ASSOCIATION BETWEEN INTRINSIC MOTIVATION AND ACADEMIC PERFORMANCE AMONG TECHNICAL VOCATIONAL EDUCATION AND TRAINING STUDENTS IN TWO FAITH BASED TVET, IN NAIROBI AND NAKURU.

BIIN GODWIN TARNONGU

(14080Y)

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Institute of Youth Studies

Tangaza University College

Catholic University of Eastern Africa

Nairobi

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Declaration

I, the undersigned, declare that this thesis is a product of my own work and is not the result of anything done in collaboration. It has not been previously presented to any other institution. All sources have been appropriately cited and duly acknowledged in full.

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Signature of the Student:……..

Name of the Student: Biin Godwin Tarnongu

Date:……..

Signature of the Supervisor 1:……

Name of the Supervisor 1: Ms. Joice Njeru

Date:……

Signature of the Supervisor 2:……..

Name of the Supervisor 2: Dr. Anne Mbwayo

Date:…….

Abstract

There is a fallacious but commonly held belief that Technical Vocational Education and Training (TVET) is a field for academically inadequate students who need skills for employment. This negative perception could serve as a discouragement to TVET students. However, these students remain committed to attending TVET institutions up to graduation, which suggests that something motivates them. Studies have shown that, intrinsic motivation commits students to learning. Therefore, the main objective of this study was to establish whether intrinsic motivation is a driving force in the academic performance of TVET students. The study reviewed literature related to intrinsic motivation in learning, and the negative attitudes society has towards the TVET system of education. The study used cross sectional research design. As such, Mwangaza College, Nakuru, and Don Bosco Boys Town Technical Institute, Nairobi, were conveniently sampled. 182 respondents in Nairobi, and 166 respondents in Nakuru were randomly sampled (155 females and 193 males). The Intrinsic Motivation Inventory, with a demographic section, was used to collect data. Descriptive analysis of Intrinsic Motivation Scores across the Sampled Institutions showed that the overall average level of intrinsic motivation among TVET students was high (104.53/126). However, result from a one way ANOVA found no link between intrinsic motivation and academic performance. Students with B had the highest intrinsic motivation (M=105.6, SD=11.5), and students with D had nearly the same intrinsic motivation (M=102.0, SD=15.5) with B students. This result suggests that high academic performance could be a blend of intrinsic motivation and other factors not tested by this study.

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Abbreviations and Acronyms

NACOSTI: The National Commission for Science, Technology and Innovation

SDT: Self-Determination Theory. This is a theory that supports a student's natural and internal tendencies to seek knowledge.

SPSS: Statistical Package for the Social Sciences

TVET: Technical and Vocational Education and Training. Institutions meant for acquiring skills for development, for employment and for sustainable income.

UNESCO: United Nations Educational, Scientific and Cultural Organization

CHAPTER ONE

INTRODUCTION

This chapter gives contextual information to the problem the study is going to explore. As such, definitions of intrinsic motivation are presented in the chapter. The chapter further presents the statement of the problem for the research. The objectives of the present study and the research questions that guided it, as well as its significance are in this chapter.

1.1 Background to the Problem

The concept of motivation has received considerable focus by scholars over the years. Motivation has often been defined from the perspective of both the extrinsic and the intrinsic dynamics. In broad terms, Locke and Latham (2004) postulated that motivation implies internal influences that induce action, and external causes that stimulate one to act. In concurrence, Nevid (2013) conceives motivation as referring to factors that influence, direct, and sustain goal-directed actions that are observable. A more precise definition is put forth by Sdorow and Rickabaugh, (2002), who conceptualise motivation as the psychological practices that stir, direct, and sustain behaviour towards one's objectives. From the above definitions of motivation, one would note that motivation is a psychological state that can only be measured and verified through exhibited behaviour.

Taking the perspective of educational psychology, the present study lays emphasis on motivation in learning with a focus on intrinsic motivation proposed by Ryan and Deci (2000). The coined operational definition for intrinsic motivation in this study is the internal drive to acquire new knowledge, manifested in pleasure, personal value and competence that propel an individual to pursue his or her set goals.

Technical and Vocational Education Training (TVET) institutions offer education to students who are naturally inclined to vocational education. The institutions also offer education to students who, because of financial challenges, are not able to enrol into the university; students who lack the required academic results to enter the university, and students who have dropped out of secondary school education for different reasons. It is also available for students who finish primary school and for whatever reason, are not able to go to secondary school, therefore joining TVET to gain education and employability skills.

In Africa today, and Kenya in particular, TVET is perceived by Government and Non-Governmental Organisations as a system of education that produces a middle level skilled workforce for the economy. This might be explained by the fact that young people can acquire TVET skills for production, work and employment through apprenticeship within a period of six months or one year. This approach is underscored by UNESCO (2013) in describing TVET as an education system that equips learners with practical skills that will enable them gain employment to contribute to production, development and their sustenance. In concurrence, Lamb (2011) posits that TVET is used as a means to train people to gain labour prospects. Kingombe (2011) also echoes this sentiment as he says that TVET is the best vaccination that can rapidly cure youth unemployment.

Despite the positive benefits associated with it, evidence shows that the TVET system of education is not held in high esteem. Agyarkor (2013) mentioned that the conditions of service in industry with regards to salary and incentives are normally tilted to favour the staff members who have university diplomas and degrees, while TVET graduates who have the most tedious work are treated as subordinates with low incentives. Misganaw (2011) also agreed that TVET does not have high standing in Ethiopian education system because it has low financial and social return.

Bortei-Doku, Aryeetey and Andoh (2011) echo the same sentiments in Ghana, that TVET is often perceived as a reserve option for students who lack the qualification to join higher education. In the country of focus, a study by Simiyu (2009), reported that the manual work that accompanies TVET has made the learning field unattractive. Relatedly, Sang, Muthaa and Mbugua (2012) reported that TVET institutions in Kenya are often perceived as having the mere function of producing workforce for the labour market and not capable of according personal development for students.

In sum, society seems to have more value for education obtained in universities rather than in TVET institutions. The researcher is a graduate of the apprenticeship TVET system of education (Carpentry and Joinery), and therefore has personal experience of the negative perception and other subsequent challenges TVET is faced with in society.

The negative social perception of TVET institutions can be considered demotivating for students enrolled in such institutions. Contrary to expectation, however, TVET institutions seem to consistently pass the test of time, considering the persistent running of such institutions and the steady enrolment of students. This truth alludes to a possible inner driving force that must keep TVET students motivated in their learning. Considering the demotivating external factors, TVET students could be moved by intrinsic motivation to persist in their pursuit of education and training.

Previous studies in parts of the globe have assessed the presence of motivation and its relation to learning among students in institutions similar to TVET. Omar, Jain and Noordi (2013) carried out a study in Malaysia at a low achiever polytechnic institution to assess motivation in learning and happiness among the students. The study revealed the presence of a high level of motivation in learning and happiness among students. Niehaus, Rudasill, and

Adelson (2012) conducted a study among Latino middle school students to evaluate intrinsic motivation, and academic outcomes, and the study revealed that intrinsic motivation was positively associated with students' academic achievement. Although some studies in Kenya have focused on TVET institutions and have revealed students' views on the curriculum and the manual work associated with it (Kamau, 2013; Simiyu, 2009), the literature review for this study did not come across any studies carried out in Kenya linking intrinsic motivation to academic performance among TVET students. As such, this study assessed the effect of intrinsic motivation on academic results among TVET students in Kenya in bid to respond to the revealed gap in literature.

1.2 Statement of the Problem

In Kenya, TVET is seen as a channel of change in the realm of human resource skills for technology and industrial advancement that is capable of increasing the wealth, social wellbeing and the enrichment of the country's international competitiveness (Republic of Kenya, 2008). However, society seems to undermine the value of education attained in TVET institutions, often creating the idea that students studying in such institutions are less capable than their counterparts in universities and other tertiary level colleges. Despite this, TVET institutions are still running and students continue to enrol. This fact suggests that these students are driven by an inner force beyond the negative public opinions.

While the review of literature has revealed the existence of some studies that focused on challenging issues affecting TVET institutions in Kenya (Kamau, 2013; Simiyu, 2009), there seem to be no literature that focuses on intrinsic motivation and the academic performance of TVET students in Kenya. Accordingly, this study has delved into the association between

intrinsic motivation and academic performance and has made substantial finding that could support efforts in addressing the identified knowledge gap.

1.3 Objectives of the Study

The specific objectives that guided the study are as follows:

a. To assess the intrinsic motivation level among TVET students and consider if the two sampled institutions have the same cut off mark for high intrinsic motivation.

b. To assess whether there is a relation between social demographic variables (age, gender, entry qualification, department and society's opinion on TVET) and intrinsic motivation.

c. To assess whether there is a relation between social demographic variables (age, gender, entry qualification, department and society's opinion on TVET) and academic performance.

d. To establish whether there is a relationship between intrinsic motivation and academic performance among TVET students.

e. To find out which of the components of intrinsic motivation (pleasure, value or competence) is prevalent among TVET students.

1.4 Research Questions

The present study set out to answer the following questions:

a. What is the level of intrinsic motivation among TVET students, and which of the sampled institutions scored highest on intrinsic motivation?

b. What is the relationship between socio-demographic variables such as age, gender, entry qualification, department and society's opinion on TVET and intrinsic motivation?

c. What is the relationship between socio-demographic variables such as age, gender, entry qualification, department and society's opinion on TVET and academic performance?

d. Is the relationship between intrinsic motivation and academic performance among TVET students?

e. Which component of intrinsic motivation (pleasure, value or competence) is prevalent among TVET students?

