RELATIONSHIP BETWEEN TRANSFORMATIVE RESOURCE MOBILISATION AND INTERNAL EFFICIENCY OF PUBLIC TECHNICAL TRAINING INSTITUTIONS IN BUNGOMA COUNTY, KENYA

BY

MAXIMILLA WAKOLI

A THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF DOCTOR OF PHILOSOPHY DEGREE OF EDUCATIONAL PLANNING SCHOOL OF EDUCATION

UNIVERSITY OF ELDORET, KENYA

JULY 2019

DECLARATION

This thesis is my original work and has not been presented for any other award in any other University. No part of this thesis may be reproduced without the prior permission of the author and the University of Eldoret.

_____ _____

Maximilla Wakoli **Date**

EDU/PHD/EP/021/14

Declaration by Supervisors

This thesis has been submitted for examination with our Approval as University supervisors.

_____ _____

Dr. Alice Limo **Date**

Department of Educational Management and Foundations of Education
School of Education
University of Eldoret

_____ _____

Prof. Julius Maiyo **Date**

Department of Educational Foundation, Planning and Management
School of Education
Kibabii University

DEDICATION

To my dear husband Humphrey Maina and children Irene, Muthoni, Verah, Quinta, Jeff and Wanja

ABSTRACT

Quality technical education and training is important for development of nations across the world. However, Technical Training Institutions (TTIs) in developing countries and Sub Saharan Africa (SSA) have been faced with internal efficiency issues for some time. Throughout some time, TTIs in SSA need to transform and innovate to match with the trends in globalisation, decreased capitation from the government and technological revolution. Therefore, TTIs are required to match the global trends and improve on their internal efficiency by introducing fee-paying programmes at diploma and certificate levels. The study purpose was to examine how transformative resource mobilisation influenced internal efficiency of public TTIs in the county of Bungoma, Kenya. The specific objectives of the research were to: find out how institutional staffing capacity influenced internal efficiency of TTIs, examine how physical resource mobilisation affected internal efficiency of public TTIs, investigate how instructional resource mobilisation affected internal efficiency of public TTS and lastly to determine how financial resource mobilisation strategies influenced internal efficiency of public TTIs in Bungoma County. This research employed Resource Dependency Theory (RDT) that conceptualised an organization and its environment as inextricably linked. This theory (RDT) argues that any procedure undertaken by a formal organisation is purposed to get resources from the environment. This study was conducted in four technical training institutes; Sangalo Institute of Science and Technology, Kisiwa, Musakasa and Matili public TTIs. The study adopted mixed method research applying pragmatic philosophical paradigm. The study used cross-sectional design that ensured that data was collected at one station at a time. The population for the study involved; four principals, 16 managers in charge of IGAs, and 239 tutors from the four institutions mentioned above. The sample size involved 4 TTIs principals, 16 resource mobilisation managers and 150 tutors. The tutors were chosen through stratified and systematic random methods whereas resource mobilisation managers were selected through judgmental sampling. Data for this study was collected through document checklist, interview guide and questionnaires. These instruments were examined for reliability and validity before data collection process begun. In analysis, qualitative data was transcribed and presented in verbatim with the use of content analysis method. Whereas quantitative analysis of data process was facilitated by use of inferential (correlations and multiple linear regression) and descriptive statistics (frequencies, standard deviations, percentages and means). Data analysed was illustrated through tables, graphical illustrations and narrations. Research findings showed that there was moderate influence (45.1%) of the four transformative resource mobilisation strategies and internal efficiency of public TTIs. The beta coefficients for the four strategies were; institutional staffing (β=0.090), financial resource mobilisation (β=0.162), physical resource mobilisation (β=0.201) and instructional resource mobilisation (β=0.295). All the statistics were significant at 5% confidence level ($p<0.05$). It was concluded that public TTIs did not adequately exploit the resources they had to ensure maximum or desired output (internal efficiency) through flow of students in the system and completion rates in the institutions. The study recommended for additional training to institutional management in resource mobilisation, involvement of all stakeholders in resource mobilisation and improvement of accountable and integrity efforts in the four public TTIs.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS AND ACRONYMS

AU	African Union
BOM	Board of Management
FRN	Federal Republic of Nigeria
GER	Gross Enrolment Ratio
HOD	Head of Department
HEIs	Higher Education Institutions
IGAs	Income Generating Activities
KCSE	Kenya Certificate of Secondary Education
KIST	Kigali Institute of Science and Technology
MoE	Ministry of Education
MOEST	Ministry of Education, Science and Technology
NACOSTI	National Commission for Science, Technology and Innovation
NPE	National Policy on Education
NESP	National Education Sector Program
RDT	Resource Dependency Theory
ROK	Republic of Kenya
SDGs	Sustainable Development Goals
SPSS	Statistical Package for Social Sciences
SSA	Sub Saharan Africa
TSC	Teachers Service Commission
TTIs	Technical Training Institutions
TVET	Technical Vocational Education and Training
TVETA	Technical Vocational Education and Training Authority
UN	United Nations
UNES	University of Nairobi Enterprises and Services Limited
UNESCO	United Nations Education, Scientific and Cultural Organisation
UNEVOC	International Centre for Technical and Vocational Education

ACKNOWLEDGEMENT

I take this opportunity to acknowledge those who supported me throughout this work either through guidance, moral and financial support. First, am grateful to my supervisors; Prof. Julius Maiyo of Kibabii University and Dr. Alice Limo of University of Eldoret for their invaluable guidance, suggestions and constructive criticisms that led to the improvement and completion of this dissertation. Their support has been immense and a source of inspiration to me in the field of research.

I also wish to thank the principals, resource mobilisation managers and tutors of the four public TTIs in Bungoma County for their assistance in granting me the relevant information from their institutions.

I wish also to thank my colleagues in the Educational Planning class at University of Eldoret whose constant interactions, discussions and comments assisted in polishing this work. I wish also to thank the University of Eldoret, Department of Educational Management and Foundations, School of Education for allowing me a chance to carry out my study. For those who have not been stated here but participated massively to ensure completion of my dissertation, I Say Thank You and God favours be upon.

CHAPTER ONE

INTRODUCTION TO THE STUDY

1.0 Introduction

Technical education and training is critical for human resource development and beneficial for country's development. Chapter one of this study covers background information to the problem, the statement of the problem, study purpose and specific objectives. This chapter also addresses the research hypothesis, significance, assumptions, scope, limitations experienced, theoretical and conceptual framework and definition of operationalised terms. The chapter summary is give at the end.

1.2 Background of the Study

The Technical, Vocation, Education and Training (TVET) has been defined by UNESCO-UNEVOC (2015) as a phrase which involves study of associated science and technologies and the attainment of practicable skills, knowledge, understanding and attitudes associated to various sectors occupations of social and economic spheres. Akerele (2007) informed that TVET learning exposes students to acquire practicable skills that would be converted into economic advantages. TVET is a tool for delivering basic skills to individuals, enabling them to find employment or launch their own businesses, and to work productively. TVET is an indispensable element for social, political and economic technological advancement of a country (Psacharopoulos & Patrinos, 2004; Joute, 2014; Haramoto, 2015).

The United Nations Sustainable Development Goals (SDGs) ratified by the General Assembly in the year 2015 proposed transformative training goal which aspired to guarantee quality and inclusive education for all and champion lasting education (United Nations, 2015). Its presence there is much more evident than in Education For

All (EFA) Dakar objectives (World Education Forum, 2000), where only the vague term ‘life skills’ was used – not to mention the Millennium Development Goals (MDGs) (UN, 2000) where TVET was not mentioned at all. SDG 4 calls for each UN member countries to guarantee access to technical education and training programmes, to considerably improve youth numbers with applicable skills for employment, modest occupations and trade to remove disparities associated with gender in the education sector. SDG4 Targeted 4.3 expects that by the year 2030; there would be a significant improvement in adults and youths who possess appropriate competencies on technical and vocational education for entrepreneurship, decent jobs and employment (UN, 2015). This calls for countries across the world to develop policies aimed at improving access to TVET education by students who fail to get opportunity to join universities.

TVET educational policies in developing countries mostly look at attaining Universal Primary Education (UPE), and to a least extent on ensuring qualitative and quantitative advancement of other sub-sectors in the education with respect to nation financial ability and needs (UNESCO, 2011; Tanzania Education Sector Analysis, 2013). World Bank (2013) report showed that most tertiary education systems in SSA are increasingly under pressure because of increased student numbers and additional costs of research and teaching initiatives.

TVET institutions have recorded changes in the last five years due to; increased enrolment, decreased government funding for TVET, decentralisation of services to school level, government policies to increase quality of teaching and learning, internationalisation and globalisation of tertiary education, global competition for finances, scholars, and learners and new technologies such as ICT among others

(World Bank, 2010). This implies that rapid increase in learners' numbers is a challenge to sustainable financing of tertiary education.

Evidence from the scholarly field indicates that there is limited access to technical vocational education for students in majority of developing countries compared to develop ones (International Labour Organisation [ILO], 2014; Marope, Chakroun, & Holmes, 2015). For instance, most TTIs are stationed in urban areas and it makes huge barriers to economic and geographical inequalities and gender inequalities (African Union 2007; Konayuma, 2008).

The modern form of education in majority of African nations practices hypothetical methods and creates a lack of practical skills, which can be a challenge in bringing up technical skills and enhancing the capability to achieve growth in their economy (Asiyai, 2012). However, the curriculum only provides focus on the achievement of white-collar jobs with minimal focus on attainment of technical skills (Marope et al., 2015). This implies that there is requirement for TTIs to guarantee that they produce students who are skilled and enter the job market to not only be employed but also create jobs.

A research conducted in Ghana by Amedorme and Fiagbe (2013) found out that Technical Training Institutions (TTIs) were experiences various problems. These challenges stretched from inadequate number of TTIs across the country, lack of infrastructure and resources for training learners, insufficient tutors to teach learners, inadequate number of tutor training colleges for TTIS tutors and challenges in career progression, negative attitude by the public and views towards Ghana TVET system. The research was set to establish the transformative resource mobilisation in public TTIS in the county of Bungoma, Kenya.

Public TTIs require enormous materials for instruction, mostly through specialised facilities and materials that are consumables (Rahman, Kim & Pei, 2015). Resource inadequate appears to be one of the main factors to ineffective TTIs system, which also meant TTIs were not well equipped and that not all the equipments available were in proper condition or absolutely important to the curriculum being offered (Darvas & Palmer, 2014). The internal efficiency of technical training institutes around the world is low (Haramoto, 2015). This study investigated the internal efficiency of TTIs institutions in the County of Bungoma, Kenya.

Amedorme and Fiagbe (2013) indicate that internal efficiency is basically dependent on physical, monetary and human resources all of which can be expressed in monetary terms. Awuor, Wanjala and Muriithi (2016) state that internal efficiency as a measure for institutional effectiveness is seen in terms of the flow of students in a college system and their performance at the end of an educational cycle. This implies World Bank (2013) reported that majority of institutions in developing countries are grappling with the challenge of low internal efficiency levels. Factors of low internal efficiency in TVET are: poor performance, inappropriate curricula, weak management, ineffective teachers, under-utilisation of facilities and equipment, small teaching space or hostel accommodation for students, even timetables are factors promoting low internal efficiency in public TTIs (Haramoto, 2015).

Therefore, institutions have to device ways and means of mobilising, physical, instructional and human resource to address internal efficiency challenges that TTIs institutions grapple with. This study investigated the strategies that these institutions have developed to address low internal efficiency level for improving the internal efficiency in TVET institutions.

The transformative resource mobilization is a process of finding out means and approaches aimed at acquisition of required resources to operate educational institutions efficiently (Joute, 2014). Transformative resource mobilisation focuses on determining the quality of resources available, how the available resources are utilised and how additional resources can be provided to ensure effective delivery of TVET curriculum (Magala, 2010).

Kibet, Zhimin and Chelagat (2013) opined that this process involves institutional management giving people a chance to give through a well coordinated transfer process. Transformative resource mobilisation facilitates this process. Odundo and Rambo (2013) indicated that the procedure was a facilitator of the process that not only fulfilled the requirements but also suited the one giving that the materials have been prudently and efficiently utilised. Transformative mobilisation of resources is concerned with creation of partnerships with donors (organisations or individuals).

Resources and facilities are significant elements of effective and efficient purposeful education (Uchendu, Ekanem & Jonah, 2013). Therefore, the function of materials in making sure the significance of the identified instructional resources move ahead of their sheer specification. Resources could only be optimal and effective during the time they are well maintained and utilised (Kitui, 2015). Research has revealed that the main challenge to resource maintenance in an institution is related to finance availability (Butare, 2004; Rahman, Kim & Pei, 2015). The resources of an institution could be inside the institutions (equipments, tuition, admission fee, volunteers, researchers, tutors and members of staff) or outside (financial back up from individuals and corporations). The said resources are apportioned into non-monetary and monetary ones (Oliver, Henry, Newman-Rose, & Streete, 2008). Finances are one

of the important resources that all institutions require to function and conduct out their operations. Nevertheless, other materials would also be helpful. This study looked at how the above-mentioned resources were mobilised for improving internal efficiency of public TTIs in Bungoma County.

Rufai, Umar and Idris (2013) indicated that curriculum implementation in TVET to be effective through classroom teaching and learning to happen in TTIS could not be attained without sufficient supply and facilities maintenance. To meet educational demands, it was critical to discover whether the resources in TTIs perform well so as to align with the specified educational goals. Those resources can be classified into the following: instructional, physical and human resources. It is therefore important for researchers to regularly examine the costs incurred on availing such resources. This will help to show the function that TVET performs in improving people quality of life in a given country according to Magala (2010).

In Nigeria, Rufai, et al. (2013) found out that insufficient supply of physical facilities was because of low funding to public TTIs in Nigeria, this made it difficult to attain the goals, and vision of TTIs as it appears in National Policy on Education (NPE) of the country. In Kenya, Onani (2014) found out in spite of massive venture in Kenya secondary schools education in the country, the segment remains to be faced by wastage problem associated with low transition rates, low completion rates, high repetition and high dropouts.

Importance of instructional materials in educational management need to be taken into consideration (Yang, 2014). This is due to the factor that effective TVET may not be delivered where there exist resource inadequacies. The instructional materials

offers a stable ground for assessment, improve the tendency of the mind to keep information, make teaching to be more enjoyable and take cognizance of personal variations (Magala, 2010). Researcher observed that despite the importance placed on TVET through commissions and educational conferences, youths being churned out of TTIS lack employable expertise (Kerre, 1992 in Sang et al., 2012). This puts to question the internal efficiency in the TTIs.

Institutional staff capacity is also critical for internal efficiency in the education system. The desire for education and re-training is significant so that to mould inventive TTI's tutors Mohaffyza, Sukri & Ahmad, 2015). In Ethiopia, Sime (2014) found out that there was inexistence of assessment of needs training, inadequate and germane job market data, feeble provision of guidance services on TVET, focusing on limited categories of training programmes, made TTIs practices ineffective and non-receptive to the needs in the labour market. This shows that inadequate human resource provision and professional development affect internal efficiency of TTIs. In Kenya, Ferej, Kitainge and Ooko (2012) observed that there was requirement for incessant changes and improvement of the skills that tutors have, that the infrastructure for colleges need to be similar or close to the resources they find at public TTIs and that the college – job market network need to be made more reciprocally valuable. This research investigated human resource mobilization in the County of Bungoma, Kenya.

In Kenya, Sang, Muthaa and Mbugua (2012) said that TVET is important if the country was to modernise by 2030. Public TTIs in the country are governed by the TVETA (Technical Vocational Education and Training Act) (2013) which provides for the creation of TVET Authority that provides for the management and governance

of institutions providing TVET; to present means for synchronised evaluation, examination and certification; to introduce a means of enhancing equity and access to TVET; to guarantee relevance, quality and standards; and for related objectives. The establishment of this body has brought sanity in the way public and private institutions are run in Kenya.

Yang (2014) posits that a quality and relevant TVET industry is observed as a hopeful path to give youths with marketable expertise. The changes in TVET sector are directed by various policy documents in the country, which are Sessional Paper No. 2 of the year 2015, Vision 2030, TVET Act of 2013 and National Education Sector Programme (NESP). The most recent (Sessional Paper No. 2 of 2015) demands that: achievement and maintaining a gross enrolment ration (GER) of twenty percent in the TVET sector and giving sufficient chances for reachable competency based training. In terms of growth, TVET institutions (public ones) have been increase over the past few years. For instance, there were 753 in the year 2013 that rose to 755 in the year 2014 and later to 874 in the year 2015. This can be seen in Table 1.1 which shows the student enrolment trends in TVET institutions in the country from 2012 to 2016.

Table 1.1: Enrolment of Students in TVET Institutions in Kenya (2012-2016)

Year	Male	Female	Total	Change
2012	28,153	18,631	46,784	
2013	31,956	23,989	55,945	9161
2014	29,632	21,232	50,864	-5081
2015	32,221	23,087	55,308	4,444
2016	54,839	46,023	100,862	45,554

Source: Economic Survey (2016:46)

According to Table 1.1, enrolment of students in TVET institutions in the year 2013 was 55,945 but dropped 50,864 in the year 2014. Further, the enrolment increased to

55,308 in the year 2015 and doubled to 100,862 in the year 2016. We can observe that the marginal increase from those years was because of government push to create new public technical training institutes in almost all forty seven counties in Kenya. Ferej, Kitainge and Ooko (2012) observed that despite increased enrolment in TVET, budget towards TVET has been little in spite of its ability to improve the human resource capacity to enable country social economic development. Public TTIs have significant influence on churning out of qualified experts, as infrastructure available cannot match with the diverse job requirements through physical resources and infrastructure.

In Bungoma, a research by Kitui (2015) established that youth polytechnics had inadequate physical facilities and finally lacked enough trained and qualified teachers. This showed that provision of TVET education faces critical challenges relating to adequate human resource and physical facilities. The institutions that were surveyed by Kitui are under County governments while the study focuses on public TTIs under the TVET authority in the County of Bungoma, Kenya.

Challenges do emerge so that institutions may realise the needs of its users or diverse information needs. Because of several factors like; demand for improved services, reduction in budget, rise in prices, exponential increase in knowledge among others, mobilization and generation of materials are highly needed in TVET institutions. The increased number of students being enrolled in public TTIs, inadequate and standardised facilities further worsens the overall challenges and problems that these institutions face. TVET institutions are under increasing pressure to improve their technological capacity to meet the student demands and compete with other institutions inside and outside the country. This therefore called for an investigation to

identify how transformative resource mobilisation influenced internal efficiency of public technical training institutes located in the county of Bungoma, Kenya.

Kamau (2013) observed that TTIs have been neglected and their significance has not been embraced in majority of Sub Saharan Africa states. In Sub Saharan Africa, finance on TTIs appears to be arbitral and ad hoc. TTIs appear to be overtaken or neglected by institutions focusing mainly on academic training. Individuals appear to see TTIs in a negative perspective, as training and education meant for individuals who are considered failures in the community. This is because aims and goals of TTIs as enshrined in the educational policy have not been met in Kenya (Sang et al., 2011; Kamau, 2013). Research conducted shows that not all public TTIs were generating their own income and mostly rely on funding from the government and fee payment by students (Rodrigues, Wainaina & Mwangi, 2005). The largest potential source of funds for schools is payment of fees for tuition and related instructional services such as registration, examinations, computers and access to library services.

There can be a considerable variation both among institutions in terms of fee payments and size of the TTIs (Wanja, 2015). Physical facilities are still outdated or regular maintenance is a problem (Sang et al., 2011). Moreover, tutors are not aware of their potential skills due to lack of adequate in-service training (Kitui, 2015). However in some institutions, there is underutilization of equipment and facilities which could cause low internal efficiency (Onani, 2014). For instance, having one sewing machine per 8 – 10 students in one tailoring section was to be common in Kenya TTIs institutions (Sang et al., 2011).

Kitui (2015) further established that youth polytechnics in Bungoma East Sub-County found paltry 98.5% of the respondents indicated that indeed classrooms were

inadequate and 92.8% said that teachers were inadequate. Therefore, current types of materials would hence have to be taken into consideration and they will no longer be stated in budgetary way but through human, material and financial needs mobilised by and for the whole society to sustain internal efficiency of public TTIs. Transformative mobilization of resources available to TTIs can help bridge the financial gaps in education budget occasioned by decreased and delayed funding from national government. The study therefore examined how transformative resource mobilisation influenced internal efficiency of public TTIs in the county of Bungoma, Kenya.

1.2 Statement of the Problem

TVET is a cornerstone of human resource growth and employment of young people and vulnerable groups. As per TVET Act (2013), TVET goals and objectives are to enhance accessibility, relevance and quality to enable technical programmes to realise the urgent and upcoming job market requirements (RoK, 2013). Implementation of technical and vocational education and training curriculum has failed to produce the desired results and outcomes in terms of realising graduates who are beneficial to the job market. This has been contributed by various factors than just low national budgetary allocation for TVET education (RoK, 2017).

From the national budgetary allocation for education sector, huge amount of allocation goes to recurrent expenditures as opposed to development. For instance, little allocation from the budget has been a significant challenge among the TTIs has culminated to poor acquisition of other relevant resources. Sessional Paper No. 2 of 2015 observed existence of high access to technical training colleges because of the tuition free secondary education and therefore institutions are required to mobilise additional resources to ensure high internal efficiency. Muthima (2015) observed that

TVET in Kenya is yet to churn out sufficient and competent intermediate stage of workforce needed to realise the pressures for country development with anticipated ratio of 1:3:12:60 for technologists, technicians, crafts persons and artisans respectively. This shows that despite enrolling high number of students (Table 1.1), those completing the education cycle are low, implying low internal efficiency levels.

Past research shows that provision of technical education faces critical challenges relating to inadequate financial resources, human resource, physical facilities and instructional materials. To navigate through these challenges, TTIs Boards of Management, resource managers and principals need to mobilise resources and utilise the available ones efficiently in an effort to improve internal efficiency. Therefore, the problem far this study was, how do public TTIs institutions in Bungoma County mobilise resources to improve quality of TVET training, enrolment, retention, completion and performance index of students? More specifically, research is needed to investigate how transformative resource mobilisation is used to address internal efficiency needs in Public TTIs in the county of Bungoma, Kenya.

1.3 Purpose of the Study

The purpose of the following investigation is to understand how transformative resource mobilisation influenced internal efficiency of public TTIs in the County of Bungoma, Kenya.

1.4 Objectives of the Study

The study was guided by the following research objectives:

1. To determine institutional staffing capacity and internal efficiency of public TTIs in Bungoma County
2. To establish relationship between physical resource mobilisation and internal efficiency of public TTIs in Bungoma County
3. To find out the relationship between instructional resource mobilisation and internal efficiency of public TTIs in Bungoma County
4. To determine the relationship between financial resource mobilisation and internal efficiency of public TTIs in Bungoma County

1.5 Research Hypothesis

The following hypotheses were tested in this research:

$H0_1$ There is no significant relationship between institutional staffing capacity and internal efficiency of public TTIs in Bungoma County

$H0_2$ There is no significant relationship between physical resource mobilisation and internal efficiency of public TTIs in Bungoma County

$H0_3$ There is no significant relationship between instructional resource and internal efficiency of public TTIs in Bungoma County

$H0_4$ There is no significant relationship between financial resource mobilisation and internal efficiency of public TTIs in Bungoma County

1.6 Significance of the Research

The outcomes and recommendations of the investigation would help stakeholders in the TVET sector, TVET sector policy makers and educational planning practitioners in making appropriate choices relating to resource mobilisation and improvement of

internal efficiency in technical training institutions. Foremost, the research contribute to new method of understanding how transformation mobilisation of resources procedures in public TTIs in the county of Bungoma. The findings would are also of importance on the public TTIs management in establishing workable transformative resource mobilisation mechanisms aimed at improving internal efficiency levels in their institutions.

The research also informs TTIs principals and managers about transformative resource mobilization strategies adopted by TVET institutions and their effect on their institution internal efficiency. This may result to design of policies and programmes for resource mobilisation for improved internal efficiency of TVET institutions.

Public TTIs BOM may use the research findings to form policies and initiate the efforts of improving internal efficiency through improving staff capacities, resource provision, facilities expansion and financial management. It may further enlighten the BOM on the need to make sure that there are enough educational teaching materials in their institutions to improve on performance index. Furthermore, it is expected that the suggestions from the research would increase the flow rate of students outside public TVET system.

The study findings would be important to education policy makers like TVETA in establishing transformative strategies of improving internal efficiency public TTIs in Bungoma and country at large. The outcomes of the study would facilitate policy developers (National Assembly) to amend and amend budgetary policies resource allocation mechanisms to TVET sector. When there is adequate support to TVET sector, it will enhance country's production, encourage competitiveness and bring out profitable progress and technical competency development around the country.

TVET has been utilised by various developing nations (Malaysia, Singapore and Indonesia) as tool of improving development.

The study findings will be helpful to future scholarly work in the domain of inner efficiency in the TVET industry. The findings of the study would also add knowledge to the area of educational management and planning by its contribution of literature on how education institutions should plan on improving internal efficiency through adoption of transformative resource mobilisation practices. The research gives the facilities mobilisation administration literature in a diverse method which provides new impetus on the methodical resolve of transformative resources management procedures aimed at improving internal efficiency of public TTIs.

1.7 Scope and Limitations of the Study

1.7.1 Scope

The research investigated how transformative resource mobilisation areas by four TTIs in Bungoma County and its influence on internal efficiency. These transformative resource mobilisation areas that the study looked at included; institutional staffing capacity, physical infrastructural resources, instructional resources and financial resources. The respondents for this study involved principals, resource mobilisation managers and tutors from four TTIs in Bungoma County. A total of 4 TTI officers, 16 resource mobilisation managers and 150 tutors formed the sample size for the study. The research data was gathered from primary and secondary source using questionnaires, interview guide and document checklist. The period of data collection stretched from September to November 2017.

1.7.2 Limitations

The researcher faced two limitations during the study process. At first, some respondents (managers in charge of resource mobilisation and principals) failed to disclose information about the internal efficiency levels of their institutions for fear of information being shared to the public. However, to counter this limitation, the research did not use institutions names in reporting the findings. Secondly, some respondents took long time in answering the research questionnaire leading to extension in data collection period.

1.8 Assumptions of the Study

The researcher was guided by the subsequent assumptions:

(i) That this research instruments gave adequate information aimed at in hypothesis testing

(ii) That all TTIs in the study area had resource mobilisation initiatives

(iii) All institutions had developed policy for identification and management of resources

(iv) Resource mobilisation variables under investigation are significant in illustrating internal efficiency in provision technical and vocational education to learners in public TTIs in the county of Bungoma.

1.9 Theoretical Framework

This study was directed by two theories; the resource dependence theory and the resource mobilisation theory. They are described and explained in the next sub – sections.

1.9.1 Resource Dependency Theory

The Resource Dependency Theory (RDT) advanced by Pfeffer and Salancik (1978) directed this study. According to Odundo and Rambo (2013), the theory originated in the 1970 through the advertisement of outside influence of organisation: in a material dependence view Pfeffer and Salancik (1978). RDT approach is strengthened by the argument that materials, which are key to success of organisation and that access and dominance over materials, is a ground for authority. It is an investigation how resources that come from external such as raw materials of organisation affect the behaviour of organisation. This theory looks at how organisation resources influence the performance of organisation. These resources in an institution are important tenets of strategic and tactical management of any institution.

This theory is used to explain the behaviour of TTIs to mobilise additional resources for funding their programmes that are aimed at improving quality of Technical education. The theory was founded on the principles of open-system theory. The open systems theory indicates that organization internal resources are not always sufficient to ensure proper functioning of programmes. In this case, the TTIs internal resources cannot ensure basic and quality Technical education is provided to students. This leads to dependence on outside resources to aid institutions aspirations and operations according to Gulati and Sytch (2007).

The deficiency in materials to support institutional programmes is the key factor driving them to analyse their capacity to initiate and mobilise reserves. This theory further informs that institutions have different scales of reliance on resources externally; therefore insufficient dominance of the outside environment would affect

the attainment of institutional objectives and goals which later threatens the survival of those institutions (Healey, et al., 2007).

Organisations rely on external environment to get important resources for their sustenance (Pfeffer & Salancik, 1978). The organisation surrounding consists of several variables or actors or providers of resources who have several conditions and potentials. The said actors have impacts on the programmes or results of the resource recipient organisation. This environment, along with resources, encompasses policies, threats, competitors and opportunities. The said environmental features could assist for and station blockages to the capacity of the local institution to acquire resources.

The organisation that is receiving the resource has to know the important stakeholders and therefore address stakeholders association to ensure they survive in that particular surrounding. Pfeffer and Salancik (1978) and Aldrich (1979) inform that the RDT theory argues that individual may not know institutional structure or behaviour without understanding the circumstance within which it functions. Similar to how strategic selection methods, this theory take up a lively function of individual firms in their efforts to survive. Institutions also attempt to lively impact on their surroundings.

From the resource dependence angle, TTIs may administer materials dependence challenges coming from government capitation through rivalling materials from a certain market. Jongbloed (2004) indicated that TTIs might function in markets that are multiple, they would be in a position to set up various exchange association for preventing disorderly resource unsteadiness by creating various streams of revenue as suggested by Wangenge – Ouma in the year 2011. This theory recommends two-change feedback for the development of multiple revenue streams. Conversely, institutions may respond to transformation to match the requirements of the

environment in order to fit their capabilities. From knowledge gained from resource dependency theory, it is clear that TTIs need to assess the internal and external potentials for mobilising additional resources to improve on their internal efficiency.

The study found out this RDT is useful in trying to understand how transformative resource mobilisation was conducted with the purpose of increasing internal efficiency of public TTIs. This theory connects input – output relationship and because internal efficiency concept is associated with this kind of arrangement, this made this theory to be helpful in guiding this research.

1.9.2 Resource Mobilisation Theory

Secondly, this investigation was also informed by resource mobilisation theory advanced by McCarthy, Mayer and Zald (1987). According to them, this theory endevours to elucidate social movements by seeing individuals as logical actors who are involved in influential actions that utilise recognised organisations to acquire materials and promote mobilisation (Awuor, 2015). The success and failure of a social organisation is dependent on external variables influencing resource flow and from an organisation (McCarthy et al., 1987). Hence, a supply and demand form could be utilised to explain resources -in and resource out of the institution. An institutions need to utilise some resources to follow its objectives or supporters will not buy the targeted product. The main priority is self-preservation, followed by maintenance and or improvement of membership and ultimately flow of resources. An organisation should divide its resources between recruiting new people, maintaining its constituency and leading action towards its known objectives (McCarthy et al., 1987).

Resource mobilisation appears to be an emerging venture in various areas of the globe, particularly on growth of education. Education stakeholders, from basic rank to

tertiary echelon, try to mobilise materials well, to realise the increasing needs in their organisations. Resource mobilisation underlies the aptitude of members of a certain movement to obtain resources (materials fiscal or physical) and to mobilise people towards accomplishing the organisation or community goals. The education sector in most countries is facing many challenges including inadequate teachers, lack of teaching and learning resources and inadequate facilities for learning.

Others are low enrolment levels at different education levels, low rate of transition, disparity in gender, and out-dated curriculum. Like in Tanzania, the achievement in enrolment that has been realised so far had activated the desire to get more institutional facilities to match the level of enrolment, which has increased. This calls for efficient strategies to mobilise resources to minimise these challenges. Resource mobilisation would involve administration and other resource mobilisation costs, but it should be born in mind that the cost in resource mobilisation should be kept as minimal as it can be, as the intention of resource mobilisation is to solve education needs (MarCarthy et al., 1987).

For example, when a school needs money for construction of infrastructures such as students dormitories and tutors houses; purchase of textbooks and reference materials, laboratory equipment, and other facilities, they might need to mobilise funds to meet these requirements. In order to run resource mobilisation activity smoothly one requires to have some finance for management cost for activities like communication (e-mail mail, and telephone), printing costs, hiring of venue, community mobilisation, and promotion materials and related costs (Awuor, 2015).

Resource mobilisation requires a lot of plans and preparations. The following are steps to follow: First step is to identify and analyse the institution, community, or

school needs. Ask yourself, how many schools or classes are needed to be constructed? What is the problem behind that? What is the magnitude of the community awareness about the education problems over the area? Second step is to recognise the necessary stakeholders and possible donors or contributors, and try to analyse how you are going to convince them to support your project. Ask yourself, why they should assist in a particular education activity, why should they give out their money. Third, do identification of potential supporters. List all potential donors and analyse their capacity (based on skills, financial and material) to contribute toward the achievement of the program. Ask yourself, who is going to donate? What are they going to contribute? How much are they going to contribute? (Awuor, 2015).

Another procedure is to develop a resource mobilisation theme. The theme need to be touchy, appealing that enters in the contributors emotions and, mind so that he/she can donate. The reasons why individuals contribute money depend on their head (the logic in aid of the meeting requirement) and the heart (the emotions available in the heart of the contributor). Just like during political campaigns, political parties utilise various slogans and themes that they deem could touch their citizens and members to donate resources towards their success of their initiatives (Awuor, 2015).

Another very important variable is to reflect how an individual situate and convey the problem to the community. Communication scheme need to be very much effective, in managing the resource mobilisation operations. Experience with the resource mobilisation operations in Kenya; recognise that there is a need for inclusion of the particular community to sponsor education resource mobilisation initiatives in their societies. Acholla (1988) noted that they could mobilise materials, finance in addition

to labour. Therefore, resource mobilisation is a never-ending process which requires proper planning from the start through implementation to evaluation stages.

1.10 Conceptual Framework

The conceptual diagram for the research was modelled on the relationship between independent variables; resources mobilisation and dependent variable; institutional internal efficiency public TTIs within Kenya. Furthermore, the theoretical framework also assisted in developing the study variables as the resource dependence theory advocates for adequate resources to be mobilised for attainment of institutional objectives. Figure 1.1 presents the association between various models of the research.

