	342	342

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

The results of the correlation analysis presented in Table 22 indicate that there was a statistically significant positive correlation between orientation services and course satisfaction among TVET trainees ($n=342$; $r=.473$; $p=.000$). This implies that there is direct relationship between orientation services and course satisfaction among TVET trainees, suggesting that improved levels of orientation services is associated to improved course satisfaction among TVET trainees and vice-versa. The finding agrees with Malinda and Mandyata (2021) study conducted in Zambia which reported that career guidance has a significant positive role to play in the preparation of secondary school pupils for tertiary education. On the contrary, Kamenye, Iipinge, and Du Plessis (2016) in Namibia revealed that some schools do not have career guidance programmes and those that do, start giving career advice to learners very late and this was one of the reasons for change of course.

4.5.3 Regression Analysis of Orientation Services on Course Satisfaction

Regression analysis was used to determine the degree of influence of orientation services on course satisfaction among TVET trainees. A coefficient of determination was computed to estimate the level of influence of orientation services on course satisfaction among TVET trainees. The results of model summary of regression are presented in Table 23.

Table 23: *Model Summary of Orientation Services on Course Satisfaction*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.473 ^a	0.224	0.221	0.54764

a. Predictors: (Constant), Orientation Services

The model shows that orientation services accounted for 22.1%, as signified by Adjusted R Square value of 0.221, of the variation in the level of course satisfaction among TVET trainees. This is a fairly high influence of a variable on the dependent variable. Table 24 shows the coefficients values of regression model of the influence of orientation services on the level of course satisfaction among TVET trainees.

Table 24: *Coefficients-Influence of Orientation Services on Course Satisfaction*

Model	Unstandardized Coefficients		Standardized		Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta	t		Lower Bound	Upper Bound
1 (Constant)	2.285	0.189		12.081	0.000	1.913	2.657
Orientation Services	0.450	0.046	0.473	9.895	0.000	0.361	0.540

a. Dependent Variable: Course Satisfaction

$$Y = \alpha + \beta_1 X_1 + \varepsilon$$

$$\text{Course Satisfaction} = 2.285 + 0.450x + \text{error term.}$$

From the model, it is evident that the slope coefficient for orientation services was 0.450, implying that course satisfaction among the TVET trainees improves by 0.450 units for each one-unit improvement in orientation services. Similarly, an improvement in orientation services by one standard deviation results into improvement in course satisfaction among the TVET trainees by .473 standard deviations.

However, to investigate whether level of significance between orientation services was really a significant predictor to course satisfaction among TVET trainees, Analysis of Variance was conducted as explained by Tabachnick and Fidell (2001), as shown in Table 25.

Table 25: ANOVA-Influence of Orientation Services on Course Satisfaction

		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	29.364	1	29.364	97.911	0.000 ^b
	Residual	101.969	340	.300		
	Total	131.333	341			

a. Dependent Variable: Course Satisfaction

b. Predictors: (Constant), Orientation Services

From the ANOVA output, there exists enough evidence to conclude that the slope of the population regression line is not zero, meaning orientation services is a significant predictor of Course Satisfaction, $F(1, 340) = 97.911, p = .000 < .05$; Adjusted $R^2 = .221$. This implies that TVET trainees who have effective orientation services are likely to rate highly in Course Satisfaction compared to their counterparts receive relatively low or poor orientation services.

4.5.4 Hypothesis 1 Testing

To determine whether there is a significant influence of orientation services on course satisfaction among TVET trainees, the following null hypothesis was formulated;

H₀₁: There is no significant significant influence of orientation services on course satisfaction among TVET trainees

The investigated null hypothesis is $H_0: \beta_1 = 0$ and the corresponding alternative hypothesis being $H_1: \beta_1 \neq 0$. If the null hypothesis is true, then from $E(Y) = \beta_0 + \beta_1 X_1$ the population mean of Y is β_1 for every X value, which indicates that X (Orientation services) has no influence on Y (Course satisfaction) and the alternative being that Orientation services has influence on course satisfaction among TVET trainees. The results of the regression ANOVA, reveals that the calculated F statistics was statistically significant [$F(1, 340) = 97.911, p = .000 < .05$]. Hence, there is sufficient evidence to reject the null hypothesis ($\beta_1 = 0$). Subsequently, the alternative hypothesis ($\beta_1 \neq 0$) was supported and it was concluded that orientation services, as an aspect of career guidance services, has statistically significant influence on course satisfaction among TVET trainees. The finding agrees with Chin, Cohen and Hora (2018) in the United States which reported that utilization of college career service centers is central in helping students prepare and compete in a rapidly changing global economy. The findings are also in line with an earlier study by Amoah, Kwofie and Agyeiwaa (2015) in Ghana which concluded that the school counsellor plays a critical role in providing appropriate career education and guidance to students and thus influences students' choice of career. Likewise, Bidyalakshmi (2016) in India reported that unless students are assisted through career guidance to overcome the challenges they encounter and be well adjusted they may not make informed decisions about the course of study and thus fail to achieve satisfaction.

4.6 Findings on Appraisal Services and Course Satisfaction among Trainees

The second objective of the study was to establish the relationship between appraisal services and course satisfaction among trainees. The objective was addressed by using descriptive statistics first to explore the views of the sampled TVET trainees on appraisal service, as an aspect of career guidance services. Secondly, inferential statistics analysis was used to establish whether appraisal services have any influence on course satisfaction among trainees.

4.6.1 Ratings on Trainees' Appraisal Services in TVET Institutions

The views of the students on their application of appraisal services was investigated through a ten-Likert-scaled questionnaire. The application of appraisal services was inferred by the use of career assessment tools to assist trainees identify courses that match their interests, ability and aptitude, and offer them satisfaction. The items of appraisal services were measured on a five-point Likert scale ranging from *strongly disagree* (1) to *strongly agree* (5), with 1 denoting complete least application of appraisal services and 5 suggesting very effective appraisal services. The responses were summarized in percentage frequencies and means with their standard deviations, as shown in Table 26.

Table 26: Respondents' Ratings on Appraisal Services

STATEMENTS	SA	A	U	D	SD	MEAN	STDEV
1. Appraisal services has assisted me to know areas of weakness in each unit covered	119 (34.8%)	135 (38.5%)	56 (16.4%)	24 (7.0%)	8 (2.3%)	3.97	1.00

2.	After doing many tests, I now know my areas of strengths	151 (44.2%)	127 (37.1%)	39 (11.4%)	16 (4.7%)	9 (2.0%)	4.15	0.98
3.	Appraisal services have enabled me know my academic performance in the course	108 (31.6%)	165 (48.2%)	40 (11.7%)	23 (6.7%)	6 (1.8%)	4.01	0.93
4.	Forms of assessment are varied for each of the modules taught	90 (26.3%)	185 (54.1%)	37 (10.8%)	22 (6.4%)	8 (2.3%)	3.96	0.92
5.	From the appraisal services offered, I'm convinced that I'm undertaking the course I'm suited for.	135 (39.5%)	174 (50.9%)	16 (4.7%)	11 (3.2%)	6 (1.8%)	4.23	0.82
6.	Appraisal services have energized me to do better for final certification	131 (38.3%)	148 (43.3%)	42 (12.3%)	16 (4.7%)	5 (1.5%)	4.12	0.90
7.	I feel confident with the units after thorough revision	151 (44.2%)	135 (39.5%)	30 (8.8%)	15 (4.4%)	11 (3.2%)	4.17	0.98
8.	Appraisal services have made me prepare well on practical tests	118 (34.5%)	158 (46.2%)	23 (6.7%)	25 (7.3%)	18 (5.3%)	3.97	1.09

9. With the appraisal services available, I'm busy studying my course to do better	154 (45.0)	134 (39.2%)	37 (10.8%)	7 (2.0%)	10 (2.9%)	4.21	0.93
10. Appraisal services have made me to be well prepared for the final examinations	126 (36.8%)	161 (47.1%)	30 (8.8%)	18 (5.3%)	7 (2.0%)	4.11	0.92
Overall mean rating of Appraisal services						4.09	0.64

Key: 5- Strongly Agree, 4- Agree, 3- Undecided, 2 – Disagree, 1 – Strongly Disagree

Source: Survey data (2021)

An overall mean of 4.09 (SD=0.64), in the scale of 1 to 5 which was established for the application of appraisal services shows that although appraisal services was generally applied to the TVET trainees, its application was not 100% effective among trainees in TVET institutions in Kakamega county. This was further confirmed by the divergent views expressed by the trainees who were sampled for the survey. On whether appraisal services helped them know areas of weakness in each unit covered, 119 (34.8%) and 135 (38.5%) strongly agreed and agreed respectively, 56(16.4%) were undecided, 24(7.0%) disagreed and 8(2.3%) strongly disagreed. Participants were further asked whether the tests help them know their areas of strength. Although 278 (81.3%) of the trainees accepted or strongly accepted that after doing many tests they discovered their areas of strengths, some 25 (6.7%) of them either refuted or strongly refuted the claim that they discovered their areas of strengths after doing many tests, but 39 (11.4%) of them remained neutral over the matter. The finding were justified by an average response mean of 4.15 (SD=0.98). Hence, the findings

indicate that even though appraisal services have helped many of the trainees identify their strengths and weaknesses academically, there is a significant number of trainees who believed that they do really not benefit from the service with regards to identifying their areas of strengths and weakness and thus are not satisfied so far. On the contrary, while many 273 (79.8%) of the trainees who participated in the study agreed that appraisal services had enabled them know their academic performance in their course, 29 (8.5%) refuted the claim that appraisal services had enabled them know their academic performance in the course. However, for this item, 40 (11.7%) of the surveyed trainees were undecided.

The current findings agree with Saxon and Morante (2014) study on effective student assessment and placement in the United States, which highlighted the weaknesses in the assessment, and placement process that includes lack of prior information and preparation for assessment, failure to include other measures in student assessment, inappropriate uses of test scores and imperfect assessment instruments. In addition, the findings were in line with those arrived at by Mini et al. (2020) among college students in India which revealed that students lack knowledge and understanding about their aptitude and interest while selecting a specific course in college leading to career confusion in the final year. Similar findings on inadequacy of appraisal services were reported by Samanyanga and Ncube (2015) from a study in Zimbabwe which concluded that guidance and counselling teachers who were holders of general diplomas in education were not formally trained to teach guidance and counselling, and inadequate time was allocated to students for guidance and counselling lessons. However, the findings were contrary to Asirifi (2015) who investigated the impact of career guidance on career development of staff and students of Koforidua

Polytechnic, Ghana. The study by Asirifi (2015) reported the existence of an effective career guidance program that assisted the students in choosing their courses of study.

Qualitative results were also obtained on appraisal services and one of the themes that was reported was appraisal during admissions.

Appraisal during admissions

The study findings reported that there were appraisal services especially to new students offered by the office of career guidance. This involved the students providing information about their educational and family background, and on their preferred course of study. This was reported by some participants as indicated below during interviews:

“Many trainees report to the institution with no clear decision on course of study. When asked about the course indicated in their application form they give answers like: ‘My parents choose for me the course,’ Such trainees are referred to the career guidance or Registrar’s office for assistance” (R1)

“Information is collected from each trainee on admission. Such information includes education background, hobbies and interest, and family background.....” (R2)

“The appraisal services offered to trainees are based on KCSE, KCPE and internal examination results, and participation in extra curricular activities. Each department has a trainer incharge of guidance and counselling, and a career guidance officer.” (DP 2)

“Our college has appraisal services when we admit the new trainees and we gather lots of information from them which can help us to know their issues very well and this helps them to settle well” (GCC 3)

From the interview excerpts (R1, R2, DP2 and GCC 3) it can be concluded that appraisal services are offered during admissions by the career guidance office, trainers

and office of the Registrar. This depended largely on information collected from the students and the examination results. This finding agrees with the results of Hilling (2017) study in America which revealed that career counselling is extremely beneficial for students in exploring different career opportunities, and that a post-secondary planning group increase students perceived readiness for post-secondary plans. However, the results were contrary to those reported from the study by Cajucom, Campos and Mina (2019) among Management and Business Technology freshmen students in Argentina which revealed that the students' influencers for their choice of course were personal choice (15%), parental advice (47.39%), inspiration from high school teacher (19.91%) and peers (17.54%). Appraisal services was not mentioned as student influencer of course of study.