1.5 Significance of the Study

Given that the present study did not come across any study that has assessed the effect of intrinsic motivation on academic performance among TVET students in Kenya, this study is needed today in order to fill that knowledge gap. Results from this study could help teachers and education stakeholders to understand that TVET students find pleasure, value and competence in their learning tasks and hence focus in helping them build their drive for learning. The study could further influence teachers to evaluate the tendency of external controls in learning, and the attitude of rewards or punishments in their teaching pedagogy. It could help them to improve their pedagogical approach, learning contents and activities in order to stir intrinsic motivation in students.

In addition, the findings of this study could make society aware that the negative image that has been accorded the TVET system of education does not necessarily impede its students from acquiring knowledge. This awareness could help improve the image of TVET in our society and elicit positive attitude among TVET students.

It is further hoped that this study will motivate educationists and researchers to carry out studies that will highlight the plight of TVET students in the challenges they face.

1.6 Scope and Delimits of the Study

Geographically, this study is conducted within Kenya. The study focuses on the effects of intrinsic motivation on academic performance among TVET students. The population for the study is both female and male TVET students. Teachers and administrators of TVET are not included in the study. The counties of Nairobi and Nakuru form the geographical location under which the study took place. Specifically, one TVET institution from each of the two counties was sampled for the study. The theoretical framework of the study is based on the Self-determination Theory and thus, the questionnaire for the study focuses around the Self-determination Theory elements such as, pleasure, value and competence in learning.

1.7 Operational Definitions of Key Terms

Competence: This is an individual's ability to effectively apply and demonstrate what he or she has learned by proficiently performing a task (Deci & Ryan, 2004).

Intrinsic Motivation: The internal drive to acquire new knowledge manifested in pleasure, personal value and competence (Ryan & Deci, 2000).

Learning: The gradual process in which an individual permanently understands how to make or do something he or she is taught.

Pleasure: The delight and satisfaction coming from the acquisition of new knowledge.

Prevalence: The presence of intrinsic motivation conceived in an individual student, and subsequently to the entire sampled population.

Skills: The learned ability and expertise gained for handwork, production and employability.

Students: These are individuals who are admitted at TVET institution to learn**.**

Value: The belief, the importance and worth that a student attaches to his or her learning task (Deci & Ryan, 2004).

CHAPTER TWO

LITERATURE REVIEW

This chapter has literature review that is focused on intrinsic motivation and its relationship with academic performance. Literature on the components of intrinsic motivation such as, pleasure in learning, value in learning and learning competence is reviewed as well. The theoretical framework which forms the foundation of this study, and the conceptual framework are also in this chapter.

2.1 Review of Literature Relevant to the Study

This section of the literature review followed an objective and critical review of important literature linked to intrinsic motivation in learning. The literature review attempted to focus on reading materials and researched works with current thinking on the topic between 2000 and 2016. E-resources, books and journal articles for the literature review were obtained from libraries and websites.

2.1.1 Motivation

Murray, Poole and Jones (2006) perceive motivation as an effort one makes in order to accomplish a need. In concurrence, Dagne, Beyene, and Berhanu (2015) view motivation as an individual's degree of willingness to exert and retain an effort towards set goals. Motivation is classified into extrinsic and intrinsic. Extrinsic motivation is present when people carry out activity for the external reward they look forward to (Yang, Si & Chow, 2015). On the contrary, intrinsic motivation is when people engage in activity without any externally rewarding influence, but for the sake of actualizing their potential (Coon & Mitterer, 2010). In the same thought, Ryan and Deci (2000) describe intrinsic motivation as behaviours that derive satisfaction from the activity itself. However, Poch and Martin (2015) argue that extrinsic motivation also

gives satisfaction and it still propels people to finish their task, only that it emanates from outside. Conversely, Ryan and Deci (2000) see intrinsic motivation as a resource for students who are goal oriented, those who have the strength to persevere even when learning becomes challenging, and those with the inherent trait for knowledge acquisition. That is why, in learning, intrinsic motivation is favoured over extrinsic motivation. Consequently, intrinsic motivation and its features will be discussed in the succeeding paragraphs.

2.1.2 Intrinsic motivation and academic performance

Analogically, intrinsic motivation and learning are like a matchbox and a matchstick, the matchstick can strike around the matchbox, but if it does not strike the coarse surface, fire will not erupt. In a similar light, the principles of intrinsic motivation suggest that every student is necessarily intrinsically motivated which proposes that he or she has a coarse surface waiting to be touched so that their passion for learning can erupt (Deci & Ryan, 2004). Recognising the significance of intrinsic motivation in learning, Barić, Vlašić and Erpič (2014) underlined that intrinsic motivation has been studied as one of the key dynamics in influencing learning outcomes.

Some studies have underscored external factors as key to high academic performance as Seitsinger, Brand, Burns and Bolton, (2007) conducted a study which revealed that the school environment, coupled with the relationship students share with their teachers has a considerable influence on the academic performance of students. In concurrence, Gest, Rulison, Davidson, and Welsh (2008) assessed the association between extrinsic motivation and students' academic performance, and they discovered that academic performance associates moderately strongly with teacher rated skills. Despite this, other studies have made assertions that intrinsic motivation associates positively with academic performance. Such confirmation is made by Moneta and Siu

(2002), who in their study documented that intrinsic motivation associates positively with academic performance when students are faced with complex learning tasks. More so, You, Dang and Lim (2016) found out in a study that intrinsic motivation brings about greater academic achievement. A study conducted by Lemos and Verissimo (2014) also supported the phenomenon under review as their study reported that intrinsic motivation was strongly connected with academic success. Going by the findings of these studies, it could be pointed out that intrinsic motivation is considerable when one thinks of achievement in any learning field. Regrettably, none of the studies reviewed considered the relationship between intrinsic motivation and academic performance among TVET students.

2.1.3 Intrinsic motivation among students

Teachers who have orientation towards intrinsic motivation can easily recognize their students who are intrinsically motivated. Besides, several studies have been carried out among students in diverse academic systems and academic levels. In this regard, Sonja, Sabine and Waldemar (2011) documented that intrinsic motivation associates well with perceived autonomy and support (r = .63). Lemosa and Veríssimo (2013) also carried out a study and found that there exists a significant positive relationship between students' academic success and intrinsic motivation (.30**). Lepper, Corpus and Iyengar (2005) reported in their study that intrinsic motivation was highest among the youngest students in their sampled population. Corpus and Wormington (2014), in their study, revealed that intrinsic motivation was high among their respondents. The reviewed studies have pointed out the presence of intrinsic motivation among students. And so, it is encouraging for this study to assess the effect of intrinsic motivation on academic performance among TVET students, since such a study has seems not to have been carried out before.

2.1.4 Pleasure of learning

Ford and Opitz (2015) define pleasure of learning as a manner of acquiring knowledge and skills that brings about pleasure and happiness. Since joy is a word that concerns pleasant feelings, joyful learning and pleasure in learning shall be used interchangeably as this study reviews literature in this section. DeCharms (1968) proposed that people gain pleasure when they carry out activities that give them a sense of causation. DeCharms (1968) sees this phenomenon as the base for intrinsic motivation. Discussing in the same line, Tough (2012) observed that learning activities that elicit joy among students should always be considered as effective methods of instructing students.

The concepts of extrinsic motivation and intrinsic motivation have always been viewed by educators and psychologists from a standpoint of antagonism. However, Véronneau, Koestner and Abela (2005) have put an agreeable observation to this view by saying that external motivators are capable of influencing intrinsic motivation. This opinion was validated by James (2004) in an empirical study which showed that the prudent use of content related, non-hostile humour proved to promote interest and pleasure in school tasks. It also enhanced the student's mind-set in regards to the subject matter. More so, Ford and Opitz (2015) think that being attentive to teaching techniques that motivate students helps a teacher to prepare a lesson in a manner that would spark joy among the students, subsequently leading students to learn. And so, pleasure of learning seems to be an experience a teacher can induce in students in order to bring out that intrinsic motivation to learn among students.

From the foregoing discussion on the pleasure of learning, one would understand that apart from students deriving pleasure from their studies, teachers can, as well, induce that pleasure in students so that they can find pleasure in the activity they are carrying out. In this regard, Véronneau, Koestner and Abela (2005) argue that extrinsic motivation stands the chance to support and enhance intrinsic motivation. This argument is supported by Fredericks, Blumenfeld, Alison and Paris (2004), whose study revealed that engaging learners in the three human aspects of affective, behaviour and cognition help learners to acquire knowledge in a pleasurable way. Fredericks, Blumenfeld, Alison and Paris (2004) explained that, through behaviour, learners actively get involved in the school tasks. By engaging their cognition, learners use their reasoning and intellectual ability, and finally by appealing to their affective life, learners experience pleasure and joy as they learn. In agreement with the idea of engaging students fully in the classroom, Schlechty (2011) says that students who are fully engaged with academic task do not need to be entertained. They and their teachers derive a significant amount of joy out of what they are doing and they have fun as they carry out their school work. And so, this section on pleasure in learning could, in summation, state that the purposeful attempt by the teacher to actively engage students in learning tasks can result in pleasure in learning and, at the same time stir students' intrinsic motivation to learn. Since the present study could not assess any existing materials on pleasure of learning as a characteristic of intrinsic motivation among TVET students, this study has become important as its findings have filled this knowledge gap.

2.1.5 Personal value in learning

According to Brophy and Albert (2008) value in learning is a learning attitude that gives learners the feeling that a school task is important, and it is also doable. This attitude consequently helps learners to attach significance to the outcome of the school task and to feel safe with the contexts in which the learning is taking place. Under such conditions, learners

develop intrinsic interest, and they value the learning task (Parks & Guay, 2012). In addition, Blumenfeld, Alison and Paris (2004) observe that education is a process whereby a person goes through affective, behavioural and cognitive enlightenment. As such, one could reason that education is more than successes gained in school examinations. Daily education encompasses new social encounters with parents, teachers, friends, and the environment. Since enlightenment defines education, then real education should encourage a learner to develop personal values in learning. Therefore, learners attach personal importance and value to what they learn in a manner that influences their attitude and behaviour. It is in view of this that Allison and Von Wald (2010) opined that acquired knowledge forms and shapes a learner's daily decisions and choices.