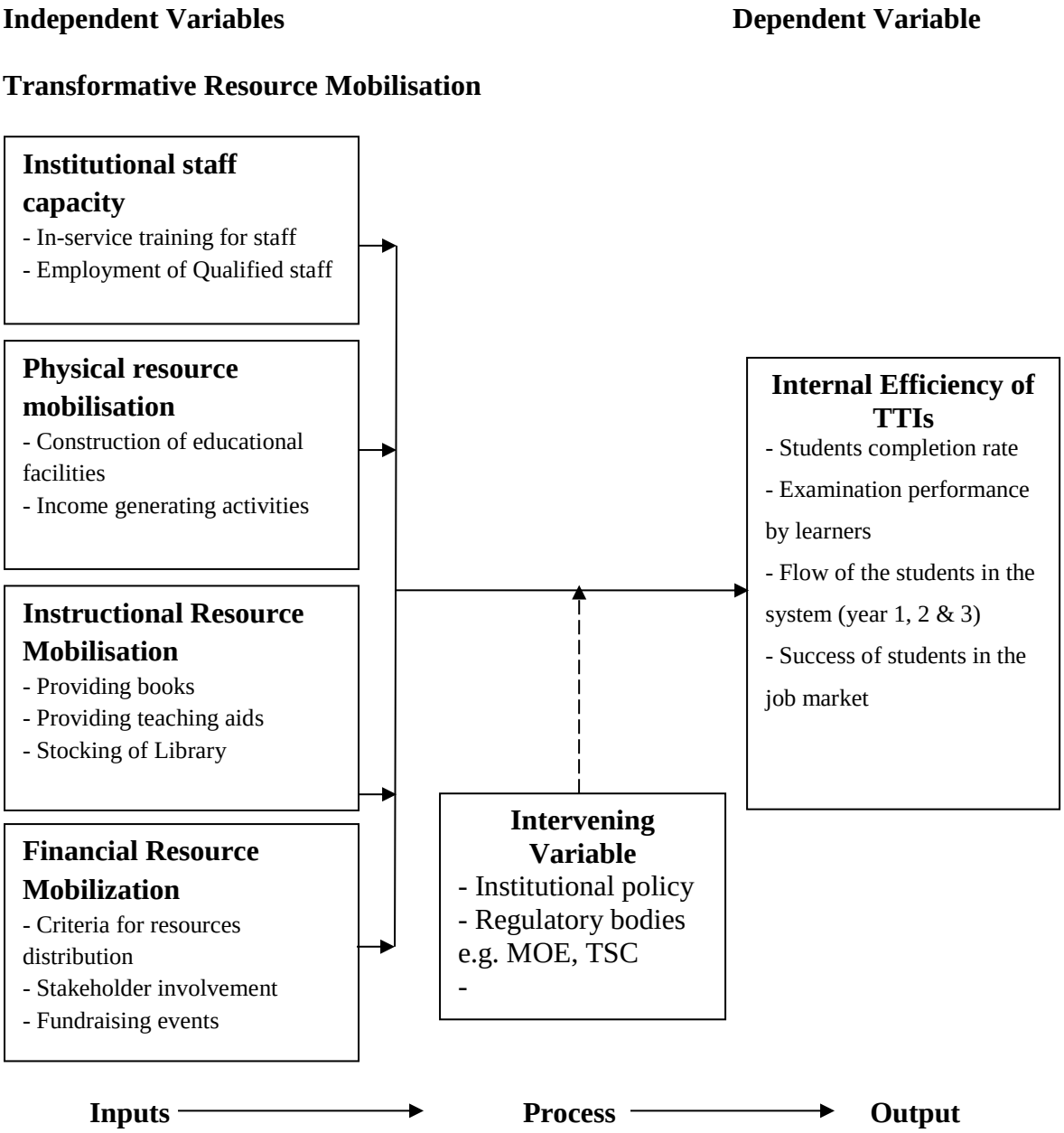


Figure 1.1 Conceptual Framework for Transformative Resource Mobilisation and Internal Efficiency of TTIs

Source: Developed from the study objectives (2017)

The first independent variable is the action by TTIs to mobilise more human resource for quality education provision. Several methods can be used to mobilise additional human resource like; hiring of part-time tutors, provision of in-service training for human resource development, institutions linkages with other institutions and

addressing the workload of teachers by petitioning the teacher service commission to employ more tutors in their institutions.

Secondly, TTIs need to have adequate funding to sustain their programmes and ensure that resources are purchased, as they are needed. With decreased funding, Technical institutions have an option of seeking additional support through increasing their programmes for private sponsored students who study on part time, establishment of cottage industries, seeking grants from different organisation and creation of endowment fund.

Thirdly, physical availability and adequacy is also a key factor that necessitates provision of quality technical and vocational education. Institutions need to mobilise development and improvement of physical infrastructure which includes; classrooms, administration blocks, laboratory, other buildings by seeking donor support, organising fund raising programmes and leasing their expansive land that they are not currently using for income generation.

Fourthly, the instructional resources are also needed for Technical Training curriculum to be implemented. The instructional resources are key requirement to ensure that the TTI students are skilled and have necessary competencies for entering the job market. Therefore, institutions have to mobilise resources such as print and electronic media, workshop materials, library equipments and laboratory apparatus.

Fiftly is the financial resource mobilisation strategies used by the public TTIs. It involves establishing mechanism put in place to control resource allocation and distribution, accountability mechanism, stakeholder involvement criteria, fundraising

processes and capacity of the institutional board of management to mobilise additional resources.

The internal efficiency is reliant on adequacy and provision of the above mentioned materials in technical institutions. The indicators for internal efficiency are; completion rate of students admitted the success of their students employment field and during internships, enrolment trend, performance of examinations, flow of the students in the system and performance trend. However, in some instances, other factors may also affect internal efficiency of TTIs other than the ones that the study will look at and forms the intervening variables for this study. The four institutions have their own policies for resource mobilisation and therefore the levels of their internal efficiency are different. To control this, the research will develop a standard instrument for measuring resource mobilisation and internal efficiency to provide the general view on how the Technical institutions are applying them.

1.11 Operational Definition of Terms

The definitions of significant terms that were used in the study are explained below:

Financial resource mobilisation: involves the process of marshalling and drumming up of monetary resource by school administration to support institutional programmes. In this research it involves the procedures that TVET institutions take to mobilise more money and funds with the aim of improving internal efficiency.

Influence: Refers to the ability to have an effect on something. In this study, the capacity of resource mobilisation to affect internal efficiency of TTIs.

Institutional staff capacity: involves teaching staff who are qualified, partially professional and non professional category to design, implement and follow up activities and projects. Human resources also need professional skills and expertise to carry out the diverse services.

Instructional Resource mobilisation: these materials consist of bibliographies, books, patents, abstracts, journals, reports, thesis, publications, scholarly articles among others that may improve internal efficiency on TTIs.

Internal efficiency: is the capacity of public TTIs to churn out graduates within a stipulated time and at an affordable cost. It will be measured by the use of students' completion rate, success of students in examinations, performance of graduates in the job market, school wide development and flow of students in the TVET system.

Physical Resource mobilisation: include land, libraries, bookshelves, furniture (reading rooms, tables, racks, chairs, reading tables, among others). They also comprise of physical facilities within the school like ICT ones. They may also consist of other facilities which support others in schools.

Technical Training: Refers to curriculum, which imparts expertise and understanding to enable students undertake a mid – tertiary level of specialist situation in the employment field.

Technical training institutions: They are middle level tertiary institutions offering diploma and certificate courses in technical education.

Transformative resource mobilization: Refers to efforts made to exploit the available resources to initiate, sustain, and improve teaching and learning programs in TTIs. The efforts include: institutional staff capacity, physical resource mobilisation, instructional resource mobilisation and resource mobilisation.

1.12 Organisation of the Study

This dissertation is arranged into five chapters including the references and appendix sections. Chapter one focuses on the background to the research problem, purpose of the research, specific objectives of the research, research questions and research hypothesis. The chapter also tackled the study significance, scope, limitations encountered, and assumptions made, theoretical and conceptual frameworks. The definition of significant terms has also been undertaken in this chapter. The next chapter (two) undertakes the review of literature from past research and evidence as established by scholars in relation to the study title. A summary and research gap has been presented. Chapter three presents the various methodological decisions and procedures that were followed in ensuring data was collected and analysed.

Chapter four focuses on how the data analysed is presented, interpreted and discussed in relation according to the study objectives and in comparison with previous

empirical studies to find out relationships or differences. Chapter five summarises the whole work to give the main outcome of the study and suggests recommendations. Reference section is also captured to ensure all cited works appear there. The appendix section contains various attachments that are relevant for this study.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.0 Introduction

Chapter two reviews related literature on the resource mobilisation and its influence towards internal efficiency of technical training institutes. The information presented in this chapter is according to the specific objectives of the research. The following are the areas that the chapter covered; evolution of TVET, internal efficiency in TTIs, institutional staffing capacity and internal efficiency, physical resource mobilisation and internal efficiency, instructional resources mobilisation and internal efficiency and financial resource mobilisation and internal efficiency of TVET institutions. The last part of chapter two identifies the research gap. This chapter research involved reviewing both empirical and theoretical literature. Information presented in this chapter came from past theses, journals, government policy documents and acts, international organisation reports and online articles.

2.1 Evolution of Technical, Vocational Education and Training

TVET began before the colonisation of Africa by Europeans (Ferej, Kitainge & Ooko, 2012). There is worldwide acceptance that the capacity of individuals, business, and countries to realise the competitive challenges of an increasingly world economy is irreversibly attached to the tertiary vocational education and training (TVET) policies that have been implemented to establish an adaptable, highly-skilled and knowledgeable workers (Cheong & Lee, 2016; Alagaraja, Kotamraju, & Kim, 2014). It is also recognised that these standards would not be raised in country standing on its own. Students in TVET programmes and further training need to be given chances to transfer effortlessly between learning environments (including national and

international educational institutions) to improve their employability and quality of life (Spottl, 2013). In this situation, the New Zealand and People's Republic of China did work together on initiatives for employee development for, firstly, an ongoing extension of the workplace skills and abilities of employees and trainees and, secondly, an appraisal of formal TVET courses and programmes (Clayton, 2015).

Coming to developing countries, according to Ferrej et al. (2012), learning during the pre-colonial period was through apprenticeship, which was passed by parents to their children from generation to generation. The elders used to be instructors to the youth and they taught them the following skills: farming, fishing, hunting, crafting, masonry, weaving among others. According to Simiyu (2009), Africans understood how to construct their own homes, construct farming equipments, smelted other accessories for hunting like spears, knives, hoes, cooking utensils, axes and potteries.

During the colonial period, missionaries were the ones who first introduced TVET education in the late 19th century. This led to establishment of directorate of education. The missionaries (Christian) introduced artisans and made significant strides to educate the Kenyan people through offering various skills to help in the tools and equipment maintenance and also for the East African railways. Simiyu (2009) informed that Asians who built Kenya Uganda Railway in early 1900 established craftsmen and artisan training at Kabeter which was known as Kabete Industrial Training Depot.

Moreover, after independence in Kenya, several education commissions chaired by the following (Ominde, Kamunge, Gachathi, Mackay and Koech) led to the advancement of TVET education. First technical training institute to be established in

Kenya was Royal Technical College in Nairobi (now University of Nairobi) in the year 1954. From there, five national polytechnics (Kenya Polytechnic, Kisumu, Eldoret, Meru, and Mombasa) came up. Out of the five, Kenya Polytechnic, Meru and Mombasa polytechnics did transit to fully fledge university seven years ago while some technical training institutions and institutes of technology were upgraded to polytechnic level (for instance, Kitale, Sigalagala, Kabete, Meru-Previously Meru TTI, Nyeri, Kisii, North Eastern in Garissa and Kenya Coast). From the time the country obtained independence, there has been great development and growth of the TVET sector as a result of government direct involvement and intervention together with the participation of communities to which they are based at.

Simiyu (2009) informs that the objectives and purposes forwarded for TVET in any nation define the extent through which the TVET is going to be implemented and developed. In Tanzania, TVET offer alternative training and educational opportunities when students complete primary and secondary schools, this leads to creation and emergence of skilled individuals like professionals and technician workers in various country economic sectors. Tanzania TVET focuses on communicating the required knowledge and skills to students to enable them make contributions to community social and economic development which in the long run influences the while nation (Tanzania Education Sector Analysis, 2013).

Kerre (1995) informed that majority of nations have indicated, through one way or another the main goals of TVET education as: to give, together with normal education, skills and knowledge in technical and vocational areas so as to realise the country human resource gaps in various sectors like; technical services, industry,

business and agriculture. The Kenya Kamunge (1988) report noted that TVET in the country was included in the 8-4-4 education system.

The specific objectives as outlined in the report were; to put down foundation for the technical and vocational expertise needed for social economic development; to expose learners to technological and scientific ideas, skills and trends, to increase entrepreneurship and vocational skills as foundation for future employment and training, to develop required vocational initiatives, attitudes and creative mindset directed towards job, to develop skills relevant to several professions, vocations and trades. Lastly to develop an acknowledgement for the importance of manual jobs (RoK, 1988).

Coming to Tanzania, the TVET sector enrolment rate was 250 learners per each one hundred people in the year 2009), this was found to be better compared to other small income nations (228 learners per one hundred thousand people). MOE (2013) found out that 70.0% of TVET learners were registered in FDCs and VTCs and 30.0% were placed in non – higher technical learning levels. Similarly, Kerre (2001) recommended the need for the country (Kenya) to become technological and scientific educated if TVET was to become part of the rising world economy. This means that the instruction in technology and sciences has to be improved so that young people in the country would be prepared for the 21st century transformations. So that to re-evaluate the objectives, aims and goals of the current TVET system of learning, the research believed that it was important to understand the transformative resource mobilisation strategies for internal efficiency improvement in public TTIs.

2.1.1 Internal Efficiency of TTIs

UNESCO (2003) defined internal efficiency as the effectiveness at which education and other learning products are formed in academic institutions. UNESCO (2003) measured the internal efficiency of the school system through the student flow analysis method (Kayanda, 2015). This approach evaluates mainly three things that occur once a certain group enters the education cycle, learners would be promoted to the next class, learners might repeat the class and some may drop out from the school system permanently. Therefore, indicators of internal efficiency in schools consist of repetition rates, performance rates, promotion rates and dropout rates (Ncube, 2004).

Public TTIs internal efficiency refers to the degree to which resources provided to educational institutions are utilised well to attain the goals of the institutions as indicated in their vision and mission statements. Therefore, Yang (2014) informed that the input into the educational system and the output from the system is needed to be ascertained. These inputs consist of; textbooks, furniture, tutors, classrooms among others and they can be measured as the cost per each learner in a given year. Therefore, the input have to be in terms of years a student spent in a certain institution. The outputs of the TVET system are the students who graduate from it (Ithuta, 2014).

The implication here is that there should be optimum enrolment of students in educational institutions so that the resources can be fully utilised. Khamala (2012) suggests that the resources used in education should be properly utilized by the enrolled number of students so that they can reap maximum from them and hence a given educational institution realizing internal efficiency.

To assess the internal efficiency of TVET, a scholar has to perform a cohort analysis. This cohort analysis plainly explains the account of a specific education level to the time a cohort of learners goes out of such level. Per se, it can reflect the degree to which a particular system of education is in a position to utilise its raw materials (learners) in production of graduates (output). Incidentally, the cohort analysis could reflect the flow rate of students in the system like dropout rate, repetition rate and promotion rate of learners. If the education systems is in a position to see the learners through the system (here refers to TVET) in the minimal possible time, then the systems is termed to be efficient. In another way, the education system is effective when the wastage rate of it is below the minimum. Babalola (2003) concluded that the lower the wastage rate, the more efficient is the education system.

Internal efficiency of any education system is also explained by; dropout rates, repetition and grade promotion (Abagi & Odipo, 1997). The higher the completion and promotion rates, the better the education system internal efficiency (Lerotholi, 2001). Another researcher (Galabwa, 2008) also indicated that internal efficiency as a way of maximising association between inputs and outputs. According to Galabwa, there must be a steady pursuit on the educational managers part of the system of education to see if similar outputs in relation to measured learning attainment, successful completers and enrolments can be attained with small financial or 'actual resource inputs' and whether more outputs could be attained by redistribution of the level of inputs that are existing. Because internal efficiency is computed based on promotion, repetition and dropout rates, when repetition and dropout rates are high before the closure of each cycle of education, then that part of the system of education is termed to have critical level of internal inefficiency.

Concisely, internal efficiency is a measurement of the utilisation of materials to attain the results that are desired. Efficient strategic planning in the TVET sector would assist to decrease wastage rate in the utilisation of resources that are available that, in sequence, would assist tertiary institutions attain their objectives. lack or inadequate effective planning and plans executions, few academic faculty members together with poor facilities (infrastructure) have been seen to be variables militating against internal efficiency and consistently efficient administration of TVET institutions (Yang, 2014).

A study was conducted by Kayanda (2015) to establish variables that influenced internal efficiency of community secondary schools in Tanzania education sector. Kayanda used mixed method approaches consist of one hundred and twenty five respondents who were grouped as the following; students, teachers, principals and district education officers. In sampling, stratified random and purposive sampling methods were utilised to select the sample. Kayanda found out that the status of internal efficiency in the said schools was weak because of existence of low survival rates, high dropout rates and poor performance in Form two and four country exams. This state of affairs was associated to variables like lack of laboratories and libraries, teenage pregnancies, early marriages, students' participation in rites of passage, inadequate number of teachers and lack of adequate textbooks for learning. Therefore, there was need to examine the relationship between transformative resource mobilisation practices; institutional staffing capacity, physical resource mobilisation, instructional resource mobilisation and internal efficiencies of public TTIs in the County of Bungoma, Kenya.

2.2 Institutional Staffing Capacity and Internal Efficiency of TTIs

The main important resource in academic institutions is the human one since it can create or split an institution (Jan & Umar, 2012). Ameh and Aernyi (2016) saw that human resources are significant for efficient functioning of organisation. All other institutional resources are of secondary magnitude. Human resource is different from other resources because of its innovative capacity. It is through human inventiveness, ingenuity, potential and dedication that real progress is attained in an academic institution. Mobilisation of human resources is very important for organisational objectives and goals (Elena, 2012).

In relation to the vibrant type of the present day world, transformation happens on frequently generating new organisation challenges. So as to cope with the new challenges, institutions need dynamic human resource capacity who can handle the said issues by coming up with inventive ideas (Ameh & Aernyi, 2016). All other institutional resources could also influence development activity to some degree, but under developed and low quality human resource capacity has greatly affected institutional progress.

Institutional staffing capacity also involves the development of human resources in academic institutions. According to Maduewesi and Onyeachu (2017), human resources are human beings and in public TTI institutions, they consist of school board of management, parents, principals, tutors, learners and non-academic staff (support staff) with particular knowledge or skills. Other scholars described human resources as individuals with distinct roles, capabilities and specialities who are part of a certain institutions. In relation to this study, the institutional staffing capacity refers to expertise, skills and knowledge in social, managerial, mechanical or

technical areas available for utilisation in public TTIs for ensuring high internal efficiency levels are realised. These individuals together with their skills do not arrive by chance; they are developed and created by an institution to attain the overall objectives of it (Maduewesi & Onyeachu, 2017). Therefore, the institutional staffs need to be mobilised and utilised to achieve TTI goals and specifically TVET curriculum.

The workforce in any organisation is composed of human resources with varied level of competencies (Abdulkareem, Fasasi & Akinnubi 2011). The quality of staff in TVET institutions affects the internal efficiency (Yang, 2014). The features, which are associated with staff quality, consist of members of staff ability to interact with learners in the institution, their classroom management abilities, motivation, experience, qualifications and their attitude. When planning the quality of training and education, it is normal that tutors are mostly the important part of the entire educational system process (Kitui, 2015). Abuel-Ealer (2012) observes that the way they are prepared for instruction is an important variable of quality of education given that favourable tutor training need to address with the following factors like; professional development, in-service training, experience, pedagogical training and academic qualifications. Hence, Abuel-Ealer noted that educational systems need to have adequate and well competent tutors.

Rahman, Kim and Pei (2015) said that economic money generating ventures have been familiar within Malaysian higher education institutions (HEIs). Several variables that bring inadequacy of finance made HEIs to look for extra income to aid the expenses operations. Funding sustainability matters made up of the important influence towards the tertiary level of education. The study used qualitative approach

through interviews as a method of collect data from the study. Then, the outcomes of the interview (data) was analysed through interactive modelling. The outcomes showed that the major IGAs came from the consultancy and research while commercialisation chipped in the major critical income to the institution. They concluded that, the money that was generated by the faculty was significant to sustainability and development of the college. Possibly, the study was important to those who were concerned on the matters of IGAs coming from the members of the faculty. Through the findings, various groups would be known to the main cause of the problems and the address them. This would ultimately assist the institution to find a good means so that to achieve the desired result from IGAs.

Yunusa (2016) noted that each educational system level relies on tutors for the implementation of its programmes. Improving and maintaining standards of education is only possible through tutors. A tutor is an individual who instructs or teachers and gives education to students hence assisting them to get new knowledge and making them helpful to themselves and the whole community. A tutor is an important part of any system of education because no organised instruction could happen without them. They are the implementers of the educational policy and curriculum performs an important function in the achievement of any educational system observes and goals. Yunusa (2012) recorded that the utilisation of tutors to attain maximum outcomes is hinged on the accessibility and availability of instructional materials. To facilitate tutor utilisation, they need to be given the opportunity to attend in-service training for their career upgrading and improvement. Those in-service training would enable them renew their competencies for efficient classroom instructions.

Investment in employee training would result to development of skills among them, which would raise their productivity level, and they need to be marketable or develop their own to permit extensive utilisation of active technology, as well training permits adoption of new technological advancements. They dynamism of the world puts a lot of weight on not only the nations but also business and entrepreneurs to become competitive. Advanced skills level is therefore an important variable in improving and enhancing the required feedback. Hence, training is needed regularly throughout work life to improve employability of the person and jointly workforce flexibility. This implies that training need to equip employees with competencies and skills for jobs (Kamau, 2013). However, tutors in TVET institutions hardly go for short term training, inadequate scheme of service and receive little income hence low job motivation. The small numbers who are qualified quit the institutions because of low pay, poor working environment and inadequate professional development support (Bourgonje & Tramp, 2011).

While conducting a research in Nigeria, Ameh and Aernyi (2016) noted that human resource personnel in educational institutions were strong resources for their value in attainment of the goals. The researchers observed that educational institutional productivity was strongly linked to its human resource capacity. This is because a strong and well taken care workforce would identify themselves with the school as they are motivated to attain and reach their goals whereas some school staff who are not motivated see their schools as way created to attain their own individual goals. Therefore institutional human resource capacity brings a wide scale of knowledge, abilities and qualifications which in most cases it is beneficial to the institution and at times it is not beneficial.

In Rwanda, Butare (2004) noted that individuals desired to advance in education for their careers but do not have time off from their work to participate in the long professional development initiatives. Because of this need, Kigali Institute of Science and Technology created a department of part time study, which recorded more that 100 fee-paying students (workers) who were undertaking various diploma and degrees in different fields of expertise. Moreover, the institution regular provided on demand short term training like computer programmes like Microsoft certified courses, CISCO and ACCA. Butare noted that this programmes were appreciated since they addressed the needs of the workforce and did not come at a burden to the institute because they sustained themselves as they were priced at market values.

In Eritrea, Woldu (2017) examined principal function in helping transform the teaching and learning methods in schools. In addition, they focused on the important functions of the principles in implementing curriculum. Woldu used qualitative and quantitative methods in randomly selecting sixty-two teachers from Asmara five junior schools. Findings showed that teachers perceived that their seniors in the schools had been assisting in execution of transformation that was introduced by the Ministry of Education. Teachers perceived that principals have been making efforts to facilitate change by providing proper leadership style, mobilising and providing resources, performing supervisory functions, improving the provision of institution based training and development initiatives and providing needed channels of communication. The research was done in Eritrea junior schools while this research was conducted in Kenya TTIs.

Mamo (2015) comparative research involved four SSA public universities: two from Ethiopia (Adama Science and Technology University and Haramaya University) and

one each from Jomo Kenyatta University of Agriculture and Technology in Kenya, and Nelson Mandela Metropolitan University located in South Africa. The study was a case study and collected data through interviews guide which were open ended desktop publishing research including institutional documents (annual reports, planning documents, evaluation reports). The interviewees were university administrators, deans, department heads, and academics. The RDT-driven research model that guides the fieldwork is augmented by the academic literature on income generation strategies undertaken by universities in developing countries. The results from our analysis of the case studies show that our sample institutions of higher learning had indeed improved their university human resource base and involved in diverse revenue generation methods. The two institutions have made efforts to exploit into extra financial revenue streams like seeking support form multilateral and bilateral donors, authorities at local and regional level, campus services and students fees. Only with the case of the Kenyan and the South African universities do we see revenues from industrial firms, endowment and philanthropy. So as to connect with outside groups and organisations, a sample of academic faculties (continuing education offices and research centres) and administrative / reach out units (short term training, consultancy, marketing and promotion and technological transfers) were initiated.

Tutors in TVET institutions are important constituents of requirements of training. The government of Kenya recommends the need for adequate human resource for quality education delivery in all levels in the country (RoK, 2005). All departments have to be fully resourced with adequate teachers in TVET institutions. In a research, Sang et al. (2011) found out that most of respondents indicated that tutors wwere inadequate whereas others said that the tutors were adequate to execute their

classroom tasks in their specific faculties. The inadequate tutors came as one of the issues that public TTIs in the country faced.

Tutors level of education is important in establishing the effectiveness of the training procedure. The tutors need to have higher education level of training to efficiently conduct training tasks in classrooms (Aduda, 2003). From establishing the tutors' academic qualifications competencies in public TTIs, Sang et al. (2011) found out that majority of tutors held diploma or undergraduate degrees. Further, less than 25% of the tutors were found to have postgraduate and masters level of education correspondingly. Sang et al. (2011) established that most tutors held diploma or bachelors degree. This is in contrast to the fact that majority of TTIs graduates completed their education to obtain diploma level of training. Hence, most TTIs appear to be poorly staffed with highly skilled instructors, making the training quality to be below the standard expected.

To address low number of trainers, majority of the respondents (66.7%) noted that condition was addressed through employing part-time tutors, whereas 21.2% of respondents indicated that the solution was to implement multi-grade learning approach. Further, 3.0% said that tutors were to be left to continue with their own education. The research established that public TTIs resulted to frantic efforts address tutors shortages, which included the act of employing part-time tutors as the main used strategy. The multi-grade learning was utilised as a choice where tutors joined students undertaking same units though at diverse levels into one lab, workshop or classroom.

Kitui (2015) assessed the availability and teachers quality in the youth polytechnics which is, the number of teachers available, their qualifications and how often they

attend programmes like in-service induction courses. From the results, 92.8% of trainee respondents and 97.3% of the managers agreed that youth polytechnics did not have enough trained and qualified teachers. Even the few available teachers were mainly of low qualifications at the minimal grade of certificate.

Kibet, Zhimin and Chelagat (2013) reviewed and analysed the resource requirements and their sources together with the training level and capacity enhancement in resource mobilisation among private universities that were chartered in Kenya. a descriptive research design strategy was employed. Purposive sampling method was utilised to select a total of 63 staff from Nakuru town based three private universities. Questionnaire was utilised to collect data. Research data revealed the following: capacity building and training strategies on mobilisation of resources were yet to have a meaningful influence on resource mobilisation endevours; learners were the major source of resources for these universities as tuition payment fees formed the main resources that were mobilised by these institutions; constant awareness, capacity building and training in mobilisation of resources among employees; empowering the university faculties so that they can mobilise resources to the maximum at their locations.

It was found out that only 16.1% of respondents indicated to have been involved in capacity building workshop towards mobilisation of resources. The result implies that most respondents did not attend capacity-building forums on mobilisation of resources in their respective institutions. They indicated that resource mobilisation training did not have meaningful influence on mobilisation of resources. This shows that in most instances, training on mobilisation of resources did not have significant

influence on resource mobilisation strategies among the three private universities in Nakuru town.

Olu, Omiyale and Adebola (2015) argue that the achievement of any system depends on adequate funding, effective administration and proper planning. Finance is important for institutional survival, even TVET ones, there are various methods way to which educational financing can be done. UNEVOC (1996) cited by Ferej et al. (2012) classified a number of clearly identified financing methods that consist of; international donor help, public and private sponsored financing and public financing. Coming to the Kenyan scenario, learners pay fees regularly, which are divided, into three terms in order to supplement the government capitation to these institutions.

Governments, which are adequately focused, can develop strategies for reallocating some of the money burdens of education to students individually and their families through tuition fees or student loans, to employers through levies and payroll taxes or to local communities through self-help building or help with operation costs. In addition, they may devise taxes earmarked for education such as graduate or professionals surtax. All these are in realisation of the fact that central government funding is not only or necessarily the most desirable way to finance education investments (Psacharopoulos & Patrinos, 2004).

The challenges facing TVET institutions consist of funding and financing, the growth and development of private TVET colleges, administration problems. The main challenge that is affecting public TTIs is the underfunding issue of these institutions (Ahmed, 2011). The funding challenge exist in attaining the educational policy objectives developed for TVET colleges, the finance gap is considerably high starting from 50 – 90.0% in a ten year period (2010-2020) (Chang, 2007).

This means that important players in Kenya TVET system would have to look for alternative and increased methods of filling in the gap created through underfunding by changing their resource management, good administration nd leadership, accountability, and enhancement of public – private partnership at TVET level. the problem of inadequate funding of TVET institutions has a critical impact on the student and staff performance who are at the output stage.

In a research conducted in Nigeria, majority of capital projects that are being done to realise the increased number of learners have been stopped or delay because of funds inadequacy (Ekundayo, 2008). Ekundayo pointed out that the inadequate resource pressure has resulted to decreased on the employee welfare remuneration and packaged coupled with decreased working environmental conditions. The immediate impact are increased attrition of high qualified employees, embezzlement, admission runs, extortion of learners, cultism, increase crime levels, regular staff and student strikes among other behaviours. Initiatives that could assist to reduce wastage rate in the TVET system consist of; modifications in training of tutors so that empirical teaching would substitute rote learning and memorisation; in addition to reinforcing pedagogical approaches as tools for increasing efficiency of education. When these strategies are put into practice, the system of education could attain much more than it is attaining with the present funding level (Olu et al., 2015).

Abdulkareem, Fasasi and Akinnubi (2011) looked at the association between utilisation of human resource and Nigerian state universities internal efficiency. The study used descriptive research approach where respondents were selected using stratified random sampling method. A total of 6 universities formed the sample. The researchers found out that lecturers were over-utilised, the wastage rate was very low

at 23.0% and the graduation rate was high (85.0%). In addition, there existed significant association between utilisation of human resources and Nigerian state universities internal efficiency. This study was conducted in Nigerian universities that have different operational modes compared to TVET institutions to which the current research was conducted in.

In Nigeria, Pitan (2012) examined the association existing between utilisation of human resources and internal efficiency of Ibadan North local government area secondary schools located in Oyo State. Pitan study was guided by descriptive survey research design where purposive method of sampling was used to select 8 out of twenty two schools in the study area. Results showed that a significant positive associated existed between learner – teacher ratio and wastage ratios. However, there existed no significant association between quality of teachers (through heir qualification), their workload and wastage ration correspondingly. Utilising the input – output analysis method of the schools sampled, the researcher found existence of high positive association between utilisation of resources and secondary school system internal efficiency. Student performance in national examinations displayed a lot of failure (wastages) hence making the system to appear inefficient.

In another perspective, education aligned income generation is mainly produced through means of education and teaching services, hence, they were in a position to utilise their experience and knowledge through involvement into the IGAs. Equally, Kassim (2011) noted that the teachers are now changed into scholars rather than tutors. The tutors were expected publish books and articles to maintain guaranteeing the outside sources in the form of research grants. Moreover, other researchers (Beath et al., 2000) argue that incentives could be provided to lecturers who had performed

IGAs through using maximum ‘tax’ on the earning profit. Further, Mankiw et al. (2009) noted that optimal tax value needed to be executed with reference to ability of distribution.

Ferej et al. (2012) established that every year, the funds are provided by the government to each tertiary institution to meet their operational costs related to payment of salaries. Tutors registered and employed by TSC are paid their earnings that is also derived from government’s yearly budget. Some TVET colleges however, employ tutors through their board of managements where they have requirements to address as they hire an instructor to supplement those provided by TSC. It is not known whether TTIs in Bungoma County hire extra teachers to manage the workload that existing teachers are facing.

Rodrigues, Wainaina and Mwangi (2005) looked on income creation in various public universities. They indicated that after many years, public universities of learning in the county have to innovate to respond to improved competition and decreased government capitation. The researchers noted that by 1995, under the pressure of increased debts associated with utilities, pension schemes, Kenya Revenue Authority and suppliers, the University of Nairobi decided to set up University of Nairobi Enterprises and Services Limited (UNES). This company (UNES) is wholly owened by UON. The purpose of this company is to enhance running of income based programmes for students who pay fees at undergraduate and post graduate levels. It also enhanced collection of revenue from diverse income sources (IGAs) which consist of academic and non academic units like mortuary department.

The income that came from the projects, was grouped by type of activities: special production units, short courses, consultancy and teaching units with plainly clearly

schemes for allocation of the income generated. It was through this way that UON was gradually in a position to get itself off from debts and go towards solvency. The expansion of IGAs, advancement of internal procedures, better client / customer services and administering the vague association between UNES and university, a institution that is owned by the university, through sensible balance between cooperation and autonomy, is recommended for both parties sustainable development.

Ndolo, Simatwa and Ayodo (2011) evaluated school based IGAs on financing and access to secondary education for four years stretching 2000 – 2004. They used a cross-sectional survey design strategy with the sample involving 297 learners, 33 head teachers and one Sub County director of education. Data was gathered through the use of questionnaire where a pilot study of 10% of the sample were used for piloting and also determination of validity and reliability. Data was analysed using descriptive statistics where findings showed that the main IGAs practiced in secondary schools were: farming of crops (41.4%), keeping of livestock (31.8%), and making of bricks (12.3%). Moreover, it was evident that income from IGAs decreased overhead costs associated with secondary education which ultimately increased access to secondary schools by students. They researchers noted that IGAs made significant contribution on secondary school education in the sub county. The income that came from IGAs supported schools to construct and expand facilities together with purchasing instructional learning materials. This study determined to establish whether the school initiated IGAs contributed to learners' retention in public technical training institutions in the county of Bungoma.

Chemutai (2015) paper sought to know the functions performed by school heads as Human Resource Managers in Secondary schools. Chemutai study was designed on

Burns and Stalk Contingency theory which looked at how systems of management would change in reaction to demands of rapidly changing environment. Survey research design was utilised with the target population consisting Nandi County 140 secondary school principals. Census method was used to select the study sample. Collection of data was done using questionnaire that were administered by the researcher. Coding and entry of field data was aided by Statistical Package for Social Scientists (SPSS) for windows Version 20.0. Data analysis was performed through descriptive statistics. Presentation of data was in form of charts and frequency tables. The study findings clearly showed that the primary roles of head teachers in institutional staffing capacity identified consisted of recruitment of staff in schools, encouraging team work among staff, empowering staff and encouraging them in developing their career. These activities were found to improve management of schools. The gap created by Chemutai research is the failure to link the human resource capacities of principals and internal efficiency of schools.

Waweru and Muturi (2015) paper determined to examine the impacts of alternative sources of education financing in the provision of instructional learning materials in selected public secondary schools. some of the research objectives were: to determine the contributions of alternative sources of revenue in financing education on provision of teaching and learning materials in public secondary schools in Trans-Nzoia East Sub-County, to assess extent at which the various alternative income sources of financing education are reliable and adequate to purchase quality instructional classroom materials in public secondary school. Another theme was to find out to establish the degree at which alternatives sources of financing education are utilised to obtain quality instructional teaching resource in the said secondary schools, to find out which strategies can be devised to improve alterative income sources of funding

to enhance the financing of public secondary schools. A total of 62 respondents were selected from the target population to participate in the study through use of purposeful sampling method. The main data collection tool was the questionnaire. Inferential and descriptive statistics guided the process of analysis that was enhanced through SPSS computer programme. The main outcome was that the alternative sources of financing education in public secondary schools are grossly inadequate, irregular, and fraught with myriad of challenges. The above review of empirical studies point that there exists a gap in establishing how TVET institutions conduct financial mobilisation activities and its effect on internal efficiency, a focus of this research. None of the researchers reviewed in the sub-section reveal the actual outcome of institutional staffing initiatives towards maintaining internal efficiency in the said institutions, an areas that the researcher conducted deep examination on.