Findings from a different study by Kaneez and Medha (2018) in Mauritius were also inconsistent with the findings of the current study. The study conducted among a sample of 400 students in Grade 10 revealed that 39.63% of student participants prefer their friends to be their source of counselling, followed by their teacher and parents. Further, 22.92% of the participants said they lacked reading and reference material resources while 21.92% did not receive support from department. In addition, the results of the current study agrees with earlier research findings by Okoye and Okwelle (2013) in Nigeria from a study on complex mix of socio-political synergy on TVET in Nigeria. Their findings revealed that appraisal services can reduce mismatch between course taken and an individual's talent or potential, and reduce wastage and stagnation.

Qualitative results were also obtained from participants and one theme on appraisal services was appraisal through quality assurance office.

Appraisal through Quality Assurance office

The study findings also indicated that some appraisal services were available through the office of quality assurance. This depended on what information was needed from the trainees at the college which could be provided through the quality assurance office. Some respondent reported the following regarding this:

“The institution does provide questionnaires not only on the orientation alone but also collects data depending on a specific issue. The monitoring by the Quality Assurance office helps the trainees to know they are getting quality training”(GCC 4)

“There is also a Quality Assurance officer who collects a lot of information from the trainees on their satisfaction with services offered such as training, accommodation, co-curricular activities and meals. (R 3)

“The Deputy Principal Academics and trainers are also able to appraise trainers on their class work and finds out whether the trainers are confident with what they are doing. The monitoring by the Quality Assurance office helps the traineesgives them confidence in their study programmes” (DP 2)

From the interview results (GCC 4, R 3 and DP 2), it can be concluded that appraisal through quality assurance office was frequently used by the colleges to enhance course satisfaction among trainees. The finding is contrary to Chireshe (2012) in South Africa which revealed that in spite of the critical role played by the university’s career advisors in assisting students in decision making they viewed the career guidance services they offered to students not as effective as they should be due to lack of career counselling centers in the university, the career advisors’ inability to use psychological tests which the university has, staff shortage, and none involvement of librarians who are key stakeholders in career guidance and counselling.

It was further revealed from the study that appraisal services have played a role in motivating the trainees in TVET institutions in their academic journey. This was

reflected by a mean response rate of 4.23 (SD=0.82) with 135 (39.5%) and 174 (50.9%) of the trainees who took part in the study being in strong acceptance and in acceptance, respectively, that the appraisal services have made them be convinced they are undertaking courses suitable for them. Equally, about 279 (81.6%) of the same group of trainees, with mean of 4.12 (SD=0.90), were in agreement that appraisal services had energized them to do better for final certification. Similarly, 151 (44.2%) and 135 (39.5%) of the trainees felt very confident and confident respectively with the course they were doing after thorough revision with a mean of 4.17 (SD=0.98), while 15(44%) and 11(3.2%) disagreed. It is evident in the study findings that appraisal services encourage the students in TVET institutions to prepare well for their final tests and practicals, as 287 (83.9%) of those who were surveyed generally agreed that appraisal services have enabled them to prepare well for the final examinations with a mean of 4.11 (SD=0.92).

In addition, about 276 (80.7%) of the same trainees, with mean 4.17(SD=0.98) registered that appraisal services have made them prepare well on practical tests. However, some 30 (8.8%) of them were neutral on this item while 18(5.3%) disagreed and 7(2.0%) strongly disagreed that appraisal services have made them prepare well on practical exams. In agreement, Asirifi (2016) reported the existence of an effective career guidance program at Koforidua Polytechnic, Ghana and majority of students and staff admitted to visiting and patronizing the services. The study by Asirifi (2016) concluded that there was a positive relationship between career guidance and career choice.

Qualitative results were also obtained from participants and one theme on appraisal services was lack of appraisal services.

Lack of consistency in appraisal services

Some respondents also reported that appraisal services were lacking in their colleges. The respondents felt that the skills were mostly inborn and therefore appraisal services were absent from the colleges. Two respondents reported that:

“Appraisal services are offered but not always. The services at times miss where they are required most for nurturing a particular skill. Because of the inconsistency of appraisal services, then no course satisfaction..... can enhance course satisfaction among trainees by placing them in the right courses” (GCC 1)

“Because there are no continuous appraisal services, there is no way to gauge course satisfaction and no course satisfaction amongst trainees. Examinations are administered end of the term or course but not for the purpose of gauging course satisfaction”(GCC 3)

From the interview results (GCC 1 and GCC 3), it can be interpreted that there was inconsistent provision of appraisal services in some colleges and this affected how trainees could adjust to the new training environments. These results support earlier research findings by Mini, Christopher and Janetius (2020) in India which reported that there was no clear knowledge among students regarding aptitude and interest while seeking a specific course in college leading to career confusion in the final year. Findings from a different study by Kaneez and Medha (2018) in Mauritius were also consistent with the findings of the current study. The study reported that more than half of respondents were not aware of any career guidance and the majority pointed out that they did not benefit from any career guidance from their school. The study by Kaneez and Medha (2018) thus reported lack of assistance to students in course selection. In agreement, Takahashi (2016) study in Rwanda and Kenya revealed that teacher counsellors did not know much about career choices nor about the requirements necessary to attain these occupations, and that students were encouraged to make efforts for their preferred career paths even though their choices were

unrealistic. The finding is contrary to Onditi (2018) which revealed the major sources of career information available to young males in the Kuria community as radio, newspaper, teachers, books, parents, television, relatives, friends, and computer-internet.

Finally, the study concludes that although many trainees have expressed their satisfaction with regard to application of appraisal services towards course satisfaction, a significant proportion of them considered appraisal services as having no benefit to them. This means that some of the trainees are not satisfied with their courses.

4.6.2 Correlation Analysis of Appraisal Services and Course Satisfaction

Pearson's correlation analysis was used to determine the degree of relationships between appraisal services and course satisfaction among TVET trainees. The scores of both the variables were converted into ratio scaled data by computing mean responses per respondents. The correlation analysis result is presented in Table 27.

Table 27: *Correlation Analysis of Appraisal Services and Course Satisfaction*

		Appraisal Services	Course Satisfaction
Appraisal Services	Pearson	1	0.511**
	Sig. (2-tailed)		0.000
	N	342	342
Course Satisfaction	Pearson	0.511**	1
	Sig. (2-tailed)	0.000	
	N	342	342

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

The results of the correlation analysis presented in Table 27 indicate that there was a statistically significant positive correlation between appraisal services and course

satisfaction among TVET trainees ($n=342$; $r=.511$; $p=.000$). This implies that there is a direct relationship between appraisal services and course satisfaction among TVET trainees, suggesting that improved levels of appraisal services is associated to improved course satisfaction among TVET trainees and vice-versa. This finding agrees with Hilling (2017) that a post-secondary planning groups increase students perceived readiness for post-secondary plans. On the contrary, Cajucom, Campos and Mina (2019) revealed that the students' influencers for their choice of course were personal choice, parental advice, inspiration from high school teacher and peers.

4.6.3 Regression Analysis of Appraisal Services on Course Satisfaction

Regression analysis was used to determine the degree of influence of appraisal services on course satisfaction among TVET trainees and its level of significance. A coefficient of determination was computed to estimate the level of influence of appraisal services on course satisfaction among TVET trainees. The result of the model summary of regression is presented in Table 28.

Table 28: *Model Summary of Appraisal Services on Course Satisfaction*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.511 ^a	0.261	0.258	0.53440

a. Predictors: (Constant), Appraisal Services

The model shows that appraisal services accounted for 25.8% (Adjusted R Square = .258) of the variation in the level of course satisfaction among TVET trainees. This is a plausible influence of a predictor variable on the dependent variable. Table 29 shows the coefficients values of regression model of the influence of appraisal services on the level of course satisfaction among TVET trainees.

Table 29: *Coefficients-Influence of Appraisal Services on Course Satisfaction*

Model	Unstandardized Coefficients		Standardized	t	Sig.	95.0% Confidence	
	B	Std. Error	Beta			Lower Bound	Upper Bound
1 (Constant)	2.102	0.188		11.18	0.000	1.732	2.471
Appraisal	0.497	0.045	0.511	10.94	0.000	0.407	0.586

a. Dependent Variable: Course Satisfaction

$$Y = \alpha + \beta_2 X_2 + \varepsilon$$

$$\text{Course Satisfaction} = 2.102 + 0.497x + \text{error term.}$$

From the model it is evident that the slope coefficient for appraisal services was 0.497, suggesting that course satisfaction among the TVET trainees improves by 0.497 units for each one-unit improvement in appraisal services. Likewise, an improvement in appraisal services by one standard deviation cause an improvement in course satisfaction among the TVET trainees by 0.511 standard deviations.

Finally, the study sought to investigate whether appraisal services was a significant predictor to course satisfaction among TVET trainees. This was done by use of Analysis of Variance in line with the recommendation by Tabachnick and Fidell (2001) as shown in Table 30.

Table 30: *ANOVA- Influence of Appraisal Services on Course Satisfaction*

Model	Sum of	df	Mean	F	Sig.
1 Regression	34.235	1	34.235	119.877	.000 ^b
Residual	97.098	340	.286		
Total	131.333	341			

a. Dependent Variable: Course Satisfaction

b. Predictors: (Constant), Appraisal Services

From the ANOVA output, there exists enough evidence to conclude that the slope of the population regression line is not zero, suggesting that appraisal services are indeed

significant predictors of Course Satisfaction, $F(1, 340) = 119.877, p = .000 < .05$; Adjusted $R^2 = .511$. This implies that TVET trainees who enjoy effective appraisal services are likely to rate highly in course satisfaction compared to their counterparts who receive relatively low or poor appraisal services. This finding agrees with Asirifi (2016) which revealed the existence of an effective career guidance program and majority of students and staff admitted to visiting and patronizing the services. Further, majority of students chose their careers based on the counselling they had received and staff respondents indicated that their programmes of study were as a result of career counselling they received.

4.6.4 Hypothesis 2 Testing

To determine whether there is a significant influence of appraisal services on course satisfaction among TVET trainees, the following null hypothesis was formulated;

H₀2: There is no significant influence of appraisal services on course satisfaction among TVET trainees

The investigated null hypothesis is $H_0: \beta_2 = 0$ and the corresponding alternative hypothesis being $H_1: \beta_2 \neq 0$. If the null hypothesis is true, then from $E(Y) = \beta_0 + \beta_2 X_2$ the population mean of Y is β_2 for every X value, which indicates that X (appraisal services) has no influence on Y (Course satisfaction) and the alternative being that appraisal services is associated to course satisfaction among TVET trainees. Given that the calculated F statistics was statistically significant [$F(1, 340) = 119.877, p = .000 < .05$] there is sufficient evidence to reject the null hypothesis ($\beta_2 = 0$). In this regard, it was concluded that appraisal services, as an aspect of career guidance services has statistically significant influence on course satisfaction among TVET trainees. The finding is contrary to Takahashi (2016) which revealed that career

education still needed some improvement in Rwanda. In most schools, ordinary teachers were doing supplementary work as counselors though only few teachers gave career advice to students. The teachers admitted that neither did they know much about career choices, nor about the requirements necessary to attain these occupations. Most teachers admitted that their main interest was to ensure students passed the national exams and therefore they put more emphasis on students' desire, encouraging them to make efforts for their preferred career paths, even though at times the choices were unrealistic due to lack of career guidance.

4.7 Findings on Education Services and Course Satisfaction among Trainees

The third objective of the study was to establish the relationship between education services and course satisfaction among trainees. The objective was addressed by using descriptive statistics to explore the views of the sampled TVET trainees on education services as an aspect of career guidance services. Secondly, inferential statistics analysis was used to establish whether education services have any influence on course satisfaction among trainees.