It is worth noting that extrinsic motivation can reduce the value students attach to learning task. This discovery was made by Deci (1971) when he reported in an empirical study that students who were believed to have intrinsic motivation lose the sense of value for their school task when they were rewarded for learning tasks they had so much enjoyed performing. According to Deci (1971), the reward was seen as an externally controlling force which rather dissuaded the students from valuing the task they were doing. In a twist that seems to reconcile the viewpoints of extrinsic motivation and intrinsic motivation, Hayenga and Corpus (2010) said that educationists are now at the verge of resolving conflict that besieges the two different types of motivations. Hayenga and Corpus suggest that the two different motivations have the potential to coexist to enhance academic task engagement. Therefore, when one looks at this argument in relation to personal value in learning, the learning environment that helps students develop value in learning is the one that takes into consideration the need to stimulate students' learning desire. Wolk (2008) suggests that insights about interesting topics, learning methods and materials encourage students to develop interest and value for their learning tasks. Also, the provision of thought-provoking and meaningful learning activities help students to show interest and get

involved in the content being taught to them. In addition, students show value in learning when they are given the opportunity to participate in the selection of activities, content and materials to be taught (Wigfield & Eccles, 2002).

The argument of Hayenga and Corpus (2010) continues to get support as Matthews, and Flinders University (2004) discovered that personal values attached to learning tasks appeared to promote learning among students. As such, teachers who approach learners as people with inbuilt potential to be explored use the contents of their lesson to harness the creative energy of their students. In this regard, learners see the value in what they are learning and so, they delve deeper into what they are learning rather than skim the surface (Mei-yung, Dongyu & Chan, 2012). With such an approach, learners become more interested in conceptual understanding of what they are taught, rather than the recollection of mere procedures and facts (Waterman, 2005). A sense of personal value emanates, as learners are actively involved in seeking out information related to a meaningful topic they can relate with (Wolk, 2008). In this regard, extrinsic motivation subtly stimulates the intrinsic motivation aspect of personal value for education. Since the literature in the section of personal value was unable to access studies carried out on this section of the research, the findings of this study have contributed to the missing knowledge in this aspect of intrinsic motivation.

2.1.6 Personal competence in learning

According to Solzbacher (2006), competence in learning is described as the abilities, skills, behaviour and attitude a learner requires in order to successfully follow learning processes. In addition, Stoof, Martens, and Van Merriënboer (2002) define learning competence as a collection of knowledge, skills and attitudes possessed by a learner. These give a learner the ability to handle school tasks. Given the description of what personal competence in learning is,

students can only achieve it when they are motivated intrinsically, since competence in learning is portrayed as an inner component in knowledge acquisition.

However, Prins, Nadolski, Berlanga, Drachsler, Hummel and Koper (2008) feel that the possession of the attitude, behaviour and skills is not enough qualification for personal competence. They broadened the scope of personal competence in learning as they opined that concentration; cooperation and conscious involvement are necessary components that an individual needs in order to be qualified as having competence in learning. In agreement, Hoi Kwan & Downing (2010) hypothesise that the peak of personal competence in learning occurs when a learner perceives knowledge, processes it and understands the information and then constructs his or her own facts. What follows next is that the learners become acquainted with the knowledge and personalise it.

In another turn, Vogten, Koper, Martens, and Van Bruggen (2008) argue that a plausible way of viewing learning competence takes into account all the informal and experiential learning opportunities that an individual has had in acquiring knowledge during the course of his or her lifetime. Vogten, Koper, Martens, and Van Bruggen (2008) have then portrayed competence in learning as the proficiencies in acquiring knowledge that are beyond academic, theoretical, formal and informal realms of knowledge acquisition.

Some longitudinal studies (Guay, Marsh & Boivin, 2003; Stringer & Heath, 2008; Zanobini & Usai, 2002) have revealed that early academic experiences can nurture competence, which in turn can influence academic achievement positively among learners. Also, in a study conducted by Marsh and O'Mara (2008) discovered that learning competence has an impact on a learner's academic achievement. Another study conducted by Solzbacher (2006) revealed that making students masters of their learning process greatly promotes learning competence.

Therefore, it is important to take into cognisance that, when students are motivated intrinsically, they develop learning competence that compels them to exert more effort towards new learning tasks (Pintrich & Maehr, 2004). Efforts to get empirical studies that measure personal competence on academic performance among TVET students were fruitless. Therefore this study has attempted to fill that knowledge and literature gap.

2.1.7 Socio-demographic factors

TVET students sampled for the present study share the same sociodemographic characteristics such as gender, age, entry qualification and society's opinion on TVET. And so, literature review has analysed how the sociodemographic features relate with academic performance and intrinsic motivation.

2.1.7.1 Gender

Educationists and psychologists are always curious to find out factors that affect and influence degradation or improvement of students' academic performance. Johnson (1976) opined that there are abilities, achievements and performance that favour the male and female gender differently. As such, there is a good amount of empirical studies that have been carried out to ascertain the relationship between gender and intrinsic motivation. In view of this, Hon Keung, Man Shan and Alison Lai Fong (2011) revealed in their study that gender does not influence levels of intrinsic motivation. In addition, Kerger, Martin and Brunner (2011) documented that the mean level of females' scientific interest was higher when the concepts were presented in feminine ideas. Also, males' scientific interest was higher when concepts were presented in masculine notions. This portrayed that the level of intrinsic motivation in learning sciences in both genders is at the same level.

On the other hand, Mubeen, Saeed and Arif (2011) discovered in their study that although there was no significant difference between male and female motivation towards science, female students were found to be slightly better in their motivation towards science than males. More so, Narayanan, Rajasekaran and Iyyappan (2007) revealed in their study that the intrinsic motivation to learn English was higher in females than males. In agreement, Lavonen, Juuti and Meisalo (2012) revealed in their study that intrinsic motivation in learning is higher in female gender than the male gender in regards to learning Physics. Unfortunately, this review could not assess studies that evaluated the level of intrinsic motivation in the two genders in regards to TVET. Therefore, one of the objectives of this study is to find out if gender matters in terms of intrinsic motivation in the TVET system of education.

2.1.7.2 Age

There are some empirical studies that have supported the notion that age influences academic outcome. In this instance, Martin (2010) confirmed in a research that school children who were delayed before joining primary school had an academic disadvantage that was characterised by low motivation and low academic achievement. Dobkin and Ferreira (2010) also reported in their study among secondary school students that intrinsic motivation and academic outcome is influenced by age.

2.1.7.3 Entry qualification

Studies have been carried out to ascertain the relationship between school entry qualification and academic outcome. However, these studies have controversial outcomes. Adewale and Adhuze (2014), in their study with polytechnic students, discovered a weak relationship between entry qualification and academic achievement. This finding contradicts the

finding of Bush (2012) who reported in a study among Master of Pharmacy Degree Program that prior academic achievement correlated positively with academic performance in the programme. Ogbonnaya, Okpuruka, Iheanacho and Ndu (2014) concur in their study that there is a positive correlation which was statistically significant in the relationship between entry qualifications and final academic performance. Regrettably, this study could not assess empirical literature that linked academic entry qualification and intrinsic motivation in learning.

2.1.7.4 Society's Opinion on TVET

UNESCO (2013) portrays TVET as career that fosters skills for sustenance and production in order to improve the economy. In view of this, there are so many coined terms and terminologies that describe TVET in our society. Such terms and expressions include apprentice training, vocational education, technical education, technical-vocational education, occupation education, vocational education and training, career and technical education, workforce education and work place education (Hollander, & Mar, 2009). All the terms that are coined to express society's opinion of TVET have some element of work and skills. This could probably explain the reason why Simiyu (2009) discovered in a study that some people view TVET negatively because it involves manual work. However, Kingombe (2011) describe TVET as the vaccination that can help society deal with the issue of youth unemployment. A study conducted in a TVET oriented learning institution revealed that the intrinsic motivation of the students was high (Omar, Jain & Noordi, 2013). In this regard, the present study aimed at assessing the opinion society has towards TVET and how it has affected TVET students.

2.1.7.5 Academic Department

According to Ramsden and Entwistle (1981) academic departments are a division of different learning discipline in universities and higher institutions of learning that are dedicated to separate learning fields. Departments in learning institutions are valued because in a study, Hartnett and Centra (1976) discovered that the impact of education on learners is more effective when learners focus on their learning fields in their departments. Ramsden and Entwistle (1981) further discovered in a study that the divisions in higher institutions of learning have positive effect on teaching and knowledge acquisition of students. Different studies have seem to exalt the ideal of departments in universities and higher institutions of learning, however, this study was unable to establish whether there was any study that assessed the association between intrinsic motivation and departments. Therefore, this study has attempted to fill that literature gap.

2.1.8 The TVET institutions in Kenya

According to the Universities and Colleges Central Placement Services (2015) there are 855 TVET institutions in Kenya. These TVET institutions fall under different categories: some are public owned; others are private, while others are private and faith-based. Then there are some that are referred to as village polytechnic. Besides, another characteristic that differentiates them is that some have the same academic entry requirements as the university, while others admit students whose academic results are below the academic entry requirements for university. Better still, other TVET institutions are open to secondary school dropouts due to economic or academic challenges. More so, some of the TVET institutions are open to primary eight leavers. Some of the curriculum for these institutions include carpentry/joinery, cabinet making, masonry, plumbing, electrical fitter & electrical wiring, tailoring and dress making, machine-shop-fitter/ turner, welding shop-fitter, motor vehicle mechanic and motor vehicle electrician, computer training, business management, sales and marketing, secretarial studies, human resource

management, supply chain management, information studies, food and beverage, music and languages.