2.3 Physical Resource Mobilisation and Internal Efficiency of TTIs

Physical resources are expressed and defined in terms of main material assets, physical infrastructure, properties or buildings in a certain institution as per IES (2006). According to Maduewesi and Onyeachu (2017), physical facilities consist of materials, which exist, in a particular environment, (here in this study a school). They mentioned on that the physical facilities consist of school buildings and equipments that an institution has control over. Physical resources facilities in institutions improve the teaching and learning process in schools through enhancing the instructional process to be objective, purposeful and meaningful. The physical infrastructure in academic institutions could also be seen as whole plants in which school management, educators and learners utilise, give out and harness for efficient and smooth administration of any institution of education. Asiyai (2012) found out that

the objective of mobilising physical resources was to ensure purposeful and effecting classroom learning experience is evident in schools.

Physical resources consist the entire infrastructure and material facilities, which are used to aid in provision of quality education curriculum in schools (Rufai et al., 2013). Physical resources according to Bakare (2009) includes basic organisational and physical structures which are required for successful operational of an educational establishment. Other important resources in institutional environment classified as physical by Omotayo, Ihebereme and Maduewesi (2008) consist of: electricity provision, provision of technical and vocational infrastructure, provision of desks and chairs, provision of computers facilities, laboratory equipments and in some case library resources. These facilities' are significant to effective curriculum implementation. High quality and usual institution of learning relies mostly on adequacy, provision, utilisation and administration of physical resources for improved internal efficiency levels.

An argument was made by Akinsolu in the year 2004 who noted that curriculum could not be well conducted or implemented when the facilities in an educational institution which are poor and dilapidated. Indications reveal that, infrastructure facilities in schools consist of physical ones, which enhance effective learning and teaching process. Akinsolu mentioned that they composed of toilets, storerooms, playground, chairs, desks, tables, visual and audio-visual media, water, electricity, consumables, equipments/implements, libraries. Workshops, laboratories and classrooms. This study endeavoured to determine whether the above-mentioned facilities were existing or mobilised by public TTIs in the county of Bungoma, Kenya.

Infrastructure facilities in TTIs have been noted as important element of resources in the education sector and have a significant function to perform in achievement of schools internal efficiency levels. In public TTIs, Oyesola (2007) observed that infrastructural resources consist of important inputs that provide a conducive environment, enhances classroom interaction and facilitates attainment of educational goals. The Kenya education ministry in the year 2008 reported observed that adequate and modern facilities were important aspects of a vibrant and sound technical and vocational training (MOEST, 2008).

Availability of adequate and modern training facilities to cope with rapid technological changes has been an issue even with the richest nations according to the ministry report (Kitui, 2015). In real meaning, Uko and Ayuk (2014) indicated that TVET curriculum would be functional and meaningful if the needed physical infrastructure resources are not given in requirement quantity or quality at the desired period through main organisational assurance. Provision and maintenance of facilities is important for efficient teaching and learning process in TVET level (Rufai et al., 2013).

Availability of infrastructure resources in TTIs supports meaningful instruction in classrooms. The TTIs principal and board of management need to plan for these facilities in their institution because the student population appears to be changing in tandem with changing modernisation and programmes. Material resource management consist of the following processes; maintenance of the facilities, controlling the use, distribution, allocation, acquisition and planning process that comes at the beginning (Ithuta, 2014). Ithuta remarked that the existence of infrastructural facilities like desks, chairs, classes, administrations building among

others are significant for educational objectives attainment in TVET. Researchers (Owoeye & Yara, 2011) observed that school library was an important infrastructural resource to facilitate curriculum implementation. Existence of library supports research and reading work to both instructors and learners in educational institutions. This is because for curriculum to be implemented well books have to be provide and they are stored in the library. Owoeye and Iyara noted that the main purpose of institutional library is to ensure that a student can access, at their own convenience and times, all materials that are reproduced, periodicals, newspapers, all books and materials which are of value and interest to the student but which are not assigned or provided to the learner as supplementary or basic textbooks. However, Akinsolu (2012) identified with a lot of disappointment that majority of libraries in institutions of higher learning are not up to the required standards and learners are not adequately aware of the library infrastructure nether do they have adequate access to them.

Various research investigations have been performed to find out the connection between physical facilities mobilisation and internal efficiency of educational institutions around the world. Adeyemi (1989) cited by Onani (2014) who assessed the level of Lagos state technical colleges internal efficiency. The research collected data through questionnaires where analysis was done using percentages and re-modelled using cohort approach. Adeyemi established that for the 2 groups of cohorts used, the ratio of the wastage was 1.00 and 1.08 and the rate of wastage was 2.0% and 3.0% respectively. Students' performance positively related with availability and utilisation rate of the available facilities in their schools (physical and human ones).

Physical facilities can improve or developed through money generated from income generating ventures. UNESCO (19930 refers IGAS as a group of small – scale

initiatives which are in a position to generate an income source for groups or individuals for the objective of encouraging integration, repatriation and right to self – determination. According to evidence that was gathered from past research, majority of TVET tutors are more likely to participate in commercialisation ventures, consultations, research and development to create income for their institutions programmes running.

Moreover, faculties in tertiary institutions also give category of units that are specific tailored to attract more learners to pursue their education in special areas; in the meantime widen the income sources for their TVET institutions. Asia (2012) suggested that most of the Malaysian universities were creating entrepreneurial and innovative ventures to create extra profits. Most (84.0%) of the higher educational colleges in Malaysia were found to be executing consultancies initiatives to produce their profits and it is then followed by amplification of post graduate training courses, short term professional development trainings, continuing learning courses and off-shore courses in their local HEIs. Half of the HEIs were found to create their own IGAs through providing entrepreneurship courses and received profit through private companies or corporate entities and business units. This research was conducted in Malaysia HEIs while the study focused on TTIs in Kenya to determine the level of institutional income generating programmes and their support of internal efficiency.

Akinsolu (2003) conducted a research in Nigeria on provision and maintenance of educational infrastructure to facilitate primary education. Akinsolu found out that there existed whole facilities for primary schools ranging at 1.5 to the minimum and 35.2% to the maximum. Akinsolu suggested the significance of physical infrastructure resources in education system management. Akinsolu suggested that all stakeholders

were required to certify sufficient availing of physical infrastructure in all levels of education (university, colleges, secondary or primary) to enhance teacher productivity, which would enhance teaching, and learning in schools. Akinsolu contended that objectives of education would only be realised with the provision of relevant and adequate infrastructure facilities in educational institutions.

In Cross River State, Nigeria, Uko (2015) determined how creativity and proficiency of head teachers influenced school infrastructural facilities management. A total of thirty six secondary schools formed the study sample with 2 schools selected from the 18 local government regions of the state. Result revealed that there was significant connection between head teachers creativity, proficiency and general objectives of education in schools facilities management. This showed that creative and proficient management of school infrastructure was essential in developing a non-restrictive classroom environment hence improving the equivalent attainment and performance of learners through effective classroom instruction.

While conducting the research in the same state as Uko (2015), Uchendu, Ekanem, and Jonah (2013) examined the impact of school infrastructure facilities maintenance in educational services provision in both private and public secondary schools. To attain the aims of the study, 2 hypotheses were developed to be tested. The researchers followed a descriptive survey design approach where 738 principals and their deputies were selected using stratified random sampling method from a population of 1,515 of heads and their deputies. They collected the research data through questionnaire designed according to the title. The descriptive statistics utilised were standard deviation, rank order, mean set and mean. In addition, one – sample t-test was used to test and confirm the study hypotheses. Outcomes obtained

revealed that the culture of maintenance in both set of institutions (private and public secondary schools) was below standard; the schools infrastructural facilities were often maintained. Educational infrastructure facilities if well maintained affected the educational services provision and academic performance of students in the two categories of institutions in the area. The researchers also found out that finance was the man constraint influencing effective school infrastructural facilities maintenance. The main weakness of the research was that they were not in a position to collect data for all schools because of terrain that was port to allow vehicles to move in.

In Cameroon Yaounde centre, Ndjebakal and Genevarius (2017) studied the connection, which existed between facilities of public bi-lingual secondary schools and their internal efficiency. Qualitative and quantitative methods were utilised to collect and conduct data analysis. Results revealed that school infrastructural resources significantly influenced Yaounde Centre secondary schools internal efficiency. They concluded that there existed significant connection between school facilities and Cameroon secondary schools institutions efficiencies.

In Rwanda, Butare (2004) informed that with higher demand for basic computer knowledge and high quality ICT courses for the community living in the country, Kigali Institute of Science and Technology started its ICT School in the year 1999. Through the ICT centre at KIST, the institution has been one of the leading Internet service Provider (ISP) in Rwanda after Rwandatel (the public and national telecommunication firm). The ICT centre provides web based and internet services for wire and dial up connections, they do sell internet accessories for local and wide area network together with operating a cyber café. Moreover, despite providing internet services to its wide clientele, members of the public can also be served on

consultancies and services like; secretarial services (typing, printing, photocopy), internet access services (email and websites), developing softwares packages, network, web design and hosting among others services. Competitive pricing that KIST provides makes it to be one of the best choices for most consumers in Rwanda. The ICT centre is also involved in offering maintenance services like servicing computer hardware tools among other computer related electronic devices.

Other main operations at KIST ICT centre were upgrading of personal computers, assembling of computers, training ICT officers, computer maintenance and related electronic devices. During a short term, the ICT centre expanded to become self sustaining and able to aiding an ever rising customers numbers while producing a profit that is reasonable. To additional improve its competitiveness; the KIST ICT centre did negotiate a mutual venture with one private company in the country Rwanda by the name Media Post. This shared business arrangement consists of creation of a television company that is private and was the one to be launched in Rwanda by then. From the review of Butare's work, it is not known whether TTIs in Bungoma County have invested in IT Industry. The researcher did determine this.

Tesfay (2015) examined the issue of internal efficiency and the efficiency in form of repletion and dropout of learners. The study was conducted in Welqait, Wereda in Ethiopia. A sample of 5 secondary schools involving 5 principals, 40 students and 40 teachers were chosen as the sample through convenience and purposive sampling method. Data was analysed using quantitative forms in addition to qualitative (percentages and frequencies) which was done through narrations. Results showed that most students used to trek for long distances to access schooling. Teachers were found not to encourage students on the importance of education. The students

indicated that they failed to dedicate a lot of efforts in their studies because no one was available to show them the way. Even parents support was found to be inadequate. Resources (facilities) in the schools were found to be available but inadequate. This led to incidents of overcrowding in classrooms. The study was conducted in Ethiopian secondary schools while this study was in public TTIs in Bungoma.

In South Sudan, Yang (2014) assessed Gambella Regional State Nuer Zone primary schools level of internal efficiency. Yang used a descriptive research design where quantitative data was gathered from heads of department, section leaders and principals by using questionnaire as data collection instrument. The respondents were selected through simple random sampling method. They found out that the dropout rate in Nuer zone together with repletion rate of upper primary level was fluctuating with changing increase and decrease for some years. The research found out that one of the factors influencing internal efficiency was shortage of school facilities. It emerged that school facilities were not mobilised to increase internal efficiency through various mobilization programmes. The research by Yang was conducted in South Sudan primary schools while this research was conducted in public TVET institutions in Kenya.

Sang et al. (2011) research established that government of Kenya report in the year 2005 noted that training infrastructure was significant if the country was to realise the evolving technological market skills requirements and propel the nation towards Vision 2030 attainment. The provision of adequate facilities for training was important to quality of training and teaching. Sang research found out that most heads of department (83.3%) said that facilities for training were not enough as opposed to

16.7% who rated their training facilities as adequate. This means that department holds perceived that public TTIs were operating with inadequate infrastructural resources. Majority (63.1%) of the students in those institutions said that TTI infrastructural facilities were not adequate and a few (36.9%) mentioned that the physical resources were indeed adequate. This shows that most teacher training pre-service students believed that the training they underwent happened in poorly structured infrastructural resources. This study departs from Sang by conducting the research in technical training colleges whereas sang did in teacher training colleges.

In Kisumu municipality, Ngunzo (2001) conducted an investigation on how access to secondary school education was impacted by availability of school infrastructure. The research found out that those institutions that had modern infrastructural resources that were up to date attracted more learners compared to those without. In addition, these kinds of institutions performed better in KCSE examinations and they did sent large number of students to higher education institutions (colleges and universities) compared to those that did not have. Another research conducted in Bungoma East Sub County by Kitui (2015) in selected TVET colleges offering the curriculum. Kitui research followed a descriptive research approach. The questionnaire was distributed to 120 finalist youth students, five youth polytechnic managers and one sub-county youth officer. Results showed that most trainees and managers' responses indicated that polytechnics had inadequate physical facilities.

When asked in their own view what could be done to increase enrolment in youth polytechnics, the trainees suggested provision of more physical facilities like construction of modern classrooms, desks, libraries, workshops, laboratories and playing fields. In some polytechnics, it was observed that some classes took place

under trees; facilities like sewing machines were very few to the extent that ten trainees shared one machine while workshops were not available. This was likely to compromise TVET education quality. The study by Kitui was done in youth polytechnics while this study interest was in public TTIs in the larger county of Bungoma.

Still in the country, Ferej et al. (2012) research did identify that in the studied TVET colleges, depending on location and initiative of its administration, they collected revenue for their institutions independently from IGAs. The IGAs consisted of students paying higher fees than additional courses started by the institutions for students who were willing to undertake. Other initiatives were consultancies, repairs, services and farming (livestock and crop). The researchers established that income creation ventures were critical and therefore majority of the public technical institutions were relying on them to survive in a period of reduced government allocation to the sector that was at times irregularly provided. To some institutions, donor aid performed a critical function in TVET institutions development in the country. UNEVOC (1996) also observed that in most developing nations like Kenya, a large support of international support has resulted to setting up of structures for capacity building. Through development aid, new infrastructure facilities have been put up, the academic and non-academic fellows have been train and instructional resource materials have been provided to aid in curriculum implementation. The study departs from Ferej et al. (2012) investigation by looking at how physical resources were mobilised in Bungoma TTIs for the purpose of addressing low internal efficiency levels.

Onyara (2013) research was to determine institution based variables (human, financial and physical) influencing students' academic performance at KCSE in Teso South Sub County. The study utilised of descriptive survey research design approach. All Teso South Sub County 12 public secondary schools participated in the study involving 12 principals, 24 form 3 and 4 class prefects and 12 directors of studies. The respondents were selected using purposive sampling method. Observation checklist and questionnaires for principals, class teachers and director of studies facilitated data collection. Descriptive analysis guided the process of analysis and the results were displayed in frequency distribution tables. Some of the main findings of the study revealed that human resource was not well handles since from the findings, most of the principals and director of studies did not employ well trained school workers and their numbers were not adequate to ensure quality education provision. Finance resource was not well established since most of the principals found their schools having financial problems. The researcher concluded that physical resources were not well developed in most of the secondary schools as agreed by majority of respondents.

In Meru County, Ithuta (2014) investigated the determinants of internal efficiency in public primary schools in Tigania East Sub-County. Ithuta investigation utilised a descriptive survey design. The investigation sample consisted of 10 school heads, 100 teachers, 10 Education officers and 400 standard 7 pupils in the District. Questionnaire was used to collected data where analysis was performed through quantitative and qualitative techniques. The research discovered that learners did not have adequate sitting place in their class and they sat more than the required number of learners in a single desk. The researcher found out that that pupils' whose schools lacked facilities and materials were significantly more likely to attain lower scores

than those learners whose schools were well equipped. This research made a comparison on the degree to which mobilisation of physical facilities influenced internal efficiency to establish whether the correlation was related to Ithuta research.

In Tana River County Kenya, Onani (2014) study determined to discover the association that existed between physical infrastructure resources and public secondary schools internal efficiency levels. The researcher checked the following resources; electricity, latrines, toilets, furniture, textbooks, science laboratories, and classrooms. Onani specifically wanted to establish the level of internal efficiency in the said schools through the following indicators: dropout rates, completion rates and repetition rates. The researcher desired to come up with solutions on how to address physical facilities situation in schools so as to minimise wastage rates in addition to finding out realistic strategies that could minimise repletion and dropout rates. Cost benefit analysis hypothetical stance guided the study. This theory purposes to attain optimal production as it argues that the output of any invested need to be connected with the input so that profitability can be assessed.

Two research approaches; correlation and descriptive research designs were used. A total of fifteen public secondary schools participated where the following tools documentary analysis, interview guides and questionnaires were utilised for data gathering. Onani found out that in the said county, most schools physical facilities were inadequate and those had at least some, their conditions were deplorable. With respect to the second objective by Onani, there existed no association between condition of physical facilities in schools and student dropout rate. With respect to the third objective, it was discovered that there existed a significant positive connection between the state of physical facilities with completion and repletion rates of students.

Onani also found out that Tana River county secondary education system was not efficient as the dropout rate for students stood at sixteen percent. Based on the findings of the study, Onani deduced that physical facilities positively correlated with Tana River county public secondary schools internal efficiency. Despite research have shown the significance and influence of physical infrastructure facilities on educational institutions general operations, the said researches failed to depict how physical facilities mobilisation could affect internal efficiency of TTIs, a key area of focus in this research. In addition to that, observation, limited research has been conducted on TTI from this sub-section and specifically to the county of Bungoma, Kenya.

2.4 Instructional Resource Mobilisation and Internal Efficiency of TTIs

The instructional learning resources are materials that could aid, support or provide help to the instructional learning process in the classroom. Okumbe (1998) indicated that the instructional materials are resources or things, which supported and aided the instructional process in institutions offering educational services. Onani (2014) indicated that instructional learning materials were main factors influencing the rate of educational progress in a specific nation. According to Olabiyi, et al. (2008) many teachers are of the view that learning occurs best through participation. The use of instructional resources facilities helps teachers to direct the learning of their students instead of talking from higher platform to passive students, some of who might be asleep. Students, as we know, learn by discovery and the teacher cannot have in stock all that the child needs to know.

Mkpa (2005) observed that educators required to be informed that a creative instructor would perform a lot to reduce reliance on state for the allocation of required

classroom instructional resources; most of resources exist in a setting that can be efficiently utilised for curriculum implementation. Maduewesi and Onyeachu (2017) noted that various types of shapes available in students' homes could be used to teach statistics. Diagrams and pictures could be used by tutors to teach humanities subjects. Tutors to create and improvise instructional resources could use old print resources. Mkpa (2005) further recommended that institutions could exploit their students' talents to make materials that which cannot be effectively developed at schools. The students when directly mostly if they are assigned such activities as projects could result to creation of more advanced instructional materials to support learning. Efficient utilisation of institutional resources could also be useful to provide firsthand experience to students in TVET institutions. Mkpa's analysis reveal that even the students' talent can be utilised and mobilised for effective creation of resource materials to aid in learning.

Generation and mobilisation of materials is also viewed as tantamount to getting additional or new facilities, it is also concerned with making improved, or maximising of the resources that are existing. In definition, mobilisation consist of procedures that institutions undertake for pursuit of cooperative objectives (Joute, 2014). Joute (2014) notes that in the case for tertiary library facility, it can be deduced that mobilisation and resource generation implies marshalling financial resources to reinforce libraries and the whole institution at large. Joute says that it is the procedure or an undertaking that happens to drum up strategic planning process.

Kamau (2013) noted that a well and good-grounded TVET system has to be at the front in technological inventions, which are geared towards realising community needs. Nevertheless, it has to be emphasised that acquirement of knowledge is not

adequate to end all the issues that African economics are facing. It is a pre-condition, however, a lot needs to be done and implemented. The author noted that the following; unequal distribution of resources (wealth), poor policies on economy, poor governance and political instability ills need to be done away with if a good TVET system of education is to be experienced in a given nation.

In several Asian nations; Sri Lanka, Nepal and Bangladesh Asian Development Bank (2015) conducted an extensive analysis of TVET system together with university education. According to their observation, TVET faced the following issues; trainers and tutors were insufficient in Bangladesh, in Nepal, there was no monitoring system that was of quality and in Sri Lanka, there was inadequate industry involvement. The reported noted that: inadequate provision of high quality TVET to administer and improve training programmes, weak institutional arrangement measures, long term training which eliminate marginalised and the poor, inadequate information concerning demand (leading to a variance between available jobs and training), low employment rate of graduates and ineffectual quality procedures to administer and improve training programmes.

In Nigeria, Maduewesi and Onyeachu (2017) investigated the procedures of utilisation and mobilisation of resources for efficient primary education curriculum implementation. The themes of Nigeria Policy on Education were itemized. They described the concepts of utilisation and mobilisation. The resources were classified as material and human resources and their importance on primary education. The researchers found out that problems experience against efficient utilisation and mobilisation of materials were found to be prevalent in schools and consisted of not recognising the environmental facilities existing in a particular institution, school staff

ignorance on improvisation knowledge and inadequate competencies on how to utilise the specific material, human and physical resources available in schools. The gap created here is that the researcher did not establish how mobilisation of resources influenced internal efficiency of schools.

Iseleye (2018) evaluated financial resource sharing to education and how it influenced outcomes of students in Rivers state senior secondary schools. The study was guided by ex post factor research strategy. The financial allocation period ranged from 2014 – 2016. Result showed that the allocation to schools was higher in the year 2016 by 40.4% and this implied that performance of student was expected to be higher among students in that year of huge allocation. The researcher concluded that increased in financial mobilization by senior schools increased their performance levels.

In Rwanda, Kigali Institute of Science, Technology and Management (KIST) was considered to be one of the pioneers university in the country took the lead in starting entrepreneurial initiates by the year 2002 (Butare, 2004). For instance by 2002, the institutions created 35.0% of its budget from income generating ventures. By the year 2008, the figure was expected to surpass the 50.0% contribution to the institution annual budget. The institution has innovated from the time it started to offer conventional instructional approaches that embedded technology with it. The following initiatives: food processing, waste water management and renewable energy projects were some of the successful projects that were initiated by the institutions and succeeded. The main products from some of these projects consisted of; development of a crop dryer which used biomass (firewood, sawdust or rice husks) or sunshine either, invested in rain water harvesting methods, development of foot power water pumps which were found to be low cost and appreciated by many people among

other products. Utilising feedback from their community development of officials with majority being female, the institution did modify simple machines which made it possible to be operated by women, capacity build women groups on businesses processes and trained all its learners on basic entrepreneurial knowledge and skills. The institution ICT centre is considered to be one of Rwanda's internet service providers and major supplier of softwares in addition to provision of training on computers. In addition, part – time paying college students for undertaking various short and advanced studies contributed to the institutional kitty.

Coming to Kenya, Odundo and Rambo (2013) did an investigation to determine the value added by IGAs on public secondary schools financial performance in terms of net worth, portfolio, liability and assets. Secondary school managers have the gigantic task of balancing meagre resources between subsistence and development needs as well as good performance in national examinations. However, macro-economic shocks such as inflation, fuel shortage, and crop failure, among others, often militate against the success of public schools. Institution based income generating initiatives facilitate public schools to manage with outside economics disturbances, without inevitably passing over adjustment of budgets to parents and guardians. However, the nation (Kenya) was found not to have a clear policy procedure to assist the panning, administration, financial reporting, accounting and review of income generating projects in educational institutions. Besides, there was no documented information concerning the worth enhanced by income generating ventures to public secondary schools financial performance. The researchers established that those institutions having IGAs and those that did not varied significantly in terms of number of support staff, annual income, age, student population and category of school. Institutions that had IGAs were almost double times (1.9) likely to posses as many properties

compared to schools that did not have income generating ventures. Besides, schools that had income generating ventures were 2.2 times less prone to have their burden in surplus of median limit. Concerning net value, the researchers established that institutions that had income generating ventures were about 2.1 times more likely to be performing higher than the median limit. This implied that institutions that had income generating ventures were more affluent compared to schools that did not have such ventures. Based on the findings, this study concludes that IGA projects were beneficial to schools by improving the ability of schools to accumulate assets and manage their liabilities. Based on study findings, they concluded that income-generating ventures were advantageous to schools as they enhance the capacity of the institutions to amass asses and handle their liabilities. The researchers failed to link how income-generating ventures influenced internal efficiency, an area that this study investigated.

In another research conducted in the country, Kamau (2013) determined to know the problems that were bedevilling Kiambu county youth polytechnics provision of technical vocation, education and training. Moreover, the researcher desired to specifically identify the challenges that the above-mentioned institutions were facing as part of providing educational services to its clients (students) and establish the cause and workable strategies to address the challenges experienced by the said institutions. Data collection was collected through use of questionnaires that were prepared for youth polytechnics tutors and principals. The questionnaires had open and close-ended question to enable acquisition of adequate information from respondents. The respondents (teachers and principals) were of the opinion that reduced capitation from the exchequer, government policy on TVET and weak youth polytechnic curriculum were the main problems that Kiambu youth polytechnics

faced. Alternatively, learners perceived the youth polytechnics curriculum as inadequate and the utilisation of older and out of date equipment and tools which were never replaced or repaired as main obstacles that negatively affected their learning situation in Kiambu youth polytechnics. According to their instructors, the youth (learners) were really affected by the obsolete equipment and tools because majority of them were worn out, aged, and non-operational. This meant that the equipments and tools created a problem on youth learning initiatives and even influenced their job market competitiveness. The researcher saw the need for members of the public to be made aware on the significance of youth polytechnics is not designed for those who failed in exams but they are tailored to nurture youths in the crucial roles of technical competencies required for county and national progress. The researcher established that majority of the sampled institutions were not adequately prepared to train since their physical infrastructural resources were outdated and the available implements were inadequate, not working or even obsolete. The research by Kamau was in Kiambu County while this research was done in the county of Bungoma to establish how mobilisation of instructional resources linked with internal efficiency of public TTIs.

Another research by Boru (2013) was to establish the influencing internal efficiency of Moyale Sub County public primary schools. A descriptive research design was chosen for the study with the sample comprising of seven heads of schools and 370 learners. Boru collected data by use of questionnaires for both respondents. Results indicated that schools did not have enough educational learning equipment that which influenced teachers' method of teaching and learners understanding of the concept. The research concluded that sufficiency of instructional materials for classes had an effect on public primary schools internal efficiency levels. The gap created by Boru

(2013) research is that it was done in primary schools while this research was in TTI. Moreover, the research did not establish how the instructional resources were mobilised for internal efficiency improvement in schools.

In Seme Sub County, Kisumu County, Nyanya (2015) assessed how provision of teaching and learning material resources affected secondary schools internal efficiency. The design employed in this study was descriptive Survey. The researcher targeted secondary schools (26) in located in the above mentioned study area. The research discovered out that unavailability of teaching and learning materials influenced internal efficiency of secondary school education in Seme Sub-County. This implied that the heads of schools to mobilise additional instructional resources for attaining high internal efficiency levels did little efforts. The research by Nyanya (2015) failed to provide the linkage between teaching and learning material resources and internal efficiency through statistical techniques (correlation and regression) hence necessitating this study. In addition, the review of empirical investigations have failed sufficient research showing how instructional resources mobilisation rates with public TTI internal efficiency, a focus of this study.

2.5 Financial Resource Mobilisation and Internal Efficiency

Maduewesi and Onyeachu (2017) said that a financial resource is money. For any institution to attain its goals, finance allocated for its execution has to be utilised well. This is significant since no educational institutions can function well without money. This implies that public TTIs require funds for effective internal efficiency. Successful financial resource mobilisation by institutions (including educational ones) has transformed into an important role for institutions (public or private) across the world. The current International Public Administration (IPA) principle advocates for

financial resource mobilisation practices. Majority of institutions (including educational institutions ones) currently rely to a considerable degree as regular basis put aside charitable contributions, needing significant strength to increase or maintain their resource quantity (Patz & Goetz, 2017) to ensure their goals are attained. Nevertheless, little is still understood concerning the extent / degree to which technical training institutions mobilise resources to ensure internal efficiency, this is focus of this study.

For effective implementation of TVET curriculum, supporting resources need to be adequate (Esongo, 2017). TVET institutions would require extra monetary aid to operate their activities, which are important to attainment of internal efficiency goals and students academic achievement. Monetary resources are important variables for flourishing execution and they arrive from the funds allocated by the exchequer, registration and tuition fees as the case may be. In addition, incentives in the form of remunerative power (for instance, fringe benefits, commissions or salaries) is regularly the main efficient way of reminding implementers of the education policy the motivation to attain an acceptable of compliance and enforcement (Goetz & Patz 2016). Sufficient incentives, both monetary and non-monetary given to implementers of the policy would likely make them further ready to conform to the government law (Bayram & Graham 2016). The former includes salaries and other fringe benefits while the latter includes career path development such as promotion and recognition.

Development of career path like relocations and promotions together with other remunerations performs an important function in reinforcing profession growth and competencies and has an influence on internal efficiency (Esongo, 2017). Wayua (2015) observed that Kenyan government being committed to providing adequate

teaching and learning resources by financing education for its entire people. Despite of this devotion, sufficiency of resources continued unachieved in most government schools because of inadequate monetary resources in major parts of Kenya necessitating for the need for resource mobilisation in Kenyan educational institutions like public TTIs.

UNICEF conducted a research in the year 2012 on public finance system in the East Asian nations. UNICEF noted various challenges in allocation and mobilisation of materials, which consisted of inadequate knowledge, poor monitoring of association between quality of inputs and outputs and lack of specific benchmark and rules for classrooms and schools. UNICEF recommended that institutions, which did not realise the educational standards, would receive additional finance to address variables influencing to differences. The reported further recommend the requirement for institutions to know important indicators of performance so that they could connect with allocations of budget and output and to intensify the capacity of human to improve to evaluate outputs and inputs. It is vital that the issues faced by head teachers of schools are known; those that have been settled and those remaining unsettled so that measures can be taken to address them and increase on mobilisation of resources and prioritise resource sharing for the aim of performance improvement. The study was conducted in the county of Bungoma to see the challenges and solutions that can be taken to ensure financial resource mobilisation strategies are strengthened to enhance internal efficiency.

In Israel, Yemini, Addi-Raccah and Katarivas (2014) examined principles of secondary schools views with regard the entrepreneurship ideas in their schools. They focused in examining ten principals of schools located in various streams of education

in Israel who had been recognised as entrepreneurs by supervision officials and their fellow principals. The findings showed that school head's entrepreneurship was established to be motivated by specific vision and values that were significant to them, which were then embraced by other staff members in the school. The principals engaged their junior staff and won over them to support the initiated income generating strategy. Therefore, principals' capacity to implement their goals and introduce new things relied on developing school staff commitment to entrepreneurship vision. The study was conducted in Israeli schools while this study was conducted in Bungoma county public TTIs.

Mihai (2011) investigated matters on parental inclusion in educational activities in former soviet nations located in the eastern side of Europe. In terms of methodology, a multi – national survey data was collected through a project in ten countries of Southern Eastern Europe. The researcher noted that successful mobilisation of resources in the schools was a result of involving parents by moving beyond societal structural income levels.

Fisseha (2015) looked at how various sub Saharan countries generated revenue to support their programmes. This study was conducted in the backdrop of the challenge of balancing the need to improve quality of educational with the increasing social demand for access. Henceforth, financial sustainability is one of the key challenges for Sub-Saharan Africa's universities are grappled with. The researcher used in depth case studies. When collecting the data for the research, Fisseha used direct observations, documentary evidence and interviews. The findings of Fisseha research revealed that the ability of SSA universities to broaden and diversify their finance base was limited to existence of inadequate human and non-human resources.

Moreover, result showed that the studied universities had been diversifying their revenue structure to some extent, but have largely been incapable to do so to the point of guaranteeing financial sustainability. The main university particular challenges for attaining financial sustainability through broadening their funding structure included lack of adequately qualified and motivated academic and non-academic employees, deficiency of non-human materials, and poor support and inducements for generating revenue. The study by Fisseha (2015) was in universities in selected sub Saharan African nations while this study concentrated in four public TTIs in Bungoma County, Kenya.

In Nigeria, Nwaokeonu (2014) studied the apparent influence of specific variables on Nigerian universities resource allocation procedures. The research embraced interpretivism approaches geared towards getting rich understanding on the resource sharing know how of specific university staff and their alleged influence on background factors influencing such procedures. The researcher found out that resource sharing procedures issues in universities in Nigeria were grouped intol people (important and supportive sections challenge and power and politics); process (resource sharing formula); and resources (important fund inadequacy and resource dependency feedback).

Still in Nigeria, Akinsolu (2012) assessed the connection that existed between utilisation of resources and public secondary schools internal efficiency indicators. The goal was to examine whether the said schools in Nigeria did best utilise the provided resources allocated in producing graduates with low wastage ration. the study design was correlation where respondents were selected from six regions (political) using stratified random sampling method. The use of that technique enabled

selection of 250 LGAs from the target of 774, which represented 32.0%. The correlation analysis indicated that all factors of utilisation of resources exhibited positive association with internal efficiency level of schools. This meant and justified the reality that resources are significant for educational system to function well. The research by Akinsolu was conducted in Nigeria while this was conducted in technical training institutions in Bungoma County.

Obadara and Alaka (2010) research on how allocation of financial and human resources influenced performance by secondary school students in Nigeria. A target population of 4300 private and 6700 public secondary schools. The research design used was descriptive survey. The sampling method used was proportionate stratified random sampling. Percentages and Pearson correlation statistics were used for analysis. Obadara and Alaka (2010) found out that human and financial resources shared to secondary schools influenced performance of students. Where financial resources were provided inadequately, student academic performance were below average as opposed to those institutions that mobilised more financial resources rather than depending on capitation grants from government and other partners.

In Cameroon, a research by Esongo (2017) examined the degree to which resource availability connected with school system efficiency when implementing the competency – grounded instructional approaches in classrooms. Probability sampling methods: stratified, simple and cluster approaches were used to pick 375 educators. In addition, purposeful sampling method was used to pick twenty-six school heads to participate in the study. Results showed existence of significant positive association between resource availability and school system efficiency. The strength of the relationship that existed between the two variables was however found to be weak.

The research by Esongo was conducted in secondary schools while the current study was conducted in Bungoma county public TTIs to see whether the relationship direction and strength.

In Zambia, Syacumpi (2012) noted that after government abolished school fees for primary education in the year 2002, there was significant fall in the schools income since the government support (resources) coming down to schools was inadequate to meet the funding gaps in schools. Therefore, some schools were found to have embraced fundraising activities as a means of supplementing capitation grants from the government. However, the practicability and success of such programmes remained to be seen or documented. Furthermore, the researcher found out that there existed no institutional guideline to guide schools on how to implement transformative resource mobilisation practices.

Syacumpi (2012) looked at the fundraising and resource mobilisation initiatives that were adopted by 30 secondary schools located in North Western and Copper belt provinces in Zambia (15 each). The research looked at how schools were raising the finance and how the funds were spent for education purposes. The instruments used were questionnaire for head teachers, bursars, and interviews with educational officers. The study established that institutions faced significant infrastructural facilities challenges with a few not having access to safe and clean water while others lacked electricity. The Zambian government capitation was low and irregular as some could wait for over a year to receive the budgeted amount of money at not more than 15.0%. The study found out that as a way of cushioning schools, they raised student fees and mobilised PTA members to give their donations to bridge the funding shortfall. The finances raised from school fees were used for maintenance of school

facilities. Majority of parents were found to be unwilling to contribute to PTA fees arguing that the government had waived school fees. Therefore, some schools were found to be engaged in various financial mobilisation initiatives like hiring of their halls, having school canteen, practicing farming and holding career fairs.