4.7.1 Ratings on Education Services in TVET Institutions

The views of the trainees on their application of education services was investigated through a ten-Likert-scaled questionnaire. It was operationalized the assistance given to the trainees to reach optimum educational development. The services involved assistance given to trainees in their academic work, choice of appropriate course of study and college life. The items of education services were measured on a five point Likert scale ranging from *strongly disagree* (1) to *strongly agree* (5), with 1 denoting complete least application of education services and 5 suggesting very effective

education services. The responses were summarized in percentage frequencies and means with their standard deviations, as shown in Table 31.

Table 31: *Respondents' Ratings on Education Services*

STATEMENTS	SA	A	U	D	SD	MEAN	SD
1. Advice provided on academics helped me pursue the right course	161 (47.1%)	145 (42.4%)	16 (4.7%)	15 (4.4%)	5 (1.5%)	4.29	0.86
2. Education services has helped me to match my intellectual capability with the course I am undertaking	131 (38.3%)	157 (45.9%)	29 (8.5%)	19 (5.6%)	6 (1.8%)	4.13	0.91
3. Advise on courses offered made me choose the course that gives me satisfaction	147 (43.0%)	144 (42.1%)	22 (6.4%)	18 (5.3%)	11 (3.2%)	4.16	0.98
4. Education services offered are elaborate and include co-curricular activities	128 (37.4%)	145 (42.4%)	37 (10.8%)	17 (5.0%)	15 (4.4%)	4.04	1.04
5. Trainees are provided information on content difficulty on courses offered	105 (30.7%)	131 (38.3%)	56 (16.4%)	36 (10.5%)	14 (4.1%)	3.81	1.11
6. Trainees are guided on how to excel academically	149 (43.6%)	140 (40.9%)	30 (8.8%)	17 (5.0%)	6 (1.8%)	4.20	0.92
7. Career guidance provide	131 (38.3%)	148 (43.3%)	33 (9.6%)	18 (5.3%)	12 (3.5%)	4.08	1.00

	information about career after course completion							
8.	Education services provided assisted me in making informed decisions about my career	128 (37.4%)	153 (44.7%)	36 (10.5%)	18 (5.3%)	7 (2.0%)	4.10	0.93
9.	Trainees are provided with information on studying techniques	144 (42.7%)	161 (47.1%)	18 (5.3%)	10 (2.9%)	7 (2.0%)	4.25	0.85
10.	Education services have motivated me to maximize my contribution to society	142 (41.5%)	142 (41.5%)	36 (10.5%)	19 (5.6%)	3 (4.1%)	4.17	0.89
	Mean average rating on provision of education services						4.12	0.64

Key: 5- Strongly Agree, 4- Agree, 3- Undecided, 2 – Disagree, 1- Strongly Disagree;

Source: Survey data (2021)

The results of the survey revealed that although education services in TVET institutions are high, it has not reached its optimal level. This was reflected by a mean rating of 4.12 with a standard deviation of 0.64, suggesting that even though education services have been of help to a fair majority of the students in attaining course satisfaction, not all trainees have benefited from these services. This was further reflected by the divergent opinions expressed by the sampled trainees on the items of education services questionnaire. For instance, although nearly a half 161 (47.1%) of the respondents strongly agreed and 145 (42.4%) agreed that advice provided on academics at their respective colleges helped them pursue the right course, some 20 (5.9%) of the trainees who took part in the survey either disagreed or

strongly disagreed that advice provided on academics at their college helped them pursue the right course. However, 16 (4.7%) others remained neutral on the matter. The item registered a mean of 4.29 (SD=0.86) which is in support to the above responses.

The findings of the current study agree with the results of TeWierik (2015) study conducted among students of applied science in a university in Netherlands which revealed that career guidance helped students to persist in their first year of study, and that good grades in the first year are especially important to subsequent academic success and degree completion. These findings also supported those of a study by Do Ceu and De Nazare (2014) who investigated the effectiveness of career self-management seminar in assisting undergraduate students from university and polytechnic settings prepare for next life career changes and goal attainment in Portugal. The researchers reported that the career self-management seminar was effective in improving the career exploratory attitudes and behaviours of the undergraduates.

In addition, as to whether education services has helped them to match their intellectual capability with the courses they are undertaking or not, 131 (38.3%) and 157 (49.5%) of the respondents strongly agreed and agreed respectively, with a mean 4.13 (SD=0.91), some 25 (7.4%) respondents refuted the claim that education services has helped them to match their intellectual capability with the course they are undertaking. However, some 29 (8.5%) others remained undecided on the matter, but the item attracted a mean rating of 4.13 (SD=0.91) suggesting that intellectual capability influences the choice of course.

The findings are in agreement with the results of the study by Renuka Devi et al. (2013) in India which revealed that the counselling support offered to students resulted in positive influence on academic performance, and that the number of counselling sessions attended correlated positively with the academic performance. The findings also supported a study by Kemetse Nyarko-Sampson, Nkyi, and Nyarko (2018) who evaluated the implementation of guidance services in senior high schools in Ghana and reported that students who receive guidance and counselling services have shown significant increase in academic persistence and achievement, school attendance, classroom behaviour, and improved attitudes towards school work and peers. However, the findings are contrary to those of Seren et al. (2017) from a study among nursing students in Istanbul, Turkey. The study revealed that majority of the students did not receive guidance throughout their education and that nursing course was preferred due to ease of finding a job after graduation. This implies that though education services are provided not all students benefit from them. Some students decide on the course to study without guidance from the college and may end up studying courses that do not match their interests. According to findings of a study by Kituyi (2014) conducted in secondary schools in Bungoma, Kenya without access to guidance and counselling programmes, the self and self-actualization are jeopardized more so towards self-actualization, belonging, safety and expectation as a drive. Qualitative results were also obtained from interview data, themes were reported on education services, and one of the themes was on academic training.

Academic Training

The participants reported that academic training on various fields was one of the education services that is being offered at the colleges. The respondents reported that the trainees are trained on various courses such as Food and Beverage, Clothing and

Textile, and Mechanical Engineering, Electrical Engineering, Automotive Engineering, Building Construction, Information Communication Technology, Secretarial studies, Agriculture, Aquaculture and Social Work. Training service was the core mandate of every TVET college and it was helpful as it assisted in fulfilling the dreams of the trainees. Some respondents reported that:

“The education services help trainees to get experience and confidence. The education services help the trainees to achieve course satisfaction as they are placed in the right level of the course by looking at their qualifications” (DP 3)

“Because of the different levels a trainee can opt for a lower level. For example, move from diploma to craft if there seem to be struggling and still move further ahead when they have understood their career path. Case in mind of the trainees from NYS who had to adjust to craft from diploma when it was detected they had challenges.” (GCC 2)

“Study programs and courses offered are many. Without proper guidance some trainees get discouraged..... have no passion or motivation in what they are studying” (R2)

From the interview results, it can be concluded that academic training was the main education service that was available and offered by all the colleges and that the trainees benefitted most from this service. Both qualitative and quantitative results agreed that the education services assist trainees to identify courses that match their interest and abilities. The finding disagrees with that of Mansor and Rashid (2013) study on career indecision among students of one National Youth Training Institute in Malaysia which reported high level of career indecision and no significant difference between levels of academic achievement on students' career indecision. Students in the previous study, regardless of their academic achievement, were not ready with their future career. Similarly, the results were contrary to those of Likisa (2018) who examined the contribution of career guidance in quality education in Harar and Woliso Technical and Vocational colleges in Ethiopia and reported that career

guidance services in the two colleges was not contributing to quality education as students were not assisted in education and vocational choice due to lack of systematic career guidance and facilities for career guidance.

Similarly, it was also discovered from the research findings, as reflected by a mean of 4.04 (SD=1.04), that education services offered in TVET institutions are elaborate and include co-curricular activities with 128 (37.4%) and 145 (42.4%) of the students who participated being in strong agreement and in agreement, respectively, that education services offered are elaborate and include co-curricular activities. However, whereas some 37 (10.8%) of the respondents remained undecided, another 32 (9.4%) others said that education services offered are not elaborate. In fact, when the views of the respondents on whether they were provided with information on content difficulty on courses offered were sought, the results of the survey revealed that although 236 (69.0%) of the respondents with a mean of 3.81 (SD=1.11) generally agreed that they were provided with information on content difficulty on courses offered, a respectable proportion 50 (14.6%) of the respondents held the opinion that they are not provided with information on content difficulty of courses offered.

This finding agrees with the results of a study on impact of guidance and counselling on academic performance conducted in Ghana by Dabone, Graham and Fabea (2015) which revealed that guidance and counseling have a positive effect on students' academic achievements and is necessary for all students especially at senior high school level. The reviewed study also reported that guidance and counselling improves the accomplishment of students. Similarly, Adeusi, Olujide, and Omotola, (2017) in Nigeria revealed that career guidance and counselling has an influence on students' motivation and adjustment to school. Students who had received guidance

and counselling were more adjusted and motivated towards school than those who had not received career guidance.

Another qualitative result reported from the themes which emerged was co-curricular activities as an education service.

Co-curricular activities

Co-curricular activities are part of the hidden curriculum and they enhance learning. Co-curricular refers to activities, programs, and learning experiences that complement what students are learning in class experiences that are connected to or mirror the academic curriculum (Das, 2016). The participants of the study reported that the trainees were also engaged in the co-curricular activities as reported below:

“Sports/games expose trainees... .. they get to know what happens outside of their institutions, and also see how things are done elsewhere. Co-curricular activities such as sports, music taekwondo, karate spiritual guidance relaxes trainee minds, promote good morals, positive thoughts” (GCC 4)

“Sports/games expose trainees, makes them more creative, helps them identify and talents which contribute to improvement in academic performance”. (R 1)

“Trainees’ participation in clubs and societies is encouraged. Helps them develop social skills, identify interesttrainees who participate in co-curricular activities also score high grades in examinations” (DP2)

Apart from sports and games, there are clubs and societies that trainees are encouraged to join. They help trainees to develop different skills” (GCC3)

The qualitative results agreed with the trainees’ responses on the existence of co-curricular activities in TVET institutions. From the interview results (GCC4 and R1), it can be concluded that involvement in co-curricular activities offer opportunities for academic success which is an indicator of course satisfaction as the information helps

the trainees to create a proper mindset about program of study. The findings are inconsistent with the results of a study by Hammond (2017) in Ghana which revealed that sports participation did not significantly influence the academic achievement of student-athletes.

Further, 149 (43.6%) and 140 (40.9%) of the trainees respondents strongly agreed and agreed respectively that they are provided with information on how to excel academically. This fact was corroborated with a fairly large mean of 4.20 (SD=0.92) and small proportion 23 (6.8%) of the respondents who negated the claim. This result is consistent with the trainees' response on whether they are provided with information on studying techniques. A significant majority 305 (89.8%) of the respondents accepted, with a mean of 4.25 (SD=0.85) that they are provided with information on studying techniques while 17 (5.0%) disagreed and 18 (5.3%) were undecided on this statement. The findings are parallel to the results of previous research by Mporananayo (2015) conducted among students in public higher learning institutions in Rwanda which reported that provision of career guidance was important to students' academic performance and that students who receive appropriate career guidance services succeed in their subjects. The results are also consistent reports by Atsuwe (2018) in Nigeria which indicated that guidance and counselling programme have a positive impact on the academic performance of secondary school students and that there was low academic performance by the majority of the students.

However, the findings of the current study were contrary to those of Remie and Bethel-Eke (2020) from a study in Nigeria which revealed no significant difference in the opinion of students on the extent to which educational counselling services

influence career choice and academic achievement of secondary school students in Rivers State.

In addition, on this aspect of education services, a further 279 (81.6%) of the respondents registered a feeling that career guidance provided information about career after course completion which is also supported by a mean of 4.08 (SD=1.00). However, some 30 (8.8%) respondents denied that career guidance in their college provide information about career after course completion, but some 33 (9.6%) of the respondents remained neutral on this item. The mixed responses were supported by findings of a survey conducted by Safargaliev, Zinurova, and Safargalieva (2020) to assess the effectiveness of career guidance in schools in Russia. The findings revealed that school graduates have a poor understanding of their opportunities, requirements for the profession and the labor market as a result of inadequacy in provision of career guidance.