From this category of TVET institutions, this study focused on TVET institutions that are private and faith-based and whose academic entry requirement is below the university entry requirement (Don Bosco Boys Town, Nairobi and Mwangaza College, Nakuru).

2.1.9 Research Gap

There is a good amount of literature that links motivation with academic outcome in different learning fields. However, the literature review for this study could not access studies that relate motivation to the TVET education, especially in terms of the effect of intrinsic motivation in learning in Kenya. Therefore, it is desirable to carry out a study that would assess the association between intrinsic motivation and academic performance among TVET students considering the assumption that intrinsic motivation could be the fuel that has been driving TVET students amidst a widespread negative social opinion of this system of learning.

2.2 Theoretical Framework

Self-Determination Theory (SDT) is the theoretical framework on which this study is built. Harlow et al. (1950) is cited in Andrew, Barto and Botvinick (2009) as the pioneer who defined the difference between external and intrinsic motivation. In a study Harlow gave a puzzle to rhesus monkeys to solve. The drive and eagerness with which the monkeys carried out the task was labelled intrinsic motivation. Harlow's study with the monkeys inspired Edward L. Deci in 1971 to expound the idea of external reward influencing intrinsic motivation.

According to Deci and Ryan, (2004) SDT is intrinsic motivation, doing something because it is inherently interesting or enjoyable, producing the curiosity to learn, and also bringing about higher quality learning. Learning flourishes in contexts that satisfy three human

inherent human needs: competence, autonomy, and relatedness. Students experience competence when challenged with study tasks and given prompt feedback-the sense of efficacy. Students experience autonomy when they feel supported to explore, take initiative, develop and implement solutions for their problems. Also, students experience relatedness when they feel they belong, and when they perceive that others are listening and responding to them. When these three needs are met, students are more intrinsically motivated and actively engaged in their learning (Deci & Ryan, 2004).

The three inherent human needs promoted by SDT are only operational when they are activated by society through the creation of an enabling environment. Once activated, the needs bring about positive results as they promote well-being and growth. Therefore, SDT places emphasis on positive motivation by meeting the basic human needs so that people can achieve growth naturally.

The SDT is seen as a reliable background for studying motivation practically and empirically, in different life situations, like sports, education and wellbeing (Vansteenkiste, Lens, & Deci, 2006). And so, several studies in the field of academic learning have used Self Determination Theory to examine intrinsic motivations. Whereas the study could not identify any previous research focusing on the TVET that have applied the SDT, several studies have been carried out in the secondary school learning field. Byman, Lavonen, Juuti and Meisalo (2012) carried out a study to investigate the different learning links with the motivational factors of SDT. Subsequently, the study showed intrinsic motivation as having association with the learning of Physics. Perlman (2013) too conducted a study with the purpose of assessing the influence of two different learning settings based on the self-determination theory in the area of Physical Education among secondary students. The result of the study revealed that SDT was important in

the study of PE. Jang, Reeve, Ryan and Kim (2009) noted that since Western individual cultures do not accord the same value for autonomy, the way the Eastern cultures do, some critics have raised questions about the SDT, asking whether autonomy can be considered a common psychological need.

As such, one of the cross-cultural critics, Iyengar and DeVoe (2003) opined that Eastern cultures value social obligations and do not hold personal autonomy in high esteem. Therefore, they might likely show a different result from the one found in the Western sampled population.

In response to the criticism put forward by cross-cultural critics, Chirkov, Ryan, Kim, and Kaplan (2003) argue that it is erroneous to put the concept of autonomy on the same pedestal with concepts like individuality, uniqueness and independence. This is because, while autonomy indicates inner acceptance of one's actions, it does not connote the separation of one's association with others. Therefore, Jang, Reeve, Ryan and Kim (2009) cite Ryan and Lynch (1989) as saying that it is encouraged for individuals to be autonomously interdependent, because with such a character, individuals stand a chance to embrace collective values.

Research by Ryan, and Deci (2000) on Self-Determination Theory indicates that intrinsic motivation (doing something because it is inherently interesting or enjoyable), and thus higher quality learning, flourishes in contexts that satisfy human needs for competence, autonomy, and relatedness. Students experience competence when challenged with study tasks and given prompt feedback, the sense of efficacy. Students experience autonomy when they feel supported to explore, take initiative and develop and implement solutions for their problems. Also, students experience relatedness when they feel they belong, they perceive others listening and responding

to them. When these three needs are met, students are more intrinsically motivated and actively engaged in their learning (Deci & Ryan, 2004).

Numerous studies (Ryan & Deci, 200; Wehmeyer & Palmer, 2003; Litman, 2005) have shown that when the human needs which are proposed by self-determination theory (competence, autonomy, and relatedness) are absorbed by the students, the students' learning aptitude increases. More so, the three mentioned needs are seen as important requirements that enhance the understanding of content and the process of academic pursuit (Deci & Ryan, 2004).

Therefore, since the present study concerns itself with the effect of intrinsic motivation in learning among TVET students, the SDT influences this study to view intrinsic motivation as the base of pleasure, value, and competence that promote learning among students. On this ground, SDT will play a significant role in guiding the study to verify intrinsic motivation among TVET students. In view of this, the self-report Intrinsic Motivation Inventory-IMI developed by Ryan (1982) will be used as the research instrument to measure intrinsic motivation among TVET students.

2.3 Conceptual Framework

Miles and Huberman (1994) view conceptual framework as any illustration that describes the concepts and variables that are under study. It is a key concept of research work because it is the system of concept, suppositions, outlooks and beliefs that support and inform an empirical study (Robson, 2011). The variables that constitute this study are intrinsic motivation, academic performance and socio-demographic features such as age, gender, entry qualification, department and society's perception of TVET. The conceptual framework presented below graphically represents the relation among such variables.

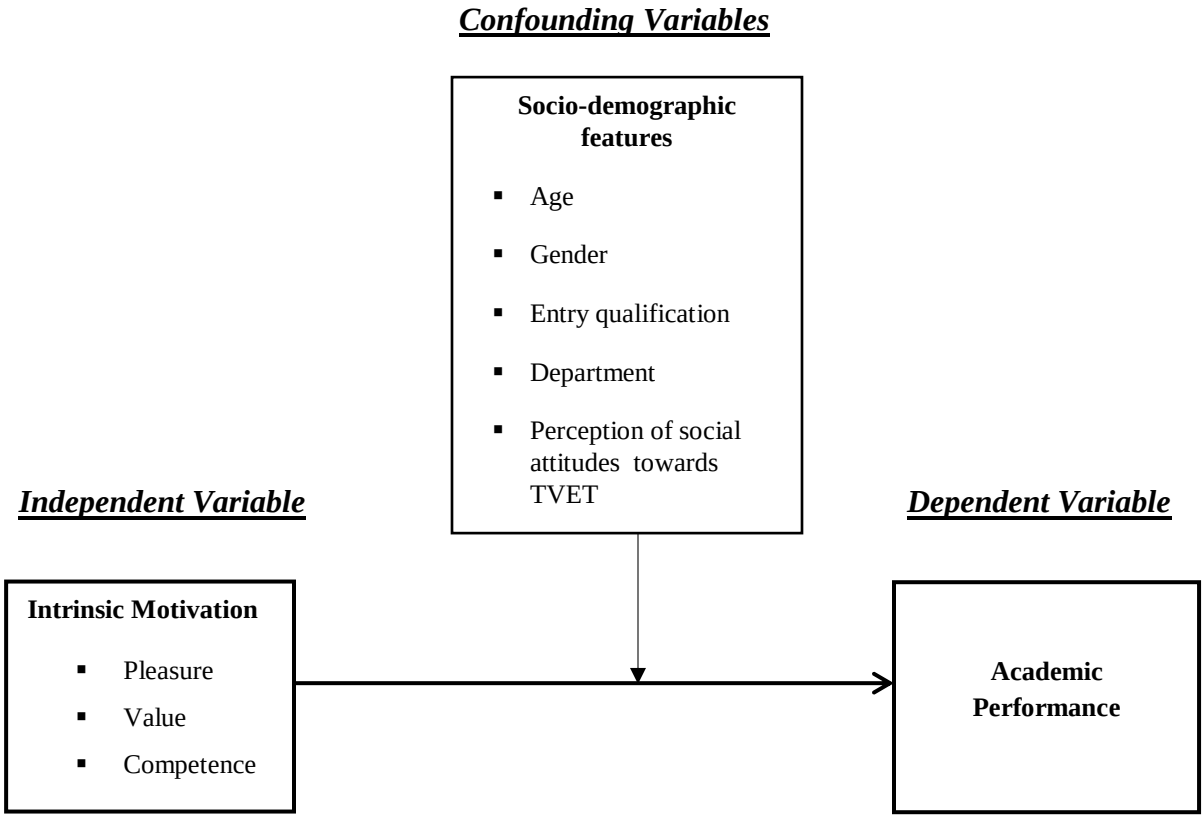

Figure 2.1: Conceptual Framework

Intrinsic motivation is the independent variable, while academic performance is the dependent variable. The outcome of intrinsic motivation is measured by a student's academic performance. Pleasure, value and competence are the elements that define intrinsic motivation in this study. A student who is intrinsically motivated approaches learning with an attitude of pleasure. Similarly, a student who is intrinsically motivated assigns personal value to learning. Tasks and activities that relate to learning are viewed as worthy endeavours. An intrinsically motivated student is equipped with the ability to enact tasks, even when learning tasks are challenging, since a sense of competence energies them. Therefore, learning that has elements of intrinsic motivation is expressed in high rate of class attendance and high academic performance.