In Tanzania, Galabwa (2008) conducted a research to determine measures of improving quality of education and efficiency. The period covered studying policies developed in the period of 1990-2000 which also included the country's 'Vision 2025', debt relief strategies, poverty rehabilitation policies, institutional and civil reforms and development programmes for education. The above mentioned policies were used as a vehicle for economic and qualitative transformation mostly in the education sector. Galabwa revealed that fundraising efforts were schools stable revenue sources. Other sources seen in the research for mobilisation of resources consisted of parents paying admission and registration fees, organising music extravaganzas and conducting raffles.

In Lake Victoria zone, Galabwa found seven finance sources that consisted of the following; finance from school funding institutions, finance from local community development groups, school fees, school economic infinitives and parental contributions. The researcher however failed to show the contribution at which each of the financial mobilisation schemes influenced efficiency of education. The current study endeavoured to establish the degree at which financial mobilisation strategies influenced public TTIs in Bungoma County internal efficiency levels.

Otidi (2013) conducted a study in Bungoma South Sub County. The researcher established that the level of IGAs and other services that were provided by their institutions dictated the fees charged in public secondary schools. Otidi also found out

that majority of schools faced challenges when collecting school fees and this made the institutions not to benefit from economies of scales coming from bulky purchases and investments that could have seen the benefits transferred to the parents through fees reduction for their children. Otidi recommended that there was need for improvement in fee payment methods to allow the schools to make bulk procurement with the remaining money to be invested in IGAs to enhance savings and creation of supplementary money that could see the benefit passed to guardians or parents through fees reduction. The researcher also suggested that day schools should be established in the area because fees charged there are low compared to boarding ones.

In Kenya, Wayua (2015) conducted a research to discover resource mobilisation methods and sharing among various Makueni county public secondary schools subjects. Wayua study was guided by cost effective model that stressed the need for educational assessment and how it could be utilised to support instructional educational programmes. Wayua study population consisted of 8279 respondents which involved 7273 learners, 877 instructors and 129 secondary school principals. The respondents in the study were picked through use of probability and non probability methods of sampling. Results showed that instructional learning materials were mainly (69.23%) obtained through purchase by the institutions using government capitation money and NGOs donation (61.4%). The instructional learning materials were mainly (80.8%) shared based on size of the class or enrolment per subject and school's resource availability (69.23%. Some of the main hindrances in mobilisation and sharing of resources in the schools was due to overcrowded classrooms (69.23%) and lack of adequate finances (82.61%). In terms of recommendations, the respondents suggested that parental involvement in resource mobilisation and schools prioritisation of important areas of teaching and learning

were found to assist in addressing the challenges mentioned above. The research by Wayua was in secondary schools while this research was conducted in public TTIs.

Malia (2015) investigated factors that influenced Migwani Sub County public secondary schools principals' mobilization of resources. A census method of sampling was used to select all fourty two principals of secondary schools. The study used a mixed method research design approach with instruments of data collection consisting of questionnaires that were structured. Research outcomes showed that there existed a strong positive association between institutional based variables and school head resource mobilisation competencies. In addition, an individual personal feature of principals was also a predictor of their ability to mobilise resources or not. The study departs from Malia research by checking how mobilisation of resources by TTI principals influenced internal efficiency.

Still in Kenya, Awuor (2015) conducted a research on the influence of financial resource mobilisation strategies like school foundations, IGAs, donor support, community support, student labour, state subsidy and users fees on Homa Bay Sub County internal efficiency indicators that comprised of; student's performance, repetition and retention levels. The research was guided by descriptive approach. 61 out of 72 public schools in the sub county formed the sample for the investigation. The research tools used were interview guide, observation schedule and head teachers questionnaire.

Awuor found out that mobilisation of financial resources resulted to improved internal efficiency levels of public secondary schools in Homa Bay. The researcher established that institutions that charged more fees to their learners performed better academically compared to those that charged low fees. These schools were also found

to have low wastage ratio and high retention level of students as indicators of high internal efficiency. A notable observation from Awuor research was that some schools had endowment fund and foundations, which significantly influenced retention rate of students as needy and bright students, received scholarships. They also conducted funds drive (harambees) to improve their infrastructure situation in their schools. The availability and construction of the infrastructural facilities also helped in improving retention rate in schools. Awuor concluded that financial resource mobilisation strategies positively influence Homa Bay County public secondary schools internal efficiency rates. The research gap created by Awuor research is that the focus was on secondary schools while this study was in public TTIs in the county of Bungoma, Kenya.

2.6 Chapter Summary and Research Gap

The literature reviewed exposes the fact that the government and parents do not have enough financial resources to support quality and accessible technical education. Research studies have been conducted to investigate the influence of resource mobilisation on internal efficiency of institutions from global, regional and local perspectives (Ahmad, 2011; Abuel-Ealer, 2012; Asiyai, 2012; Ferej et al., 2012; Joute, 2014). However, several gaps have been identified and which necessitate the researcher to investigate how mobilisation of resources affects internal efficiency of TTIs.

At first, Kitui (2015) investigated factors influencing TVET in Bungoma East Sub-County. Kitui research found out that physical facilities and inadequate teachers affected TVET institutions. The study was on youth polytechnics while this was in technical training institutions in Bungoma County that is different from Kitui.

Another study by Rufai et al. (2013) focused on facilities provision and maintenance in TVET institutions. The study used secondary data sources to arrive at research findings. They used qualitative research approach while this study was a mixed method. Rodrigues, Wainaina and Mwangi (2005) looked at income generation at public universities by utilising secondary data sources. The findings of the study cannot be applicable in TTIs since it was secondary research conducted in public university (University of Nairobi), Kenya. This study will determine the profit generating initiatives that are there in four public Technical institutions in Bungoma County. In Nigeria, Uchendu, Ekanem, and Jonah (2013) studied the influence maintenance resources on the educational services provision. The limiting factor in this study is that it was conducted in secondary schools while this investigation was on TTIs.

From the empirical review of the studies, it has been established that majority of investigations did not show the exclusive association or influence between transformative institution mobilisation of resources and institutions internal efficiency. Since the country gears towards being a middle-income nations through Vision 2030, production of competent and highly skilled human resources remain to be a key priority. However, public educational institutions have to grapple with funding challenges which have necessitated them to look for alternative mechanism to sustain their operations.

Research conducted in Kenya has been mainly in secondary schools (Nguzo, 2011; Odundo & Rambo, 2013; Onani, 2014; Waweru & Muturi, 2015). Moreover, the internal efficiency aspect has rarely featured in above-mentioned studies. The literature reviewed exposes the fact that the government and parents do not have

enough financial resources to support internal efficiency goals in the education sector. Further, the public TTIs have divergent resources that can be mobilised to cover some of the operation costs in order to improve internal efficiency of technical vocational education and training. The reviewed literature also failed to show how public TTIs were mobilising resources with the goal of improving internal efficiency levels. These observations, the researcher saw the need to fill this research gap by investigation relationship between transformative resource mobilisation activities and internal efficiency of Public TTIs in the County of Bungoma, Kenya. The next chapter discusses the methodology for this research.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.0 Introduction

Chapter three provides a comprehensive explanation of the study design and methodological procedures for establishing how transformative resource mobilisation and relationship with internal efficiency of public TTIs in the County of Bungoma, Kenya. The aim of this chapter is to give a precise and complete situation of the procedures guiding the process of collection of data and analysis. Chapter three is structured into eleven sections: study area philosophical approach (paradigm); research methodology; research design type; study target population (respondents); methods of sampling the respondents; methods of collecting data: reliability testing methods and validity determination approaches; procedures for collecting data from the field, data analysis methods; ethical considerations and summary of the chapter.

3.1 Study Area

This investigation was conducted in Bungoma County Kenya. Bungoma County covers an area of about 3,032km^2. Geographically, the county is situated on the southern slopes of Mount Elgon. The county borders Republic of Uganda to the North West side, County of Trans-Nzoia to the North East, County of Kakamega to the East and South East and County of Busia to the West and South West. Bungoma County is classified into 9 (nine) administrative Sub-Counties which are: Bungoma Central, Bungoma North, Bungoma West, Kimilili, Mt Elgon, Bungoma North, Webuye East, Webuye West and Bungoma East.

The 2009 population census showed the county population as 1,374,627 with projections of 3% annual growth. This implied that the population currently stands at

1,650,750 people. Bungoma County has gazetted 1 (one) forest reserve in Mount Elgon covering an area of 618km^2 and forest taking an area size of 61km^2. Some of the common economic ventures for households in the study area is agriculture and business with sand harvesting, quarrying and tourism attractions being done in small scale. In terms of education, there are primary schools, secondary schools, colleges and universities in the area. For instance, there are four TTIs under TVET authority while county government manages Vocational Training Centres.

There is also one national public university, Kibabii University and teachers training college: Kibabii Diploma Teachers College. A research by Kitui (2015) found out that youth polytechnics in the county were in dilapidated state and the researcher was motivated to establish the condition of physical facilities in public TTIs in the county. The County was chosen for this research because the area has a variety of human and economic activities that could be used to mobilise resources for enhancing internal efficiency of the public TTIs. Furthermore, the area is a high-density region with more secondary schools churning out large number of students after form four, which created demand for TVET education.

3.2 Research Paradigm

Every research that is undertaken in social sciences has to have its origin. The decision to choose a suitable paradigm for the research comes before an appropriate methodology is selected. The main reason for this argument is that paradigm influences all stages of research from establishment of the problem of the research, analysis of data and interpreting data (Denzin & Lincoln, 2000). Different scholars have defined paradigm but we will sample a few. According to Creswell (2013), paradigm refers to a common set of assumptions or believes that directs research is

embraced in a particular investigation. According to Mertens (2005), paradigm refers to a controlling way of phenomenon conceptualisation, of approaching it methodologically and of focusing for answers to study statement of problem. The research can made some deductions from the two definitions to imply that a paradigm represents a system of viewpoints and understanding that model the behaviour of research. The research paradigm operate as a channel and obligate the investigator to specific research designs, methods of sampling, data collection methods, data presentation methods, and how to interpret the findings of the research. Ogula (2009) informs that paradigms give methodological, theoretical and philosophical basis for performing research.

A research paradigm can either be positivism (mainly quantitative), interpretivism (mainly qualitative) or pragmatism (integrate multiple research methods like quantitative, qualitative and action research) (Kumar, 2014). This study used a pragmatism philosophical approach. Between constructivism and positivism, most social scientists have made efforts to provide a middle ground. Moreover, paradigm takes congruence between qualitative and quantitative approaches (Howe, 1988).

According to Tashakkori and Teddlie (1998), the observation of pragmatism research is that the study question is more significant compared to the methodological line or the classical theories that lie beneath the approach. Tashakkori and Teddlie emphasised that both qualitative and quantitative techniques are important, but that favourite, nevertheless, is dependent on the research question. The epistemological situation of the pragmatists could be either being subjective, objective or both. Scholars (Tashakkori & Teddlie, 1998; Creswell, 2013) argue that pragmatists agree with positivists on the external reality point.

The present research made use of qualitative and quantitative methods of data collection, which allowed the use of pragmatist research paradigm that also allows separate method of analysing data. The use of pragmatism research also results to the choice of mixed method methodology and descriptive survey research designs. This helped the researcher to investigate how transformative resource mobilisation influenced internal efficiency of public TTIs in the County of Bungoma, Kenya. It is also strengthened with the fact that one approach may be 'better' than the other for answering particular questions hence the decision to use this approach rather than intepretivisim or positivism.

3.3 Research Methodology

In definition, methodology refers to a structure that consists of hypothetical assumptions together with framework, which gives procedures on how research is conducted in the perspective of a certain research paradigm (Sarantakos, 1998). Creswell and Plano Clark (2007) inform that collection of data in any investigation should be grounded by three approaches. Tashakkori and Teddlie (1998) mentioned them as; quantitative, qualitative or mixed method approaches.

Based on the nature of the study, a mixed method methodological research was chosen for this study. This approach is explained in many ways as; synthesis, triangulation, multi – trait, multi method or convergent methodology among others. It is an approach to research where two processes; qualitative and quantitative are joined together. Creswell (2013) attributed the emergence of this approach to Campbell and Fiske (1959) validity research of psychological traits utilising more than two approaches.

According to Al-Dossary (2008), this approach of mixed method looks at the process of collecting data and analysis convergence with both quantitative and qualitative sources of data in a single study or in a pattern of research. The ground for this argument according to Creswell et al (2007) is that this approach gives a clear knowledge of a situation, which a single method in itself could not yield. The main significance of mixed method methodology is to decrease the limitations related with quantitative and qualitative approaches (Johnson & Onwuegbuzie, 2004). According to Al-Dosarry, the main functions are five under this methodology; expansion, development, initiation, complimentarity and triangulation. The approach can provide more understanding on a particular matter through which one methodology would not provide.

According to researchers (Johnson & Christensen, 2004; Al-Dossary, 2008), this approach could be used to improve the generalisability of the study outcomes because it make use of the two approaches which have their own weaknesses and strengths. Creswell and Plano Clark (2007) add that the method follows that the limitations of a single approach could counterweigh for the weaknesses of the other method. This was facilitated by use of mixed method design. This was a design in which both qualitative and quantitative data were collected and analysed to respond to study questions. Therefore, the researcher had to use mixed method research design approach to collect quantitative and qualitative data to aid in responding to study questions and testing of hypothesis on the relationship between transformative resource mobilisation on internal efficiency of public technical training colleges in the County of Bungoma, Kenya.

3.4 Research Design

This research adopted a descriptive survey study design that incorporated qualitative and quantitative aspects. The quantitative data was expressed in ratios and percentages and presented on frequency tables. The qualitative data appeared in form views and opinions. Based on Mugenda and Mugenda (2003) view, the survey design enables a researcher to investigate the status of a given phenomenon, compare the status with the expectation and suggest ways of improving the condition. Further, survey method data collection from a wide number of respondents and depends on personal feedback for their understanding, attitudes or behaviour.

The purpose of a descriptive survey research is to provide data, which explains active phenomenon by probing persons concerning their views, attitudes, behaviours or principles. This design is therefore relevant to this study because it was through examining the influence views of transformative resource mobilisation on internal efficiency of public TTIs in Bungoma County.

3.5 Target Population

The target population for this study involved four TTIs located in Bungoma County, which are Sang'alo Institute of Science and Technology, Kisiwa Technical Training Institute, Musakasa Technical Training Institute and Matili Technical Training Institute. The respondents from these four TTIs included; four principals of TTIs, 16 managers in charge of resource mobilisation activities and 239 tutors. Table 3.1 shows the target population for the study.

Table 3.1 Target Population

Respondent	TTIs				Total
	Matili	**Kisiwa**	**Sang'alo**	**Musakasa**	
Tutors	56	49	94	40	**239**
Resource mobilisation managers	4	4	4	4	**16**
Principals	1	1	1	1	**4**
Total	**61**	**54**	**99**	**45**	**259**

Source: County TVET Office (2016)

3.6 Sampling Procedures and Sample Size

This refers to the procedure of choosing a sub-set from the population to act as a representative of the whole. According to Ithuta (2014), by studying a sample, one can know about the population without studying the entire population. Because the number of tutors is higher, a sample size was taken while all resource mobilisation managers and TTI principals were all included and participate in the research.

3.6.1 Sample Size

The sample size for the tutors was calculated using the following formula by Mugenda and Mugenda (2003) was utilised to calculate the required sample size for tutors.

$$n = \frac{N}{1 + Ne^2}$$

Where

n=sample size

N=population size

e=margin of error ($e \leq 0.05$)

The sample size for respondents was calculated as:

$$n = \frac{239}{1 + (239 * 0.05^2)} = 149.60$$

Therefore, the final sample size consisted of 4 principals from TTIs, 16 resource mobilisation managers and 150 tutors as respondents for the study. All four principals and 16 resource managers from the four public TTIs were exclusively selected to participate in the research. Only tutors were subjected to sample size determination process.

3.6.2 Sampling Procedure

A stratified random sampling approach was utilised for the research to select the sample. This technique was appropriate to this study because TTIs are classified in different groups (4). The use of stratified random sampling technique followed two stages: stratification and random sampling. At first, the TTIs to be used in every category were randomly selected to ensure representation and equal distribution of chances to form four stratas.

This method was applied in selecting 150 tutors who participated in the research based on the proportion of their population against the sample size. Table 3.2 shows the population distribution of respondents and how they were selected to participate in the research. The principals and resource mobilisation project managers were selected automatically to participate in the research through census method. This is because the respondents hold key information that the research wanted to know with respect to how transformative resource mobilisation activities were conducted in their institutions.

Table 3.2 Sampling Size and Procedure

	TTIs								Sampling method
	Matili		Kisiwa		Sang'alo		Musakasa		
Respondent	**N**	**S**	**N**	**S**	**N**	**S**	**N**	**S**	
Tutors	56	35	49	31	94	59	40	25	Stratified random
Resource mobilisation managers	4	4	4	4	4	4	4	4	Census
Principals	1	1	1	1	1	1	1	1	Census
Total	61	40	54	36	99	64	45	30	

Key: N-Target, S-Sample Size
Source: County TVET Office (2016)

The use of stratified random sampling method facilitated selection of respondents based on their technical institutions population. Ogula (2009) adds that Stratification ensures that different groups of the population are represented in the sample.

3.7 Data Collection Instruments

The primary data was collected through questionnaire, interview of respondents and observation checklists. The secondary data was collected from observation checklists, institutional records, and literature review of, journals, documents, magazines, books, and online articles.

3.7.1 Questionnaires for Tutors

The study developed questionnaire for tutors. According to Kombo and Tromp (2006), the benefits of utilising questionnaires are that the individual issuing out the tool has a chance to develop bond, describe the intention of the research and elucidate the connotation of items that could not be clear to them. In addition, questionnaires permit respondents liberty to articulate their perceptions or viewpoints and to formulate recommendations. The questionnaire for tutors had six sections (A-F).

Section A consisted information on individual and background information of the respondents while Section B contained data on institutional staff capacity, Section C had questions on physical resource mobilisation, and Section D had questions on instructional resource mobilisation.

Additionally, Section E had questions on relationship between financial resource mobilisation and Section F contained questions on internal efficiency of TTIs. The development of internal efficiency questions was used for correlation and regression analysis process. The respondents scoring of the tool were on Likert scale with choicesas follows: Always (A)-5, Often (O)-4, Sometimes (S)-3, Rarely (R)-2 and Never (N)-1.

The use of Likert scale facilitated the research to understand the degree to which transformational resource mobilisation affected internal efficiency of TTIs in Bungoma County. Despite using Likert scale items, the questionnaire had open-ended questions (qualitative in nature) where tutors were requested to provide their opinion on how resource mobilisation activities impacted on internal efficiency of their institutions. A copy of questionnaire for tutors appears in Appendix II.

3.7.2 Interviews

Interviews guide is a set of question items that are administered to the respondents verbally (Creswell, 2013). The interview schedule was prepared for principals and managers in charge of resource mobilisation in the four public TTIs in Bungoma County. The purpose of using interview was to get in-depth information from the appointing members since they were regularly involved in planning and implementation of resource mobilisation. The interview was semi-structured and ensured that the researcher could ask more questions during interview to provide

clarification on issues that were not covered in the interview questions. A copy of the interview guide appears in Appendix III.

3.7.3 Observation Checklist

The research also collected data through use of observation checklist. According to Ogula (2009), a checklist present a number of options for which the respondent is expected to check or tick the most relevant response or all the suitable responses. The researcher sought to collect data on the staffing levels in public TTIs, student enrolment trends, instructional and physical facilities present in the institutions (See Appendix IV). Direct observation was suitable for descriptive studies since it is objective based and facilitates the derivation of more real information (McMillan & Schumacher, 2010; Kothari, 2012). The information collected through observation was used to supplement the information collected through questionnaires and interview schedules. The researcher conducted observation in the four public TTIs in Bungoma County.

3.8 Validity and Reliability of Research Instruments

To ascertain whether or not the study tools are testing what they are meant to test; the researcher tested the reliability and the validity of the study tools.

3.8.1 Validity

According to Patton (2002), validity is the degree to which a test or instrument measures the phenomenon under study. Validity ensures the effective use of appropriate indicators to measure different variables. The validation process ensured face, content and construct validity of the instruments. Face validity refers to the appeal and appearance of the instrument, that is, the instrument should appears as if it is measuring what it should measure, in this case strategies of financial resource

mobilization in public schools. Content validity refers to the representativeness of instrument items as they relate to the entire universe of content being measured while construct validity refers to the accuracy of the instrument in measuring what it should measure (Kathuri & Pals, 1993).

The content validity of the instruments was determined in two ways. First, the researcher discussed the items in the instruments with the lecturers from the department. The experts were asked to indicate by tick or cross for every item in the questionnaires, and in the interview guides to show if it measured what it was supposed to measure or not. Secondly, content validity of the instruments was determined through piloting, where the responses of the participants were checked against the research objectives. This also gives reason as to why particular content was used. Relevance of tests to measure participants was measured by content validity. For a research instrument to be considered valid, the content selected and included in the questionnaire must be relevant to the variable being investigated (Mugenda & Mugenda, 2003). Comments and suggestions made by the experts were considered upon before submitting the instrument (questionnaire) for reliability test. The researcher finally proof read the items and effectively eliminated the systematic errors that could have been due to poor validity.

3.8.2 Reliability

The reliability of a study tool is the degree to which an assessment tool produces consistent and stable results. Reliability is thus the consistency of a test tool. The researcher utilised the test-retest technique to measure instrument reliability. This was done by using the study instruments in a different study setting similar (two TTIs in privately owned) to the actual study area prior to commencement of the actual

study to determine whether or not the results are consistent. To determine the reliability of research instrument, calculations was done using the Pearson product moment correlation coefficient. This was to ensure that the instrument captures all the required data. Pearson's product moment correlation coefficient formula was utilised.

$$r = \frac{N\sum xy - (\sum x)(\sum y)}{\sqrt{[N\sum(x^2) - (\sum x^2)][N\sum(y^2) - (\sum y^2)]}}$$

Where r = Pearson co-relation co-efficient

x = results from the first test

y = results from the second test

N = Number of observations

Due to the tediousness of calculating correlation of each item with every other item to derive the mean inter-item correlation when the scale is long, Statistical Package for Social Science (SPSS version 22.0) aid in calculating the reliability value of research instruments. This is supported by Mugenda (2008) who said that the computer programme generates an inter-item correlation matrix first and then sums up all the correlations to estimate the mean correlation.

The scale of reliability ranged from 0 – 1. R-values of less than 0.5 are considered not reliable while those that are above 0.5 are considered to be reliable according to different scholars. This study used Kothari (2012) benchmark for determining the reliability of research instrument where he advocates that a reliability value of 0.6 and above obtained are considered okay. The questionnaire items were thereafter reassessed, ambiguities corrected and redrafted for more clarity and appropriateness after getting a Pearson correlation coefficient of 0.7134 for the four objectives and dependent variable that was considered acceptable as per Kothari (2012).

3.8.3 Pilot Study

Yin (2003) suggests that researchers need to conduct a pilot study before they undertake the main research when they are utilised mixed method approach. Al-Dossary (2008) explains that this permits the investigator to elucidate specific areas of research before going to the main full study. Yin also acknowledges that this process also assists to enhance the following stages of study. For this investigation, the pilot study was conducted in the first and second weeks of July 2017 by involving 3 principals, 3 resource mobilisation administrators, 8 tutors in 3 public TTIs in the county of Kakamega. One of the reasons for conducting pilot studies is to establish that particular respondents know the questions and those who they felt uncomfortable with when answering. In addition, Al-Dossary (2008) suggests that this process can be applied to measure the equipments, time required one to respond and the way respondents react when they are issued with the instrument.

3.9 Data Collection Procedures

An introductory letter was obtained from University of Eldoret, School of Education to facilitate granting of research permit from National Commission for Science, Technology and Innovation (NACOSTI). Thereafter the research sought approval to conduct research from County Commissioner and County Director of Education in Bungoma County. Thereafter the researcher proceeded to TTIs and sought permission from principals to conduct research in their respective institutions. After granting of research approval, respondents consent in filling questionnaire was sought.

A delivery and collection method of data collection was used since it helps in controlling the number of respondents and any source of possible biasness at this

stage in addition to increasing questionnaire return rates. The researcher visited the schools and conducted a situational appraisal and documents analysis for verification of facts and figures. After receiving consent from respondents, the questionnaires were administered to tutors. Interviews with principals and managers were arranged two weeks in advance. The interview was face-to-face where the researcher took notes.

3.10 Data Analysis Procedures

The data to be collected involved use of quantitative and qualitative methods. The quantitative data were mainly in the questionnaire while interview guide will have qualitative information. Quantitative data from questionnaires were screened to remove errors and arrange them. Thereafter, coding and entry was done with the use of Statistical Package for Social Sciences (SPSS) computer software for data analysis. Coding was done to enable the researcher find all the information regarding the variables of interest to the study.

Quantitative data were analysed using descriptive and inferential methods. Inferential method includes Pearson Product Correlation and Descriptive ones were frequencies, percentages, means and standard deviation. Correlation analysis was used to test the association between transformational resource mobilisation strategies and school internal efficiency. Multiple Regression analysis was also conducted to test the study hypothesis at 0.05 significance level. Here was the regression formular used for the study

$$y = \alpha + \beta x_1 + \beta x_2 + \beta x_3 + \beta x_4 + \varepsilon$$

Where y = is the dependent variable – internal efficiency of public TTIs

α = Y-intercept (a constant term)

$\beta_1, \beta_2, \beta_3,$ and β_4 = Slope parameters

x_1 = institutional staffing capacity

x_2 = physical resource mobilisation

x_3 = instructional resource mobilisation

x_4= financial resource mobilisation

ε= Random (error term)

In addition, multiple Regression analysis was used to establish the strength of relationship between the variables to come up with appropriate policy options relevant to transformative resource mobilization strategies in public TTIs in Bungoma County.

Qualitative data were condensed using categorization of data according to related responses from various respondents. The related responses were then be counted and quantified. Unquantifiable qualitative data were grouped thematically and a general narrative written to describe the results. Analysed data were presented using tables, graphical illustrations and narrations. Table 3.3 shows the summary for data analysis process.

Table 3.3 Data Analysis Matrix

Objective	Independent	Dependent	Source of data	Method of analysis
Influence of human resource mobilisation on Internal Efficiency of TTIs	- In-service - Linkages - Workload	- Completion - Exams - Performance - Flow of students	Questionnaire, interview guide and	Descriptive, inferential and qualitative analysis (thematic)
Influence of physical resource mobilisation on Internal Efficiency of TTIs	- Donor support - Fundraising programmes - Land leasing	- Completion - Exams - Performance - Flow of students	Questionnaire, interview guide and observation checklist	Descriptive, inferential and qualitative analysis (thematic)
Influence of instructional resource mobilisation on internal efficiency	- Books - Teaching aids - Library and Lab apps	- Completion - Exams - Performance - Flow of students	Questionnaire, interview guide and observation checklist	Descriptive, inferential and qualitative analysis (thematic)
Relationship between financial resource mobilisation and internal efficiency	Methods Training Capacity	- Completion - Exams - Performance - Flow of students	Questionnaire, interview guide	Descriptive, inferential and qualitative analysis (thematic)
Influence of transformative resource mobilisation on internal efficiency	All the four independent predictors	- Completion - Exams - Performance - Flow of students	Questionnaire	Multiple linear regression

Source: Researcher (2018)

Both qualitative and quantitative data were interpreted to help meet the objectives of the study.

3.11 Ethical Considerations

Ethics are the rules of conduct, which differentiates between acceptable and unacceptable behaviour (Rensnik, 2011). Research ethics provide guidelines for responsible conduct of research. All ethical procedures were followed during the process of data collection. At first, the researcher sought ethical clearance from National Commission for Science, Technology and Innovation (NACOSTI) prior to data collection. All interviews were conducted in a private room to ensure privacy and confidentiality was maintained. Institutions names were not identified in this research. The information gathered by the researcher was treated with utmost confidentiality. This was an assurance that was given to all respondents who participated in the sampled. With regard to consent, participation of respondents in the research was voluntary and no any kind of inducement or present given to them to participate.

The respondents were informed that the research is for academic purposes and not for use by neighbouring denominations for their own self-gain. Further, the respondents' right to withdraw at any stage of the study process was guaranteed. To avert incidents of withdrawal, the respondents were taken through the objectives and purposes of the study. Concerning academic standards, the researcher ensured that all sources cited appear in the reference section. All data obtained from the respondents were de-identified to protect the identity of the respondents. Hard copy filled study instruments were kept safely.

3.12 Chapter Summary

This chapter has focused on the research methods that were followed to enable gathering and analysis of data. The research methodological approaches have been explained in detail together with the study area. Further, the targeted respondents and

method of selecting the sample has also been covered. The instruments that were used to collect data, method of determining their validity and reliability have been well tackled in the chapter. The methods of collecting data through administration of questionnaires and interviews have been covered together with method of analysing data and ethical considerations that were followed. The next chapter presents the research findings and discussions.

CHAPTER FOUR

DATA PRESENTATION, INTERPRETATION AND DISCUSSION

4.0 Introduction

This chapter presents the findings, interpretations and discussions on how transformative resource mobilisation influences internal efficiency of public TTIs in Bungoma County. The study collected information from tutors, resource mobilisation managers and principals of the four technical training institutions through use of questionnaire, interview schedule and observation checklist. The response rate that the study achieved is given in Table 4.1.

Table 4.1 Response Rate

	Matili			**Kisiwa**			**Sang'alo**			**Musakasa**		
Respondents	S	R	%	S	R	%	S	R	%	S	R	%
Tutors	35	33	94.3	31	26	83.9	59	52	88.1	25	19	76.0
Resource mobilisation managers	4	4	100	4	3	75.0	4	2	50.0	4	3	75.0
Principals	1	1	100	1	1	100	1	1		1	1	100
Total	**40**	**38**	**95.0**	**36**	**30**	**83.3**	**64**	**55**	**85.9**	**30**	**23**	**76.7**

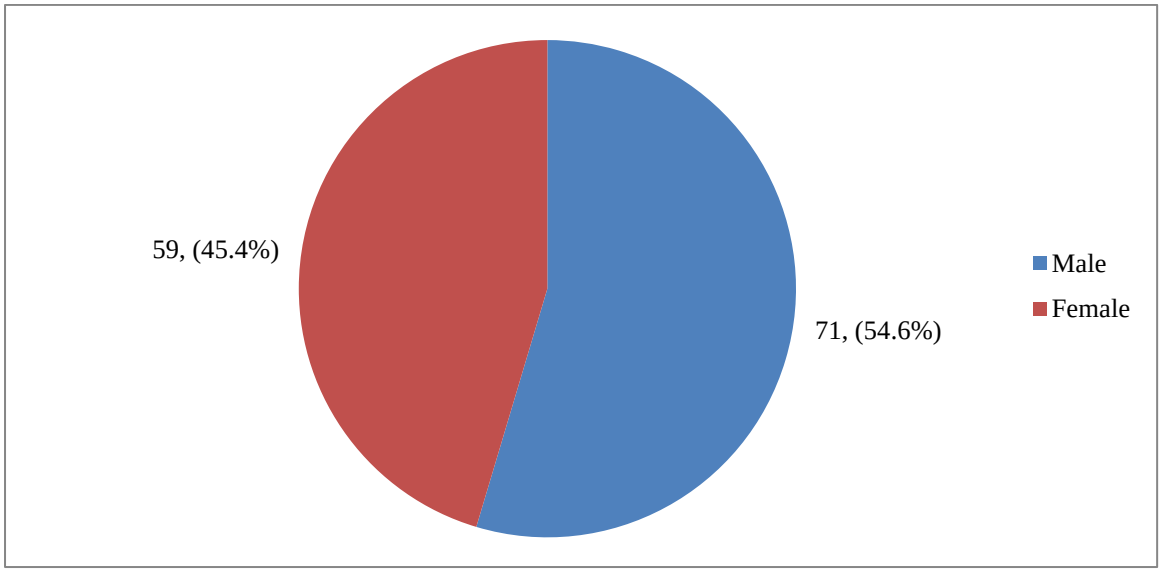
R - Return Rate, S-Sample & %-Percentage.
Source: Field data (2018)

According to Table 4.1, the researched achieved 95.0% of responses from Matili followed by Sang'alo (85.9%), then Kisiwa (83.3%) and lastly Musakasa (76.7%) for all respondents targeted. The average response rate for the research instruments was 85.23% that is above 75.0% cut off point as recommended by Al-Dossary (2008). The analysis of data is done using qualitative and quantitative approaches. Qualitative analysis has been achieved through content analysis while quantitative analysis has been achieved through using descriptive and inferential statistics. The presentation of

research findings follows the research objectives but first the demographic data of respondents is presented.

4.1 Demographic Data of Respondents

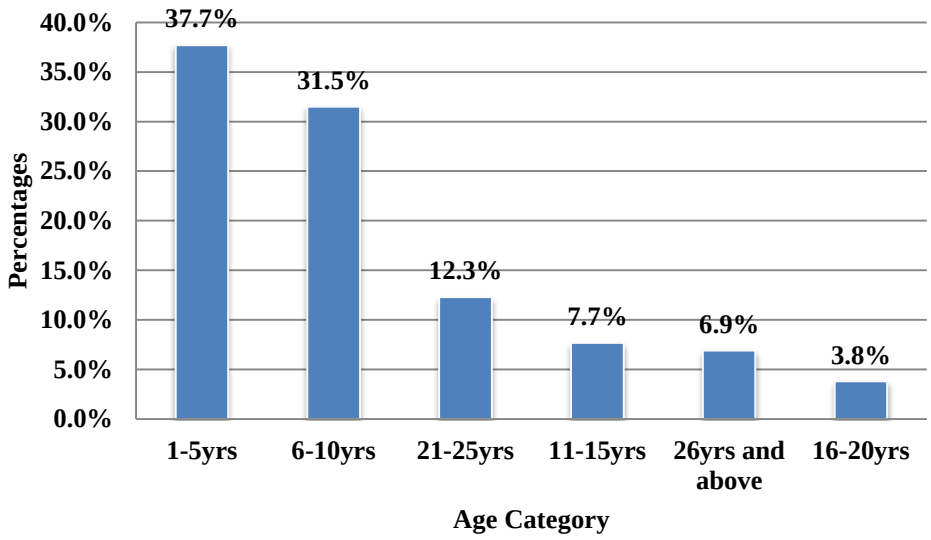
The demographic information of respondents was sought. The tutors were asked to indicate their gender profile. The responses are illustrated in Figure 4.1.



Source: Field data (2018)
Figure 4.1 Tutors Gender

Information presented in Figure 4.1 shows that 71 (54.6%) of tutors in the four government TTIs were male while 59 (45.45) were female. This shows that gender mainstreaming in the TTIs has been achieved and this presents an opportunity for having a balanced response with regard to transformative resource mobilisation and internal efficiency of public TTIs in Bungoma County.