To further emphasize on the elaborateness of the education services, “*education services provided assisted me in making informed decisions about my career*” was rated at mean of 4.10 (SD=0.93) with 281 (82.1%) of the respondents answering the statement in affirmative. However, some 25 (7.5%) of the respondents claimed that the education services provided do not assist them in making informed decisions about their course of study. The findings are contrary to the results of a study by Orewere and Ojochogu (2020) in Nigeria which revealed that some students find it difficult to make wise career decision due to limited or no guidance and counseling services.

It emerged that education services provided in TVET colleges have enabled some the trainees to be productive in their respective communities upon completion of their training. For example, at a mean of 4.17 (SD=0.89), majority of 142 (41.5%) and 142 (41.5%) of the trainees who took part in the study strongly agreed and agreed respectively, that education services have motivated them to maximize their contribution to society. The results contradict earlier findings by Ali (2014) in Nigeria which revealed low level of guidance services in Kogi State University and poor attitude of students towards guidance.

These findings paint a mixed results on the adequacy of education services in TVET institutions, with many of the trainees who took part in the survey expressing their satisfaction with education services in their colleges. However, some of the respondents felt that education services offered in their college are not very adequate in the provision of relevant knowledge in the choice of a course.

4.7.2 Correlation Analysis of Education Services and Course Satisfaction

Pearson's correlation analysis was used to establish the direction and magnitude of the relationships between education services and course satisfaction among TVET trainees. The scores of both the variables were converted into continuous data by computing mean responses per respondents and the correlation analysis result is presented in Table 32.

Table 32: *Correlational Analysis of Education Services and Course Satisfaction*

		Education	Course
Education Services	Pearson Correlation	1	0.557**
	Sig. (2-tailed)		0.000
	N	342	342
Course Satisfaction	Pearson Correlation	0.557**	1
	Sig. (2-tailed)	0.000	
	N	342	342

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

It is evident in Table 32, that there is a statistically significant positive correlation between education services and course satisfaction among TVET trainees ($n=342$; $r=.557$; $p=.000$). This suggest that there is a direct relationship between education services and course satisfaction among TVET trainees. This finding disagrees with that of Mansor and Rashid (2013) in Malaysia which reported no significant difference between levels of academic achievement on career indecision and that regardless of academic achievement, students were not ready with their future career. Similarly, Likisa (2018) in Ethiopia also disagrees that career guidance services in the two colleges is not contributing to quality education as students are not assisted in education and vocational choice.

4.7.3 Regression Analysis of Education Services on Course Satisfaction

Regression analysis was used to investigate the degree of influence of education services on course satisfaction among TVET trainees and its level of significance. The *R*-Square value was computed to show the level of influence of education services on course satisfaction among TVET trainees. The result of the model summary of regression is presented in Table 33.

Table 33: *Model Summary of Education Services on Course Satisfaction*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.557 ^a	0.310	0.308	0.51616

a. Predictors: (Constant), Education Services

The model shows that 30.8% (Adjusted *R* Square = .308) of the variation in the level of course satisfaction among TVET trainees is explained by the variation in the level of provision of education services. In addition, Table 34 shows the coefficients values of regression model of the influence of education services on the level of course satisfaction among TVET trainees.

Table 34: *Coefficients-Influence of Education Services on Course Satisfaction*

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error				Lower Bound	Upper Bound
1 (Constant)	1.925	0.181	10.643	0.000	1.569	2.280	
Education Services	0.536	0.043	0.557	12.368	0.000	0.451	0.621

a. Dependent Variable: Course Satisfaction

$$Y = \alpha + \beta_3 X_3 + \varepsilon$$

$$\text{Course Satisfaction} = 1.925 + 0.536x + \text{error term.}$$

From the model, it is evident that when the provision of education services is increased by one unit there would be an ensuing improvement of course satisfaction among the TVET trainees by 0.536 (B=.536) units with a standard error of .043. However, an improvement in education services by one standard deviation would cause an improvement in course satisfaction among the TVET trainees by .557 standard deviations.

Similarly, the study sought to investigate whether education services is a significant predictor to course satisfaction among TVET trainees. This was done through the help of Analysis of Variance in line with the recommendation by Tabachnick and Fidell (2001). The ANOVA results is shown in Table 35

Table 35: ANOVA- Influence of Education Services on Course Satisfaction

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	40.751	1	40.751	152.960	0.000 ^b
	Residual	90.582	340	0.266		
	Total	131.333	341			

a. Dependent Variable: Course Satisfaction

b. Predictors: (Constant), Education Services

The results in Table 35 reveals that there is sufficient evidence to conclude that education services is a significant predictor of Course Satisfaction among the TVET trainees, as the slope of the population regression line is not zero [$F(1, 340) = 152.960, p = .000 < .05$].

4.7.4 Hypothesis 3 Testing

To determine whether there is a significant influence of education services on course satisfaction among TVET trainees, the following null hypothesis was formulated and tested formally;

H₀3: There is no significant influence of education services on course satisfaction among TVET trainees

The investigated null hypothesis is $H_0: \beta_3 = 0$ and the corresponding alternative hypothesis being $H_1: \beta_3 \neq 0$. This implies that, if the null hypothesis is true, then from $E(Y) = \beta_0 + \beta_3 X_3$ the population mean of Y is β_3 for every X value, which indicates

that X (education services) has no influence on Y (Course satisfaction). However, the alternative hypothesis is that education services is associated to course satisfaction among TVET trainees. Since the calculated F statistics was statistically significant [$F(1, 340) = 152.960, p = .000 < .05$] the null hypothesis that there is no significant influence ($\beta_3 = 0$) of education services on course satisfaction among TVET trainees, was rejected. Therefore, it was concluded that education services has statistically significant influence on course satisfaction among TVET trainees. This implies that TVET trainees who adequately receive effective education services are likely to rate higher in course satisfaction compared to their counterparts who receive comparatively low or poor education services. This finding agrees with TeWierik (2015) which revealed that career guidance helped students to persist in their first year of study, and that good grades in the first year are especially important to subsequent academic success and degree completion, as they enhance first year progress towards timely degree completion. Similarly, Do Ceu and De Nazare (2014) indicated that the seminar was effective in improving the career exploratory attitudes and behaviours of the undergraduates.

4.8 Findings on Information Services and Course Satisfaction among Trainees

The last objective of the study sought to establish the relationship between information services and course satisfaction among trainees. The objective was addressed by using descriptive statistics to explore the views of the sampled TVET trainees on information services as an aspect of career guidance services. Secondly, inferential statistics analysis was used to establish whether information services has any influence on course satisfaction among trainees.

4.8.1 Ratings on Information Services in TVET Institutions

The views of the trainees on the application of information services was investigated through a Ten-Likert-scaled questionnaire. The application of information services was considered as information on careers, on learning opportunities and personal social skills provided to enable students make intelligent choices with regard to their studies. It was operationalized as the provision of accurate and current information to enable trainees select courses of their interest and ability. The items were measured on a five point Likert scale ranging from *strongly disagree* (1) to *strongly agree* (5), with 1 denoting least effective application of information services and 5 suggesting very effective information services. The responses were summarized in percentage frequencies and means with their standard deviations, as shown in Table 36.

Table 36: *Respondents' Ratings on Information Services*

Item	5	4	3	2	1	ME	SD
1. The information provided through printed materials (Brochures, fliers and leaflets) contributed towards my understanding of the courses offered	116 (33.9%)	127 (37.1%)	52 (15.2%)	29 (8.5%)	18 (5.3%)	3.86	1.13
2. Information on education and occupation is provided to students by means of: A file of occupational provided to students by means of books and pamphlets	93 (27.2%)	128 (37.4%)	49 (14.3%)	51 (14.9%)	21 (6.1%)	3.65	1.20
3. Provided to students by means of college catalogue	71 (20.8%)	130 (38.0%)	92 (26.9%)	33 (9.6%)	16 (4.7%)	3.61	1.06
4. The use of occupational posters, charts, films, and Exhibits	66 (19.3%)	121 (35.4%)	84 (24.6%)	44 (12.9%)	27 (7.9%)	3.45	1.17
5. By use of career day	81 (23.7%)	111 (32.5%)	81 (23.7%)	40 (11.7%)	29 (8.5%)	3.51	1.21
6. By visits to business and industry	82 (24.0%)	107 (31.3%)	60 (17.5%)	52 (15.2%)	41 (12.0%)	3.40	1.32
7. By use of internet	113 (33.0%)	125 (36.5%)	62 (18.1%)	25 (7.3%)	17 (5.0%)	3.85	1.11
8. I was provided with sufficient information	138 (40.4%)	115 (33.6%)	29 (8.5%)	41 (12.0%)	19 (5.6%)	3.91	1.21
9. The information services provided assist trainees in selecting courses that give them satisfaction.	122 (35.7%)	148 (43.3%)	34 (9.9%)	27 (7.9%)	11 (3.2%)	4.00	1.03
10. I'm not sure about the course choice I am studying since no one has talked	65 (19.0%)	53 (15.5%)	25 (7.3%)	76 (22.2%)	123 (36.0%)	2.59	1.55
Mean average rating of information services						3.48	0.73

Key: 5- Strongly Agree, 4- Agree, 3- Undecided, 2- Disagree, 1- Strongly Disagree

Source: Survey data (2021)

A composite mean of 3.48 (SD=0.73) was obtained for the information service as a variable in the study, showing that the trainees who participated in the study have varied opinions with regards to this career guidance service in their college/department, but what came out clearly is that career guidance information services is provided to the trainees using varied methods. It emerged from the study that information services are majorly provided through printed materials (brochures, fliers and leaflets) because they are fairly effective. This was confirmed by 116 (33.9%) and 127 (37.1%) of the trainees who were surveyed who either strongly agreed or agreed that the information provided through printed materials (Brochures, fliers and leaflets) contributed towards their understanding of the courses offered. About 52 (15.2%) were undecided while 29 (8.5%) and 18 (5.3%) disagreed and strongly disagreed respectively. Given that the item attracted a mean of 3.86 (SD=1.13), it implies that some of the respondents did not believe that information services are majorly provided through printed materials. When asked whether education and occupational information was provided by means of a file of occupational books and pamphlets, 93 (27.2%) and 128 (37.4%) strongly agreed and agreed respectively. A significant number (49) remained undecided while 51(14.9%) disagreed and 21 (6.1%) strongly disagreed. The mixed responses indicate that the use of these information sources is limited.

Similarly, on whether information was provided by use of posters, charts, and exhibits, 66 (19.3%) strongly agreed, 121 (35.4%) agreed, 84 (24.6%) were undecided, 44 (12.9%) disagreed and 27 (7.9%) strongly disagreed. The results

corroborated the findings of Sunilkumar (2018) in India that the career information resources needed for students and research scholars are available in print, audio visual or electronic format. Print format is most preferred, followed by electronic version. These findings show inadequate sources of career information contrary to the findings by Onditi (2018) from a study among students in Tanzania that revealed the major sources of career information available as radio, newspaper, teachers, books, parents, television, relatives, friends and internet. The findings in the reviewed study revealed that students benefitted from adequate career information. The findings are also inconsistent with the results of a study by Kabunga (2020) conducted among secondary school students in Uganda which reported that the more information the learners receive the more they make the choices concerning careers.

The study findings indicate that the means of providing information on education and occupation to students such as career day talk, visits to business or industry, which are vital in assisting the trainees have up-to date information about job market demand are barely effective, hence, cases of dissatisfaction in course satisfaction. For instance, whereas 192 (56.2%) of the trainees who took part in the study accepted that information on education and occupation to trainees by means of career day talk is effective, slightly more than a fifth 69 (20.2%) of the sampled trainees disagreed and strongly disagreed with the statement while 81 (23.7%) were undecided. This could be a possible reason for low course satisfaction among TVET trainees. The item registered an average mean of 3.51 (SD=1.21), suggesting that although many trainees were satisfied with the career talk, a respectable proportion of them held that career talk is less effective in course choice. The results were consistent with those of Bama and Borokonda (2019) who investigated the extent to which career guidance impacts students' career choice in secondary schools in Cameroon, and found out that career

information, career fairs and school career days positively impact the choices that students make of their careers.