Socio-demographic features which comprise of age, gender, entry qualification department and perception of social attitude towards TVET, are perceived as moderating variables between intrinsic motivation and learning. Socio-demographic features affect the strength of the relationship that is between intrinsic motivation and learning. It is presumed that as students mature in age they will have a higher intrinsic motivation and consequently perform better academically. Similarly, gender differences can determine the strength of intrinsic motivation among learners and subsequently their performance. Considering the negative social opinion on TVET alluded to by the study, it is presumed that motivation among learners may be determined by their perception of how society appreciates the TVET system of learning. Learners who feel that this system is viewed in negative light by society may, on the contrary, be more motivated intrinsically and perform better academically. Differently, those learners who feel that TVET is held in little regard by society may tend to be less motivated in learning. It is also presumed that students who enter into TVET institutions with a higher grade may perceive themselves as capable in their learning tasks, hence steering the levels of intrinsic motivation and accordingly learning, whereas the contrary may be true for students with lower entry grades.

Conclusively therefore, the three elements of intrinsic motivation are effective enough to influencing academic performance among TVET students. In addition, the socio-demographic variables will serve as a moderating factor in the strength of the association intrinsic motivation has with academic performance.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

The quality of a good study is greatly defined by the research method employed. Methodology in a study is like the blueprint upon which the entire study is realised. As such, the quality of the blue print necessarily defines that of the resulting product. The blueprint of any study outlines the general approach; the study population; the sample and sampling design; the data collection methods and instruments; and the data analysis methods. In this study knowledge is obtained through direct measurement of intrinsic motivation among TVET students. Therefore, this section of the work defines the blueprint of the present study.

3.1 Approach and Method

This study has employed the cross sectional research design. This is because this design allows for drawing inferences from existing differences between two subjects. With this design, a researcher could find relationships among variables at one moment in time, and can estimate the prevalence of an outcome of interest since the sample is usually taken from the whole population (Marczyk, DeMatteo & Festinger, 2005). The study has adopted the quantitative research methodology and has made use of descriptive and inferential statistics analysis. Quantitative methodology stresses objective measurements and the accurate statistical analysis of data, and manipulates pre-existing statistical data using computational techniques (Patton, 1990).

Positivist epistemology forms the foundation for this study. Crowther and Lancaster (2008) describe positivism epistemology as a means of acquiring knowledge that deals with facts and observation through measurement. The reasoning involved is broad from the beginning, then it narrows down to the particular, and this is known as deductive approach. Researchers who

ascribe to the positivism approach limit themselves to data collection and interpretation through observable and quantifiable means. This study has taken the positivism approach because it takes the quantitative study approach which will eventually measure facts, students' intrinsic motivation through Intrinsic Motivation Inventory without the researcher interfering with the outcome of the collected data. This has created a sense of objectivity in the findings of the present study.

3.2 Target Population

According to Creswell (2008), a group of individuals with common defining characteristics identified for a particular study is referred to as a target population. Therefore, this study targeted both male and female TVET students in Kenya. These individuals have common and binding characteristics, such as learning focused on skills acquisition and the potential to exhibit intrinsic learning motivation. The two institutions are Catholic faith-based. However, admission is open to young people from all religions. The age range of the students is 15 to 30, and most of the students are from financially challenged families.

3.3 Sample and Sampling Techniques

Creswell (2008) refers to sample as a selected subset of the population which represents the targeted research population, and in relation to which results are inferred to the targeted population. The process of selecting the sample is referred to as sampling design. Probability and non-probability sampling procedures were used in this study. Probability sampling concerns approaches to sampling in which each member of the targeted population has a known prospect of being chosen to participate in the study; whereas in non-probability sampling, respondents do not know their likelihood of being chosen to participate in the research (Marczyk, DeMatteo & Festinger, 2005). This study used both convenience sampling and simple random sampling.

3.3.1 Convenience sampling

According to Marczyk, DeMatteo and Festinger (2005), convenience sampling is a procedure that recruits any available targeted population in a particular time and particular place. Through convenience sampling, one TVET institution (Don Bosco Boys Town Technical Institute) was sampled in Nairobi County, and another one was sampled in Nakuru County (Mwangaza College). These two institutions were conveniently sampled for the study because they are managed by two male religious groups in the Catholic Church who are committed to the empowerment of youth through education. All over the world, for hundreds of years the De La Salle Brothers of the Christian Schools and the Salesians of Don Bosco have been known for their education service for young people. Therefore it is desirable to assess the effect of intrinsic motivation on academic performance among their students, and even carry out a comparison. The De La Salle Brothers of the Christian Schools run Mwangaza College in Nakuru, and the Salesians of Don Bosco run Don Bosco Boys Town Technical Institute, Nairobi. It is important to underline that the sampling frame from the Universities and Colleges Central Placement Services (2015) shows that there are 855 TVET institutions in Kenya, out of which 340 of TVET are found in Nairobi County, and 38 are found in Nakuru County. As such, through the use of convenience sampling two TVET institutions are selected for the study as explained.

Don Bosco Boys Town, Nairobi **(**DBBT**):** It was established in 1985 by the late Fr. Sean Mc Ferret and the late Bro. Cherian Palathinkal to empower youth with knowledge and skills for life in the charism of St. Don Bosco. The school has 150 males and 80 females. The students admitted to DBBT come from marginalized, poor families, street boys/girls, orphans, addicts and those who have completed class 8. Any of these statues qualify a young man or woman within the age range of 18 to 22 to be admitted. Most of the students come from the slums of Dagorreti, Kibera, and Kawangwari. Co-curricular activities at the school include: cultural dances, karate,

scouts, acrobatics, sports and music. Boys have boarding facilities but girls commute every day from their homes. The trades on offer are: Electricals, Mechanical Engineering (Machinists, Fitters/Turners), Welding, Motor Vehicle Mechanic, Masonry, Carpentry/Joinery, Plumbing and Tailoring. The students are closely supervised in apprenticeship as they prepare for the yearly Grade III Government Trade Test. The course is a two year programme.

Mwangaza College, Nakuru: The institution started in 1993 by the De La Salle Brothers under Catholic Diocese of Nakuru. Its major aim was to take care of the less advantaged students in the society who completed secondary school with low grades. The students are from Nakuru, Baringo and Nyandarua Counties. There are 400 students, 250 females and 150 males, with the age range of 15 to 30 years. Due to high demand, more competitive courses were introduced. Different courses require different entry requirements, in this order: Craft courses (Fashion & Design, Tailoring & Dressmaking, Hair Design & Beauty) require D+; Diploma Courses require C- and Professional courses like Accounting, Business Management, Sales and Marketing, Secretarial Studies, Human Resource Management, Supply Chain Management, Information Studies, (ICT and CICT) , Food and Beverage, French, Music, Spanish and Chinese require C+ and above. Co-curricular activities at the school include football, darts, table tennis and salsa dance.

3.3.2 Simple random sampling of learners

Simple random sampling is a probability sampling process where each member of the subset of a statistical population is allowed the chance to participate in the study. Every probable sample of a given size has the same chance to be selected (Panneerselvam, 2004; Creswell, 2008). Simple random sample is encouraged because it helps reduce the potential for human bias in the selection of participants to be included in the sample. Also, it provides researchers with a sample that is highly representative of the population being studied. In this regard, simple random

sampling allows for generalisations from the sample to the population (Panneerselvam, 2004). Therefore, in order to follow a standardised method of determining sample size, this study adopted Krejcie and Morgan's (1970) table that recommends the sample size for populations with finite sizes, and good enough, the population for this study had finite size. The given finite size allows for the study to make generalisations about the entire sampled population in the two discussed institutions (Appendix A shows the Krejcie & Morgan's recommended Sample Size).

Through convenient sampling and simple random sampling, participants were recruited in the following method:

Don Bosco Boys Town: From Don Bosco Boys Town, Nairobi, the total number of students was small (189), therefore convenience sampling was used to recruit students for this study. As such, recruitment for the study was announced, and students who were available and willing to participate were given the questionnaire to respond to. At the end 147 male students and 35 female students responded to the questionnaire. Altogether, 182 students from Don Bosco Boys Town Technical Institute, Nairobi responded to the questionnaire.

Mwangaza College: Mwangaza College has a population of N=400, and so the reference table require that 196 be sampled. The population is made of 250 females, which means 123 females form 63% of the population; males are 150, and so 73 of them form 37% of the population. Therefore, in order to sample females, a simple random sampling exercise was conducted by putting 123 "yes" and 127 "no" on pieces of papers, placing them in a bag and requesting the females to pick them. The 123 who picked the yes were sampled for the study. For the males, 73 "yes" and 77 "no" were written on pieces of paper and placed in a bag, and the same exercise was repeated. The 73 who picked yes responded to the questionnaire. At the end, 46 males responded

to the questionnaire, and 120 females responded to the questionnaire. Altogether 166 students at Mwangaza College, Nakuru responded to the questionnaire.

3.4. Data Collection Instrument

The Intrinsic Motivation Inventory (IMI) developed by Ryan (1982) was used as the research instrument. The IMI has seven scales, but this study used only the three scales that elicit information on intrinsic motivation (the scale for person's pleasure-5 items, perception of personal competence-6 items, and value/usefullness-7 items). Deci and Ryan (1985) suggested that the items and the subscales of IMI can be malleably formulated and adjusted according to the situation, and the relevance of issues a researcher is out to explore. It is also allowed that items that appear redundant can be removed. The IMI has a likert scale of 1 to 7, and it is self-reported. The instrument has three main choices for the respondent to pick from. The first choice allows for complete agreement with a given statement, to a partial agreement with a statement and to a complete disagreement with the statement. Items number 11, 19 and 25 were reversed. The socio-demographic section and the 18 items of the IMI required approximately 20–30 minutes completing. The research instrument was divided into two sections. Section A had a demographical section to elicit information on the gender, age, entry qualification, participant's last semester academic result, admission number, department and perceived societal attitude towards TVET. Section B contained the IMI (Appendix B shows the participant's consent form and the research instrument).