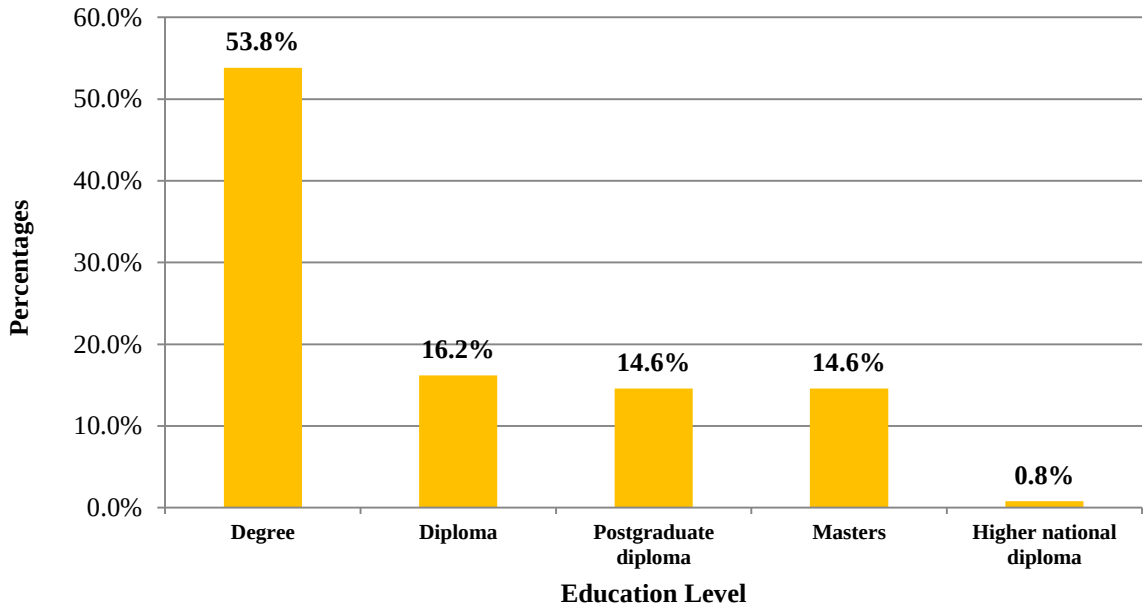
Trainers are a critical component of the training requirements. The researcher further asked the tutors to provide their working experience in TTIs. Their responses are illustrated in Figure 4.2.



Source: Field data (2018)
Figure 4.2 Teaching Experience in TTIs

According to research findings from Figure 4.2, 37.7% had been teaching for between 1-5 years, 31.5% had been teaching for 6-10 years, 7.7% had been teaching for 16-20 years, 12.3% had been teaching for a period of 21-25 years while 6.9% mentioned that they had taught for 26 years and above. The varied experience in teaching will provide tutors insight on how transformative resource mobilisation strategies influence on internal efficiency of TTIs.

The trainers' level of qualification is critical in determining the efficiency of the training process (Sang et al., 2012). This implies that a tutor should possess higher qualification to effectively execute teaching and learning duties in TVET institutions. The current TSC policy on human resource recruitment and development indicates that a TTI tutor should posses at least a college diploma and above. The researcher also sought the educational qualification level of respondents. Their feedback is presented in Figure 4.3.



Source: Field data (2018)
Figure 4.3 Education Qualification

Results from Figure 4.3 shows that 16.2% of tutors had diploma level of education, 53.8% had undergraduate degree level of education, 14.6% had postgraduate diploma qualifications, 14.6% had masters' degree while 0.8% mentioned that they had higher national diploma level of qualification. This shows that most of tutors had attained the minimum education level required to teach in technical training institutions. This may also relate to their understanding of effects of transformative resource mobilisation on internal efficiency of public TTIs in Kenya. In line with the study findings, Sang et al. established that majority of the trainers were either diploma holders or first-degree graduates. This is despite the fact that most TTI graduates left the institutions with a diploma qualification. It is therefore clear that most TTIs are poorly staffed with highly skilled instructors, making the quality of training low (Appendix IV on observation checklist results). In agreement with this research, Nyanya (2015) research found out that teacher academic and professional level of training influence student dropout and repetition of classes in schools. This research will later determine

whether institutional staffing capacity influence internal efficiency of public TTIs in Bungoma county.

4.1.1 Flow Rate of Students in Public TTIs in Bungoma County

The researcher collected data on the flow rate of students in the four public TTIs from the year 2014 to 2016. The data on flow rate is shown in Table 4.2.

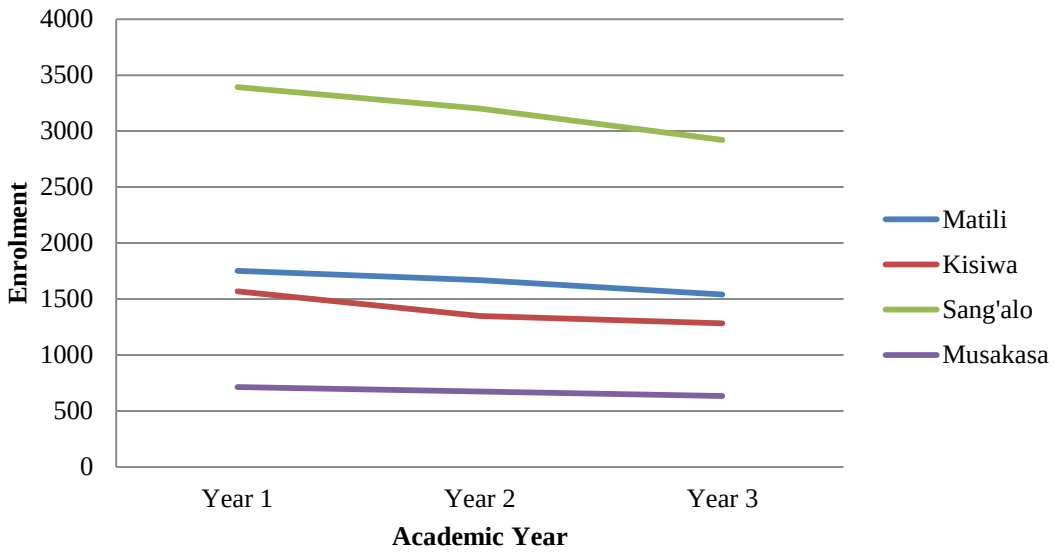
Table 4.2 Flow Rate of Students in Year 1 to Year 3 from 2014 to 2016

2014	I	II	II	Graduation	Graduation rate	Cohort wastage rate	Survival rate	Average completion rate
					Sangalo			
E	3392	3090	3006	2500	0.765			
R	102	120	100					
Year 2015								
E	3404	3201	3002	2614	0.870		0.877	
R	15	225	92					
Year 2016								
E	3500	3302	2920	2572	0.88	0.17	0.826	3.69
R	110	105	116					
					Kisiwa			
Year 2014								
E	1568	1528	1512	1192	0.788			
R	50	102	49					
Year 2015								
E	1420	1348	1105	1009	0.822		0.791	
R	101	107	50					
Year 2016								
E	1602	1400	1284					
R	78	79	68	1213	0.789	0.22	0.730	4.097
					Matili			
Year 2014								
E	1751	1720	1625	1103	0.679			
R	92	71	80					
Year 2015								
E	1708	1670	1648	1250	0.758		0918	
R	19	62	82					
Year 2016								
E	1820	1650	1540	1125	0.73	0.18	0.915	4.409
R	72	75	102					
					Musakasa			
Year 2014								
E	713	707	691	520	0.753			
R	22	45	21					
Year 2015								
E	729	673	614	514	0.873		0.858	
R	52	61	65					
Year 2016								
E	742	692	633	517	0.817	0.15	0.846	3.905
R	13	25	30					

Key: E – Enrolment
R- Repeaters

Source: Field data (2018)

Table 4.2 data on flow rate of students in the system for the three year diploma period show a decrease in students' transition from one year to another. For instance, at Sangalo TTI, out of 3392 who registered in year one of study, only 3201 continued in year 2 showing a survival rate of 0.877. The same is witnessed in Kisiwa, Matili and Musakasa TTIs recording survival rates of 0.791, 0.918 and 0.895 for same year of study. Data on cohort wastage over the three years showed that Sangalo lost 17% of students, Kisiwa 22%, Matili 18% and Musakasa 15%. Average completion rate shows that students are taking longer than expected to finish their diploma programmes. For instance, those in Kisiwa, Matili and Sangalo students finish at four years instead of three. The result can also be presented graphically as shown in Figure 4.4 below.



Source: Field data (2018)
Figure 4.4 Flow rate of students in public TTIs in Bungoma County

Data from Figure 4.4 shows that there is a decline in the flow rate of students from year 1 to year 3. This implies that internal efficiency appears to be on a declining trend in most public technical institutions in Bungoma County. More details and

statistics on the years are presented in appendix IV on institutional observation checklist results.

4.1.3 Internal Efficiency of Public TTIs in Bungoma County

The dependent variable for this study was establishment of the level of internal efficiency of public TTIs based on tutors responses in the four technical training institutions in Bungoma County. Awuor et al. (2016) measured internal efficiency of public secondary schools using school performance index, completion rate and students' retention rates.

In this study internal efficiency was measured through; students completion rate, success of graduates in the job market, enrolment trends in Technical institutions, KNEC examination performances, flow-rate of students in TTI system, perceptions of industry members on the quality of graduates, prudential financial management and approval of the institutions by certified bodies. Through these IE measurements, the respondents (tutors) were asked to rank the level at which various indicators had been achieved as very low (1), low (2), moderate (3), high (4) and very high (5). The findings are presented in Table 4.3.

Table 4.3 Internal Efficiency in Public TTIs in Bungoma County

Aspect	Very low	Low	Moderate	High	Very High	Mean	SD
Students completion rate	0 (0%)	14 (10.8%)	74 (56.9%)	36 (27.7%)	6 (4.6%)	3.2615	.71043
Success of your students in the job market (industry)	0 (0%)	29 (22.3%)	87 (66.9%)	14 (10.8%)	0 (0%)	2.8846	.56561
Enrolment trend in your institution	0 (0%)	17 (13.1%)	71 (54.6%)	23 (17.7%)	19 (14.6%)	3.3385	.88531
Examinations performance (credit and pass)	0 (0%)	20 (15.4%)	94 (72.3%)	15 (11.5%)	1 (0.8%)	2.9769	.54935
Flow of the students in the system	0 (0%)	19 (14.6%)	97 (74.6%)	14 (10.8%)	0 (0%)	2.9615	.50430
Public perceptions on the quality of your graduates	1 (0.8%)	26 (20.0%)	96 (73.8%)	7 (5.4%)	0 (0%)	2.8385	.51042
Prudential financial management	33 (25.4%)	28 (21.5%)	62 (47.7%)	7 (5.4%)		2.3308	.91828
Approval and certification e.g. ISO, TVETA	0 (0%)	1 (0.8%)	28 (21.5%)	36 (27.7%)	65 (50.0%)	4.2692	.82395
						3.1077	0.68346

Key: SD-Standard Deviation

Source: Field data (2018)

Research findings on students completion rate in Table 4.3 shows that 74 (56.9%) rated it as moderate, 36 (27.7%) said it was high, 14 (10.8%) said that it was low and 6 (4.6%) indicated that it was very high. The computed mean shows that the level of student completion level to be moderate (M=3.26 and SD=0.71). This implies that students could be facing various challenges (failures, lack of fees) which impede their college completion levels hence affecting internal efficiency of their institutions. The finding is supported by Yang (2014) research that showed that the trend of dropout rate has been evident in all grade levels in South Sudan schools. This implies that the problem of non – completion of schools does not happen in Kenya alone.

On the level of students success in the job market, 87 (66.9%) said that it was on moderate, 29 (22.3%) said that it was low while only 14 (10.8%) indicated it to be high. This also shows that only half (M=2.88 and SD=0.56) of students are succeeding in the job market. The issue could be on the inability of the education systems to instruct students on all aspects of careers (job creators and employees). Moreover, the situation of churning high number of graduates to the job market coupled by low opportunities for jobs could be the reason for this situation. This coincides with Esongo (2017) research that revealed that a good number of candidates trained by the education system were not able to effectively integrate into the national production sector (job market). This is an indication of low internal efficiency level. This result generally indicated that the performance of the TVET system in Kenya does not orientate to jobs, its performance is low because the TVET system does not encourage creativity and the quality of training is low for job seekers.

With regard to enrolment trend, 71 (54.6%) said that it was on average, 23 (17.7%) said that it was high, 19 (14.6%) said that it was very high and 17 (13.1%) indicated it

to be on lower level. The descriptive statistics shows that the level of enrolment is on average (M=3.33 and SD=0.88) in the four public TTIs in Bungoma county. This state of affairs could be due to lack of awareness by secondary school leavers on the opportunities that TVET education offers for future career growth and development. Institutions with high enrolments are able to raise more funds since the amount is collected per student. Institution enrolment determines the resource base of an institution since the more the number of students the more fees a college is likely to collect. In addition, institutions with more financial resources will not only acquire more learning resource but will enjoy the advantages of economies of scale. The institution size determines other quality of education aspects like teacher/student ratio and textbook/student ratio.

On the flow rate of students in the TTI system, 97 (74.6%) mentioned that it was on average, 19 (14.6%) indicted it to be low with only 14 (10.8%) saying that it was high. The result therefore shows that there is an average (M=2.96 and SD=0.50) flow rate of students in TTIs system in the County of Bungoma, Kenya. This implies that most TTIs have moderate flow rate (enrolment, retention and completion) of students in their institutions. With a high survival rate, an institution system is said to be internally efficient because very few students would have repeated or dropped out.

On the examination performance, 84 (72.3%) said that it was on average, 20 (15.4%) said that it was low, 15 (11.5%) said that it was high and 1 (0.8%) said that it was very high. The result therefore shows that average (M=2.97 and SD=0.54) performance has been recorded in the four institutions in recent years. The study coincides with Awuor et al. (2016) found out that performance of the schools in KCSE was average in relation to the national mean during the period under

consideration. In addition, Pitan (2012) research in Nigeria found out that the performance of students in the public examination examined revealed that there were lots of wastages (students' failure) in the system.

With regard to public views on the quality of graduates churned from the institutions, 96 (73.8%) said that it was on moderate level, 26 (20.0%) indicated it to be low and 7 (5.4%) mentioned that it was high. The descriptive scores (M=2.83 and SD=0.51) suggests that the students graduating from the TTIs have average level of acceptance as being qualified by members of public and therefore a lot needs to be done by stakeholders to improve the rating. On the prudential financial management front, 33 (25.4%) said that it was very poor, 28 (21.4%) said that it was very low, 62 (47.7%) indicted to be on average level and only 7 (5.4%) said that it was high. This shows that prudential financial management practices in the four TTIs to be low (M=2.33 and SD=0.91). This therefore implies that all the four training institutions are grappling with issues of financial mismanagement that affects the internal efficiency level. This state of affair could also explain why there are moderate indicators from the internal efficiency areas discussed above.

On the approval and certification level by ISO and TVETA, 1 (0.8%) said it was low, 28 (21.55) indicated it to be on average, 36 (27.7%) said it was high and 65 (50.0%) said it was very high. The findings therefore shows that the level of certification to offer TTI programmes by recognised bodies is high (M=4.26 and SD=0.82). Composite statistics on the level of internal efficiency shows that it is on average (M=3.10 and SD=0.68) in all the four technical training institutions in Bungoma County. In agreement with the findings, Esongo (2017) found out that internal inefficiency of the Cameroon school system on the was characterised by a pedagogy

that fosters knowledge reproduction rather than production, high drop-out rates, irregular attendance, high repetition and failure rates, and poorly adapted and overloaded programmes; worsened by poor quality teaching and irrelevant curriculum content that do not match with local or workplace realities. This chapter determines whether the established internal efficiency level could be explained by the four transformative resource mobilisation practices given in Sub Sections 4.2, 4.3, 4.4 and 4.6. The comparison of the relationship between independent and dependent variable is determine through conducting correlation analysis and linear regression analysis.

4.2 Institutional Staffing Capacity and Internal efficiency of public TTIs

To deliver quality and effective Technical education, adequate human resource (teaching and non-teaching) have to be available. The first objective of this study sought to determine institutional staffing capacity and its relation with internal efficiency of public TTIs in Bungoma County. Therefore, tutors were asked to rate the frequency to which institutional staffing capacity methods was applied in their colleges using the following scale: never (1), rarely (2), sometimes (3), often (4) and always (5). The findings are presented in Table 4.4.

Table 4.4 Institutional Staffing Capacity of TTIs in Bungoma County

Staffing capacity	Never	Rarely	Sometimes	Often	Always	Mean	SD
Our institution ensures that qualified staff are recruited to ensure quality TVET education	0 (0.0%)	6 (4.6%)	30 (23.1%)	44 (33.8%)	50 (38.5%)	4.0615	.89576
Our institution invests in continuous professional development for all staff to increase their competencies towards quality service delivery	7 (5.4%)	36 (27.7%)	62 (47.7%)	17 (13.1%)	8 (6.2%)	2.8692	.92668
The institution has ensured that there is adequate human resource to reduce workload	2 (1.5%)	31 (23.8%)	51 (39.2%)	29 (22.3%)	17 (13.1%)	3.2154	1.00375
There is good scheme of service for all members staff in this institution to motivate and retain them	9 (6.9%)	46 (35.4%)	42 (32.3%)	22 (16.9%)	11 (8.5%)	2.8462	1.05992
Our institution partners with other institution in exchange programmes to improve standards of teaching	7 (5.4%)	57 (43.8%)	44 (33.8%)	13 (10.0%)	9 (6.9%)	2.6923	.97126
The institution partners with industry to bridge the gap between industry and research among our graduates	4 (3.1%)	21 (16.2%)	42 (32.3%)	39 (30.0%)	24 (18.5%)	3.4462	1.06430
The resource mobilisation is a teamwork process to ensure attainment of institutional goals	10 (7.7%)	53 (40.8%)	33 (25.4%)	15 (11.5%)	19 (14.6%)	2.8462	1.18427
All staff members are better remunerated to increase their productivity	14 (10.8%)	59 (45.4%)	44 (33.8%)	7 (5.4%)	6 (4.6%)	2.4769	.92523
Our institution offers scholarships for staff wishing to go for further studies to improve their competitiveness	39 (30.0%)	63 (48.5%)	19 (14.6%)	7 (5.4%)	2 (1.5%)	2.0000	.89789
Our institution hires part-time staff due to shortage of full time staff to address inefficiency	11 (8.5%)	29 (22.3%)	43 (33.1%)	23 (17.7%)	24 (18.5%)	3.1692	1.19520
Composite scores						**2.9623**	**1.01243**

Source: Field data (2018)

Research findings shows in Table 4.4 that 50 (38.5%) agreed that their institution always ensured that qualified staff were recruited for the purpose of providing quality TVET education to students, 44 (33.8%) said that their institution often ensured, 30 (23.1%) sometime ensured while 6 (4.6%) said that they rarely ensured that. Computed descriptive statistics values (M=4.06 and SD=0.89) shows that all the four institutions often ensured that qualified and competent teaching and non-teaching staff are employed for the purpose of ensuring teaching staff meet the minimum requirements required to teach in those institutions.

When unqualified people are given opportunities to work, the institutions may fail to achieve quality education, as most of them cannot deliver the demands that their jobs entail. These results were also confirmed by Esongo (2017) who established that availability of qualified manpower in schools (with a mean value of 2.70) and the possession of adequate experience and appropriate pre-service training to promote competency based teaching (with a mean value of 2.88) were moderate.

Secondly, research findings shows that 62 (47.7%) of respondents indicated that their institution sometimes invested in continuous professional development for all staff with the aim of improving their competencies and teaching pedagogies. The descriptive statistics (M=2.86 and SD=0.92) shows that the four TTIs do sometimes provide opportunities for Continuous Professional Development (CPD) for their teaching and non-teaching staff to increase their knowledge, skills and competencies. The study agrees with Haramoto (2015) research in Sudan that found out instructors in TTIs were not provided with in-service training. In addition, Esongo (2017) research found out that majority of the respondents were exposed to at most two short duration seminars (of a day or two) per academic year which was largely insufficient

to go through the very demanding mastery of competency-based teaching approaches in Cameroon. This shows that most employees are not guaranteed opportunities for increasing knowledge and skills and which may affect their delivery of services to students in the institutions. This implies that employees' professional development is not valued at such in the public TTIs in Bungoma County.

Thirdly, research results show that only 51 (39.2%) of respondents agreed that their institution had ensured that there was adequate human resources in their schools to manage workload. The descriptive scores (M=3.21 and SD=1.00) suggests that this is an act that is conducted regularly in the institutions with the aim of ensuring that proper curriculum is provided to students. This could be because the institutions rely on TSC to provide them with adequate teaching staff that in some cases could take long before the requests are done. However, through internal mechanism, the institutions could cover the shortfall (human resource) through employment of BOM teachers and casuals from income generating projects that institutions undertake.

In line with the study findings, Sang et al. (2012) established the T.T.Is resulted to desperate moves in managing staff shortages that included the hiring of part-time lecturers as the most commonly used option. Multi-grade teaching was used as an option where the trainers combined trainees taking similar units though at different levels into the same classroom, workshops or laboratories. In contrast to the study findings, Yang (2014) established that major factors contributing to poor internal efficiency stated were high students'- section ratio and low number of teachers in schools. This implies that when there are no adequate human resources in schools, the internal efficiency is greatly affected.

When asked on whether scheme of services was improved from time to time for all members of the staff in the institution to motivate them and retain them in institutions, 9 (6.9%) said that was not there, 46 (35.4%) said it was rare, 42 (32.3%) said it sometimes happen, 22 (16.9%) indicated that it was often done and 11 (8.5%) said that it was always done. The result shows (M=2.84 and SD=1.05) that sometimes there is good scheme of services while in other instances, it is not there hence could result to staff turnover intentions.

This implies that when employees are not provided with favourable scheme of services on regular basis, this could affect their job morale and motivation that could affect internal efficiency of the institutions in producing low quality and incompetent graduates. The findings coincides with Esongo (2017) research that showed that was inadequate incentives/rewards (like low salaries and remuneration) to promote competency-based teaching, lack of funding to run training seminars for teachers in schools to promote effective curriculum implementation.

On whether they collaborated with other institutions through exchange programmes for benchmarking purposes and improving standards of providing TVET curriculum, 7 (5.4%) said that they never, 57 (43.8%) said it is sometimes done, 44 (33.8%) said it is sometimes done, 13 (10.0%) said that it is often done and 9 (6.9%) said it is always done. This therefore shows that it is not a common practice (M=2.69 and SD=0.97) for the public TTIs in the study area to have staff exchange programmes with other institutions. Considering the importance of benchmarking in technical and vocational education, most of the institutions surveyed have not utilised this opportunity which would be significant in improving their internal efficiency levels. The importance of

staff exchange programme is aimed at improving organisational learning process as best practices could be learnt from the partnering institutions.

On the linkage between the colleges and industry to bridge the gap between what is taught theoretically in class and what happens in the field, 4 (3.1%) of tutors said that their institutions never partnered with industry, 21 (16.2%) rarely partnered with industry, 42 (32.3%) sometimes partnered with industry, 39 (30.0%) often partnered with industry and 24 (18.5%) always partnered with industry to bridge the gap that exists between industry and research which improves the success of their students in the job market. The result implies that most institutions sometimes (M=3.44 and SD=1.06) partner with industry to assist their students to apply the knowledge learnt in class to practical situation in the industry. This also explains why respondents earlier indicated that the success of students' rate in the job market is on average since institutions do not the burden of ensuring that they get and look for internship and attachment opportunities for their students in industry. This state of affairs may affect the achievement of internal efficiency goals in public TTIs.

When asked as to whether the process of resource mobilisation was all-inclusive to ensure attainment of institutional goals, 10 (7.7%) disagreed, 53 (40.8%) said that it is rarely done, 33 (25.4%) indicated that it was sometimes done, 15 (11.5%) said that this was often done and 19 (14.6%) said that this was a regular process in their institutions.

The results therefore shows that sometimes (M=2.84 and SD=1.18), the public TTIs worked together with all staff to mobilise resources while in other instances they do not. This implies that the failure of staff development efforts to achieve their objective is because of school management partial involvement of all staff at different levels in

the organisation. The study is different from Kibet et al. (2013) results that showed that a significant proportion of the private universities conducted awareness on resource mobilization at least monthly or did not at all. This implies that public institutions need to value the input of their members of staff when mobilising resources for the aim of attaining high internal efficiency scores.

Research findings further showed that most 59 (45.4%) of tutors said that they members of staff are rarely better remunerated with the aim of increasing their productivity in the school. Results suggests that apart from the salary that tutors get form TSC, public TTIs in Bungoma County rarely remunerated their teaching and non teaching staff. Lack of better remuneration of employees did affect their commitment level as some would even opt not to give their best when delivering their services to students. This in contrast with Awuour (2015) whose study revealed that nearly all the schools (96.7%) motivated their staff through awards, which were either monetary or material gifts. Prompt payment of salaries or any service. The result therefore shows disparity exists between secondary schools and tertiary institutions efforts in motivating staff. When members of staff are not motivated, their morale declines which later affects performance of students at the end of their module examinations.

To explain further the implication of the above findings, when member of staff in a technical and vocational institutions (TTIs) were not remunerated well, issues of absenteeism, transfers and turnover are common and this ultimately influences the internal efficiency of the said institutions. Research findings also show that most 63 (48.5%) of tutors said that their institutions rarely offered scholarships for staff who wished to go for further studies. This implies that scholarships opportunities are rare (M=2.0 and SD=0.89) in the four public TTIs from Bungoma County. This also

explains why demographic data showed that most tutors were degree holders and few possessed masters degree. When institutions fail to look and provide for scholarships for further education for their staff, this may affect their knowledge and skills levels considering that the way instruction was done 30 years ago is different in this technological age hence making them not being in a position to compete with other established technical institutions within and outside the country.

In some institutions, the researcher found out that there was skewed issuance of scholarships as those connected and related to management benefited than deserving members of staff therefore creating mistrust between the institutions management and members of staff. On the frequency to which the institutions hired part – time staff to address the shortage of full time staff to address issues of inefficiencies, 11 (8.5%) did not hire, 29 (22.3%) rarely hired, 43 (33.1%) sometimes hired, 23 (17.7%) often hired and only 24 (18.5%) said that their institutions hired. This shows that most institutions in the study area sometimes (M=3.16 and SD=1.19) hired part time workers to bridge the shortfall. This could be because of inadequate funding that the government provides to these technical institutions making them to utilise members of staff who are available.

However, as part of resource mobilisation strategy, institutions board of management may find ways through which they can generate additional revenue to support payment of casual workers who would improve internal efficiency of these institutions. Average scores shows that institutional staff mobilisation strategies were at times (M=2.96 and SD=1.01) conducted in the four public TTIs in Bungoma County. In line with the study findings, Kibet et al. (2013) he concluded that majority of the study respondents (staff) either did not attend capacity-building training on

resource mobilization or did not attend the capacity-building sufficiently enough even if conducted by their institutions.

Resource mobilisation managers were asked to give their views with regard to achievements made by their institutions in institutionalising staff capacity. Officer Number 16 had this to say:

> *Improved staff numbers through hiring teaching staff on part time basis to easen-congested workload. At least one staff competently trained in a year.*

Another officer had to say this with regard to institutional staffing capacity in his or her college:

> *Staffing capacity has been supported on the side of hiring but training and the institute has not supported staff development; the individual staff members have attained higher training and development on their own using their own resources.*

In addition, officer number two indicated the following:

> *I have continued to hire required staff each time there is need. A good number of office leavers had an opportunity to go for training; I facilitated training of about thirty teachers in ICT.*

The above information from resource mobilisation managers confirms that institutional staffing happens in the four TTIs under consideration in this study. Staffing capacity has been supported on the side of hiring but training and the institute has not supported staff development; the individual staff members have attained higher training and development on their own using their own resources. In line with the study findings, Pitan (2012) established that the available human resources were

well utilized, there was an increase in the level of internal efficiency of the school system.

The research went further to determine the kind of relationship that existed between institutional staffing capacity efforts and internal efficiency (Table 4.9) through computation of Karl Pearson correlation statistics. The results of the analysis are presented in Table 4.5.

Table 4.5 Relationship between Institutional Staffing Capacity and Internal Efficiency of TTIs

		Institutional staffing capacity	Internal efficiency
Institutional staffing capacity	Pearson Correlation	1	.473**
	Sig. (2-tailed)		.000
	N	130	130
Internal efficiency	Pearson Correlation	.473**	1
	Sig. (2-tailed)	.000	
	N	130	130

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

Source: Field data (2018)

The results in Table 4.5 show that there exist a moderate positive relationship (r=0.473 and p=0.00) between institutional staffing capacity at the four public TTIs in Bungoma county. The relationship appears to be significant at 99% confidence level. In agreement with the study findings, Abdulkareem, Fasasi and Akinnubi (2011) found out that significant relationship existed between human resources utilization and internal efficiency in the state-owned universities. The role of the lecturers cannot be underscored in teaching-learning process and in attainment of educational goals at the university level. This implies that continuous commitment by TTIs management to improve staffing capacity would results to increased internal efficiency levels. This

implies more needs to be done by the institutions to mobilise human resources. Further, the tutors through open-ended questions were asked which other strategies their schools might use to mobilise human resources for improving internal efficiency of their schools. The tutors suggested that there is need for institutional administration to consider increasing the workshops in schools.

Secondly, they suggested that their institutions should consider hiring casual workers to bridge human resource shortfall. Thirdly, they said that there is need for school management to promote good working conditions for all staff. There was also need for the college management to consider benchmarking with other Technical institutions for the staff to learn from what others are doing. Aspects of employee motivation; giving of incentives for all staff, recognition, promotion, sponsorship for further training and performance contracting were also mentioned as measures which the institutions may undertake to improve institutional staffing capacity aimed at improving internal efficiency.

4.3 Influence of Physical Resource Mobilisation on Internal Efficiency of public TTIs

Institution physical resources are facilities that are required so that teaching and learning of Technical education can take place. RoK (2013) observes that training facilities are critical if education in Kenya is to meet the technological market skill needs and move the country to the vision 2030. The availability of training facilities is critical to achievement of internal efficiency goals. Therefore, the second objective of this study sought to determine how public TTIs were mobilising physical resources and its relation with internal efficiency of those institutions. Therefore, tutors were to state the extents to which physical resources were mobilised in their institutions

through the following scale: (1), rarely (2), sometimes (3), often (4) and always (5). The findings are presented in Table 4.6.

Table 4.6 Frequency of Physical Resource Mobilisation in Public TTIs in Bungoma County

Physical Resource Mobilisation	Never	Rarely	Sometimes	Often	Always	Mean	SD
Our institution ensures that physical facilities are utilised well to minimise wastage	5 (3.8%)	26 (20.0%)	52 (40.0%)	25 (19.2%)	22 (16.9%)	3.2538	1.08057
Our institution ensures that physical facilities are adequate for use by staff and students	6 (4.6%)	31 (23.8%)	60 (46.2%)	20 (15.4%)	13 (10.0%)	3.0231	.99195
Physical facilities are well maintained and up to the required standards to ensure effective learning	4 (3.1%)	37 (28.5%)	63 (48.5%)	13 (10.0%)	13 (10.0%)	2.9538	.95529
All stakeholders are involved in planning and construction of institutional facilities to promote institution wide development	9 (6.9%)	39 (30.0%)	54 (41.5%)	16 (12.3%)	12 (9.2%)	2.8692	1.02970
Institutional facilities are leased for use during holidays to generate extra income for programme expansion	19 (14.6%)	26 (20.0%)	62 (47.7%)	16 (12.3%)	7 (5.4%)	2.7385	1.03095
The institution seeks donor support when developing new infrastructural facilities to increase student enrolment	3 (2.3%)	26 (20.0%)	51 (39.2%)	33 (25.4%)	17 (13.1%)	3.2692	1.00223
There is no wastage in utilisation of physical facilities and IGAs to improve efficiency	5 (3.8%)	46 (35.4%)	47 (36.2%)	17 (13.1%)	15 (11.5%)	3.0846	1.97282
The institution leases extra land (farming purposes) to generate income for smooth running of programmes	22 (16.9%)	30 (23.1%)	44 (33.8%)	24 (18.5%)	10 (7.7%)	2.7692	1.16498
The institution seeks grants from government to aid in infrastructure development and increase enrolment	0 (0.0%)	17 (13.1%)	25 (19.2%)	55 (42.3%)	33 (25.4%)	3.8000	.96770
Sale of institution products enable it to meet budget deficits associated with inadequate support for fees and government grants	18 (13.8%)	38 (29.2%)	44 (33.8%)	20 (15.4%)	10 (7.7%)	2.7385	1.11754
Composite scores						**3.0500**	**1.13137**

Source: Field data (2018)

Findings from Table 4.6 shows that 52 (40.0%) of tutors indicated that sometimes, their institution ensured that physical facilities were utilised well to minimise wastage and underutilisation. The descriptive scores shows that physical facilities were sometimes (M=3.25 and SD=1.08) utilised well in specific times and at times not. This implies that despite institutions being endowed with adequate facilities, some of these facilities were not well utilised to ensure they accomplish the purpose they were intended for hence affecting internal efficiency of schools. The study findings coincide with Haramoto (2015) found out that there was underutilisation of equipment and facilities that caused low internal efficiency in TVET institutions.

Secondly, 60 (46.2%) mentioned that their TTI sometimes ensured that the school infrastructure were adequate for use by students and staff, 6 (4.6%) said that they never ensure, 31 (23.8%) said their institutions rarely ensured, 20 (15.4%) indicated that their institutions often ensured and only 13 (10.0%) always ensured that their school facilities were adequate. The result therefore shows that physical facilities in public TTIs in Bungoma county were sometimes (M=3.02 and SD=0.99) adequate for use by staff and students. This means that when some facilities are not provided in colleges, teaching and learning process may not be done hence hampering the achievement of internal efficiency goals.

Further, it is the duty of school administration to ensure that they provide adequate infrastructural facilities to enhance the delivery of TVET curriculum. However, if this action is not done in earnest, the quality of graduates churned out of those institutions may not compete and succeed in the job market. The study findings relate with Sang et al. (2012) who established that TTIs operated with inadequate training facilities.

This unavailability of training facilities affected the relevance of skills to market skill needs by students from the said institutions. This implies that certain courses used facilities that were completely out of tune with facilities used in industries and business organizations. Even in Nigeria, Uko (2015) revealed that in about 80% of the schools, facilities like laboratories, libraries, classrooms, assembly halls, furniture, technical workshops among others were in a complete state of despair. This implies that the situation in Nigeria is the same as in Kenya TTIs in Bungoma County.

Research results also showed that 63 (48.5%) of respondents indicated that sometimes physical facilities are well maintained while at times they are not. This implies that institutional management are failing in their responsibilities in ensuring that there is regular safety and maintenance checks of the physical facilities for effective teaching and learning process to happen and to conform to the TVETA authority requirements. Lack of regular maintenance and repairs of infrastructural facilities may result to various crisis; accidents and destruction of the said facilities to non-repairable levels. To support study findings, Uko (2015) said that effective management is a precursor to facilities sustainability, utilization and maintenance as it enhances effective productivity by the teachers and overall performance of the students.