On the contrary, a study by Abubakar (2017) in Nigeria revealed that participation in career guidance activities is generally low and no significant difference existed in the pattern of participation among genders. The participation trend depicted that students underutilize the opportunity to identify their skills, values and aptitude adequately and also fail to explore the existing careers relevant to respective personalities.

This finding agrees with Shen et al. (2014) which revealed that majority of students were 'somewhat' satisfied with their decision to study pharmacy, a higher proportion of students were 'not at all' satisfied compared to those who are 'extremely' satisfied. Important factors for studying pharmacy included the nature of the work such as patient contact, job prospect and high income expectation. The level of dissatisfaction with career decision was higher amongst students who chose pharmacy due to pragmatic reasons such as high income, or those who sought alternative career pathways such as health policy or medicine/dentistry.

Further, while 82 (24.0%) and 107 (31.3%) of the respondents strongly agreed and agreed, respectively that information on education and occupation is provided to them by means of visits to business and industry, 93 (27.2%) of them refuted the claim that they are taken for visits to business and industry. However, 60 (17.5%) of the respondents were not decided on this matter, showing that a significant proportion of the respondents are not benefiting from information services regarding career choice provided by visits to business and industry. The item attracted a mean of 3.40 with a standard deviation of 1.32 suggestive of a divergent opinion of the respondents on this

matter. These findings agree with those of Lawer (2015) in Ghana which reported that career guidance programme was not given prominent attention for the full benefit of the student and that students' source of career information was limited. Divergent opinions were also reported from the study by Uleanya et al. (2020) that explored various forms of communication for disseminating career guidance services to potential university students in South Africa. The study reported that students from Durban University of Technology were more aware of various available careers and had access to information while most students from University of Zululand were not well informed about available careers.

Qualitative results were also obtained from respondents on information services that was available and how it influenced course satisfaction among trainees. One of the themes that was reported was industrial attachment information.

Industrial attachment information

Industrial attachment forms part of the training programme and is mandatory for all trainees. It is a requirement for all trainees enrolled in TVET institutions to experience a minimum of 3 months industry attachment. According to Habibur (2022), industrial attachment provides opportunity to students to gain first hand workplace experience in their chosen field of study. The study participants reported that information on attachment for industrial purposes was available at the Industrial Liaison Office (ILO) and Career offices and it helped the trainees to get adequate placement. Two respondents reported that:

“We have information that we give to trainees on the attachments for their respective fields that they are studying on. The trainees are able to get placed for practical training in industry on all that they have learnt from the lectures” (GCC 1)

“Our trainees are placed for industrial attachment for most of the courses that are taught here. This gives the trainees the opportunity to get places for their practical, and we also have an ILO office for that assist trainees to get places for practice” (R 2)

From the interview results (GCC1 and R2), it can be concluded that industrial attachment information was available as an information service and it helped the trainees to adjust well to the new college environment. In agreement, Uleanya, et al. (2020) reported that the students from Durban University of Technology (DUT) were more aware of various available careers and had access to good career information while most of the students’ participants from University of Zululand (UNIZULU) were not well-informed about available careers.

On whether they were provided with sufficient information concerning the courses they are taking, 138 (40.4%) of the participants strongly agreed, 115(33.6%) agreed, 29(8.5%) were undecided while 41(12.0%) and 19(5.6%) disagreed and strongly disagreed respectively. Similarly, 118 (34.5%) of the surveyed trainees admitted that they are not sure (mean=2.59; $SD=1.55$) about the course choice they are studying since no one had talked to them about the courses, 25(7.3%) were undecided while 189 (58.2%) disagreed and strongly disagreed respectively. The current finding agrees with Angelista (2018) research findings from a study in Tanzania that investigated challenges facing secondary school teachers in implementing career guidance and its implication on the students’ future job choices. The study revealed that students in secondary schools did not receive adequate information on career choices and this posed a challenge in subject selection in higher secondary school and fields of study in university education respectively with students ending up studying courses they are dissatisfied with The findings were in line with the findings of Ombaba et al. (2014) in Kenya that revealed that lack of information services makes students become

frustrated, dissatisfied and some are forced to change careers midway after poor performance leading to discomfort.

Qualitative results were also obtained from respondents on information services that was available and how it influenced course satisfaction among trainees. One of the themes that was reported was course requirements information.

Course Requirements Information

This refers to the course details that each trainee is expected to have with respect to entry information and other course requirements. The respondents reported that the information on course requirements was provided by the different colleges for the trainees. This was to assist each trainee to be aware of each course demands so that they could adjust easily in to the programmes. One respondent reported that:

“We have information that is provided to the trainees regarding the course requirements and this give detailed information to the trainees on what they should expect in each course. This has helped the trainees so that they could settle well in their courses” (GCC 3)

“The trainees are given adequate information on the courses that they need to do at the college. This is helpful to them because they have what they need to do well in their courses. They have information on subject combinations and other relevant information that is meant to assist them to do their courses” (DP 4)

From the interview results (GCC3 & DP4), it can be concluded that course requirements information was an information service that was available for trainees and it helped them to adjust well to the new environment. This finding agrees with Arliani and Farozin (2020) in Indonesia which revealed that career information services assisted by interactive video and live modeling are effective in increasing the career understanding of students. Further, career planning is very effective if students

are provided with career information that provides them with the latest information and in accordance with their need. The study concluded that provision of career information services significantly increased students' motivation to pursue higher education. However, the findings are contrary to those of Upoalkpajor (2020) on career guidance and its implications for students' career choices in selected schools in Ghana that reported that poor delivery of career information has led to incorrect career path decisions by students translating into absence of interest and dissatisfaction in selected fields. Inconsistent findings were also reported by Angelista (2018) in Tanzania that revealed that secondary school students did not receive adequate information on career choices which posed a challenge in subject selection in higher secondary school and fields of study in university education.

Similarly, although 113 (33.0%) and 125 (36.5%) of the respondents did strongly agree and agree respectively that information on education and occupation is provided to trainees by means of internet, video and films some 42 (12.3%) of the respondents denied that internet is used as a way of creating information on career choice while 62(18.1%) remained undecided on this item.

The findings are similar to the results of a study carried out by Syakir *et al* (2016) among second grade students in Indonesia that investigated the impact of ICT integration in career counselling in assisting students in decision-making and career aspirations. The study reported that the implementation of the service model of ICT-based career information to senior high school students had significant effect on improving their decision-making. These findings are further corroborated with the results of a study by Arliani and Farozin (2020) in Indonesia which reported that

interactive video and live modeling are effective in increasing the career understanding of students.

Qualitative results were also obtained from respondents on information services that was available and how it influenced course satisfaction among trainees. One of the themes that was reported was reproductive health services information.

Reproductive health services information

The reproductive health services information has to do with issues regarding the monitoring menstrual cycles, counseling on contraception, pregnancy prevention, and family planning are important components to the reproductive health care adolescents receive. Most participants reported that there were reproductive health information services that was provided every term of the academic year and that they could access this from the counselling office. Some respondents reported that:

“There is information that is given to the trainees on how to take care of themselves while within the college. The female students are taught how to take care of themselves not to get pregnant and they are also provided with information regarding safe sex and encouraged on abstinence”
(GCC 1)

“The trainees have access to lots of information on their reproductive health. We provide condoms and put them in strategic places for trainees to pick and use them if they need to do so. This helps to guard against unwanted pregnancies and sexually transmitted diseases” (R 4)

From the interview results, it can be interpreted that reproductive health services information helped the trainees to adjust well. In agreement, Bama and Borokonda (2019) revealed that career information, career fairs and school career days organized by resident school or career counsellors in the context of career guidance positively

impact the choices that students make of their careers. On the contrary, Upoalkpajor (2020) reported that poor delivery of guidance services especially in the form of career information has led to incorrect career path decisions by students translating into absence of interest and dissatisfaction in selected fields. It emerged from the findings that with career information acquired, the students are able to link what they learned to their interests, capacities, aspirations, and match it with the existing career opportunities thus achieving satisfaction.

Lastly, the findings of the study show that 122 (35.7%) and 148 (43.3%) of the respondents were in strong agreement and agreement, respectively, that the information services assist trainees in selecting courses that give them satisfaction. The item recorded a mean of 4.00 (SD=1.03) indicating a high degree of agreement that information services support trainees in selecting courses that give them satisfaction. However, 38 (11.1%) of the trainees who participated in the survey were in disagreement that information services provided to them at TVET assist them in selecting courses that give them satisfaction. The results of the current study are contradictory to the findings of Chin, Cohen, and Hora (2018) in the United States that examined undergraduate students' experiences with career services and decision-making processes. The reviewed study by Chin, Cohen, and Hora (2018) reported participants' greater reliance on socio-cultural resources compared to institutional factors such as College Career Service Center (CCSC) programs and services to obtain career information. Inadequate provision of information services was also reported from a study by Lawer (2015) in Ghana which revealed, among other things, that career guidance programme was not given prominent attention for the full benefit of students and students' source of career information was limited. The reviewed study revealed that students had some information about the self, but much was not

known about the world of work. However, the findings of the current study support earlier findings by Gacohi, Sindabi, and Chepchieng (2017) from a study conducted in 6 public universities in Kenya that reported that career information had a high influence on the choice of degree programme of students. The findings were consistent with those of Kanyingi-Maina (2020) from a study conducted among undergraduate students in Kenya. The study concluded that there was a statistically significant relationship between career guidance programmes, and choice and change of programme of study

Qualitative results were also obtained from respondents on information services that was available and how it influenced course satisfaction among trainees. One of the themes that was reported was reproductive government capitation and loans information.

Sponsorship and loans information

This is information regarding sponsorship and loans available for the trainees during the course of the training. This information includes government loans and bursaries, and Constituency Development Fund bursaries. The information is not only contained in booklets and is given to all the trainees at the time of registration and admissions but is also provided by the institutions' administrators. This was helpful as it helps the trainees to obtain financial support from the relevant organizations so that they can finish their courses. One respondent reported that:

“We have information which is provided to the trainees on the funding opportunities that are available at the colleges from various bodies. The government always give funding to trainees in tertiary institutions like ours” (GCC 3)

“The trainees get adequate information regarding funding which is provided by the government. Trainees are also encouraged to apply for

loans and bursaries from Higher Education Loans Board (HELB). This helps the trainees to make applications for the available funds and it assists them to complete their education well” (R 4).

From the interview results (GCC3 and R4), it can be concluded that government capitation and loans information was available for the trainees and this made them to adjust well in the colleges. On the contrary, Mabula (2012) indicated that, career service provision in government schools in the region is inadequate with less students’ exposure to career programs and limited sources of career information in comparison to the provision in international schools where students demonstrated good exposure to various career programs and better knowledge in various career options.

4.8.2 Correlation Analysis of Information Services and Course Satisfaction

The direction and magnitude of the relationships between information services and course satisfaction among TVET trainees was investigated using Pearson’s Product Moment Correlation analysis. The scores of both the variables were converted into continuous data by computing mean responses per respondents and the correlation analysis result is presented in Table 37.

Table 37: *Correlation Analysis of Information Services and Course Satisfaction*

		Information Services	Course Satisfaction
Information Services	Pearson Correlation	1	0.439**
	Sig. (2-tailed)		0.000
	N	342	342
Course Satisfaction	Pearson Correlation	0.439**	1
	Sig. (2-tailed)	0.000	
	N	342	342

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

It is evident in Table 37, that there is a statistically significant positive correlation between information services and course satisfaction among TVET trainees ($n=342$; $r=.439$; $p=.000$), implying a direct relationship between information services and course satisfaction among TVET trainees. In agreement, Bama and Borokonda (2019) revealed that career information, career fairs and school career days organized by resident school or career counsellors in the context of career guidance positively impact the choices that students make of their careers. On the contrary, Mabula (2012) indicated that, career service provision in government schools in the region is inadequate with less students' exposure to career programs and limited sources of career information in comparison to the provision in international schools where students demonstrated good exposure to various career programs and better knowledge in various career options.