In a study to assess intrinsic motivation in students, Shia (n.d.) used the categorical method to score the IMI. Those who scored 1-3 were considered to have a poor quantity of intrinsic motivation. Then those who scored 4 were considered to have good quantity of intrinsic motivation, while those who scored 5-7 were perceived to have a high quantity of intrinsic

motivation. Therefore, given that the IMI is flexible and adaptable (McAuley & And, 1989), the present study used two categories as a cut off and scoring mark. Those who scored 1-4 were considered low on intrinsic motivation, while those who scored 5-7 were considered high on intrinsic motivation.

3.4.1 Validity and reliability of research instrument

In a study to determine the psychometric properties and the internal consistency of IMI in the subscales of pleasure and perceived competence, McAuley and Andy (1989) revealed that the alpha coefficient showed pleasure as having $\alpha = .78$, while perceived competence had $\alpha = .80$, and the overall scale showed an alpha coefficient of $\alpha = .85$. In another study conducted by Choi, Mogami, and Medalia (2010) to describe the psychometric validation of a scale designed to measure intrinsic motivation (IM) in schizophrenia, it was discovered that Cronbach alpha showed good internal consistency for the IMI with a total score of $\alpha = .80$. Meanwhile, the subscales of pleasure was $\alpha = .95$, and value was $\alpha = .9$. In addition, Monteiro, Vera, Mata, Lourdes, Peixoto and Francisco (2015) conducted a research in order to analyse the characteristics of IMI among Portuguese students. At the end, the subscales of value and perceived competence showed a Cronbach's alpha of .82 and .91. Various empirical studies showed that results from IMI establish acceptable reliability and validity in regards to the particular targeted populations and tasks. Tsigilis and Theodosiou (2003) conducted a study on the temporal stability of IMI and it was revealed that the IMI provides a temporally stable measure, given that perceived competence was not markedly changed. In addition, Véronneau, Koestner, and Abela (2005) used IMI in a study to assess intrinsic need satisfaction and well-being in children and adolescents, and the validity of each subscale in the IMI was shown to be highly acceptable.

3.4.2 Age and level appropriateness of research instrument

The present study targeted students from the age range of 18 to 30. The IMI is appropriate for use amongst this age range because McAuley and Andy (1989) previously used the instrument among participants with the mean age of 21.3 to assess the psychometric properties of Intrinsic Motivation Inventory. Houlfort, Koestner, Joussemet, Nantel-Vivier, and Lekes (2002) also conducted a study with participants with the mean age of 19.3, and the study was to evaluate the impact of performance-contingent rewards on perceived autonomy and competence. More so, Thomas Li-Ping (1990) used undergraduate students at the National Taiwan University to ascertain factors affecting Intrinsic Motivation among university students.

3.5 Data Collection Procedures: The Intrinsic Motivation Inventory

The data collection procedure for this study started with a permit letter from the Tangaza University College research committee allowing the researcher to collect data. Another letter for the permission of data collection for the study was received from the National Commission for Science, Technology and Innovation (NACOSTI) allowing the researcher to collect data from the sampled TVET institutions. These permission letters were attached to the questionnaire and submitted to the Principals of the sampled TVET institutions. The two permission letters also helped the researcher to obtain the academic results of the participating students. In agreement with the principals, a convenient date that did not disrupt the schools' programme was set for data collection. The researcher chose to collect the data in the morning when students were alert and active. Thursday morning was a convenient time at Don Bosco Boys Town Technical Institute and the researcher used that time. And Friday morning was suitable at Mwangaza College. A day before the data collection date, the researcher obtained permission from the principals of the institutions and introduced himself and spoke briefly to the student body about the research and

its importance to the TVET system of education, making it clear to the students that the study was only for students who were 18 years and above, and their responses to the questionnaire was confidential. The researcher met students in their various departments where the sampling procedure was carried out. The researcher and research assistant distributed the questionnaires, which were self-administered. Sampled participants responded to the questionnaire under the supervision of the researcher and the research assistant. Before responding to the questionnaire, the participants signed the research consent form which was prefixed to the questionnaire after they had read and understood its content. The researcher carefully explained how to fill out the questionnaire, and encouraged the participants to answer all the questions. After filling the questionnaire, the researcher and the assistant collected the questionnaire from the participants. This study excluded students who were under 18 years old, and those who were absent from school on the day data was collected.

Since confidentiality guided the present study, participants were encouraged to identify themselves through their admission numbers. Therefore, with the use of the consent form and the admission numbers, participants' 2015 third term academic results were obtained from the school administrations for the purpose of confirming with the result participants had filled in the questionnaire.

For the sake of confidentiality, the researcher and the assistant were the only ones who distributed and also collected the questionnaire after students had finished filling it. After collecting the data in each location, the researcher safely put the data in a box and locked it up safely in the private vehicle of the researcher. The researcher then personally took the responsibility of transporting the data (filled questionnaires and exam results) safely to the researcher's private study space. For the purpose of confidentiality, each TVET institution had a

code that was only known to the researcher. Besides, results for the study have been analysed and discussed in groups.

3.6 Data Analysis

With the use of the Statistical Package of the Social Sciences for Windows Version 21, descriptive statistics was carried out (frequencies, cross tabulations and means/standard deviations) to analyse and describe the socio-demographic characteristics of the participants. In addition, inferential statistics (one way ANOVA and chi-square) was used as tests that could help the study make inferences from the collected data. Since the components of intrinsic motivation had different subscales, the study employed mean scores rather than total scores for analysis. Results from data analyses have been presented in tables.

3.7 Ethical Issues

Silverman (2000) brings to the awareness of researchers that they enter into the private space of their participants as they carry out their studies. And so, this raises ethical issues that should be addressed before, during, and after a research. In this regard, the present study gave attention to the issue of informed consent. In each of the targeted institutions, the administration was given a copy of the research authorization letter from Tangaza University College, NACOSTI, and the County Governments of Nakuru and Nairobi research authorisation bodies (The research authorization letters are found in Appendixes C, D, E, and F). Before the distribution of the questionnaires, participants were made aware of the purpose of the study and the data collection method involved. The role participants were expected to play was communicated to them as well. Meanwhile, it was made clear to the participants that their participation in the study was purely voluntary, since the study was carried out solely for

academic purpose. More so, students were made to understand that students who were 18 years and above were the only ones permitted to participate in the study.

This study did not have any known situation that could put its participants in a psychological or physical harm because of their participation in the study. In addition, honesty and trustworthiness is the standard that guided the handling of the data collection and analysis in this study. Also, it was made clear to the participants that at no point in time their identity or name, and information they had shared in the research were going to be revealed as they participated in the study. In order to conceal the identity of individuals, the results for the study were released as a group, not as individuals. There was assurance of privacy, confidentiality and anonymity. The questionnaires were distributed with pens to enable the students respond to the questions. Afterwards, students kept the pens as a way of compensation for their participation in the research.

CHAPTER FOUR

DATA ANALYSES AND RESULTS

4.1 Preamble

This chapter presents the findings of the study whose primary objective was to reveal the association between intrinsic motivation and academic performance among TVET students. By so doing, the chapter has the report of the level of intrinsic motivation among TVET students, and it further shows the institution with the highest intrinsic motivation level. This chapter also shows results on how intrinsic motivation and its subscales are affected by various demographic information such as gender, age, school entry qualification, semester's result, department and societal view of TVET education system.

4.2 Response rate

The study targeted a sample size of 378 respondents, although 30 questionnaires were rejected, the study recorded a response rate of 92.06%. This response was excellent considering that Mugenda and Mugenda (1999) state that a response rate of 50% is adequate for analysis and reporting; a 60% response is rated as good, while a response rate of 70% and above is rated as excellent.

4.3 Respondents Socio-demographic Details

The socio-demographic details of the research participants for the present study were analysed using descriptive methods including frequencies and cross tabulations. The socio-demographic details comprised of institution, gender, age, last semester's academic result (2015 third term), department and attitudes towards TVET education system.

Table 4.1 Representation of Research Participants

	Frequency	Percent
Mwangaza	166	47.7
Don Bosco	182	52.3
Total	348	100.0

As can be seen in table 4.1, TVET students at the Don Bosco Technical Training Institute are the most represented in this study, with a number of 182 (52.3%).

Table 4.2: *Socio-demographic Details of Participants*

	Mwangaza		**Don Bosco**		**Total**	
	n	%	n	%	n	%
Gender						
Male	46	27.7	147	80.8	193	55.5
Female	120	72.3	35	19.2	155	44.5
Age						
18-22	118	71.1	120	65.9	238	68.4
23-27	43	25.9	62	34.1	105	30.2
28+	5	3.0	0	0.0	5	1.4
Entrance Grade						
A- (75-79)	0	0.0	2	1.1	2	0.6
B+ (70-74)	8	4.8	1	0.5	9	2.6
B (65-69)	15	9.0	2	1.1	17	4.9
B- (60-64)	28	16.9	2	1.1	30	8.6
C+ (55-59)	47	28.3	24	13.2	71	20.4
C (45-54)	35	21.1	31	17.0	66	19.0
C- (40-44)	19	11.4	38	20.9	57	16.4
D+ (35-39)	8	4.8	29	15.9	37	10.6
D (30-34)	3	1.8	19	10.4	22	6.3
D- (25-29)	3	1.8	6	3.3	9	2.6
Primary (400-500)	0	0.0	6	3.3	6	1.7
Primary (200-300)	0	0.0	18	9.9	18	5.2
Primary (100-199)	0	0.0	4	2.2	4	1.1
2015 3rd Term Result						
A (70-100)	15	9.0	19	10.4	34	9.8
B (60-69)	75	45.2	81	44.5	157	45.1
C (50-59)	73	44.0	77	42.3	150	43.1
D (40-49)	2	1.2	5	2.7	7	2.1
Departments sampled	7	40.0	11	60.0	16	100
Attitudes towards TVET						
Negative	12	7.2	15	8.2	27	15.4
Positive	154	92.8	167	91.8	321	84.6

Majority of the female participants are from Mwangaza, while most of the male participants are from Don Bosco. In addition, most of the TVET students that were sampled for this study were from the age range of 18-22. Don Bosco is the only institution that admitted students with the highest qualification of A-, and the lowest qualification of primary school leaving certificate. A significant number of TVET students scored B in their 2015 third term academic results.