Fourthly, research results showed that all stakeholders were sometimes (M=2.86 and SD=1.02) involved in planning and construction of institutional facilities which are aimed at promoting institutional wide development. This implies that the management of the schools sometimes involved other stakeholders and at times, they do not hence hampering efforts of TTIs expansion. Lack of involvement of all stakeholders may affect the realisation of the planned projects as their input and perceptions, which could have been critical, is not considered. Furthermore, it is against the MOE policy

not to involve stakeholders in planning and construction of school infrastructure. This explains why in some institutions, there were projects that were found not to have been completed on time while others had stalled due to issue of not involving stakeholders (parents, students, members of staff and regulatory bodies).

When asked on whether institutional facilities were leased for use during school holidays for conferences and other meetings with the objective of generating extra income for programme expansion, 19 (14.6%) said this did not happen in their schools, 26 (20.0%) indicated that this rarely happened, 62 (47.75) said that this sometimes happened, 16 (12.3%) mentioned that it often happened and 7 (5.4%) said that this always happened. This implies that most schools sometimes (M=2.73 and SD=1.03) leased their facilities during holidays for conferences and others events with the aim of generating extra cash for improving school operations. This implies that most schools have not marketed their facilities to host meetings and conferences and thereby leading to loss of opportunity for revenue that comes with hosting such meetings. Other institutions across the country use this strategy to generate extra revenue to support school programmes.

It was also established that 3 (2.3%) never sought donor support, 26 (20.0%) rarely sought, 51 (39.2%) sometimes sought, 33 (25.4%) often sought and 17 (13.1%) always looked for donor support when developing school infrastructure with the aim of increasing students enrolment. This implies that most institutions sometimes (M=3.26 and SD=1.0) seek donor support and at times they do not hence resulting to admitting similar number of students on year basis. This explains why respondents earlier reported that the facilities for use by students and teachers were inadequate hence affecting internal efficiency of those institutions. This result also shows that

most school administrations are not making frantic efforts to seek donor support in developing new infrastructure facilities. The study findings coincides with Awuor (2015) who found out that Forty percent of the respondents said the NGOs were helping them to pay salaries to BOM employed teachers. Thirty percent of the schools engaged the organizations in initiating infrastructure development while 40% said the NGOs were offering bursaries to needy students as the other forty percent had received book donations from the NGOs.

When asked as to whether there was wastage when utilising physical facilities and income generating projects to improve internal efficiency, 46 (35.4%) said that this rarely happens and 47 (36.2%) agreed that this sometimes happen. This shows that sometimes (M=3.08 and SD=1.97) there is wastage of resources and sometimes there is no. This implies that there are no appropriate measures that have been set up to address wastage of resources in the institutions that could lead to inefficiency of operations. Further, it shows that there is pilferage of resources that affects internal efficiency of the public TTIs in Bungoma County.

To generate more income to support TVET educational programmes, 22 (16.9%) never leased extra land for IGAs, 30 (23.1%) rarely leased, 44 (33.8%) sometimes leased, 24 (18.55) often leased and 10 (7.7%) reported that they always leased land for farming purposes to sustain educational programmes in their institutions. The result therefore shows that public TTIs sometimes (M=2.76 and SD=1.16) leases land and sometimes do not to generate additional income to enhance smooth running of institutional programmes. This implies that as a resource mobilisation strategy, public TTIs in Bungoma county are not maximising the resources they have at their disposal to generate additional income hence making them to be dependable on grants from the

government. The study findings coincide with Awuor (2015) considering the availability of resources, most of the schools (59.0%) owned school farms as the major physical resource. Those who had school buses (32.8%) followed this. Fishponds were owned by 13.1% while *posho* mills (flourmills) were existent in 3.3% of the schools. The remaining 8.2% of the schools owned greenhouses. It was therefore evident that the schools had the capacity to support their budgets through divergent income generating activities.

Results further showed that 55 (42.3%) of respondents agreed that their institutions often sought grants from government to aid in infrastructural development aimed at increasing students numbers. The respondents appeared to agree that this practice is often (M=3.8 and SD=0.96) done in their institutions. The result implies that the institutions board of government support in expanding and constructing new facilities for teaching and learning that are ingredients for effective internal efficiency and would result to high flow rate of students in the system. Corresponding to the study findings, Nwaokeonu (2014) study suggested universities appeared to be over dependence on the government for critical funding hence were not able to compete with other institutions. This implies that a proper relationship needs to be developed by BOM with the ministry to ensure that funding is provided for.

Asked as to whether they sold institutional products to meet budget deficits associated with inadequate support for fees and government grants, 18 (13.8%) said that they do not, 38 (29.2%) rarely sold, 44 (33.8%) sometimes sold, 20 (15.4%) occasionally sold and only 10 (7.7%) reported that they sale their institution products to cover budget deficits associated with inadequate and delayed funding from the government. The result shows that this practice is sometimes done (M=2.73 and SD=1.11) in the four

public TTIs in Bungoma County. Money generated from the project is used to finance critical activities that are aimed at realising school goals and objectives. Composite scores shows that physical resource mobilisation initiatives are sometimes (M=3.13 and SD=0.94) conducted in public TTIs in Bungoma county. This finding correspondents with Yang (2014) research that found out that majority of schools had shortage of physical infrastructure facilities.

Through interviews, the resource mobilisation managers were asked to state the extent to which they mobilised physical resource for improving internal efficiency of schools. Officer number 1 said that:

> *The institute acquired COE status from the GOK in 2009. This was supported by supply of equipment and tools for farm machinery, surveying, TD development of tissues culture bananas, bee keeping ,farm tools and equipment among others.*

Another officer No. 2 also remarked that:

> *I have completed science complex labs, workshops, and F-B. Complex, repairs of building and machinery.*

Further, officer No. 9 had this to say:

> *We seek government support in building of academic tuition blocks. We also seek support from NG-CDF to build school infrastructures. We have also received generators form well-wishers to address power outages in the institution.*

The above results therefore show that resource mobilisation managers are making frantic efforts to improve the internal efficiency of public TTIs through mobilisation of physical facilities. In contrast to the study findings, Nyanya (2015) found out that

all respondents indicated that school physical facilities affected student dropout and repetition of classes in their schools.

The researcher further conducted a correlation analysis to determine the degree of relationship between physical facilities mobilisation and internal efficiency (Table 4.9) of public TTIs. The results of the analysis are presented in Table 4.7.

Table 4.7 Relationship between Physical Facilities Mobilisation and Internal Efficiency of Public TTIs

		Physical Resource mobilisation	Internal efficiency
Physical Resource mobilisation	Pearson Correlation	1	.534**
	Sig. (2-tailed)		.000
	N	130	130
Internal efficiency	Pearson Correlation	.534**	1
	Sig. (2-tailed)	.000	
	N	130	130

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

Source: Field data (2018)

Table 4.7 results shows that there exist moderate strong positive relationship (r=0.534 and p=0.001) between physical resource mobilisation and internal efficiency of public TTIs in Bungoma County. The statistics is also significant at 99% confidence level ($p<0.01$). The finding implies that despite existence of above average strength of relationship, increase in institutional efforts towards mobilising physical resources would improve internal efficiency levels in those institutions. This concurs with Haramoto (2015) who established that underutilisation of facilities and equipments caused low internal efficiency in schools. In addition, Uko (2015) research in Nigeria found out that relationship that exists between a principal's proficiency, creativity and management of school facilities for overall academic performance is mutually

reinforcing. Furthermore, Boru (2013) research in Moyale found out that headteachers were of the opinion that physical facilities can help to improve internal efficiency.

Through open-ended questions, the respondents were asked to give strategies that could be used to mobilise physical resources in their institutions. They suggested that there is need for their schools to seek funding from other institutions and donors, regular repair and maintenance to be done, tutors to improvisation teaching and learning materials, outsourcing of facilities, planting of crops for sale, leasing of school facilities, start of bakery project and collaborating with other institutions. They indicated this strategies need to be done to improve physical facilities hence promote internal efficiency in schools. This is because availability of adequate physical facilities encourages meaningful learning and teaching.

4.4 Influence of Instructional Resource Mobilisation on Internal Efficiency of public TTIs

Instructional resources are significant materials required for curriculum to be effectively implemented. The importance of instructional materials in teaching and learning process cannot be over – emphasized. The third objective of the study sought to determine how instructional resource mobilisation influenced internal efficiency of public TTIs in Bungoma County. Therefore, through the questionnaire constructed with Likert scale questions: (1), rarely (2), sometimes (3), often (4) and always (5), they were asked to indicate the frequency at which mobilisation of instructional learning materials occurred at their institutions. The results are presented in Table 4.8.

Table 4.8 Frequency of Instructional Resource Mobilisation in Public TTIs in Bungoma County

Instructional Resource mobilisation	Never	Rarely	Sometimes	Often	Always	Mean	SD
Our institution procures modern instructional resources (ICT) to produce all rounded graduates	1 (0.8%)	35 (26.9%)	52 (40.0%)	30 (23.1%)	12 (9.2%)	3.1308	.94326
Tutors always use modern instructional resources teaching and learning to improve classroom experience	7 (5.4%)	46 (35.4%)	53 (40.8%)	14 (10.8%)	10 (7.7%)	2.8000	.97567
Our institution mobilises additional instructional resources to ensure provision of quality education	1 (0.8%)	39 (30.0%)	54 (41.5%)	23 (17.7%)	13 (10.0%)	3.0615	.95442
Our library (ies) are stocked with enough and relevant books, journals and articles to promote research	10 (7.7%)	46 (35.4%)	52 (40.0%)	15 (11.5%)	7 (5.4%)	2.7154	.95831
Institutional library (ies) are able to accommodate large number of students to improve their performance	23 (17.7%)	42 (32.3%)	41 (31.5%)	15 (11.5%)	9 (6.9%)	2.5769	1.11970
There exist laboratories that allow students to conduct various practicals which increases their knowledge & skills	11 (8.5%)	53 (40.8%)	45 (34.6%)	12 (9.2%)	9 (6.9%)	2.6538	1.00164
There is a system for restocking additional resources to cover for shortfall or outdated instructional resources	11 (8.5%)	60 (46.2%)	38 (29.2%)	13 (10.0%)	8 (6.2%)	2.5923	.99375
The institution ensures that school budget items are prioritised first. e.g. purchase of teaching materials first, stationery, furniture during opening of school term quality TVET education	11 (8.5%)	49 (37.7%)	35 (26.9%)	16 (12.3%)	19 (14.6%)	2.8692	1.19033
Composite scores						**2.8000**	**1.01714**

Source: Field data (2018)

Findings from Table 4.8 shows that 52 (40.0%) of tutors said that their institution sometimes purchased current technological resources with the aim of producing IT competent graduates, 35 (26.9%) rarely purchased, 1 (0.8%) did not purchase, 30 (23.1%) often procured and 12 (9.2%) always purchased. The results shows that most public TTIs from Bungoma county sometimes (M=3.13 and SD=0.94) procured instructional technological resources for teaching and learning process. This denotes average commitment by TTIs management to avail technological resources for teaching and learning process. The current education environment demands that teaching and learning process in school should be technology driven and institutes need to ensure that they match with the dynamic changes so that they can produce graduates who are knowledgeable in matters concerning IT.

The study findings coincides with Sang et al. (2012) who established that most of the training equipments found in T.T.Is are not technologically in tandem with equipments found in industries and business organizations. Similarly, Ndjebakal and Genevarius (2017) found out that the nature of computers is very poor because computer machines are not equipped in respective classes and it will be difficult to take students to the computer laboratory always given the high computer student ratio.

Concerning the adequacy of course-wares, internet and other ICTs, respondents indicate that they are poor. The results are different with a study conducted in Israel by Yemini et al. (2014) who found out that the innovations being introduced in schools by principals were being successfully institutionalized within the organization. They became part of the school routine and in some cases were adopted by other schools as well.

Asked on whether they used modern instructional resources in teaching with the aim of improving classroom experience, 7 (5.4%) mentioned that they do not use, 46 (35.4%) indicated that they rarely use, 53 (40.8%) sometimes used, 14 (10.8%) occasionally used and 10 (7.7%) were the ones who said that they always integrate their teaching and learning process through adoption and use of current educational media.

The computed statistics shows that modern instructional resources are at times (M=2.8 and SD=0.97) used by tutors in the public TTIs to improve and modify. This implies that non-regular use of these devices by teachers could be due to their unavailability in school and because of teacher competency and knowledge on how to operate and use them in classroom instruction. In contrast to the study findings, Yemini et al. (2014) research in Israel established that school principals introduced innovation in their organizational and pedagogic environments. These changes were different in their scope but appear, as reported by the school principals, to be significant in their impact at school, leading to profound and lasting changes.

Asked on whether their institution mobilised additional instructional resources to maintain and improve quality of TTI education, 1 (0.8%) did not, 39 (30.0%) rarely did, 54 (41.5%) sometimes did, 23 (17.7%) often did and 13 (10.0%) always mobilised them to ensure that quality education was provided. The findings reflect that mobilisation of instructional resources was sometimes (M=3.06 and SD=0.95) done by public TTIs to ensure effective teaching and learning process. This means that tutors have to improvise instructional learning materials so that their delivery of lesson objective could be effective. This may affect the quality of graduates released to the job market as they would not be skilled enough to competitively apply their

knowledge in the job market. In line with the findings of the study, Ithuta (2014) research found out that that majority of learners did not have writing materials and there were no enough textbooks in the class. The schools had inadequate teaching aids, textbooks, reference materials and staff and this affected student's performance in examinations in schools.

Some tutors also complained that they do make request for the resources to be provided but most HODs and school administrators always give them hope that they would be availed. This state of affairs was one of the hindrances of achievement of total internal efficiency in schools. It was also evident from the findings of the study that 46 (35.4%) of respondents said that their libraries were rarely stocked with enough and relevant items to promote research, 52 (40.0%) said that it was sometimes stocked while 15 (11.5%) indicated that it was often stocked. This suggest that most of the four institutional libraries are sometimes (M=2.71 and SD=0.95) stocked with adequate learning materials for students use while in some cases that does not happen.

The result therefore shows that students cannot access adequate books, journals and articles from their libraries because they are not yet fully stocked. This denies students to do research and a chance to compete with other students in other technical training institutions that have enough books in their libraries in KNEC examinations. This may result to poor performance by these students in certificate and diploma examinations. In agreement with the study findings, Nyanya (2015) established that students in most schools in Seme are compelled to share the textbooks even when teaching is ongoing. The few books available are outstretched and therefore much time is wasted.

Further, research findings revealed that most institutional libraries could not be able to accommodate large number of students with the aim of improving reading culture as evidenced by 42 (32.3%) who said that it rarely fits them. This made some of them to go into shifts in the library with the hardest days being during the period of revisions where some even sit on the pavements so that they can get ample time for revision. This state affairs was found by Maduewesi and Onyeachu (2017) research that showed that most technical colleges libraries in Nigeria were small and lacked recent books. Most learners had to rely on the internet (which was sometimes unavailable) to read.

The lack of spacious and well stocked institutional libraries denies students opportunity to conduct their private studies, research and also revisions. This may affect their performance in KNEC examinations. Ndjebakal supports these results and Genevarius (2017) research in Cameroon that found out that most of the few documents in the libraries did not match the present curriculum; they were all obsolete. Asked on whether they had laboratories for all courses to improve on student research and performance, 11 (8.5%) said they never had, 53 (40.8%) rarely had, 45 (34.6%) sometimes had, 12 (9.2%) often had and 9 (6.9%) always had adequate labs for doing practicals.

The mean score values shows that most tutors perceived that there was inadequate (M=2.65 and SD=1.0) science laboratories for students to undertake practical examinations in public TTIs in Bungoma county. Considering that some courses have to be done practically, the unavailability of these facilities may hinder acquisition of specific skills by students in those institutions. In agreement with this research, Nyanya (2015) found out that that 92.6 percent of the in Seme Sub County schools

have experienced shortage of laboratory apparatus and chemicals needed by teachers for the practical sessions. This implies that most of the practical lessons are not taught or they are taught theoretically. The concepts to be learnt practically by the students are not sufficiently learnt hence affecting their performance in KNEC examinations.

When asked as to whether their institution had a system in place of restocking additional resources to cover for shortfall that could arise as a result of outdated instructional materials or shortfall occasioned by increased enrolment, 11 (8.5%) said never, 60 (46.2%) indicated this was rarely done, 38 (29.2%) mentioned that this was sometimes done, 13 (10.0%) said that this was occasionally done and 8 (6.2%) said that this was always done. This meant that no system exist in public TTIs on how to restock school instructional materials. This observation was seen in Nigeria by Mkpa (2005) who recorded that tutors were behind development in TVET sector because the instructional resource used were outdated. This affected quality of TVET being offered in such institutions.

The combined values shows partial existence (M=2.59 and SD=0.99) of restocking systems in the institutions hence students have to compete with the available books through sharing which hampers effective delivery of Technical education. This implies that there exist outdated instructional resources that are not helpful in the four public TTIs in Bungoma County. Further, these outdated instructional materials are not relevant in the current trends of Technical education thereby wasting students' time in classroom instruction. The results concurs with Nyanya (2015) who found out that 52.9 percent of the teachers were not supplied with teaching/ learning materials whenever they need them. This denotes that resources are inadequate in the schools that participated in the study.

On whether their institution ensured that their school budget items were prioritised first during planning, 11 (8.5%) said that this was never done, 49 (37.7%) admitted that this was rarely done, 35 (37.9%) said this sometimes happened, 16 (12.3%) indicated that this often happened and 19 (14.6%) said that this always happened in their institution. This implies that necessary resources and materials required for learning like stationeries, furniture among others are sometimes (M=2.86 and SD=1.19) prioritised in the four technical training institutes in Bungoma County.

The results also point to lack of seriousness in budget planning as the instances to which the key items are missing signal to laxity by school administration to prioritise them. When these key instructional resources are lacking in colleges, internal efficiency challenges arise hence delivery of poor quality Technical education. In agreement with the study findings, Esongo (2017) research established that there was insufficient budget in schools to support curriculum activities hence affecting internal efficiency because in the absence of finances the promotion of competency-based teaching in institutions quality of education was greatly hampered.

Average composite scores shows that instructional resource mobilisation was moderately (M=2.8 and SD=1.01) conducted in the four TTIs in Bungoma County. This state of not providing instructional learning adequately to teachers and students in schools could hamper the goal of achieving 100% completion and pass rate in KNEC examinations. In agreement with the study findings, Nyanya (2015) established that teaching and learning resources affect student dropout and repetition of students in schools hence low internal efficiency. Insufficient supply of teaching and learning material resources therefore results to inefficiency of public TTIs in the provision of technical and vocational education.

Through interviews, the resource mobilisation managers were asked to state the achievements that they had made in mobilising instructional materials aimed at improving internal efficiency of their institution. One officer No. 16 indicated the following:

> *Continual improvement and timely service delivery. This has resulted to good quality grades in KNEC examinations, increased knowledge and skills in TVET education.*

Another officer No. 9 indicated this:

> *What we have is bought out of fees and government grants from our taxation vote. We buy books, machines and equipment*.

In another angle, officer No. 4 mentioned the following:

> *We have installed computerised systems to improve administrative supervision and service delivery of academic activities. There is a revised academic policy that has already been operationalised.*

Other resource mobilisation managers indicated that they ensure that they procure ICT equipments, built and stocked library adequately. This shows that various instructional mobilisation strategies are used to improve internal efficiency in public TTIs in Bungoma County. In contrast to the study findings, Ndjebakal and Genevarius (2017) research in Cameroon found out that most buildings were old and dilapidated and had not been innovated for long. Some of them leaked during rainfall.

The researcher went further to correlate if there existed a relationship between instructional resource mobilisation and internal efficiency (Table 4.9) of TTI by conducted a correlation test. The results of analysis are presented in Table 4.9.

Table 4.9 Relationship between Instructional Resource Mobilisation and Internal Efficiency of TTIs

		Instructional resource mobilisation	Internal efficiency
Instructional resource mobilisation	Pearson Correlation	1	.413**
	Sig. (2-tailed)		.000
	N	130	130
Internal efficiency	Pearson Correlation	.413**	1
	Sig. (2-tailed)	.000	
	N	130	130

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

Source: Field data (2018)

Table 4.9 correlation results shows that there a weak positive relationship (r=0.413 and p=0.001) between instructional resource mobilisation and internal efficiency of public TTIs. The statistics also appears to be significant at 99% confidence level ($p<0.01$). This implies that despite weak positive relationship, increase in mobilisation of instructional materials by the institutional management would automatically result to increase in internal efficiency levels in the public TTIs in Bungoma County. Therefore, instructional resources are key factors for institutional achievement of internal efficiency goals in educational institutions. In line with the study findings, Wayua (2015) research found that most schools in Makueni County relied on capitation funds to purchase instructional resources. Most of school heads did not mobilise additional instructional resources to increase internal efficiency in schools. Further, the state affairs could be explained by the fact that parents were not involved in mobilisation of instructional resources.

Through open-ended questions, the tutors were asked to indicate other instructional resource mobilisation strategies that can be used in their schools. They suggested that there is need for institutional management to seek support from donors, internet and Wi-Fi to be installed in schools, the TTIs to consider using e-books rather than paper ones, to equip laboratories and libraries with adequate equipments, efficient utilisation of available resources, improvement of procurement process and borrowing from other institutions. The measures would improve internal efficiency of TTIs in Bungoma County.

4.5 Relationship Financial Resource Mobilisation and Internal Efficiency of public TTIs

Schools needs finances (from government, students fees, non – governmental organisations, income generating projects) to run school programmes. Hence, without finance, all programmes in the institutions come to a halt. Therefore, the fourth objective of this study was to determine the relationship that existed between financial resource mobilisation and internal efficiency of public TTIs in Bungoma County. To answer the fourth research question, tutors were asked to state the frequency to which financial resource mobilisation activities was conducted in their institution using the following scale: 1), rarely (2), sometimes (3), often (4) and always (5). The responses are presented in Table 4.10.

Table 4.10 Financial Resource Mobilisation Strategies in Public TTIs

Resources	Never	Rarely	Sometimes	Often	Always	Mean	SD
There is a proper criteria for financial resource distribution in our TTI to improve financial management	13 (10.0%)	55 (42.3%)	29 (22.3%)	29 (22.3%)	4 (3.1%)	2.6615	1.03095
Expenditure is properly accounted for and is done according to priorities set to reduce wastage	17 (13.1%)	56 (43.1%)	32 (24.6%)	22 (16.9%)	3 (2.3%)	2.5231	.99779
Our institution holds various fundraising functions to promote institution wide development	24 (18.5%)	55 (42.3%)	33 (25.4%)	16 (12.3%)	2 (1.5%)	2.3615	.97252
Our institutional management has the capacity to mobilise resources to attract more students	4 (3.1%)	28 (21.5%)	30 (23.1%)	56 (43.1%)	12 (9.2%)	3.3385	1.01580
All stakeholders are involved in resource mobilisation activities to ensure objectives are realised	16 (12.3%)	43 (33.1%)	38 (29.2%)	27 (20.8%)	6 (4.6%)	2.7231	1.07123
Resource mobilisation is an ongoing exercise in our institution as it increases internal efficiency	7 (5.4%)	29 (22.3%)	28 (21.5%)	59 (45.4%)	7 (5.4%)	3.2308	1.03083
Composite scores						**2.8064**	**1.01985**

Source: Field data (2018)

Asked on whether there was proper criteria for financial resource distribution in their TTI to improve on prudential financial management, Table 4.10 result indicated that 13 (10.0%) said there was no such criteria, 55 (42.3%) said that it was rarely done, 29 (22.3%) said that it was sometimes done, 29 (22.3%) was often done and 4 (3.1%) said that it was always done. The computed statistics shows that sometimes (M=2.66 and SD=1.03) developed criteria for financial resource distributions in their institutions which is a critical factor towards attaining prudential financial management standards. This result concurs with Fisseha (2015) outcomes that showed that most SSA universities had no proper financial management procedures on resource allocation and distribution. Finances generated from projects and government capitation were utilised on need base and not on budget or planed events.

The results implies that due to poor budgeting planning and implementation process, financial resource distribution is not properly conducted which may affect the performance of various activities within the school. In tandem with the study findings, Nwaokeonu (2014) research in Nigeria found out that the allocation of allocation of resources in the six universities did not follow a standard scientific assessment process. This suggested that the universities pursued resource allocation in no systematic order. This appeared to have resulted in lack of transparency and loss of faith on the part of the resource managers.

Secondly, 56 (43.1%) of respondents said that expenditure is rarely accounted for and it is rarely done with respect to priorities set with the aim of reducing wastage, 32 (24.6%) were of the opinion that this was sometimes done, 22 (16.9%) said this was often done and only 3 (2.3%) said it was always done according to the requirements. The results show that expenditure is not always (M=2.52 and SD=0.99) done

according to the laid procedures hence resulting to wastage and financial impropriety incidents. This implies that there due to accountability issues, most institutions cannot account for what they have spent because what was done using the money given was not according to priorities set thereby bringing the issue of financial mismanagement in schools that puts the internal efficiency at lower level. To correct the above issue, Awuor (2015) argued that to avoid mismanagement and misappropriation of school funds there is need to keep up to date financial books of accounts.

Results further showed that 55 (42.3%) of tutors indicated that their institution rarely hold various fundraising functions to promote institution wide development, 24 (18.5%) said that they did not regularly hold fundraising events, 33 (22.4%) sometimes held fundraising, 16 (12.3%) often held fundraising and 2 (1.5%) always held fundraising events. The responses shows that most institutions rarely (M=2.36 and SD=0.97) conduct fund raising events with the aim of purchasing and constructing new facilities in schools. This shows that most institutional management have not yet identified the significant role that harambees plays towards improving educational resources in TVET institutions. The study contradicts with Awuor et al. (2016) who established that a boost in harambee collections strategy would result into minimal increase in student performance. Even in Zambia, Syacumpi (2012) found out that schools were using fundraising activities to support and maintain their school facilities.

This state of affairs is further reinforced by findings that showed that the institutional management did not have full capacity to mobilise more resources with the aim of increasing enrolment (M=3.33 and SD=1.01). Only 56 (43.1%) of respondents indicated to have full capacity of mobilising resources with the aim of expanding their

school student intakes. This implies that the low level of fundraising activities is due to inability by institutional board of management to understand how to mobilise resources for increasing internal efficiency of those institutions. Another aspect that could explain the inability of institutional management to mobilise financial resources could be due to their failure to involve other stakeholders in planning, decision-making and implementation of programmes.

In line with study findings, Kibet et al. (2013) found out that most of the institutions did not have officers or officers or committees in charge of resource mobilization. In addition, in most of the institutions, the staffs were not adequately involved in resource mobilization efforts. However in contrast to these findings, Yemini et al. (2014) research in Israel found out that principals are not hindered by funding constraints in implementing visions they have dedicated themselves to. They did not hesitate to begin a new project, even when funding for it had not been secured. They appeared confident in their ability to fundraise as needed. As such, they appeared ready to take risks.

This argument is supported by the findings that showed that only 6 (4.6%) admitted that stakeholders were involved in resource mobilisation activities hence affecting schools goals and objectives. The mean statistics showed that stakeholders were sometimes (M=2.72 and SD=1.07) involved in resource mobilisation activities. This implies that majority of stakeholders feel ignored as their input is not valued in making efforts of ensuring that schools attain higher internal efficiency levels. The study findings is supported by Awuor et al. (2016) who found out that high returns from income generating activities will translate into increased internal efficiency as measured by student performance index. This study finding is different from what

Yemini et al. (2014) found in Israel whereby principals as entrepreneurs never worked alone. They engaged the school staff and win over their support for the suggested venture. Hence, their ability to execute their vision and introduce innovations depends on creating commitment of the school staff to their vision.

When asked as to whether resource mobilisation was an ongoing exercise in their institutions with the goal of increasing internal efficiency levels, 7 (5.4%) disagreed, 29 (22.3%) mentioned that it is rarely done, 28 (21.5%) agreed that it is sometimes done, 59 (45.4%) admitted it to be often done and 7 (5.4%) mentioned that it was always done. The result therefore shows that resource mobilisation is an ongoing exercise that is sometimes (M=3.23 and SD=1.03) conducted in the institutions under study.

The result therefore shows that financial resource mobilisation is not a significant process that TTIs in Bungoma County consider and this could have significant effect on achievement of internal efficiency targets. The study finding coincides with Haramoto (2015) who found out that there was no income generating activities in Sudan TTIs. In addition, Kibet et al. (2013) implied that despite their potential, majority of campuses of the private universities were not able to mobilize as many resources as possible. Other potential sources of resources were yet to be fully exploited for resources mobilization. The findings show that generally, the training on resource mobilization is yet to have a significant impact on resource mobilization efforts among private universities in the study area.

Composite scores showed that financial resource mobilisation was averagely (M=2.80 and SD=1.01) conducted in public TTIs centres in Bungoma County. Through interviews, the resource mobilisation managers were asked to indicate the

achievements made in mobilising financial resources in improving efficiency of public TTIs. One resource mobilisation officer No. 6 said the following:

> *Department involved in budgeting and income generation from electrical hire services.*

Another resource mobilisation officer No. 4 fronted this aspect:

> *We have enforced school fees collection and BOM and school administration members have embraced budgeting controls.*

Furthermore, officer number 16 remarked that:

> *Opening of new learning programmes and additional courses/more campuses. Established short innovative courses i.e. Garment making and mushroom production. Mobilisation of HELB loans application for needy students to raise fees. Making of effective budgets during the financial year.*

The above responses from resource mobilisation officers show that various strategies are used to mobilise financial resources in schools. In agreement with the study findings, Syacumpi (2012) found out that schools in Zambia started farming activities, leased their premises during holidays and started school canteens to mobilise additional funding to support school programmes.

To check on the kind of relationship that existed between financial resource mobilisation and internal efficiency (Table 4.10) in public TTIs, a Karl Pearson correlation was computed. The results are presented in Table 4.11.

Table 4.11: Relationship between Financial Resource Mobilisation and Internal Efficiency of Public TTIs

		Financial resource mobilisation	Internal efficiency
Financial resource mobilisation	Pearson Correlation	1	.336**
	Sig. (2-tailed)		.000
	N	130	130
Internal efficiency	Pearson Correlation	.336**	1
	Sig. (2-tailed)	.000	
	N	130	130

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

Source: Field data (2018)

Table 4.11 Correlation statistics shows that there exist a weak positive relationship ($r=0.336$ and $p=0.001$) between financial resource mobilisation activities and internal efficiency of public technical institutions in Bungoma County. The results also appears to be significant at 99% confidence level ($p<0.01$). This implies that financial resource mobilisation activities were low and which did not affect internal efficiency of public technical institutions. However, the research result imply that increased financial resource mobilisation would increase internal efficiency of public TTIs in Bungoma county. The research somewhat coincides with Awuor et al. (2016) established that financial resources mobilised through income generating activities were found to be positively related to internal efficiency of the schools. The proceeds were used to subsidize the lunch and boarding budgets hence releasing more funds for tuition related activities. Therefore, to positively influence school internal efficiency effective resource mobilisation strategies must be employed.

Similarly, Kibet et al. (2013) concluded that apart from tuition fees, other potential sources of resources are either yet to be fully exploited or mobilized on a limited scale. It was also noted that despite their potential, majority of centers/campuses of the private universities were not able to mobilize as many resources as possible. Furthermore, Esongo (2017) research in Cameroon found out that there was a significant relationship between the availability of resources and the efficiency of the school system.

The magnitude of the relationship that exists was rated low. This implies that when resource mobilization activities are low, internal efficiency of public TTIs is greatly affected. The findings of this study is in sharp contrast to Akinsolu (2012) findings that financial and human resources utilization seem not to have any relationship on student repetition rate, dropout rate, and fail-out rate and graduation rate (aspects of internal efficiency of public TTIs.

4.6 Influence of Transformative Resource Mobilisation Practices on Internal Efficiency

The main purpose of this study was to determine the influence of transformative resource mobilisation practices; institutional staffing capacity, physical resource mobilisation, instructional resource mobilisation and financial resource mobilisation. At first the researcher had to determine the level of internal efficiency in public TTIs in Bungoma County.

4.6.1 Multiple Regression Analysis

To arrive at the findings, a multiple linear regression analysis was compute using enter method to test the hypothesis. The assumptions made were that the data

followed a normal distribution. The research findings are presented in Table 4.12 (a, b and c).

Table 4.12 (a) Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.671[a]	.451	.433	.30984

a. Predictors: (Constant), Financial Resource mobilisation, Physical resource mobilisation, Institutional staffing capacity, Instructional resource mobilisation

Source: Field data (2018)

The multiple correlations are 0.671 that indicates a strong correlation between transformative resource mobilisation and internal efficiency of public TTIs. R^2 =0.451 which means that 45.1% of the variability in internal efficiency is explained by the four independent variables in this linear model. The adjust R^2 =0.433 which measures the variability in internal efficiency is explained by the four independent variables and this linear model taking into effect the model has four independent variables. Further the F-ratio statistics are presented in Table 4.12 (b).

Table 4.12 (b) ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.854	4	2.463	25.662	.000[a]
	Residual	12.000	125	.096		
	Total	21.854	129			

a. Predictors: (Constant), Resource mobilisation, Physical resource mobilisation, Institutional staffing capacity, Instructional resource mobilisation
b. Dependent Variable: Internal efficiency

Source: Field data (2018)

The obtained values are F (2.463, 0.096) =25.662, p=0.001 for the multiple regression equation. The higher F values suggest that the relationship between the independent variables and dependent variable is not due to chance and is due to real relationship that exists between them. This explains why the p-values are below 0.001. This linear

model is significant. Further, the study checks the significant contributions of each independent variable in Table 4.12 (c) below.

Table 4.12 (c) Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.850	.227		3.747	.000		
	Institutional staffing capacity	.090	.043	.147	2.103	.037	.902	1.108
	Physical resource mobilisation	.201	.048	.286	4.181	.000	.937	1.067
	Instructional resource mobilisation	.295	.065	.349	4.532	.000	.739	1.352
	Financial resource mobilisation	.162	.061	.205	2.640	.009	.730	1.370

a. Dependent Variable: Internal efficiency

Source: Field data (2018)

The coefficients statistics (Table 4.12c) shows that the four independent variables; institutional staffing capacity, physical resource mobilisation, instructional resource mobilisation and financial resource mobilisation are significant in the model. The model can be expressed through the following equation;

$$y = 0.850 + 0.090x_1 + 0.201x_2 + 0.295x_3 + 0.162x_4$$

The above equation shows that all variables in the model are significant predictors of internal efficiency of public training institutions in Bungoma County. The result coincides with Awuor et al. (2016) who established that resource mobilisation strategies had varied relationships with internal efficiency as measured by examination performance, retention rates and repeater rates. Further, Multicollinearity does not exist because the VIF values are below 10. Further, the beta values show that the four independent variables have different impact in predicting the dependent variable. The findings are also consistent with the findings of Magala (2010) who

found out that significant positive correlations existed between internal efficiency and each of the four independent variables, namely: physical resource mobilization instructional materials mobilisation, institutional staff capacity and financial resources.

Based on the findings, Magala concluded that adequacy of instructional resources; availability of human resource and availability of financial resources are all positively correlated with the internal efficiency of secondary schools in Uganda. Through open-ended questions, the tutors were asked to give their perceptions with regard to the influence of transformative resource mobilisation and internal efficiency of public TTIs in Bungoma County. They indicated that transformative resource mobilisations improves learning in classroom, ensures accountability, and improves efficiency of staff and whole school development. However, others felt that transformative resource mobilisation was not done properly and more funding was needed to actualise internal efficiency goals in schools.