4.8.3 Regression Analysis of Information Services on Course Satisfaction

Regression analysis was used to establish the degree of influence of Information services on course satisfaction among TVET trainees and its level of significance. The *R*-Square value was calculated to show the level of influence. The result of the model summary of regression is presented in Table 38.

Table 38: *Model Summary of Information Services on Course Satisfaction*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.439 ^a	0.193	0.190	0.55849

a. Predictors: (Constant), Information Services

The model shows that 19.0% (Adjusted *R* Square = .190) of the variation in the level of course satisfaction among TVET trainees is explained by information services.

Table 39 shows the coefficients values of regression model of the influence of information services on the level of course satisfaction among TVET trainees.

Table 39: *Coefficients-Influence of Information Services on Course Satisfaction*

Model	Unstandardized Coefficients		Standardized	T	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
1 (Constant)	2.835	0.147		19.232	0.000	2.545	3.125
Information Services	0.374	0.041	0.439	9.004	0.000	0.292	0.455

a. Dependent Variable: Course Satisfaction

$$Y = \alpha + \beta_4 X_4 + \varepsilon$$

$$\text{Course Satisfaction} = 2.835 + 0.374x + \text{error term.}$$

From the model, it is shown that when the provision of information services is increased by one unit there would be a successive improvement of course satisfaction among the TVET trainees by 0.374 units ($B=.374$) with a standard error of .041. However, an improvement in information services by one standard deviation would cause an improvement in course satisfaction among the TVET trainees by .439 standard deviations.

On the same vein, the study sought to investigate whether information services is a significant predictor to course satisfaction among TVET trainees. This was explored through the use of Analysis of Variance in line with the recommendation by Tabachnick and Fidell (2001). The ANOVA results is shown in Table 40.

Table 40: *ANOVA- Influence of Information Services on Course Satisfaction*

Model	Sum of	Df	Mean Square	F	Sig.
1 Regression	25.285	1	25.285	81.067	0.000 ^b
Residual	106.048	340	0.312		
Total	131.333	341			

a. Dependent Variable: Course Satisfaction

b. Predictors: (Constant), Information Services

The results in Table 40 unveil that there is sufficient evidence to conclude that information services is a significant predictor of Course Satisfaction, as the slope of the population regression line is not zero [$F(1, 340) = 81.067, p = .000 < .05$].

4.8.4 Hypothesis 4 Testing

To determine whether there is a significant influence of information services on course satisfaction among TVET trainees, the following null hypothesis was formulated;

H₀: There is no significant influence of Information services on course satisfaction among TVET trainees

The investigated null hypothesis is $H_0: \beta_4 = 0$ and the corresponding alternative hypothesis being $H_1: \beta_4 \neq 0$. If the null hypothesis is true, then from $E(Y) = \beta_0 + \beta_4 X_4$ the population mean of Y is β_4 for every X value, which indicates that X (information services) has no influence on Y (Course satisfaction) and the alternative being that information services is associated to course satisfaction among TVET trainees. Given that the calculated F statistics was statistically significant [$F(1, 340) = 81.067, p = .000 < .05$] there is sufficient evidence to reject the null hypothesis that there is no significant influence ($\beta_4 = 0$) of information services on course satisfaction among TVET trainees. Thus, it was concluded that information services, as an aspect of career guidance services, has statistically significant influence on course satisfaction among TVET trainees. This implies that TVET trainees who adequately receive effective information services are likely to rate higher in course satisfaction compared to their counterparts who receive comparatively low or poor information services. In agreement, Bama and Borokonda (2019) revealed that career information, career fairs and school career days organized by resident school or career counsellors in the

context of career guidance positively impact the choices that students make of their careers. On the contrary, Mabula (2012) indicated that, career service provision in government schools in the region is inadequate with less students' exposure to career programs and limited sources of career information in comparison to the provision in international schools where students demonstrated good exposure to various career programs and better knowledge in various career options.

4.9 The Regression Model

The study used multiple regression analysis to establish a linear model that could be used to describe the optimal level of course satisfaction among TVET institutions trainees given various aspects of career guidance services. The four aspects of career guidance services (orientation services, appraisal services, education services and information services) were input in the model at once as predictor variables. The multiple-regression did not only help to investigate how well the set of career guidance services were able to predict the level of course satisfaction, but also provided information about the relative contribution of each aspect of career guidance services. Each variable was evaluated in terms of its predictive power, over and above that offered by all the other independent variables. It gave the understanding how much unique variance, in course satisfaction, each aspect of career guidance services explained. This was shown by coefficients values in Table 41.

Table 41: *Coefficient Output-Influence of Career Guidance Services on Course Satisfaction among the TVET Trainees*

Model	Unstandardized Coefficients		Standardize d Coefficient	T	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
1 (Constant)	1.201	0.203		5.918	0.000	0.802	1.600
Orientation Services	0.167	0.051	0.176	3.293	0.001	0.067	0.267
Appraisal Services	0.182	0.055	0.187	3.276	0.001	0.073	0.291
Education Services	0.246	0.059	0.255	4.137	0.000	0.129	0.363
Information Services	0.141	0.043	0.166	3.297	0.001	0.057	0.225

a. Dependent Variable: Course Satisfaction

An examination of the coefficient's values reveal that each independent variable contributes uniquely to the model; that is, the various aspects of career guidance services contribute differently in influencing course satisfaction among TVET trainees. Education services, on its own had the single highest influence (Beta = 0.255) on course satisfaction. This implies that improving education services by one standard deviation would results to an improvement in their course satisfaction by 0.255 standard deviations. Career guidance service which had the least effect on trainees' course satisfaction was information services (Beta=0.166), where an improvement of information service by one unit resulting into only 0.166 unit improvement in course satisfaction. On the other hand, Orientation Services and Appraisal Services recorded on 0.176 and 0.187 improvement in course satisfaction, respectively, when they are improved by one unit each, with the other variables in the model held constant.

The study was guided by a general regression prediction model as follows:

$$Y (\text{TVET Trainee Course Satisfaction}) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

X_1 =Orientation Services, X_2 =Appraisal Services, X_3 =Education Services, X_4 = Information Services

Thus, the predicated optimum level of course satisfaction among TVET trainees in Kakamega County was represented by:

$$Y = 1.201 + .167 X_1 \text{ units} + .182 X_2 \text{ units} + .246 X_3 \text{ units} + .141 X_4 \text{ units} + \text{error}$$

From the model, the coefficients indicate how much course satisfaction changes with a change in a variable when all other variables are held constant. For example, for each one unit change in orientation service, there is a subsequent change in the level of course satisfaction by 0.167 units. Likewise, for each one-unit improvement in appraisal services there is an ensuing improvement in course satisfaction among the TVET trainees by 0.182 units. For a unit improvement in Education Services and Information Services, the changes in course satisfaction would be .246 units and .141 units, respectively. Table 42 summaries the results of regression model and ANOVA.

Table 42: *Model Summary- Influence of Career Guidance Services on Course Satisfaction among the TVET Trainees*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Df	F	P-value
1	0.627 ^a	0.393	0.386	0.48624	d1=4, d2=337	54.621	0.000

a. Predictors: (Constant), Information Services, Orientation Services, Appraisal Services, Education Services

However, in general, the model was adequate to predict the level of course satisfaction among the TVET trainees. The model is statistically significant F (4, 337)

= 54.621, $p = .000$, $R^2 = .386$. This confirms that Career guidance services jointly is a significant predictor of course satisfaction among the TVET trainees in Kakamega County. Career guidance services as a whole accounted for about 38.6% ($R^2 = 0.386$) of variability in course satisfaction among the TVET trainees, which is a sizeable amount of variability.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the findings, conclusions of the study, and recommendations based on the study guided by research objectives. Suggestions for further research are also made based on the study findings.

5.2 Summary of Findings

The major findings are summarized based on study objectives as follows.

5.2.1 Findings on Orientation Services and Course Satisfaction among TVET Trainees

The results of the study have shown that whereas orientation services are provided to trainees in TVET colleges as an aspect of career guidance, they are not very adequate. On one hand, majority of the trainees were of the opinion that orientation services are elaborate, informative on the future of courses, provides an option for changing courses, and contributes to their adjustment to college environment. On the other hand, a few of the trainees were of contrary opinion. The findings revealed the importance of orientation services in assisting trainees to adjust to college life and make informed decisions about course of study to achieve satisfaction. The results were corroborated by findings from qualitative data that confirmed the forms of orientation services offered as general orientation of new students, departmental orientation, examinations orientations and orientation for new staff. A significant positive correlation was found between orientation services and course satisfaction among TVET trainees.

5.2.2 Findings on Appraisal Services and Course Satisfaction among Trainees

The descriptive results indicated that many trainees expressed their satisfaction with regard to provision of appraisal services. They agreed that appraisal services assist them in knowing their strengths and weaknesses with regard to their study programmes, motivates them in their studies, and provides them with confidence in their studies. A smaller number were of contrary opinion and felt that appraisal services were inadequate and not useful to them in their academic programmes. Qualitative results reported that appraisal services offered included appraisal during admissions and appraisal through quality assurance office though there is lack of consistency in provision of the services. The qualitative findings confirmed that though the appraisal services were offered, they were not very adequate. The results of correlational analysis indicate that there was significant positive correlation between appraisal services and course satisfaction among TVET trainees. This implies that there is a direct relationship between appraisal services and course satisfaction among TVET trainees, suggesting that improved levels of appraisal services is associated to improved course satisfaction among TVET trainees and vice-versa.

5.2.3 Findings on Education Services and Course Satisfaction among Trainees

The descriptive results paint a mixed results on the adequacy of education services in TVET institutions, with many of the trainees who took part in the survey expressing their satisfaction with education services in their colleges. However, some of the respondents felt that education services offered in their college are never adequate in the provision of relevant knowledge in the choice of a course. Further, qualitative results revealed that the education services offered in TVET institutions were academic training, and co-curricular activities which are critical to trainees

performance. The results of correlational analysis indicate that there is a statistically significant positive correlation between education services and course satisfaction among TVET trainees. This implies that TVET trainees who adequately receive effective education services are likely to rate higher in course satisfaction compared to their counterparts who receive comparatively low or poor education services.

5.2.4 Findings on Information Services and Course Satisfaction among Trainees

The descriptive results indicated that although career information services were provided to trainees through various means, a smaller portion of them considered information services as inadequate. However, more than half of the respondents were categorical that they were not provided with information on courses they are undertaking. This means that some of the trainees are not satisfied with their courses. Findings from qualitative analysis reported three key areas covered by career information services in the institutions: industrial attachment, reproductive health services, and government capitation and loans information. Job information is not prioritized in the provision of information services. The qualitative findings imply that trainee's career information needs are not adequately provided for them to realize satisfaction with the courses they choose to study.

The results of correlational analysis indicate that there is a statistically significant positive correlation between information services and course satisfaction among TVET trainees implying a direct relationship between information services and course satisfaction among TVET trainees.

5.3 Conclusions

The results of the study established that there is direct relationship between career guidance services and course satisfaction though the various aspects of career guidance services contribute differently in influencing course satisfaction among TVET trainees.

Course satisfaction is important in the life of a student as it leads to motivation and good performance critical for the country's development. Trainees who study courses of their satisfaction in terms of skills, interest and special aptitudes are an asset to the attainment of the country's development goals. Therefore, the study examined career guidance services as predictors of course satisfaction among trainees in TVET institutions.