Table 4.3: *Cross tabulation of Participants by Departments, Location and Gender*

Departments Sampled	**Location of Data Collection**		**Gender**		**Total**
	Mwangaza	Don Bosco	Male	Female	
Fashion & Designing	14	-	-	14	14
Tailoring & Dressmaking	13	10	4	19	23
Hair Design & Beauty	12	-	-	12	12
Accounting	17	-	7	10	17
Business Management	53	-	24	29	53
Secretarial Studies	-	17	-	17	17
Food & Beverages	55	-	14	41	55
Carpentry	-	22	22	-	22
Plumbing	-	13	13	-	13
Art and Design	-	9	9	-	9
Masonry	-	15	15	-	15
Electrical	-	27	24	3	27
Fitter Turner	-	16	15	1	16
Computer	2	14	8	8	16
Welding	-	21	21	-	21
Motor Vehicle Mechanic	-	18	17	1	18
Total	166	182	193	155	348

Table 4.3 indicates that the study sampled TVET students across 16 departments in Mwangaza and Don Bosco. The department with the highest number of male students is Business

Management and Electrical. Subsequently, Food and Beverages is the department with the highest number of females. While the department of Art and Design had the lowest students represented.

Table 4.4: Cross tabulation of Participants' Opinion on TVET, Institution and Gender

Participants' Opinion on Societal Attitudes towards TVET	**Institutions of Data collection**		**Gender**		**Total**
	Mwangaza	**Don Bosco**	**Male**	**Female**	
Negative	12	15	13	14	27
Positive	154	167	180	141	321
Total	166	182	193	155	348

A majority of TVET students sampled think that society has positive attitude towards the TVET system of education. Going by the representation in table 4.4, a higher number of students expressed the opinion that TVET is viewed negatively are from Don Bosco. In addition, majority of the students who feel that society has negative attitude towards the TVET system of education are female.

4.4 Instrument Reliability

Table 4.5: Reliability of Intrinsic Motivation Inventory, its subscales and items

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Value-usefulness 1	98.0977	133.841	.447	.381	.801
Value-usefulness 2	98.3822	130.963	.446	.280	.800
Value-usefulness 3	98.0402	134.621	.438	.392	.802
Value-usefulness 4	98.1034	132.790	.483	.487	.800
Value-usefulness 5	98.0805	133.573	.492	.573	.800
Value-usefulness 6	98.0977	133.431	.463	.500	.801
Value-usefulness 7	98.1954	131.339	.505	.442	.798
Interest-enjoyment 1	98.8506	125.920	.495	.343	.796
Interest-enjoyment 2	99.3879	134.786	.130	.144	.825
Interest-enjoyment 3	99.0891	124.612	.494	.384	.796
Interest-enjoyment 4	99.1897	122.852	.577	.424	.790
Interest-enjoyment 5	98.8621	131.508	.305	.265	.808
Perceived-competence 1	99.0057	127.141	.464	.299	.798
Perceived-competence 2	99.0603	129.999	.326	.151	.807
Perceived-competence 3	99.3937	126.499	.420	.240	.801
Perceived-competence 4	99.4195	126.313	.402	.243	.802
Perceived-competence 5	98.8908	127.544	.482	.308	.797
Perceived-competence 6	98.8420	134.197	.200	.155	.816

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.811	.837	18

As indicated in Table 4.5, the overall Cronbach's Alpha (α) of the subscales and items at the bottom of the second box is a little above .8, and going by Field's (2013) description of a reliable instrument, Cronbach's Alpha in the range of .7 to .8 qualifies an instrument to be reliable. This means that none of the items in the instrument would substantially affect the reliability of the instrument if they were deleted. As such, it shows that the Intrinsic Motivation Inventory used for this study is reliable at Cronbach's $\alpha = .811$. This result shows higher internal consistency, indicating that the respondents had an experience of effective flow as they responded to the questionnaire, as compared to McAuley and Andy (1989) who revealed that their IMI psychometric test was Cronbach's $\alpha = .78$. In addition, the Cronbach's α test in the psychometric property test of the present study is higher than the psychometric test conducted in the study of Choi, Mogami, and Medalia (2010), as they discovered Cronbach's $\alpha = .95$. This could suggest that the respondent for the current study had almost the same mindset as they responded to the IMI questionnaire, no one individual had too high scores than the other respondents.

4.5 Findings on Research Questions

Inferential and descriptive statistic tests were employed to help answer the research questions which guided this study. The first question sought to find out the level of intrinsic motivation among TVET students and the institution with the highest intrinsic motivation. The relationship between the socio-demographic variables and intrinsic motivation was the focus of the second question. The third question aimed at discovering the association between intrinsic motivation and academic performance among TVET students. Additionally, revealing the

prevalence of the components of intrinsic motivation among TVET students was another task the study needed to accomplish.

4.5.1 Level of intrinsic motivation in the sampled institutions

Descriptive analysis is used in this section, as the present study sets out to answer the first question that guided it. The question sought to find out the level of intrinsic motivation among TVET students and which among the two sampled institutions scored the highest on intrinsic motivation.

Table 4.6: *Descriptive analysis of Intrinsic Motivation Scores across the Sampled Institutions*

	Intrinsic Motivation	Value and usefulness	Interest and enjoyment	Perceived competence
Overall	104.53	44.70	27.26	32.56
Mwangaza	104.16	45.12	26.82	32.22
Don Bosco	104.86	44.32	27.67	32.87

The level of intrinsic motivation is high 104.53/126 (82.9%). In general, respondents from Don Bosco showed a slightly higher intrinsic motivation than Mwangaza, which is not statistically significant (M=104.16, SD=12.0; $F_{(1,347)}$ =.294, p=.588).

4.5.2 Relationship between socio-demographic variable and intrinsic motivation

Another question the analysis for this study needed to answer was whether there is a relationship between socio-demographic variables such as gender, age, entry qualification, 2015 third term academic result, department and society's opinion on TVET, and intrinsic motivation. This section of the analysis has results for this question.

Table 4.7: *Relationship between intrinsic motivations and Socio-demographic Variables*

Source		**DF**	**F**	**p-value**
Location	Intrinsic Motivation	1	0.294	.588
	Value and usefulness	1	2.358	.126
	Interest and enjoyment	1	2.556	.111
	Perceived competence	1	1.218	.270
Gender	Intrinsic Motivation	1	.003	.959
	Value and usefulness	1	.313	.576
	Interest and enjoyment	1	.854	.356
	Perceived competence	1	.216	.643
Age Group	Intrinsic Motivation	2	.130	.878
	Value and usefulness	2	.142	.868
	Interest and enjoyment	2	.387	.679
	Perceived competence	2	.304	.738
Department	Intrinsic Motivation	15	1.798	**.035**
	Value and usefulness	15	.710	.774
	Interest and enjoyment	15	1.904	**.023**
	Perceived competence	15	2.203	**.007**
Opinion of societal view of TVET	Intrinsic Motivation	1	1.248	.265
	Value and usefulness	1	4.235	.041
	Interest and enjoyment	1	.372	.542
	Perceived competence	1	.009	.923
Last semester's academic results	Intrinsic Motivation	3	0.788	0.501
	Value and usefulness	3	2.52	0.058
	Interest and enjoyment	3	0.745	0.526
	Perceived competence	3	1.162	0.324

As shown in table 4.7, the use of Multivariate Analysis of variance test of Between-Subject Effects (two way ANOVA) indicated that there is no relationship between intrinsic motivation and the social-demographic variables. The two way ANOVA shows statistical significance at $p < .0005$. But in our case, we have $p > .005$.

4.5.3 Association between socio-demographic variable and Academic Performance

The analysis for the present study further aimed at discovering whether there is a relationship between socio-demographic variables and student's 2015 third term academic performance.