4.6.3 Hypothesis Testing

The study also tested the null hypothesis through use of beta coefficients results presented in Table 4.12 (c) above. Hypothesis one stated that:

$H0_1$ There is no significant relationship between institutional staffing capacity and internal efficiency of public TTIs in Bungoma County

Results from Table 4.12 (c) shows that at 95.0% confidence level, institutional capacity beta coefficient was (β=0.090, t=2.103 and p=0.037) which implies that institutional staffing capacity had positive relationship with internal efficiency which was significant ($p<0.05$) although it was low compared to other three resource mobilisation variables. This led to rejection of the first null hypothesis and conclusion

that there existed a significant relationship between institutional staffing capacity and internal efficiency of public TTIs in Bungoma County Kenya. This finding is in agreement with Nyanya (2015) research that indicated that indicated that there was significant positive correlation between teachers' academic level and internal efficiency in schools in Seme, Kisumu County.

Similarly, Pitan (2012) using the input-output analysis of the sampled schools, using a positive significant relationship was found to exist between human resource utilization and internal efficiency ($r = 0.8367$; $p < 0.05$) of the school system. This suggests that as more human resources are available and are adequately utilised, the more the secondary schools' system becomes efficient. The results therefore indicate that efforts to mobilise adequate and qualified staff by TVET institutions is likely to improve internal efficiency in TTIs.

The second hypothesis stated that:

$H0_2$ There is no significant relationship between physical resource mobilisation and internal efficiency of public TTIs in Bungoma County

The obtained beta coefficient results as given in Table 4.12 (c) were (β=0.201, t=4.181 and p=0.001) indicates that the coefficient was positive and significant ($p<0.05$). Therefore, the second null hypothesis is rejected and the study concludes that there exist significant relationship between physical resource mobilisation and internal efficiency of public training institutions in the County of Bungoma, Kenya. In agreement with this study, Boru (2013) established that availability of physical facilities encouraged meaningful learning and teaching. This implies that improving the physical facilities can help to improved internal efficiency of public TVET institutions. In addition, Akinsolu (2012) found out existence of significant

relationship between physical resource utilisation and repetition rate, dropout rate, fail- out rate and graduation rate. This implies that effective physical resource mobilisation and internal efficiency of public TTIs.

The third hypothesis stated that:

$H0_3$ There is no significant relationship between instructional resource mobilisation and internal efficiency of public TTIs in Bungoma County

Coefficients results from Table 4.12 (c) indicates the following values (β=0.295, t=4.532 and p=0.001) which implies that there exist a significant positive relationship ($p<0.05$) between the variables. Hence, the third null hypothesis is rejected and the research concludes that there exist significant relationship between instructional resource mobilisation and internal efficiency of public TTIs in the County of Bungoma, Kenya.

The fourth null hypothesis stated that:

$H0_4$ There is no significant relationship between financial resource mobilisation and internal efficiency of public TTIs in Bungoma County

To test the hypothesis, the following are beta coefficients illustrated in Table 4.12 (c) which are (β=0.162, t=2.640 and p=0.001) implying that there exist a positive degree of coefficient between the two variables which is significant at 95.0% confidence level. Therefore, the research rejects the fourth null hypothesis and concludes that there exists a statistically significant relationship between financial resource mobilisation and utilisation strategies on internal efficiency of public TTIs in the County of Bungoma, Kenya.

In contrast to the study findings, Akinsolu (2012) findings show that there is no significant relationship between financial resource utilization and repetition rate,

dropout rate, fail-out rate and graduation rate in Nigeria public Secondary school. In agreement a research by Osongo [2017] in Cameroon that examined the extent to which the availability of resources related to efficiency of the school based system within the framework of implementation of competency based teaching. The study indicated that there was a significant relationship between the availability of resources and the efficiency of the school system.

4.6.4 Resource Managers Suggestions on Improvement in Mobilisation of Resources in Public TTIs

Through interviews, the resources managers were asked to give their suggestions on how the process of mobilisation of school resources with the aim of improving internal efficiency of public TTIs. The resource managers said that there is need for public TVET institutions to collaborate with industries so that they can provide opportunities for students to apply the skills learnt in industrial field. They also saw the need for the government of Kenya to provide adequate and well trained tutors who will be critical in promoting quality TVET training in Bungoma public TTIs and Kenya at large. The resource managers also suggested that government need to commit itself in upgrading public TTIs to ensure they produce competent graduates for attainment of vision 2030 objectives.

There was also calls for the need for public TTIs to ensure that acquire new technological resources rather than relying on outdated ones which have no relevance to students training in the current Technical education systems. They also indicated that members of staff (teaching and support) needed to be provided with continuous training to increase their knowledge and skills. They also said that there should be proper planning, prioritise activities and there should be proper accounting of finances

to ensure conformance to provisions of public finance Act on accountability and transparency.

There was also the need for all stakeholders to be involved in transformative resource mobilisation process to ensure that plans set succeed. Current state of moderate resource mobilisation had been blamed due to inadequate stakeholder consultation and involvement. Lastly, the resource mobilisation managers recommended that there should be well stipulated policy guidelines on resource mobilisation to ensure availability of finances.

4.7 Chapter Summary

This chapter has presented, interpreted and discussed research findings on the relationship between transformative resource mobilisation and internal efficiency of public technical training institutes located in the county of Bungoma, Kenya. Data interpreted was in two forms; qualitative and quantitative and has been presented according to various objectives of the study. Quantitative data analytics that have been used consisted of frequencies, percentages, means, standard deviation, correlations and multiple linear regressions.

Comparison of study findings with previous literature has also been done to establish existence of similarities or difference. At the end, the overall relationship model for the independent and dependent variable has been presented. The next chapter presents the summary of research findings, conclusions, subsequent recommendations and suggestions for future research.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

The study investigated relationship between transformative resource mobilisation strategies and internal efficiency of public technical training institutes in the County of Bungoma, Kenya. Therefore, this chapter presents the summary of the findings made in the previous chapters, generated conclusions, subsequent recommendations and proposed areas for further research.

5.1 Summary of Findings

The study was conducted in four public TTIs in Bungoma County. The respondents who provided information that necessitated generation of study findings were; TTI principals, resource mobilisation managers and tutors. The response rate from the respondents 85.2% which was considered to be high bearing the fact that three research instruments; institutional observation checklist, interview guide and questionnaire. Demographic information showed that most respondents had worked for more than 5 years in their respective institutions and this information was important as they were assumed to understand how transformative resource mobilisation was conducted in their respective institutions.

Research results on internal efficiency showed that most of the institutions were at moderate level (M=3.1 and SD=0.68). Only approval and certification from the relevant authorities was found to be high (M=4.26 and SD=0.82). The lowest internal efficiency indicator was on prudential financial management as it was ranked to be low (M=2.33 and SD=0.9. This is because when funds were not properly utilised, managed and accounted for, institutions were incapable of ensuring effective

Technical training was provided. The following sub-sections present the summary of study findings according to study objectives.

5.1.1 Institutional Staffing Capacity and Internal Efficiency of public TTIs

This was the first objective of the study that determined relationship between institutional staff capacity in public TTIs in Bungoma County. The principals noted that they have improved the capacity of teaching and non-teaching staff through working with TSC to raise the number of teaching staff and BOM to hire part time workers. However, they admitted that they are usually unable to provide continuous professional development programmes to the staff because of limited resources and funding. On their part, the tutors mentioned that in institutional staffing capacity, their schools only ensures that qualified members of staff are recruited only (M=4.06 and SD=0.89).

On the least side, the tutors reported that their institutions rarely (M=2.0 and 0.89) rarely offered scholarships and sponsorships opportunities for members of staff (academic and non-academic) who wished to pursue further studies. Abridged means revealed that institutional staffing capacity mobilisation efforts were at moderate level (M=2.96 and SD=1.01). This explains why the results showed that most employees were poorly remunerated.

Computed correlation results showed that there existed an average degree level of association (r=0.473 and p=0.001) between institutional staffing capacity and internal efficiency of public TTIs in Bungoma County. This showed that more needs to be done by institutional management to improve the efforts of mobilising adequate human resources for improving internal efficiency of public TTIs. Regression coefficient results showed that the results were positive and significant (β=0.090 and

p=0.037) leading to the rejection of the first hypothesis ($p<0.05$). This meant that when staffing capacity is regularly done, internal efficiency objectives would be attained.

5.1.2 Physical Resource Mobilisation and Internal Efficiency of public TTIs

Physical facilities such as classrooms, laboratories, libraries, workshops, and furniture and fittings which are required for improved internal efficiency. Physical resources are key factors for operations of public TTIs. Without adequate resources, learning may not take place. The study investigated how physical resources were mobilised by public TTIs in the study area and how they affected the internal efficiency levels. Principals and resource mobilisation managers mentioned that they have made considerable efforts to improve the status and condition of school infrastructural facilities like; science complex labs, workshops, food and beverage complexes, repair of buildings and machinery.

Tutors indicated that mobilisation of physical resources only came through the grants that government provided to the TTIs infrastructure development. On the whole, the findings showed that educational facilities were grossly inadequate in the four institutions, a development which was much more compounded by obvious lack of maintenance culture in almost all the schools. Average statistics shows that physical resources were sometimes (M=3.05 and SD=1.3) mobilised by resource mobilisation heads in the institutions studied.

The research findings showed that the majority of those institutions rarely engaged donors; county governments, NGOs, international organisations among others rarely sought grants to aid in infrastructure development. It was also found out that majority of the institutions rarely leased their school properties (lands, buildings, fields and

even vehicles) to generate income for improvement of programmes in schools. According to study results, farming was the most common IGA because most institutions were located in rain fed zone and the farms form a teaching learning aid. The school bus project has also become popular with schools though the overhead running costs are quite high and might not be profitable in the end.

The tutors mentioned that incidents of wastage of resources were evident in their school although not to a great extent. Correlation statistics showed that there exist a moderate level of relationship ($r=0.534$ and $p=0.001$) between physical resource mobilisation and internal efficiency of TVET institutions. This result reinforced the idea that frequent mobilisation of infrastructural resources in public TTIs increased the likelihood of internal efficiency levels. MLR results showed that there exists a significant relationship ($\beta=0.201$ and $p=0.001$) between physical resource mobilisation efforts and internal efficiency. This meant that for every unit change in physical resource mobilisation, internal efficiency changed by 0.2. This implied that physical resource mobilisation contributes to achievement of internal efficiency goals in public TTIs in Bungoma County.

5.1.3 Instructional Resource Mobilisation and Internal Efficiency of public TTIs

For TVET curriculum to be implemented, teaching and learning materials have to be provided in the right quantity and quality. Without adequate learning resources, impartation of knowledge to students becomes difficult. Therefore, the schools have a responsibility of ensuring that they mobilise more instructional resources for ensuring achievement of internal efficiency goals. Students and tutors in classroom instructions use these instructional resources to acquire knowledge. The principals noted during interview that they regularly improve the status of instructional resources in their

schools through stocking of libraries, laboratory and workshops. They also procured ICT resources to ensure that their institutions were stocked with modern resources that are necessary for learning in this digital age.

However, tutors said that their institution sometimes (M=3.13 and SD=0.94) procured these modern instructional (ICT). This explains why the tutors reported that instructional resource mobilisation was not regularly done in their institutions. Karl Pearson correlation results showed that there existed a weak positive relationship (r=0.413 and p=0.001) between instructional resource mobilisation and internal efficiency of public TTIs in Bungoma County. The third null hypothesis was rejected ($p<0.05$) since there existed a positive coefficient ($\beta=0.295$ and $p=0.001$) between instructional resource mobilisation and internal efficiency of Technical institutions in the area. This implied that efforts of mobilising more resources would lead to improvement in internal efficiency of public training institutions in Bungoma County.

5.1.4 Financial Resource Mobilisation and Internal Efficiency of public TTIs

The issue of finance is at the heartbeat of every organisation for organisation organs to operate smoothly. Therefore, the fourth objective of this study sought to determine the influence of financial resource mobilisation and internal efficiency of public TTIs. Principals mentioned that they ensured that financial resource mobilisation was maintained through proper procurement, others mentioned that it was on average while others mentioned that they had set up budgetary controls and set up of institutional financial accounting system. The study revealed that there were not a standard procedure in which the public TTIs carried out their resource allocation processes. Above all, it appears there were no scientific ways of assessing departmental needs for inclusion in the year's budget

In order to supplement the school financial resources, community members could be mobilised to pool up their monetary resources in form of harambees. Responses from tutors showed that financial resource mobilisation was moderately (M=2.80 and SD=1.01) conducted by school management in public TTIs in Bungoma County. This is supported by 43.1% who said that their management often had the capacity to mobilise financial resources with the aim of improving TTI curriculum implementation. Research mobilisation process was found not to be regular ongoing exercises in those institutions. Stakeholders were also found to be moderately involved in resource mobilisation activities and this justifies the outcome that financial resource mobilisation activities were not conducted as expected. However, research findings showed that fundraising initiatives were rarely done in the four public TTIs.

Computed correlation values ($r=0.336$ and $p=0.001$) showed that there existed weak positive relationship between financial resource mobilisation and internal efficiency of public training institutions in Bungoma County. This implied that financial resource mobilisation initiatives were not regularly conduct and that it why it affected internal efficiency to a lower degree. Regression analysis results showed that financial resource mobilisation had positive coefficient which was significant ($\beta=0.162$ and $p=0.009$) which lead to rejection of the fourth null hypothesis ($p<0.05$). This implied that a unit change in financial resource mobilisation, internal efficiency changed by 0.162. Therefore, public TTIs need to increase their financial resource mobilisation strategies with the hope of increasing internal efficiency.

5.2 Conclusions

This study investigated how transformative resource mobilisation influenced internal efficiency of public TTIs in Bungoma County. Multiple linear regression results showed that the multiple correlation value was 0.671 for the four variables; institutional staffing capacity, physical, financial and instructional resource mobilisation. On checking the impact of the four predictors, it was found out that 45.1% of change in internal efficiency of the four public TTIs was explained by the transformational practices being done in those institutions. All the four null hypotheses for the study were rejected ($p<0.05$) leading to the deduction that transformative resource mobilisation initiatives helped in improving internal efficiency of public TTIs in Bungoma County.

The result implied that moderate internal efficiency levels of public TTIs was due to lack of adequate transformative resource mobilisation mechanisms in place aimed at addressing human, physical, instructional and financial resource shortages. This explains why the research results showed that resource mobilisation was not an ongoing activity in the four institutions and stakeholders were not involved in planning and implementation of such programmes.

Further, a computed correlation of results on Institutional staffing capacity and internal efficiency showed that there existed an average degree level of association; similarly computed values showed that there existed a weak positive relationship between financial resource mobilisation and internal efficiency of public training institutions in Bungoma County. This led the study to conclude that transformative resource mobilisation initiatives by public training institutions in Bungoma County had moderate effects on internal efficiency levels.

The increasing need for a competent competitive labour force, the pressure for change and receptiveness in provision of TVET, and the rising demand for incessantly up skilling an all time knowledge employees is making vocational education and industry training more and more practicable, appealing, cost-effective, and treasured. This sustained development of TVET provision requires to be harmonised with a parallel development in educational investigations which looks at how specific learning environments made for TVET. The growth, rationalization, and improvement of a model which assesses the internal efficiency of TVET would go a long way in addressing the challenges that is experienced in Kenya and other countries across the world as well.

5.3 Recommendations

The study has so far established that transformative resource mobilisation was not a regular exercise being conducted in public TTIs in Bungoma County. Based on the findings of the study together with conclusions, the following recommendations are made:

(1) To improve on institutional staffing capacity, there is need for public TTIs to consider collaborating with other institutions within and outside the country for benchmarking of staff exchange programmes that could be important in improving skills and knowledge among the staff. There is also need for staff members to be remunerated well to increase their productivity. Public TTIs should sponsor their staff for further studies through provision of scholarships to increase their knowledge and skills.

(2) To improve on physical resource mobilisation efforts, there is need for public TTIs to consider developing systems through which products generated from IGAs are sold to buyers for supplementing budget deficits associated with

inadequate support from government and late payment of fees by students. There is also a need for school board of management to consider hiring institutional facilities for conferences and meetings.

(3) To improve on instructional resource mobilisation, the study suggested the need for the public TTI management to consider expanding the capacity of school libraries through stocking and conducting book donation drives. Additionally, a system for restocking additional instructional materials needs to be put in place to improve accountability, reduce wastage and reduce thefts associated with the use of manual system.

(4) To improve financial resource mobilisation, there is need for those institution to automate their financial management services. All management staff also needs to be retrained on integrity and accountability courses so that they understand the consequences of providing expenditures that is not supported with proof.

(5) The researcher suggests that the public TTIs in Bungoma county should consider and, perhaps, borrow a leaf from the developed countries transformative resources mobilisation experience and appropriate available resources based on research productivity, graduate output, governance quality and innovative programmes.

(6) To address internal efficiency challenges, there is need for public TTIs to closely monitor students' survival from year 1 to year 3 and make a follow up on the reasons that made students not to complete their study on time.

5.4 Suggestions for Future Studies

Based on the findings of the study, conclusions and recommendations, the following suggestions are made for future research:

(1) A similar research targeting public TTIs needs to be conducted in other counties and even nationwide so that the relevance of TVET education can be seen.

(2) A research on transformative resource mobilisation needs to be conducted in secondary schools in the county of Bungoma

(3) A study on the staff capacity, competency and training on resource mobilisation skills need to be conducted

REFERENCES

Abagi, O. & Odipo, G. (1997). *Efficiency of Primary Education in Kenya: Situational Analysis and Implications for Educational reform*. Discussion paper, No. 16.

Abdulkarem, A.Y., Fasasi, Y.A. & Akinnubi, O.P. (2011). Human Resource Utilisation and Internal Efficiency in State Owned Universities in Nigeria. *International Journal of Academic Research in Business and Social Sciences,* (1), 29 – 37.

Abuel-Ealer, S (2012). *Closing the Trained Teacher Gap; Global Campaigns for Education South Africa;* Educational International.

Acholla, P.P.W. (1988). "Mobilizing additional Funds for secondary and higher Education in Kenya". *Kenya Journal of Education, 4*(1), 47 - 49.

Aduda, D. (2003). Technical training reeling under neglect. *Daily Nation*, 2 June 2003, 11.

African Union [AU] (2007). *Strategy to Revitalize Technical and Vocational Education and Training (TVET) in Africa*. Bureau of the Conference of Ministers of Education of the African Union. Addis Ababa, Ethiopia: AU.

Ahmed, M. (2011). *Universities infrastructures and services: Concession options and methodologies*. Retrieved from: www.Unilorin.edu.ng/..../ Ahmed University % 20 Infrastructure, (Accessed on June 10, 2016).

Akerele, W.O. (2007). Management of Technical and Vocational Education in Nigeria: the challenges of the country. *Journal of Research in Education and Society, 1* (2&3), 117-24.

Akinsolu, R.A. (2004). Provision and Management of Facilities in Nigerian Primary Schools. In E.O. Fagbemiye, J.B. Babalola, M. Fabunmi and& Ayeni, I. (Eds). *Management of Primary and Secondary Education in Nigeria*. NAEAP Publications.

Akinsolu, A. O. (2012). Resource utilization and internal efficiency in Nigerian secondary schools: Implications for socio problems of education. *International Journal of Sociology and Anthropology, 4*(1), 23-30.

Alagaraja, M., Kotamraju, P., & Kim, S. (2014). A conceptual framework for examining HRD and NHRD linkages and outcomes. *European Journal of Training and Development*, *38*(4), 265.

Al-Dossary, S. A. (2008). *Study of the Factors Affecting Study Retention at King Saud University, Saudi Arabia: Structural Equation Modelling and Qualitative Methods.* University of Sterling, England.

Aldrich, (1979). *Organizations and Environments.* Englewood Cliffs, NJ: Prentice-Hall.

Amedorme, S. K., & Fiagbe, Y. A. (2013). Challenges Facing Technical and Vocational Education in Ghana. *International Journal of Scientific & Technology Research, 2* (6), 253-255.

Ameh, E. & Aernyi, I. (2016). *Human Resources Mobilization; an Important Factor for Educational Management and Development*. Paper presented at 23rd International Academic Conference, Venice held on 27 April 2016. Retrieved online on 12-2-2019 from http://www.iises.net/proceedings/23rd-international-academic-conference-venice/front-page.

Asiyai, R. I. (2012). Assessing School Facilities in Public Secondary Schools in Delta State, Nigeria. *African Research Review International Multidisciplinary Journal, 6*(2), 192-205.

Awuor, J.O., Wanjala, G. & Muriithi, M. (2016). Financial Resource Mobilisation Strategies and Internal Efficiency of Public Secondary Schools in Rachuonyo South Sub-county, Homabay County. *Kenya Journal of Educational Planning, Economics & Management, 10*(1), 1 – 21.

Awuor, J.O. (2015). *Financial Resource Mobilization Strategies and Internal Efficiency of Public Secondary Schools in Rachuonyo South Sub-County, Homabay County, Kenya*. D.Phil Thesis, University of Nairobi, Kenya.

Babalola, O. T. (2003). *An Investigation into the Internal Efficiency of Ekiti State Secondary School*s. Unpublished M.Ed Thesis University of Ado Ekiti, Nigeria.

Bayram, A. B., & Graham, E. R. (2016). 'Financing the United Nations: Explaining variation in how donors provide funding to the UN', *The Review of International Organizations*. DOI: 10.1007/s11558-016-9261-0.

Beath, J., Owen, R., Poyago-Theotoky, J., & Ulph, D. (2000). *Optimal incentives for income-generation within universities*. University of St. Andrews, Department of Economics.

Boru, K. (2013). *Factors Influencing Internal Efficiency in Public Primary Schools of Moyale District Marsabit County*. MED Project, University of Nairobi.

Butare, A. (2004). Income-Generating Activities in Higher Education: The Case of Kigali Institute of Science, Technology and Management (KIST). *JHEA/RESA, 2* (3), 37–53.

Centre for Technical and Vocational Education and Training of the United Nations Educational, Scientific and Cultural Organization (UNESCO-UNEVOC). (2007). *Education for Livelihoods and Civic Participation in Post-Conflict Countries*. Bonn: UNESCO-UNEVOC.

Chang, C. (2007). *Nigeria 10 year strategic plan for education: policy, cost and financing assumptions and their implication*. Working document- United Nations Educational Scientific and Cultural organization.

Chemutai, E. (2015). The Role of School Principals as Human Resource Managers in Secondary Schools in Nandi County, Kenya. *Global Journal of Human Resource Management, 3*(1), 73-82.

Cheong, K., & Lee, K. (2016). Malaysia's education crisis: Can TVET help? *Malaysian Journal of Economic Studies, 53*(1), 115–134.

Clayton, J. (2015, July 15). *The New Zealand–China Vocational Education and Training Model Programme: Research Project Report*. Tianjin: Sino-NZ Model Programme Committee.

Creswell, J. (2013). *Research design qualitative, quantitative, and mixed methods approaches* (2nd Ed.). Thousand Oaks, CA: Sage.

Creswell, J., & Plano Clark, V. (2007). Designing and conducting mixed methods research. Thousand Oaks, CA: Sage.

Creswell, J., Plano Clark, V., Gutmann, M., & Hanson, W. (2003). Advanced mixed methods research designs. In A. Tashakkori and C. Teddlie (Eds.), *Handbook of mixed methods in social and behavioural research* (pp. 209-240). Thousand, Oaks, CA: Sage.

Darvas, P. & Palmer, R. (2014). *Demand and Supply of Skills in Ghana: how can training programs improve employment and productivity?* Washington, D.C.: World Bank Group.

Denzin, N. & Lincoln Y. (2000). *Handbook of qualitative research* (2nd Ed.) Thousand Oaks, CA: Sage.

Ekundayo, T. A. (2008). Expanding Access to Higher education in Nigeria: The Question of Quality Control. *Journal of Reforming Higher Education in Africa*, 22-36.

Elena, N. I. (2012). *Human resource motivation – An important factor in the development of business performance*. retrieved online on 7/7/2018 from: http://anale.steconomiceuoradea.ro/volume/2012/nl/153.pdf.

Esongo, M. N. (2017). Correlation between the Availability of Resources and Efficiency of the School System within the Framework of the Implementation of Competency-Based Teaching Approaches in Cameroon. *Journal of Education and Practice, 8*(2), 82-92.

Ferej, A., Kitainge, K. & Ooko, Z. (2012). *Reform of TVET Teacher Education in Kenya: Overcoming the Challenges of Quality and Relevance.* Working Document for Triennale on Education and Training in Africa (Ouagadougou, Burkina Faso, February 12-17.

Fisseha, M.G. (2015). *Revenue Generation Strategies In Sub-Saharan African Universities*. Doctoral Dissertation, University of Twente, Netherlands.

Galabawa, J. (2008). *Enhancing Education quality and efficiency. Some observation on Kenya, Tanzania and Uganda*. Faculty of Education: Tanzania: University of Dares-salaam.

Gebreyes, F. M. (2010). *Revenue Generation Strategies in Sub-Saharan African Universities*.

Goetz, K.H., & Patz, R. (2017). 'Resourcing International Organizations: Resource Diversification, Organizational Differentiation, and Administrative Governance.

Guba, E., & Lincoln, Y. (2000). Competing paradigms in qualitative research. In N. Denzin and Y. Lincoln (Eds.), *Handbook of qualitative research* (2nd Ed.) (pp. 105-117). Thousand Oaks, CA: Sage.

Gulati, R., & Sytch, M. (2007). Dependence asymmetry and joint dependence in inter-organizational relationships. *Administrative Science Quarterly, 52*(1), 32-69.

Haramoto, Y. (2015). *Challenges of TVETin Developing Countries with a Case Study of Korea's Aid in Sudan*. Kobe University, Japan.

Heeley, M. B., King, D. R., & Covin, J. G. (2006). Effects of firm R&D investment and environment on acquisition likelihood. *Journal of Management Studies, 43*(1), 1513-1535.

Howe, K. (1988). Against the quantitative-qualitative incompatibility thesis or, dogmas die hard. *Educational Researcher*, 17, 10-16.

IES- Institute of Educational Sciences. (2006). *Post-Secondary Education Facilities Inventory and classification manual* (6th Ed.). Washington: National Centre for Education Statistics.

International Labour Organisation [ILO] (2014). *Technical and Vocational Education and Training (TVET) Reform in Bangladesh* (Final Evaluation Summary). Paris: ILO.

Ithuta K.J. (2014). *Determinants of Internal Efficiency in Public Primary Schools in Tigania East District, Kenya.* MED Project, University of Nairobi, Kenya.

Jan, M. & Umar, F. (2012). *Mobilising human resources for the public sector goals and objectives accomplishment in Balcochistan, Pakistan.* Journal of Managerial Sciences, 111(1), 73 – 85.

Johnson, R., & Christensen, L. (2004). *Educational research: Quantitative, qualitative, and mixed approaches*. Boston, MA: Allyn and Bacon.

Johnson, R., & Onwuegbuzie, A. (2004). Mixed methods research: A research paradigm whose time has come. *Educational researcher*, *33*, 14-26.

Jongbloed, (2003). Regulation and competition in higher education. In P. Teixeira, B. Jongbloed, D. Dill and A. Amaral (eds), *Markets in Higher Education: Rhetoric or Reality,* 87–111. Kluwer Academic Publishers. Printed in the Netherlands.

Joute, Z. (2014). *Resource Mobilization for College Library: AJob of Library Professional Excellence*. 9th Convention Planner.

Kamau, S. M. (2013). Challenges affecting the technical and vocational education training youth polytechnics in Kiambu County. *International Journal of Social Sciences and Entrepreneurship, 1* (5), 679-687.

Kamunge (1988). *The Presidential working party on education and manpower for the next decade and beyond*. Nairobi: Government Printer.

Kasim, R. S. R. (2011). Malaysian Higher Education Institutions: Shaping an Entrepreneurial Agenda. *The International Journal of Information and Education Technology*. http://dx.doi.org/10.7763/IJIET.2011.V1.27.

Kayanda, S.D. (2015). *Examining Factors Affecting the Internal Efficiency Of Education In Community Secondary Schools In Tanzania: A Case Of Kisarawe District.* MED Dissertation, the Open University of Tanzania.

Kerre, B.W. (1996). *'Education in Africa: A synthesis of case studies', paper presented at the development of Technical and Vocational Education in Africa*, Dakar-Breda.

Khamala, N. R. (2012). *The impact of free primary education of internal efficiency in Londiani Division, Kipkelion District, Kenya.* Master of Education Research project, Kenyatta University.

Kibet, S.K., Zhimin, L. & Chelagat R. (2013). A Study on the Sources of Resources and Capacity Building in Resource Mobilization: Case of Private Chartered Universities in Nakuru Town, Kenya. *Journal of International Education and Leadership, 3* (2), 1-18.

Kitui, B.M. (2015). *Factors Influencing Access to Technical and Vocational Education and Training in Bungoma East Sub-County, Kenya*. MEd in Economics, University of Nairobi, Kenya.

Konayuma, G.S. (2008). *Policy Framework: Major Policy Issues in TVET in Africa.* Livingstone, Zambia: Gakon Publications.

Lerotholi, L. M. (2001). *Tuition fees in primary and secondary education in Lesotho: The levels and implications for access, equity and efficiency*. Paris: IIEP.

Maduewesi, B. U. & Onyeachu, J.A. E. (2017). *The Process of Mobilization and Utilization of Resources for Effective Implementation of Primary Education Curriculum in Nigeria.* Academic Discourse: An International Journal. Retrieved online on 13-06-2018 from https://www.globalacademicgroup.com

Magala, S. (2010).*Education resources and the internal efficiency of secondary schools in Rubaga Division, Kampala District.* M.Ed Thesis, Kampala: Makerere University.

Malia, J.M. (2015). *Factors Influencing Principals' Mobilization of Resources In Public Secondary Schools In Migwani Sub-County, Kitui County, Kenya*. MA Project, University of Nairobi, Kenya.

Mamo, F. G. (2015). *Revenue Generation Strategies in Sub-Saharan African Universities.* Paper Presented at Center for Higher Education Policy Studies (CHEPS) School of Management and Governance, Universiteit Twente.

Mankiw, N. G., Weinzierl, M., & Yagan, D. (2009). *Optimal taxation in theory and practice: National Bureau of Economic Research*. http://dx.doi.org/10.3386/w15071

Marope, P.T.M., Chakroun, B. & Holmes, K.P. (2015). *Unleashing the Potential: Transforming Technical and Vocational Education and Training*. Paris: UNESCO.

McMillan, J.H. & Schumacher, M. (2010). *Research in education.* New Jersey, Upper Saddle River: Pearson Education.

Mertens, D. (2005). *Research methods in education and psychology: Integrating diversity with quantitative and qualitative approaches* (2nd Ed.). Thousand Oaks, CA: Sage.

Mihai, B.R. (2011). Parental involvement in schools. A study of resources, mobilization, and inherent inequality. *Journal of Comparative Research in Anthropology and Sociology, 2* (2), 103 – 115.

Mkpa, M.A. (2005). Challenges of implementing the school curriculum in Nigeria. *Nigerian Journal of Curriculum Studies,* 12(1), 9 - 21.

MOE (2013). *Enrollment and Internal Efficiency*. Chapter 2, 77 – 115. Tanzania Education Sector Analysis.

Mohaffyza M. M., Sukri, M. S. & Ahmad, A. (2015). The Need in Training and Retraining For TVET Teachers in Malaysia. *Journal of Technical Education and Training,* 51-57.

Mugenda, O.M. & Mugenda, A.G. (2003). *Research Methods: Qualitative and Quantitative Approaches.* Nairobi: ACTS Press.

Mugenda, A.G. (2008). *Social Science Research: Theory and Principles.* Nairobi: Applied Research and Training Services (ARTS) Press.

Mureithi, G. (2009). *Technical, Vocational Education and Training in Africa: Has it Lost its Significance?* Eldoret: Moi University Press.

Muthima, P. W. (2015). *Private Rates of Return to Investment in Technical Education: A Case of Manufacturing Industries in Thika, Kiambu County, Kenya*. D. Phil Thesis, Kenyatta University, Kenya.

Ncube, N.J. (2004). *Managing the Quality of Education in Zimbabwe: The Internal Efficiency of Rural Day Schools*. PhD Thesis, University of Zimbabwe, Zimbabwe.

Ndjebakal, E. S. & Genevarius, N.J.I. (2017). The Effects of School Facilities on Internal Efficiency: The Case of Selected Bilingual Secondary Schools in Yaounde Centre. *World Journal of Research and Review, 4*(4), 41-48.

Ndolo, M.A., Simatwa, M.W. E. & Ayodo, T.M.O. (2011).Effects of school based investments on access and financing of secondary education in Homa-bay District, Kenya. *Educational Research, 2*(12), 1821-1830.

Nwaokeonu, L. O. (2014). *Systematic Financial Resources Allocation Processes: A Model for Critical Resources Mobilization and Deployment for Nigerian Universities*. Doctor of Business Administration Thesis, Aston University.

Ngunzo U. (2011). *The Impact of School Infrastructure on Access to Secondary Education in Kisumu Municipality;* Unpublished Masters Project. Maseno University; Kisumu.

Nyanya O. T. (2015). *Influence of School Based Factors on Internal Efficiency in Provision of Secondary Education in Seme, Kisumu County, Kenya.* MED Project, University of Nairobi.

Nyerere J (2009). *Technical and Vocational Education and Training (TVET);* Sector mapping in Kenya.

Obadara, O. & Alaka, A. (2010). "Influence of Resources Allocation in Education on Secondary School Students' Outcome in Nigeria." *Academic Leadership: The /Online Journal*: 8(4), Article 38. Retrieved on 16/07/2019 from https://scholars.fhsu.edu/alj/vol8/iss4/38

Odundo, P.A. & Rambo, C.M. (2013). Effect of School-Based Income Generating Activities on the Financial Performance of Public Secondary Schools in Kenya. *Chinese Business Review, 12* (6), 375-394.

Ogula, P.A. (2009). *A Handbook on Educational Research* (2nd Ed.). Port Victoria: New Kemit Publishers.

Okumbe, J. (1998). *Educational management. Theory and practice.* University of Nairobi: Nairobi.

Olabiyi, O. S., Adigun, E. O. & Adenle, S.O. (2008). Assessment of the Adequacy of Training Facilities Used for Vocational and Technical Education in Colleges of Education in South West Nigeria. *African Journal for the Study of Educational Issues, 4* (3), 44-52.

Oliver, G., Henry, M., Newman-Rose, C. & Streete, T. (2008). Strategies for Income Generation at the University of Technology, Jamaica. *Latin American and Caribbean Journal of Engineering Education, 2*(1), 1-6.

Oliver, G., Henry, M., Newman-Rose, C., & Streete, T. (2013). Strategies for Income Generation at the University of Technology, Jamaica. *Latin American and Caribbean Journal of Engineering Education, 2*(1).

Olu, F. A., Omiyale, G. T. & Adebola, Y. A. (2015). Towards Improved Funding of Tertiary Institutions in Nigeria. *Asian Journal of Humanities and Social Sciences (AJHSS), 3* (2), 83-90.