Orientation services had positive and significant relationship with trainees' course satisfaction. While orientation services are predictors of students' course satisfaction, the forms of orientation services offered in TVET institutions are limited to general orientation of new students, departmental orientation, examinations orientations and orientation for new staff. Other orientation services like library orientation and information technology are not provided. From this finding, it can be concluded that there is need to include other aspects of orientation such as library orientation and information technology in orientation services offered to trainees in TVET institutions. Further, since TVET programmes are flexible in regard to entry and exit points, the orientation services should not be limited to only first years. All trainees should benefit from the services regardless of their year of study.

Appraisal services are offered during admission and through the quality assurance office though there is lack of consistency in the provision of the services. The services are not very comprehensive enough resulting in some trainees taking courses not in line with their abilities, interests and special aptitudes while trainees who received the services are more satisfied with their courses. It was therefore concluded that appraisal services is indeed a significant predictor of course satisfaction.

There is a statistically significant positive correlation between education services and course satisfaction among TVET trainees. The findings, however, paint mixed results on the adequacy of education services in TVET institutions. The education services provided are on academic training and co-curricular activities which contributes to trainees' academic success. The study concluded that education services is a significant predictor of course satisfaction among TVET trainees.

The results indicate that there is a significant positive correlation between information services and course satisfaction among TVET trainees implying a direct relationship between information services and course satisfaction among TVET trainees. Trainees are provided with information services on industrial attachment, reproductive health services, and sponsorship and loans information. Job information is not prioritized in the provision of information services. This leads to the conclusion that trainee's career information needs are not very adequately provided to facilitate their realization of course satisfaction

5.4 Recommendations

1. It is recommended that TVET institutions should implement comprehensive and elaborate orientation service that benefits all trainees regardless of year of study to enhance their course satisfaction.
2. The study recommends that the Directorate of Technical Training should continue to support the implementation of appraisal services by training counsellors competent to administer the relevant tests.
3. The study recommends that the administrators of TVET institutions should continue to strengthen implementation of TVET academic policy in the institutions for optimum provision of academic services. This will increase students' exposure to the requirements and expectations of the academic options available necessary for informed course selection.
4. The Ministry of Education through Curriculum Development and Certification Council (CDACC) and Kenya Institute of Curriculum Development (KICD) should review career guidance curriculum to incorporate all aspect of information services as an aspect of career guidance. Students can only choose courses of their satisfaction when they are provided with all relevant career information.

5.5 Suggestions for future research

1. The current study used interview schedules and questionnaires for data collection to establish whether career guidance services are predictors of trainees' course satisfaction. There is need to conduct further research on the same variables using different data collection tools such as focused group discussion and observation to provide further understanding of the relationship between career guidance services and trainees' course satisfaction.

2. From the current study the number of males and females were not equal in number though the sampling procedure in the study gave equal opportunities for participation to both gender. Therefore, further research is necessary to explore gender based differences as a variable in course satisfaction for more conclusive results.
3. The current study was conducted in public national TVET institutions only. Therefore, there is need to conduct a similar study in private and Vocational Training Centers.

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**APPENDIX A: ENROLMENT IN PUBLIC TVET INSTITUTIONS IN
KAKAMEGA COUNTY**



REPUBLIC OF KENYA

MINISTRY OF EDUCATION
STATE DEPARTMENT OF VOCATIONAL & TECHNICAL TRAINING
Office of the County Director, TVET - Kakamega

ENROLMENT DATA IN PUBLIC TECHNICAL AND VOCATIONAL COLLEGES IN KAKAMEGA BY 30TH DECEMBER, 2019

NO	INSTITUTION	ENROLMENT		TOTAL
		MALE	FEMALE	
1.	SIGALAGALA NATIONAL POLYTECHNIC	4,480	4,277	8,757
2.	SHAMBERERE TECHNICAL & VOCATIONAL COLLEGE	918	571	1,489
3.	BUSHIANGALA TECHNICAL & VOCATIONAL COLLEGE	859	557	1,416
4.	BUTERE TECHNICAL & VOCATIONAL COLLEGE	651	494	1,145
5.	MUMIAS WEST TECHNICAL & VOCATIONAL COLLEGE	72	74	146
6.	WANGA TECHNICAL & VOCATIONAL COLLEGE	75	55	130
7.	KONGONI TECHNICAL & VOCATIONAL COLLEGE	30	32	62
8.	NAVAKHOLO TECHNICAL & VOCATIONAL COLLEGE	NIL	NIL	NIL
	TOTAL	7085	6060	13145

This is the certified enrolment data as at the date shown.


JOSEPH B. SUNGUTI
County Director, TVET
KAKAMEGA & VIHIGA COUNTIES

COUNTY DIRECTOR TECHNICAL, VOCATIONAL
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APPENDIX B: TRAINEES' QUESTIONNAIRE

This questionnaire seeks to assess the influence of career guidance services on students' course satisfaction in Kakamega county. The study is part of the researcher's Doctor of Philosophy degree in Educational Psychology at Jaramogi Oginga Odinga University of Science and Technology (JOOUST). You do not need to write your name as no respondent will be traced or identified from this study whatsoever as confidentiality and anonymity are guaranteed. There are no right or wrong answers. The researcher is only interested in your own opinion. All data and information generated from this study will be treated as strictly private and confidential. You are therefore kindly requested to complete the questionnaire as honest as possible. Thank you for participating in this study

SECTION A: RESPONDENT'S BIO-DATA

The following questions ask about your background information. Kindly indicate your response to each question by placing a tick (✓) in an appropriate box

Gender

Male	<input type="checkbox"/>
Female	<input type="checkbox"/>

Age

14 -17 (yrs.)	<input type="checkbox"/>
18 – 22 (yrs.)	<input type="checkbox"/>
23(yrs.) and above	<input type="checkbox"/>

Year of study

First year	<input type="checkbox"/>
Second Year	<input type="checkbox"/>
Third year	<input type="checkbox"/>

Level of course undertaken

Diploma	
Certificate	
Artisan	
Short course (less than 6 months)	

Type of programme of study

Engineering	
Institutional management	
Business Studies	
Social Work	
Agriculture and Applied Sciences	
ICT	

SECTION B:**PART I: ORIENTATION SERVICES**

The statements below are seeking your feelings or opinions on career orientation services offered at the institute. Indicate with a tick (√) in the box provided against each statement the extent to which you agree with the statement on the table below based on the following option:

SA- Strongly Agree, **A**- Agree, **UN** – Undecided, **D** – Disagree, **SD** – Strongly Disagree

SN	STATEMENTS	SA	A	U	D	SD
1.	Orientation programmes are very elaborate at the College					
2.	Orientation services help me to adjust to the College environment					
3.	During orientation, students are introduced to the courses chosen					
4.	Orientation services are informative on the future of courses					
5.	Orientation services provides data on success of college graduates					
6.	Orientation services provides an option for changing a course at the college					

7.	Orientation services help to introduce students to courses offered					
8.	During orientation, the trainees are made aware, within their career education programmes, of TVET options alongside the other options available to them					

PART II: APPRAISAL SERVICES

The statements below are seeking your feelings or opinions on career appraisal services offered in the institute. Indicate with a tick (✓) in the box provided against each statement the extent to which you agree with the statement on the table below based on the following options:

SA- Strongly Agree, **A**- Agree, **UN** – Undecided, **D** – Disagree, **SD** – Strongly Disagree

SN	STATEMENTS	SA	A	U	D	SD
1	Appraisal services has assisted me to know areas of weakness in each unit covered					
2	After doing many tests, I now know my areas of strengths					
3	Appraisal services have enabled me know my academic performance in the course					
4	Forms of assessment are varied for each of the modules taught					
5	From the appraisal services offered, I am convinced that I am undertaking the course I am suited for.					
6	Appraisal services have energized me to do better for final certification					
7	I feel confident with the units after thorough revision					
8	Appraisal services have made me prepare well on practical tests					
9	With the appraisal services available, I am busy studying my course to do better					
10	Appraisal services have made me to be well prepared for the final examinations					

PART III: EDUCATION SERVICES

The statements below are seeking your feelings or opinions on career education services offered at the institute. Indicate with a tick (√) in the box provided against each statement the extent to which you agree with the statement on the table below based on the following option:

SA- Strongly Agree, **A-** Agree, **UN** – Undecided, **D** – Disagree, **SD** – Strongly Disagree

SN	STATEMENTS	SA	A	U	D	SD
1	Advice provided on academics helped me pursue the right course					
2	Education services has helped me to match my intellectual capability with the course am undertaking					
3	Advice on courses offered made me choose the course that gives me satisfaction					
4	Education services offered are very elaborate and include co-curricular activities					
5	Trainees are provided information on content difficulty on courses offered					
6	Trainees are provided with information on how to excel academically					
7	Career guidance provide information about career after course completion					
8	Education services provided assisted me in making informed decisions about my career					
9	Trainees are provided with information on studying techniques					
10	Education services motivated me to maximize my contribution to society					

PART IV: INFORMATION SERVICES

The statements below are seeking your feelings or opinions on career information services offered at the institute. Indicate with a tick (√) in the box provided against each statement the extent to which you agree with the statement on the table below based on the following option:

SA- Strongly Agree, **A-** Agree, **UN** – Undecided, **D** – Disagree, **SD** – Strongly Disagree

SN	STATEMENTS	SA	A	U	D	SD
1	The information provided through printed materials (Brochures, fliers and leaflets) contributed towards my understanding of the courses offered					
2	Information on education and occupation is provided to students by: A file of occupational books and pamphlets					
	3. College catalogues					
	4. The use of occupational posters, charts, films, and Exhibits					
	5. A career day					
	6. Visits to business and industry					
	7. Internet					
8	I was provided with sufficient information concerning my course					
9	The information services provided assist trainees in choosing courses that give them satisfaction.					
10	I'm not sure about the course choice I am studying since no one has talked to me about it					

SECTION C: COURSE SATISFACTION QUESTIONNAIRE

The statements below are seeking your feelings or opinion on course satisfaction at the institute. Indicate with a tick (✓) in the box provided against each statement the extent to which you agree with the statement on the table below based on the following options:

SA- Strongly Agree, **A**- Agree, **UN** – Undecided, **D** – Disagree, **SD** – Strongly Disagree

Items	SA	A	N	D	SD
I am happy with the course that I am undertaking at the college					
With my course, my opportunity for promotion is unlimited					
I have confidence that the course I'm undertaking will lead me to my dream career					
My course is compatible with my desires					
My course encourages competitive spirit					
I am satisfied with the success I have achieved in my course					
I am satisfied with the progress I have made towards meeting my goals in my course					
I am satisfied with the progress I have made towards meeting my overall course goals					
I am satisfied with the progress I have made towards meeting my goals for advancement.					
I am satisfied with the progress I have made towards meeting my goals for the development of new skills in my course.					
After receiving career guidance, I feel highly interested in the course I am pursuing.					
The introduction to different programmes has given me confidence and satisfaction with the course I had selected					
Knowing about my interests, skills, aptitude, ability, values and preferences has made me settle for the course that gives me satisfaction					
Occupational, educational, and employment information provided has contributed to my satisfaction with the course I am undertaking					
Given another chance to begin my studies, I would still pursue my current course of study.					

**APPENDIX C: INTERVIEW SCHEDULE FOR GUIDANCE AND
COUNSELING CO-ORDINATORS**

This interview is meant to facilitate a study aimed at establishing the relationship between career guidance and trainees course satisfaction. You have been identified as a critical player in this field. Your input in this study would be most valuable. I'm therefore requesting your cooperation in answering the questions as honestly and precisely as possible. The information given will be handled confidentially, and will only be used for academic intention.

- i) Which orientation services are offered at the institution?
- ii) How do the orientation services enhance course satisfaction among trainees in your TVET institution?
- iii) How are appraisal services offered to trainees in your institution?
- iv) How do appraisal services affect course satisfaction among trainees in your TVET institution?
- v) Which education services are offered to trainees in your institution?
- vi) What is the relationship between education services and course satisfaction among trainees in TVET institution?
- vii) What information services are offered to trainees in your institution?
- viii) What is the relationship between information services and course satisfaction among trainees in your TVET institution?
- ix) Which trainee problems are frequently handed by your department? What in your opinion are the root causes of the problems?