Omotayo, D. M., Ihebereme, C. & Maduewesi, B. (2008). Management of Universal Basic Education Scheme (U.B.E) for Qualitative Education in Nigeria. *Education, 129*(2), 308-314.

Onani, P.O. (2014). *Relationship between Physical Resources and Internal Efficiency of Public Secondary Schools in Tana River County, Kenya*. MED Project, Kenyatta University, Kenya.

Onwuegbuzie, A.J. (2000). *Positivists, post-positivists, post-structuralists, and post-modernists: Why can't we all g*et *along? Towards a framework for unifying research paradigms.* Paper presented at the annual meeting of the Association for the Advancement of Educational Research, Ponte Vedra, Florida.

Onyara, B. N. (2013). *School Based Factors Influencing Student's Academic Performance at Kenya Certificate of Secondary Education in Teso South District.* MA Project, University of Nairobi, Kenya.

Otidi, E. (2013). *Determinants of the Amount of Fees Charged To Students in Secondary Schools: A Case of Public Secondary Schools in Bungoma South District.* MBA Project, University of Nairobi.

Owoeye, J. S. & Yara, P. O. (2011). School Facilities and Academic Achievement of Secondary School Agricultural Science in Ekiti State, Nigeria. *Journal of Asian Social Science, 7*(7), 13 – 21.

Oxtoby, R. (1997). Barriers to the provision of cost-effective technical education in Bangladesh. *International Journal of Educational Development* 17(1), 91-99.

Oyesola, G. O (2007). *Planning educational building and facilities. Alphabetic building and facilities*. Alphabetic list of Journal articles. Ilorin: http: www.ijeunilorin.net.

Patton, M. (2002). *Qualitative Research and Evaluation Method*s (3rd Ed.). Thousand Oaks, CA: Sage.

Patz, R., & Goetz, K. H. (2017). *Resource mobilization strategies and administrative structures in the United Nations system*. Paper Presented at International Conference on Public Policy (ICPP), Singapore, 28-30 June 2017.

Pfeffer, G. & G. R. Salancik. (1978). *The external control of organisations: A resource dependence perspective.* New York: Harper and Row.

Pfeffer, J. (1987). A resource dependence perspective on inter-organizational relations. In M. S. Mizruchi, & M. Schwartz (Eds.), *Inter-corporate relations: The structural analysis of business* (pp. 22-55). Cambridge, UK: Cambridge University Press.

Pitan, O.S. (2012). Analysis of Internal Efficiency in the Utilization of Human Resources in Selected Secondary Schools of Oyo State, Nigeria. *Journal of Emerging Trends in Educational Research and Policy Studies, 3*(5), 748-752.

Psacharapoulos, G. & Patrinos, H.A. (2004). "Returns to investment in education: a further update," *Education Economics, Taylor & Francis Journals, 12* (2), 111-134.

Rahman, A.A., Kim, N. S. & Pei, N.T. (2015). Income Generation Activities among Academic Staffs at Malaysian Public Universities. *International Education Studies, 8* (6), 194-203.

Republic of Kenya. (2005). *Kenya education sector support programme 2005-2010: Delivery of quality education and training to all Kenyans*. Nairobi: Government Printer.

Republic Of Kenya (2012). *Technical and Vocational Education and Training (TVET) Policy.* Nairobi: Ministry of Higher Education, Science and Technology.

Republic of Kenya (2014). *Basic Education Statistical Booklet*. Nairobi: Government Printers.

Republic of Kenya (2016). *2017/18 – 2019/20: Education Sector Report*. Nairobi: Government Press.

Republic of Kenya. (2007). *Kenya Vision 2030*. Government Press: Nairobi.

Rensnik, D. B. (2011). *What is ethic in research & why is it important?* Retrieved on 28th Nov, 2017 from http://www.niehs.nih.gov/research/resources/bioethics/whatis/

Rodrigues, A., Wainaina, G. & Mwangi, E.W. (2009). *Income Generation at Public Universities: A Case of the University Of Nairobi Enterprises and Services Limited.* Part 4: Sustainable Information and Communication Technology Development.

Rodrigues, A., Wainaina, G., & Mwangi, E. (2006). Income Generation at Public Universities: A Case of the University Of Nairobi Enterprises and Services Limited. *Measuring Computing Research Excellence and Vitality*, 89(4), 15-23.

Rufai, A., Umar, I.Y & Idris, A.M. (2013). Facilities Provision and Maintenance: Necessity for Effective Teaching and Learning in Technical Vocational Education. *IOSR Journal of Research & Method in Education, 3* (1), 28-32.

Sang, A. K., Muthaa, G. M. & Mbugua, Z. K. (2012). Challenges Facing Technical Training in Kenya. *Creative Education, 3* (1), 109-113.

Sarantakos, S. (1998). *Social Research* (2nd Ed.). Melbourne: McMillan Education, Australia.

Sime, B.G. (2014). Sustaining Training Quality in Technical and Vocational Colleges of Oromia Regional State, Ethiopia. *Mediterranean Journal of Social Sciences, 5* (10), 342-347.

Simiyu, J.W. (2009). *Revitalising a Technical Training Institute in Kenya: A Case Study of Kaiboi Technical Training, Eldoret, Kenya*. UNESCO-UNEVOC Case Studies of TVET in Selected Countries.

Siswanto, E., Djumahir, Ahmad-Sonhadji, K. H., & Idrus, M. S. (2013). Good University Income Generating Governance in Indonesia: Agency Theory Perspective. *International Journal of Learning & Development 3*(1), 67-78. http://dx.doi.org/10.5296/ijld.v3i1.3134

Spottl, G. (2013). Permeability between VET and higher education: A way of human resource development. *European Journal of Training and Development*, *37*(5), 454 – 471.

Syacumpi, M. (2012). *Resource Mobilisation and Fundraising in Basic Schools: A Case Study of Copper belt and North-Western Province*. Working Paper No. 7, Zambia Institute for Policy Analysis & Research.

Tashakkori, A., & Teddlie, C. (1998). *Mixed methodology: Combining qualitative and quantitative approaches.* Thousand Oaks, London: Sage.

Tesfay, M.H. (2015). Assessment on the Internal Efficiency and Effectiveness of Government Secondary Schools in Welqait Woreda, Western Tigray, Ethiopia. *International Journal of Current Research, 7* (01), 12191 – 12205.

Uchendu, C. C., Ekanem, E. E. & Jonah, S. T. (2013). Resource Maintenance For The Provision Of Educational Services In Public And Private Secondary Schools In Rivers State, Nigeria. *European Journal of Business and Social Sciences,* 2 (1), 15-23.

Uko, E. S & Ayuk, A. A (2014). *The malaise that maligns the attainment of educational goals by the African child. The Nigerian experience*. International Journal of education and research, 103. Carrington Street. Adelaide, Australia.

Uko, E.S. (2015). Principalship and Effective Management of Facilities in Secondary Schools in Cross River State, Nigeria. *International Journal of Academic Research and Reflection, 3*(1), 64 – 76.

UN, (2015). *Transforming our world: The 2030 agenda for sustainable development*, 2nd August 2015, United Nations, New York. Retrieved on 13-06-2018 from https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf

UNESCO (2011). *Finding solutions for sustainable financing of tertiary education in small states.* IIEP Policy Brief. Tertiary education in small states No 2. Paris: International Institute for Educational Planning.

United Nations Educational, Scientific and Cultural Organization (UNESCO). *Guidelines for TVET Policy Review*. Paris: UNESCO.

UNESCO (2003). *EFA Global Monitoring Report 2003/2004: Gender and Education, for All, the Leap to Equality*, Paris: UNESCO.

Wangenge-Ouma, G. (2008). "Higher education marketisation and its discontents: The case of quality in Kenya." *Higher Education* 56, 457–471.

Wanja, M. N. (2015). *Influence of Government Interventions on Students' Enrolment in Youth Polytechnics in Embu County, Kenya.* MAPPM Project, University of Nairobi.

Waweru, C. & Muturi, W. (2015). Effects of Alternative Sources of Financing Education on Provision of Teaching and Learning Resources in Public Secondary Schools: A Case Study of Trans-Nzoia East Sub-County, Trans-Nzoia County, Kenya. *International Journal of Recent Research in Commerce Economics and Management (IJRRCEM), 2* (4), 19-32.

Wayua, A. W. (2015). *Mobilization and Allocation of Teaching and Learning Resources among Subjects in Public Secondary Schools in Makueni County, Kenya*. MED Project, Kenyatta University, Kenya.

Woldu, P.F. (2017). School Principal's Role in Facilitating Change in Teaching-Learning Process: Teachers' Attitude. A Case Study on Five Junior Schools in Asmara, Eritrea. *Journal of Education and Practice, 8*(6), 134 – 142.

World Bank (2010). *Financing Higher Education in Africa. The International Bank for Reconstruction and Development* / The World Bank. 1818 H Street NW Washington DC 20433.

World Bank (2013). *Youth Unemployment and Vocational Training*. Background Paper for the World Development Report 2013. Washington D.C.: World Bank.

Yang K. (2014). *Factors affecting internal efficiency of primary schools in Nuer zone of Gambella regional State*. Masters Thesis, Jimma University, Ethiopia.

Yemini, M., Addi-Raccah, A. & Katarivas, K. (2014). I Have a Dream: School Principals as Entrepreneurs. *Educational Management Administration & Leadership*, 1–15.

Yin, R. (2003). *Case study research: Design and methods* (3rd Ed.). Thousand Oaks, CA: Sage.

Yunusa, U. D. (2016). Educational Resources: An Integral Component for Effective School Administration in Nigeria. *Research on Humanities and Social Sciences, 6*(13), 27 – 37.

APPENDICES

Appendix I: Research Introductory Letter

RE: REQUEST TO PARTICIPATE IN RESEARCH

Dear respondent,

I am a student at University of Eldoret undertaking Doctorate degree in Educational Planning. In order to fulfil my course requirements, I am supposed to conduct a research related to my field of study. Therefore, the purpose of this questionnaire is to seek your opinion on "Transformative Resource Mobilisation and Internal efficiency of public TTIs in the County of Bungoma, Kenya". I am therefore requesting you to answer all questions presented in this paper. For close-ended questions, you are supposed to tick (√) in the options provided to you and write your write your opinion/views in the open spaces provided.

Remember that you are not supposed to write your name or name of your school in this questionnaire booklet. I, therefore guarantee that the responses you will give will be treated with utmost confidentiality considering that this is an academic work.

Thanks in advance for your co-operation.

Maximilla Wakoli

PhD Student

University of Eldoret

Appendix II: Questionnaires for Tutors

Instructions:
You are kindly requested to tick [√] the correct alternative and fill in the spaces where applicable.

Section A: Background Information
Fill and tick honestly where appropriate.
1. What is your gender?
Male [ ] Female [ ]
2. What is your teaching experience in TVET institutions?
1 – 5 years [ ] 6 – 10 years [ ] 11 – 15 years [ ]
16 – 20 years [ ] 21 – 25 years [ ] 25 years [ ]
3. What is the highest level of your academic qualifications?
Diploma [ ] Degree [ ] Postgraduate Diploma [ ] Masters [ ]
Other ……..

Definition
Resource mobilization is the process by which an organization acquires and manages the financial, human and logistical resources it needs to fulfil its mission. Resource mobilization is often wrongly considered as fundraising. In fact, fundraising is a component of the resource mobilization refers to a variety of resources. Therefore, resource mobilization involves the development of capacity to "steal the donors' heart" by winning them over to the cause of the organization that is the TTI.

Section B: Institutional staffing capacity and internal efficiency TTIs
4. Indicate the degree to which institutional staffing capacity is done to improve internal efficiency and quality Technical education provision

	Practice	**Never**	**Rarely**	**Sometimes**	**Often**	**Always**
a	Our institution ensures that qualified staff are recruited to ensure quality TVET education					
b	Our institution invests in continuous professional development for all staff to increase their competencies towards quality service delivery					
c	The institution has ensured that there is adequate human resource to reduce workload					
d	There is good scheme of service was improved from time to time for all members staff in this institution to motivate and retain					

	them					
e	Our institution partners with other institution in exchange programmes to improve standards of teaching					
f	The institution partners with industry to bridge the gap between industry and research among our graduates					
g	The resource mobilisation is a teamwork process to ensure attainment of institutional goals					
h	All staff members are better remunerated to increase their productivity					
i	Our institution offers scholarships for staff wishing to go for further studies to improve their competitiveness					
j	Our institution hires part-time staff due to shortage of full time staff to address inefficiency					

5. Which other strategies are used to mobilise human resource for improving efficiency of Technical education in your institution?

……
……
……..

Section C: Physical Resource Mobilisation and Internal Efficiency of TTIs

6. Indicate the degree to which physical resource mobilisation is conducted in your institution to improve internal efficiency and quality Technical education provision

	Practice	**Never**	**Rarely**	**Sometimes**	**Often**	**Always**
a	Our institution ensures that physical facilities are utilised well to minimise wastage					
b	Our institution ensures that physical facilities are adequate for use by staff and students					
c	Physical facilities are well maintained and up to the required standards to ensure effective learning					
d	All stakeholders are involved in planning and construction of institutional facilities to promote institution wide development					
	Institutional facilities are leased					

e	for use during holidays to generate extra income for programme expansion					
f	The institution seeks donor support when developing new infrastructural facilities to increase student enrolment					
g	There is no wastage in utilisation of physical facilities and IGAs to improve efficiency					
h	The institution leases extra land (farming purposes) to generate income for smooth running of programmes					
i	The institution seeks grants from government to aid in infrastructure development and increase enrolment					
j	Sale of institution products enable it to meet budget deficits associated with inadequate support for fees and government grants					

7. Which other strategies are used to mobilise physical resource for improving efficiency of Technical education in your institution?

……
……
……..

Section D: Instructional Resource Mobilisation and Internal Efficiency of TTIs

8. Indicate the degree to which instructional resource mobilisation is conducted in your institution to improve internal efficiency and quality Technical education provision

	Practice	**Never**	**Rarely**	**Sometimes**	**Often**	**Always**
a	Our institution procures modern instructional resources (ICT) to produce all rounded graduates					
b	Tutors always use modern instructional resources teaching and learning to improve classroom experience					
c	Our institution mobilises additional instructional resources to ensure provision of quality education					
	Our library (ies) are stocked with					

d	enough and relevant books, journals and articles to promote research					
e	Institutional library (ies) are able to accommodate large number of students to improve their performance					
f	There exist laboratories that allow students to conduct various practicals which increases their knowledge & skills					
g	There is a system for restocking additional resources to cover for shortfall or outdated instructional resources					
h	The institution ensures that school budget items are prioritised first. e.g. purchase of teaching materials first, stationery, furniture during opening of school term quality TVET education					
i	Our institution procures modern instructional resources (ICT) to produce all rounded graduates					
j	Tutors always use modern instructional resources teaching and learning to improve classroom experience					

9. Which other strategies are used to mobilise instructional resource for improving efficiency of Technical education in your institution?

……
……
……..

Section E: Relationship between Resource Mobilisation and Internal Efficiency

10. Indicate the extent to which you agree or disagree with the following statement on the relationship between resource mobilisation and internal efficiency in your institution.

	Practice	**Strongly Disagree**	**Disagree**	**Unsure**	**Agree**	**Strongly Agree**
a	There is a proper criteria for financial resource					

	distribution in our TTI to improve financial management					
b	Expenditure is properly accounted for and is done according to priorities set to reduce wastage					
c	Our institution holds various fundraising functions to promote institution wide development					
e	Our institutional management has the capacity to mobilise resources to attract more students					
f	All stakeholders are involved in resource mobilisation activities to ensure objectives are realised					
g	Resource mobilisation is an ongoing exercise in our institution as it increases internal efficiency					

11. What is your view on the influence of transformative resource mobilisation towards improving efficiency?

……
……
……..

Section F: Internal Efficiency in institutions

12. What are your perceptions on the rating on the internal efficiency of your institutions in terms of the following indicators?

	Efficiency area	**Very high**	**High**	**Moderate**	**Low**	**Very low**
a	Students completion rate					
b	Success of your students in the job market (industry)					
c	Enrolment trend					
d	Examinations					
e	Flow of the students in the system					

f	Performance at the end					
g	Public perceptions on the quality of your graduates					
h	Prudential financial management					
i	Management of institution resources					
j	Institution-wide development					

13. What are your views with regard to institutions resource mobilisation for improvement of efficiency in your college?

……

……

……..

The end

Thank You

Appendix III: Interview Schedule

Dear respondent

I am Maximilla Wakoli, a Doctoral student in Educational Planning from University of Eldoret. I am carrying out a research on "Resource Mobilisation and its Influence on Internal efficiency of public TTIs in the County of Bungoma, Kenya". I am going to ask you questions on the above mentioned topic. Please note that the information you provide will be treated with utmost confidentiality and will be only be used for the purpose of these study. Please feel free and respond appropriately. To begin with:

The following questions will guide us in this interview.

Questions:

1. How long have you have stayed in this institution? (Your experiences) ……
……
…….

2. How long have you been in charge of institutional administration? (Even if not in your current institution? …….
…….

3. What is the level of support that you receive when implementing decisions in your institution (from students, tutors, board members and other non-teaching staff)……
……
……
…….

4. What have you achieved so far in institutionalising staffing capacity to improve the efficiency of your institution? (To ask in terms of hiring of staff, training, development among others issues)
……...
……
……
…….
……
……
…….

5. What have you achieved so far in mobilising financial resources to improve the efficiency of your institution? (To probe in terms of: budgetary controls, IGAs, financial control, new programmes, and school fees among others)

……

……

……

……

……

……

6. What have you achieved so far in mobilising physical resources to improve the efficiency of your institution? (To ask on the development and improvement of new and existing infrastructure, expansion, maintenance, leasing)

……

……

……

……

……

……

7. What have you achieved so far in mobilising instructional resources to improve the efficiency of your institution?

……

……

……

……

……

……

8. What is your view towards the relationship between the above mentioned resources; human, financial, physical and instructional resources towards improving internal efficiency of your institution? (To comment separately)

……

……

……

……

……

……

9. What are the challenges that you encounter during mobilisation of resources to improve Internal Efficiency of TTIs in your institution?

……

……

……

……

10. What do you think needs to be done to improve resource mobilisation on Internal Efficiency of TTIs institution?

……

……

……

……

The end

Thank you for your participation

Appendix IV: Institutional Observation Checklist

(a) Matili Technical Training Institute

Institution Code: 6	Locations**:**	Kimilili Sub County
Number of Tutors (TSC):	**Male:** 25	**Female:** 17
Number of Tutors (BOM)	**Male:** 6	**Female:** 11
Number of Support Staff	**Male:** 6	**Female:** 5

	Department	Teaching Staff	No. of Students
1	Electrical	10	389
2	Automotive	11	372
3	Business	7	225
4	Building and Construction	7	189
5	Civil Engineering	111	92
6	Human Resource	2	109
7	Sales and Marketing	2	71
8	Supply Chain Management	1	41
9	Social Work and Community Development	2	54
10	Computer Studies	2	69

Flow rate of students from 2014 to 2016

Year	**Year 1**	**Year 2**	**Year 3**	**Graduation**
2014	1751	1720	1625	1103
2015	1708	1670	1648	1250
2016	1820	1650	1540	1125

Repeaters from 2014 – 2016

Year	**Year 1**	**Year 2**	**Year 3**
2014	92	71	80
2015	19	62	82
2016	75	75	102

Adequacy and Availability of Facilities

Facility / resource	Available		Unavailable	Condition / status
	Adequate	Inadequate		
Lecture Halls				Good
Computer laboratory				
Science laboratory				
Chemistry				
Other laboratory				
Workshops				Good
ICT Infrastructure				Low
Internet / wifi				Fair
Website				
Automated register / clocking system				
School bus				Poor
Other vehicles e.g. vans, tractor				Poor
Libraries				
Books in the library				
Teaching staff houses				
Non-teaching staff houses				
Boys dormitories				
Girls dormitories				
School fence				
Playgrounds - Football				
Water				
Toilets				
Latrines				
Dumping pit				
Disabled access environment				
Generator				
Solar panels				
Income generating projects				
1 Electrical services				
2 Garment making				
Teaching staff offices				

(b) Kisiwa Technical Training Institute

Institution Code: 61210	Locations**:**	Kabuchai Sub County
Number of Tutors (TSC):	**Male:** 15	**Female:** 13
Number of Tutors (BOM)	**Male:** 12	**Female:** 9
Number of Support Staff	**Male:** 8	**Female:** 21

	Department	**Teaching Staff**	**Number of Students**
1	School Lab	10	102
2	Business Studies	8	309
3	ICT	5	59
4	Electrical and Electronics	6	148
5	Mechanical Engineering	7	110
6	Building & Construction	5	90
7	Institutional Management	5	303
8	Liberal	3	101
9	Business Administration	5	71

Flow rate of students from 2014 to 2016

Year	**Year 1**	**Year 2**	**Year 3**	**Graduation**
2014	1568	1528	1512	1192
2015	1420	1348	1105	1009
2016	1602	1400	1284	1213

Repeaters from 2014 – 2016

Year	**Year 1**	**Year 2**	**Year 3**
2014	50	102	49
2015	101	107	50
2016	78	79	68

Adequacy and Availability of Facilities

Facility / resource	Available		Unavailable	Condition / status
	Adequate	Inadequate		
Lecture Halls				Need more
Computer laboratory				Spacious one needed
Science laboratory				Small
Chemistry				Small
Workshop				Small
ICT Infrastructure				Need more ICT
Internet / wifi				Adequate
Website				Adequate
Automated register / clocking system				Lacking
School bus				Need atleast 2 more
Other vehicles e.g vans, tractor				One more vehicle needed
Libraries				Need more books
Books in the library				Small collection
Teaching staff houses				N/A
Non-teaching staff houses				N/A
Boys dormitories				Adequate
Girls dormitories				Adequate
School fence				Secure
Playgrounds 1 Volleybal 2 Netball 3 Soccer				Need more playgrounds
Water Sanitation facility Toilets Latrines Dumping pit				Need more
Disabled access environment				Accessible
Generator				
Solar panels				In progress
Income generating projects 1 Bus 2 Farm outputs				Need for more income generating projects
Teaching staff offices				Need more rooms

(c) Sang'alo Institute of Science and Technology

Institution Code: 6	Locations**:**	Bungoma South Sub County
Number of Tutors (TSC):	**Male:** 52	**Female:** 25
Number of Tutors (BOM)	**Male:** 10	**Female:** 7
Number of Support Staff	**Male:** 37	**Female:** 28

	Department	**Teaching Staff**	**Number of Students**
1	Agriculture	28	1200
2	Business Management	12	345
3	Applied Science	7	250
4	Automotive Engineering	8	137
5	Building Technology	9	190
6	Clothing and Textile	07	205
7	Hospitality Management	11	270
8	Liberal Studies	10	220
9	Civil Engineering	7	81
10	Quantity Survey	5	22

Flow rate of students from 2014 to 2016

Year	Year 1	Year 2	Year 3	Graduation
2014	3392	3090	3006	2500
2015	3420	3201	3002	2614
2016	350	3302	2920	2572

Repeaters from 2014 – 2016

Year	Year 1	Year 2	Year 3
2014	102	120	100
2015	15	225	92
2016	110	105	116

Adequacy and Availability of Facilities

Facility / resource	Available		Unavailable	Condition / status
	Adequate	Inadequate		
Lecture Halls				Fair
Computer laboratory				Fair
Science laboratory				Good
Chemistry laboratory				Good
Other laboratory				
Workshops				Fair
ICT Infrastructure				Not enough
Internet / wifi				Poor
Website				Poor
Automated register / clocking system				
School bus				Good
Other vehicles e.g vans, tractor				Good
Libraries				
Books in the library				
Teaching staff houses				
Non-teaching staff houses				
Boys dormitories				
Girls dormitories				
School fence				
Playgrounds				
Water				
Sanitation facility				
Toilets				
Latrines				
Dumping pit				
Disabled access environment				
Generator				
Solar panels				
Income generating projects				
1 Dairy production				
2 Bakery				
3 Tractor services				
4 Yoghurt processing				
5 Crop farming				
Teaching staff offices				
Other facilities found				

(d) Musakasa Technical Training Institute

Institution Code:	Locations**:**	Sirisia Sub County
Number of Tutors (TSC):	**Male:** 21	**Female:** 8
Number of Tutors (BOM)	**Male:** 5	**Female:** 6
Number of Support Staff	**Male:** 3	**Female:** 3

	Department	**Teaching Staff**	**Number of Students**
1	Agriculture	-	-
2	Business Studies	10	140
3	Applied Science	5	107
4	Automotive Engineering	-	-
5	Building Technology	7	135
6	Clothing and Textile	9	207
7	Food and Beverages	5	21
8	Liberal studies	4	23

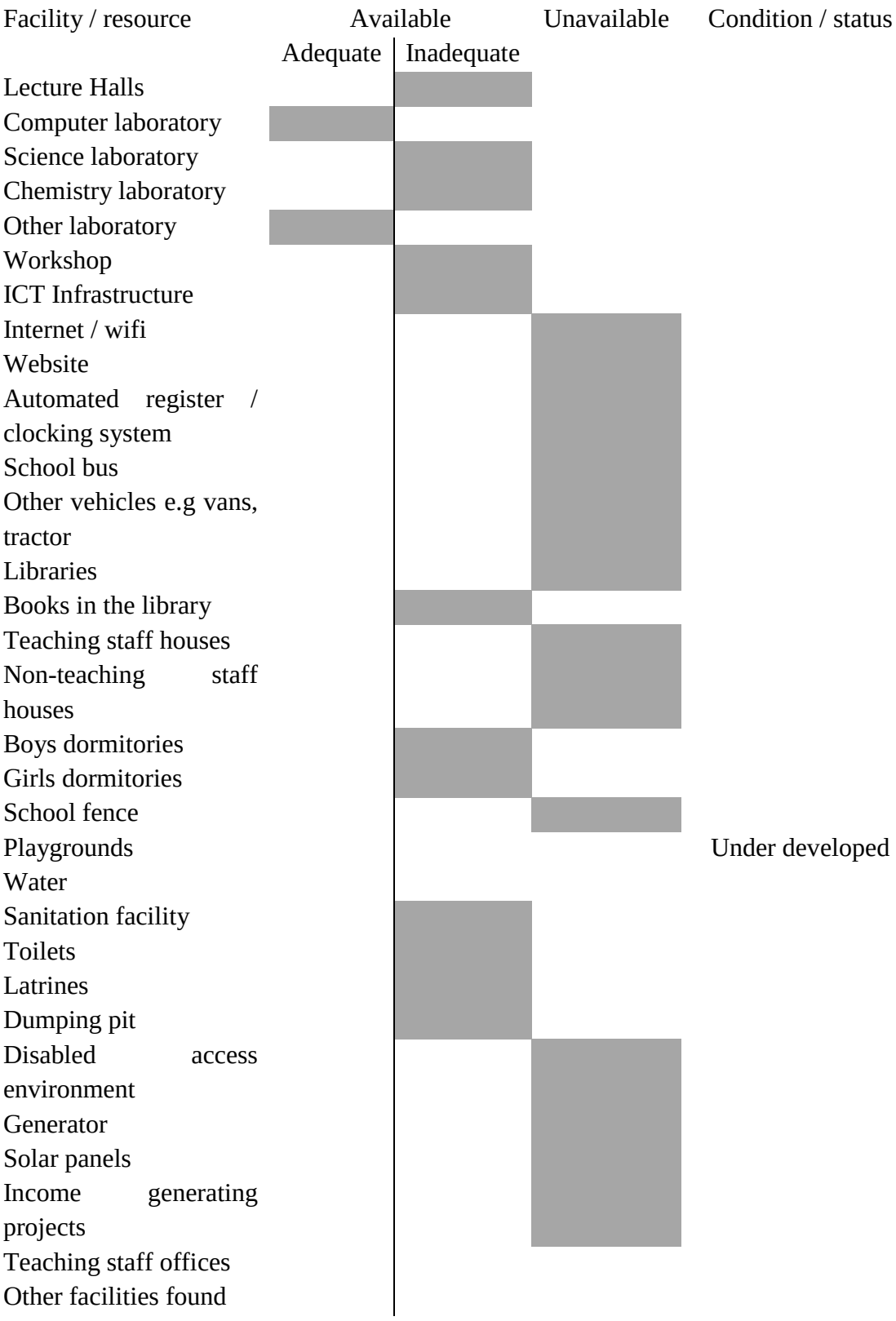
Flow rate of students from 2014 to 2016

Year	Year 1	Year 2	Year 3	Graduation
2014	713	707	691	520
2015	929	673	614	517
2016	742	692	633	517

Repeaters from 2014 – 2016

Year	Year 1	Year 2	Year 3
2014	22	45	21
2015	52	61	65
2016	13	25	30

Adequacy and Availability of Facilities



Appendix V: Research Permits

University of Eldoret

P.O. Box 1125-30100, ELDORET, Kenya
Tel: 053-2063111 Ext. 242
Fax No. 20-2141257

Our Ref: UOE/SOE/EMP/13

23rd August 2017

The Executive Secretary,
National Council for Science, Technology & Innovation
8th .9th Floor, Utalii House
Off Uhuru Highway, Nairobi
P.O. Box 30623-00100,
NAIROBI, KENYA.

Dear Sir/Madam,

RE: RESEARCH PERMIT FOR- MAXIMILLA WAKOLI
REG NO EDU/PHD/EP/021/14

This is to confirm that the above named Post Graduate Student has completed Course work of her Doctorate Degree in Educational Planning.

She is currently preparing for her field research work on her thesis entitled: ***"Transformative Resource Mobilzation and Internal Efficiency of Public Technical Training Institutions in Bungoma County, Kenya."*** The proposal has been approved by this instutition

Any assistance accorded her to facilitate successful conduct of the research and the publication will be highly appreciated.

Yours faithfully,

DR. ALICE LIMO
***HEAD*, DEPARTMENT OF FOUNDATIONS OF EDUCATION/EDUCATIONAL MANAGEMENT**

Copy to: Permanent Secretary,
Ministry of Higher Education, Science & Technology,
P.O. Box 9583-00200,
NAIROBI

THIS IS TO CERTIFY THAT:
MS. MAXIMILLA N WAKOLI
of UNIVERSITY OF ELDORET, 158-50200 BUNGOMA,has been permitted to conduct research in *Bungoma County*

on the topic: *TRANSFORMATIVE RESOURCE MOBILISATION AND INTERNAL EFFICIENCY OF PUBLIC TECHNICAL TRAINING INSTITUTIONS IN BUNGOMA COUNTY, KENYA*

for the period ending:
12th September,2018

Permit No : NACOSTI/P/17/93135/19051
Date Of Issue : 12th September,2017
Fee Recieved :Ksh 2000

.....
Applicant's Signature

.....
Director General
National Commission for Science, Technology & Innovation

CONDITIONS

1. The License is valid for the proposed research, research site specified period.
2. Both the Licence and any rights thereunder are non-transferable.
3. Upon request of the Commission, the Licensee shall submit a progress report.
4. The Licensee shall report to the County Director of Education and County Governor in the area of research before commencement of the research.
5. Excavation, filming and collection of specimens are subject to further permissions from relevant Government agencies.
6. This Licence does not give authority to transfer research materials.
7. The Licensee shall submit two (2) hard copies and upload a soft copy of their final report.
8. The Commission reserves the right to modify the conditions of this Licence including its cancellation without prior notice.

REPUBLIC OF KENYA

NACOSTI

National Commission for Science, Technology and Innovation

RESEARCH CLEARANCE PERMIT

Serial No.A 15736

CONDITIONS: see back page

NATIONAL COMMISSION FORSCIENCE, TECHNOLOGY ANDINNOVATION

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

9th Floor, Utalii House
Uhuru Highway
P.O. Box 30623-00100
NAIROBI-KENYA

Ref. No. **NACOSTI/P/17/93135/19051**

Date: **12th September, 2017**

Maximilla N Wakoli
University of Eldoret
P.O. Box 1125-30100
ELDORET.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Transformative resource mobilization and internal efficiency of public technical training institutions in Bungoma County, Kenya,"*** I am pleased to inform you that you have been authorized to undertake research in **Bungoma County** for the period ending **12th September, 2018.**

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

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

GODFREY P. KALERWA MSc., MBA, MKIM
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Bungoma County.

The County Director of Education
Bungoma County.

REPUBLIC OF KENYA

THE PRESIDENCY

MINISTRY OF INTERIOR AND COORDINATION OF NATIONAL GOVERNMENT

Telephone: 055- 30326
FAX: 055-30326
E-mail: ccbungoma@yahoo.com
When replying please Quote

Office of the County Commissioner
P.O. Box 550 - 50200
BUNGOMA

REF: Adm./15/13 VOL II/23

9th October, 2017

TO WHOM IT MAY CONCERN

RE: RESEARCH AUTHORIZATION.

The bearer of this letter, Maximilla N. Wakoli a student of University of Eldoret sought an authority to carry out a research on ***"Transformative resource mobilization and internal efficiency of public technical training institutions."*** in Bungoma County for the period ending 12th September, 2018.

The authority granted to her by the National Commission for Science, Technology and Innovation is hereby acknowledged and appreciated.

Any assistance accorded to her in that pursuit would be highly appreciated.

Fidelis L. Ababu
For: County Commissioner
BUNGOMA COUNTY

REPUBLIC OF KENYA

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY
State Department of Education – Bungoma County

When Replying please quote
e-mail: bungomacde@gmail.com

Ref No: BCE/DE/19 VOL I/39

County Director of Education
P.O. Box 1620-50200
BUNGOMA
Dates: 9th October, 2017

TO WHOM IT MAY CONCERN

RE: AUTHORITY TO CARRY OUT RESEARCH – MAXIMILLA N. WAKOLI NACOSTI/P/17/93135/19051

The bearer of this letter Maximilla N. Wakoli of University of Eldoret has been authorized to carry out research on ***"Transformative resource mobilization and internal efficiency of public technical training institutions in Bungoma County, Kenya,"*** for a period ending **12th September**, 2018

Kindly accord her the necessary assistance.

JACOB M. ONYIEGO
COUNTY DIRECTOR OF EDUCATION
BUNGOMA COUNTY

Appendix VI: Internal Efficiency Formulas

Cohort Wastage Rate

Enrolment in the 1st grade minus enrolment in the final grade less repeaters of the final grade divided by the same (enrolment in the 1st grade)

$$N_t^k = \frac{k_{t3}^{k3} - R_{t+4}^{k+3}}{N_t^k}$$

Where: N= Enrolment
k = grade
t = time
R = Repeaters

Survival Rate

Also called Grade Survival Rate calculated as:

$$GSR = \frac{N_{t+1}^{k+1} - R_{t+2}^{k+1}}{N_t^k}$$

Where: N= Enrolment
k = grade
t = time
R = Repeaters

Average Completion rate

$$AVCR = \frac{N_t^k + N_{t+1}^{k+1} + N_{t+2}^{k+2} + N_{t+3}^{k+3}}{G_{t+3}^{k+3}}$$

Where: N= Enrolment
k = grade
t = time
G= Graduation

Graduation rate

$$GR = \frac{G_{t+3}^{k+3}}{N_{t+3}^{k+3}}$$

Where: N= Enrolment
k = grade
t = time
G= Graduation

Appendix VII: Bungoma County, Kenya Map