APPENDIX D: INTERVIEW SCHEDULE FOR REGISTRARS

This interview is meant to facilitate a study aimed at establishing the relationship between career guidance and trainees course satisfaction. You have been identified as a critical player in this field. Your input in this study would be most valuable. I'm therefore requesting your cooperation in answering the questions as honestly and precisely as possible. The information given will be handled confidentially, and will only be used for academic intention

- i) Which orientation services are offered at the institution?
- ii) How do the orientation services enhance course satisfaction among trainees in your TVET institution?
- iii) How are appraisal services offered to trainees in your institution?
- iv) How do appraisal services affect course satisfaction among trainees in your institution?
- v) Which education services are offered to trainees in your institution?
- vi) What is the relationship between education services and course satisfaction among trainees in your institution?
- vii) What information services are offered to trainees in your institution?
- viii) What is the relationship between information services and course satisfaction among trainees in your institution?
- ix) What are the reasons for change of course among trainees?

APPENDIX E: INTERVIEW SCHEDULE FOR DEPUTY PRINCIPALS

This interview is meant to facilitate a study aimed at establishing the relationship between career guidance and trainees course satisfaction. You have been identified as a critical player in this field. Your input in this study would be most valuable. I'm therefore requesting your cooperation in answering the questions as honestly and precisely as possible. The information given will be handled confidentially, and will only be used for academic intention

- i) Which orientation services are offered at the institution?
- ii) How do the orientation services enhance course satisfaction among trainees in your TVET institution?
- iii) How are appraisal services offered to trainees in your institution?
- iv) How do appraisal services affect course satisfaction among trainees in your institution?
- v) Which education services are offered to trainees in your institution?
- vi) What is the relationship between education services and course satisfaction among trainees in the institution?
- vii) What information services are offered to trainees in your institution?
- viii) What is the relationship between information services and course satisfaction among trainees in your institution?
- ix) What are the causes of the following among students?
 - Poor performance
 - Drop-out
 - Absenteeism
 - Drunkenness

APPENDIX F: PARTICIPANT’S INFORMED CONSENT FORM

I am a PhD student in Educational Psychology at Jaramogi Oginga Odinga University of Science and Technology, undertaking a research on the topic: “*Career Guidance and Counselling Services as predictors of course satisfaction among trainees in Technical Vocational Education Training institutions in Kenya*”.

This will be done through answering questionnaire questions and interview schedule questions. Your participation is entirely on a voluntary basis and you have the right to withdraw from the study at any time.

The study will maintain confidentiality by making disclosure of name optional and anonymity will be achieved through use of pseudonyms to hide real identities where Guidance and Counseling Coordinators will be coded as GCC1 to GCC4, Registrars as R1 to R4, Deputy Principals as DP1 to DP4. Information will not be divulged to any other parties except those directly involved in supervising and examining this study. Data will be protected by keeping scripts in a secure place. Once the study data has been analyzed, examined and the final assessment done, the data scripts will be destroyed after the completion of the study.

I am kindly requesting you to respond to the questionnaire and the interview schedules attached as honestly as possible. The information is required for academic reason only and will be treated with utmost confidentiality. Participation in this study is voluntary.

Thank you.

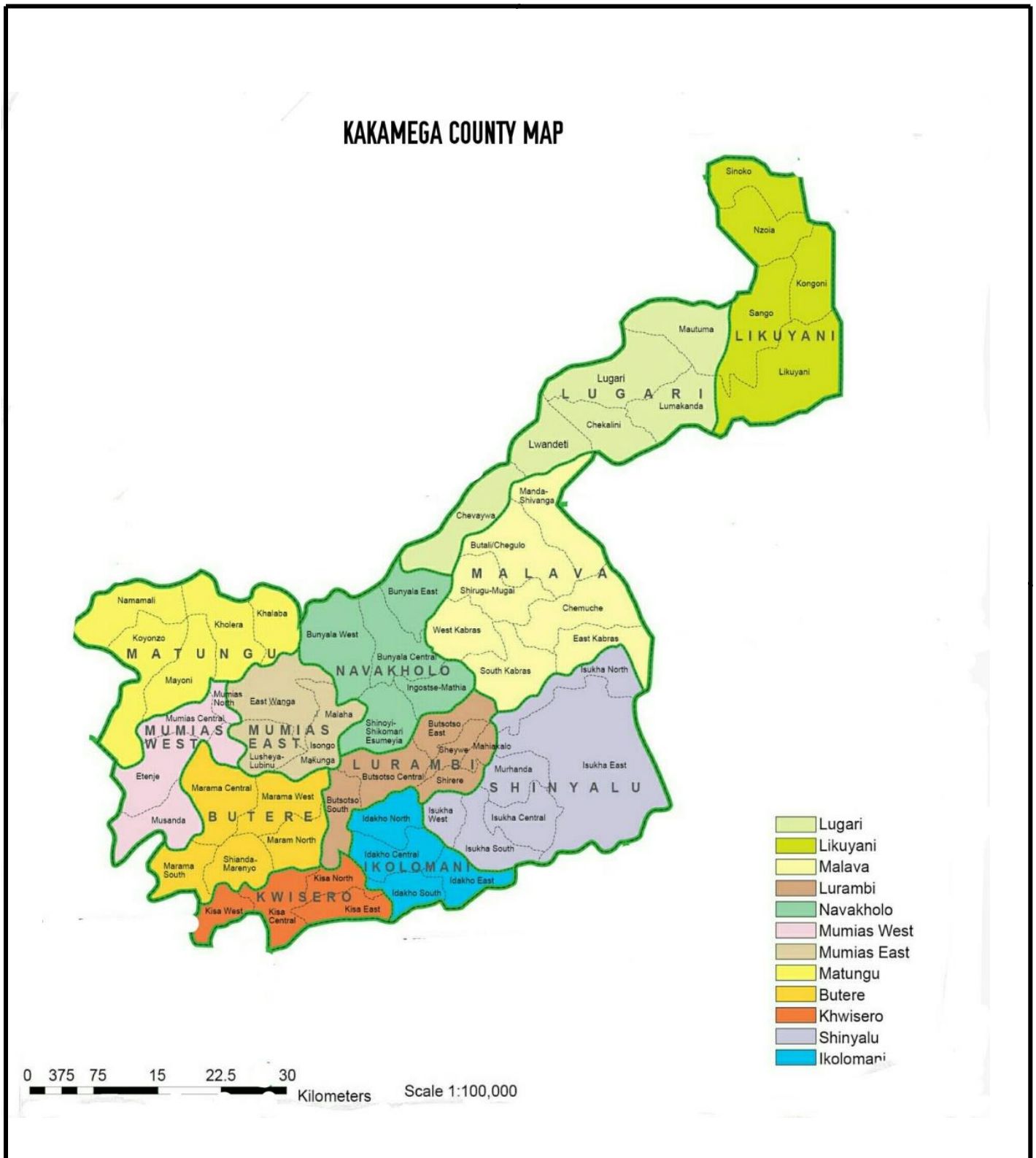
MAREN AWUOR OMONDI

Kindly sign below if you accept/ do not accept to participate in the research.

I agree to participate in the research. Sign: _____ Date: _____

I do not agree to participate in the research. Sign: _____ Date: _____

APPENDIX G: MAP FOR KAKAMEGA COUNTY



Source: Kakamega County Education Task Force Report 2014



**JARAMOGI OGINGA ODINGA
UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**DIVISION OF RESEARCH, INNOVATION AND OUTREACH
JOOUST-ETHICS REVIEW OFFICE**

Tel. 057-2501804
Email: erc@jooust.ac.ke
Website: www.jooust.ac.ke

P.O. BOX 210 - 40601
BONDO

OUR REF: JOOUST/DVC-RIO/ERC/E3

29th June, 2021

Maren Awuor Omondi
E361/4052/2015
JOOUST

Dear Ms. Omondi,

RE: APPROVAL TO CONDUCT RESEARCH TITLED "CARRIER GUIDANCE SERVICES AS PREDICTORS OF COURSE SATISFACTION AMONG TRAINEES IN TECHNICAL VOCATIONAL EDUCATION TRAINING INSTITUTIONS"

This is to inform you that JOOUST ERC has reviewed and approved your above research proposal. Your application approval number is **ERC/22/6/21-9**. The approval period is from 29th June, 2021 – 28th June, 2022.

This approval is subject to compliance with the following requirements:

- i. Only approved documents including (informed consents, study instruments, MTA) will be used.
- ii. All changes including (amendments, deviations and violations) are submitted for review and approval by JOOUST IERC.
- iii. Death and life threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to NACOSTI IERC within 72 hours of notification.
- iv. Any changes, anticipated or otherwise that may increase the risks of affected safety or welfare of study participants and others or affect the integrity of the research must be reported to NACOSTI IERC within 72 hours.
- v. Clearance for export of biological specimens must be obtained from relevant institutions.
- vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
- vii. Submission of an executive summary report within 90 days upon completion of the study to JOOUST IERC.

Prior to commencing your study, you will be expected to obtain a research permit from National Commission for Science, Technology and Innovation (NACOSTI) <https://oris.nacosti.go.ke> and also obtain other clearances needed.

Yours sincerely,

Prof. Francis Anga'wa
Chairman, JOOUST ERC

Copy to: Deputy Vice-Chancellor, RIO Director, BPS Dean, SEHSS



REPUBLIC OF KENYA

MINISTRY OF EDUCATION
STATE DEPARTMENT OF VOCATIONAL & TECHNICAL TRAINING
 Office of the County Director, TVET - Kakamega

Telephone: 056 -30828
 Fax: 056 – 30325
 E-mail:cdtvvetwr@gmail.com
 When replying please quote our ref. no.

County Director
 Technical, Vocational Education
 and Training Office
 P O Box 2441 – 50100
KAKAMEGA

Ref. No. TVET/WR/TT/GEN/1/3(66)

Date 25th March, 2021


MAREN OMONDI
 P.O Box 1738-40100
KISUMU

RE: INTRODUCTION LETTER FOR MAREN AWUOR OMONDI A STUDENT OF JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE & TECHNOLOGY

Your letter dated 18th March, 2021 in which you sought authority to undertake research in the four Institutions:- Sigalagala National Polytechnic, Butere TVC, Shamberere TTI, and Bushiangala TTI within Kakamega County on the topic "Career Guidance services as predictors of course satisfaction among Trainees in Technical Vocational Education, Training Institutions" refers. This office has authorized you to undertake the research and upon completion of your research you are expected to share your findings with this office.

The purpose of this letter, therefore, is to introduce you to the principals of the named institutions for the purpose of this research.

We wish you well.


 JOSEPH B. SUNGUTI
 COUNTY DIRECTOR, TVET
 FOR: PRINCIPAL SECRETARY, STATE DEPARTMENT FOR
VOCATIONAL & TECHNICAL TRAINING

COUNTY DIRECTOR TECHNICAL, VOCATIONAL
 EDUCATION & TRAINING
 KAKAMEGA COUNTY
 P.O. Box 2441-50100
 KAKAMEGA

Copy to: Dennis Ochuodho
 Board of Post Graduate Studies
 Jaramogi Oginga Odinga
 University of Science & Technology

The Principals
 - Sigalagala National Polytechnic
 - Bushiangala TTI
 - Shamberere TTI
 - Butere TVC


REPUBLIC OF KENYA


NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Ref No: **303330** Date of Issue: **24/October/2021**

RESEARCH LICENSE



This is to Certify that Ms.. Maren Awuor Omondi of Jaramogi Oginga Odinga University of Science and Technology, has been licensed to conduct research in Kakamega on the topic: CAREER GUIDANCE SERVICES AS PREDICTORS OR COURSE SATISFACTION AMONG TRAINEES IN TECHNICAL VOCATIONAL EDUCATION TRAINING INSTITUTIONS for the period ending : 24/October/2022.

License No: **NACOSTI/P/21/13798**

303330
Applicant Identification Number


Director General
NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Verification QR Code



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