Table 4.8: *Association between Socio-demographic variables and Academic Performance*

Variables		2015 Third term's grades				$\chi 2$	p-value
		A 70 - 100	B 60 - 69	C 50 -59	D 40 - 49		
Institutions	Mwangaza	9%	46%	44%	1%	1.289	0.732
	Don Bosco	10%	45%	42%	3%		
Age Group	18-22 yrs.	10%	46%	41%	3%		
	23-27 yrs.	9%	43%	49%		5.205	0.518
	28 + yrs.	20%	40%	40%			
Entrance Grade	A- 75 - 79	100%					
	B+ 70 -74	67%	22%	11%			
	B 65 - 69	35%	65%				
	B- 60-64	13%	67%	17%	3%		
	C+55-59	7%	61%	32%			
	C 45-54	8%	38%	55%			
	C-40-44	4%	44%	53%		112.870	<.001
	D+ 35-39	3%	32%	60%	5%		
	D 30-34	5%	36%	50%	9%		
	D- 25-29		22%	78%			
	Primary (400-500)	33%	33%	33%			
	Primary (200-300)		28%	67%	6%		
	Primary (100-199)		50%	25%	25%		
Department	Fashion & Designing	29%	50%	21%			
	Tailoring & Dressmaking		39%	57%	4%		
	Hair Design & Beauty	33%	67%				
	Accounting		24%	77%			
	Business Management	6%	30%	64%			
	Secretarial Studies	12%	35%	53%			
	Food & Beverages	7%	64%	26%	4%		
	Carpentry	14%	46%	41%		121.780	<.001
	Plumbing	15%	69%	15%			
	Art and Design		33%	56%	11%		
	Masonry		7%	87%	7%		
	Electrical	11%	59%	30%			
	Fitter Turner		31%	63%	6%		
	Computer	50%	31%	19%			
	Welding		62%	33%	5%		

	Motor Vehicle Mechanic	6%	56%	39%			

Variables		Last term's grades A 70 - 100	B 60 - 69	C 50 -59	D 40 - 49	χ-square	p-value
Gender	Male	6%	45%	46%	3%	7.231	0.065
	Female	14%	45%	39%	1%		
Impression as regards TVET	Negative	11%	52%	37%		1.182	0.756
	Positive	10%	45%	44%	2%		

Table 4.8 shows a Chi square test alongside descriptive analysis to assess the association between student's performance and demographic variables such as age group, entrance grade department, gender and society's impression of TVET. On the one hand, there is no significant association between age and students' performance (χ^2=5.205, DF=6, p>.05). More so, gender (χ^2=7.231, DF=3, p>.05) and societal attitudes (χ^2=1.182, DF=3, p>.05) have no significant relationship with student's performance. On the other hand, there was significant associations between students' performance and entrance grade (χ^2=112.870, DF=36, p<.001) and department (χ^2=121.780, DF=45, p<.001). It indicates that students who entered with high grades whether KCSE or KCPE perform better than students who entered with low grades. Similarly, students from hair design & beauty, fashion & design and computer departments' score perform better than students from Masonry, Accounting and Fine Tuner departments.

4.5.4 Association between intrinsic motivation and 2015 third term academic performance

This subsection of the analyses set out to find out whether there is any association between intrinsic motivation and the 2015 third term academic performance among TVET students.

Table 4.9: *Association between Intrinsic Motivation and 2015 third term academic performance among TVET students*

		N	M	SD	F	p-value
Intrinsic Motivation	A 70 - 100	34	103.9	12.3		
	B 60 - 69	157	105.6	11.5	0.788	0.501
	C 50 -59	150	103.7	12.3		
	D 40 - 49	7	102.0	15.5		
Value and usefulness	A 70 - 100	34	42.9	5.5		
	B 60 - 69	157	45.2	4.5	2.52	0.058
	C 50 -59	150	44.7	4.9		
	D 40 - 49	7	42.7	6.2		
interest and enjoyment	A 70 - 100	34	28.4	4.6		
	B 60 - 69	157	27.2	4.9	0.745	0.526
	C 50 -59	150	27.0	5.1		
	D 40 - 49	7	27.1	5.3		
Perceived competence	A 70 - 100	34	32.6	5.2		
	B 60 - 69	157	33.1	5.2	1.162	0.324
	C 50 -59	150	32.0	5.7		
	D 40 - 49	7	32.1	6.8		

Result from a one way ANOVA in Table 4.8 show that those who scored B in their last semester exams had the highest percentage of intrinsic motivation. On the flipside, those who scored D had the lowest intrinsic motivation. Since the difference was not significant (overall $F=.79$, $p>.05$), it can be concluded that intrinsic motivation and academic performance are not associated.

4.5.5 Prevalence of the components of intrinsic motivation

The fourth question this study focused on was to find out which component of intrinsic motivation is prevalent. Therefore, this section of the analysis sought to find out whether pleasure, value or competence is most prevalent among the sampled TVET students.

Table 4.10: *Mean Scores of Intrinsic Motivation Subscale Scores*

Variables	Nakuru	Nairobi	F	p-value
Intrinsic Motivation	104.16	104.86	0.294	0.588
Value and usefulness	45.12	44.32	2.358	0.126
Interest and enjoyment	26.82	27.67	2.556	0.111
Perceived competence	32.22	32.87	1.218	0.27

Since the components of intrinsic motivation had different items, the study employed mean scores rather than total scores. As presented in table 4.10, the findings revealed that the students scored highest on Value and usefulness, followed by interest and enjoyment. Perceived competence had the lowest score.

Table 4.11: *Descriptive Analysis of Intrinsic Motivation and its Subscales for various Departments*

Department		Intrinsic Motivation	Value and usefulness	Interest and enjoyment	Perceived competence
Fashion & Designing	*M*	104.64	44.14	27.14	33.36
	SD	11.01	5.97	2.82	5.36
Tailoring & Dressmaking	*M*	105.39	44.22	27.26	33.91
	SD	13.63	4.59	5.06	6.36
Hair Design & Beauty	*M*	**113.50**	47.25	29.08	37.17
	SD	7.66	2.73	3.58	5.54
Accounting	*M*	103.06	45.12	25.53	32.41
	SD	13.70	5.42	4.47	6.77
Business Management	*M*	102.30	44.60	26.25	31.45
	SD	11.39	4.97	5.06	5.01
Secretarial Studies	*M*	99.88	43.65	25.59	30.65
	SD	9.99	3.62	4.82	4.91
Food & Beverages	*M*	104.18	45.55	27.20	31.44
	SD	11.00	4.85	5.51	4.71
Carpentry	*M*	105.27	42.95	28.27	34.05
	SD	12.23	4.11	4.54	5.20
Plumbing	*M*	102.85	45.23	26.15	31.46
	SD	10.71	4.00	5.01	4.35
Art and Design	*M*	106.44	46.89	28.67	30.89
	SD	12.51	4.28	4.72	5.99
Masonry	*M*	103.53	44.40	27.20	31.93
	SD	10.95	5.23	4.78	5.39
Electrical	*M*	100.93	43.04	26.59	31.30
	SD	12.51	4.98	4.54	5.48
Fitter Turner	*M*	100.38	45.25	25.13	30.00
	SD	8.55	3.49	5.55	4.12
Computer	*M*	104.13	42.88	27.56	33.69
	SD	14.79	6.71	5.93	5.31
Welding	*M*	**114.57**	46.19	31.33	37.05
	SD	11.73	4.62	4.05	4.60
Motor Vehicle Mechanic	*M*	**108.67**	45.22	29.39	34.06
	SD	11.92	5.04	3.84	5.33
Total	***M***	**104.53**	**44.70**	**27.26**	**32.56**
	SD	**12.01**	**4.84**	**4.97**	**5.45**

Students with the highest intrinsic motivation were from the departments of welding, hair design and beauty, and motor vehicle mechanic respectively as can be seen in table 4.11. The lowest department with intrinsic motivation was from the department of Secretarial Studies.

4.6 Summary of the Findings

The four research questions were answered through the different analyses that were carried out. Therefore, results from the analyses pointed out that, the overall average level of intrinsic motivation was high, and Don Bosco Boys Town Training Institute showed slightly higher level of intrinsic motivation over Mwangaza College. The socio-demographic variables had no association with intrinsic motivation. However, some aspects of the socio-demographic variables such as entrance grade and departments had association with academic performance. Similarly, intrinsic motivation and academic performance did not have any link. The sampled TVET students scored highest on Value and usefulness, followed by interest and enjoyment. Perceived competence had the lowest score.

CHAPTER FIVE

DISCUSSION

5.1 Preamble

This section discusses the findings of the study as it restates the research questions that guided this study. It also revisits the conceptual framework reviewing the interaction between the independent variable, dependent variable and the moderating variable. At the same time, it compares the findings to the literature review and offers some improvement on the theoretical framework that the study is grounded upon.

5.2 Research Questions Revisited

The four research questions that guided this study sought to elicit information on the level of intrinsic motivation among TVET students. Likewise, the study needed to find out the relationship between socio-demographic variables and intrinsic motivation. It also tried to gather information as to how intrinsic motivation and academic performance relate as regards to how TVET students carry out their learning activities. The study further required information on the prevalence of the components of intrinsic motivation among TVET students.

5.2.1 Level of intrinsic motivation

A result indicating the level of intrinsic motivation among the sampled TVET institutions, and the need to discover which TVET institution had the highest intrinsic motivation was the focus of the first research question. Answering the question, the study revealed that intrinsic motivation among the sampled TVET institutions was high. This finding from the present study concurred with the discoveries made from institutions that are comparable to TVET. The studies were carried out by Omar, Jain and Noordi, (2013); Niehaus, Rudasill, and Adelson (2012). Both

studies found that intrinsic motivation was high among their sampled population. The new finding from the present study affirms the earlier postulation that intrinsic motivation has kept TVET students focused on their academic endeavour. More so, intrinsic motivation at the sampled institutions is possibly high because as UNESCO (2013) outlined, these students are studying in order to build their potential as human beings, which could eventually lead them to acquire employment for production. As such, students from Don Bosco Nairobi, a metropolitan city, probably perceive that they have more opportunities to utilise their potentials which could explain their slightly higher score in intrinsic motivation as compared to those from Mwangaza College, Nakuru.

5.2.2 Relationship between socio-demographic features and intrinsic motivation

Since the demographic features of participants stand a chance to influence their level of intrinsic motivation, the second research question aimed at assessing the relationship between the demographic features and intrinsic motivation. The study showed that there was no relationship between gender and intrinsic motivation in learning. This study, agrees with Hon Keung, Man Shan and Alison Lai Fong (2011) whose study revealed that gender does not influence levels of intrinsic motivation in learning. In addition, the result of the present study coincides with the findings made by Kerger, Martin and Brunner (2011) whose study concluded that intrinsic motivation in learning was the same for both male and female students. However, the same study revealed that the intrinsic motivation to learn was high among females when scientific concepts were presented in feminine notions, while intrinsic motivation to learn was high in males when scientific notions were presented in masculine concepts. This implied that intrinsic motivation may not be generally determined by gender but may vary in relation to gender when specific subjects are in question. In fact, there is empirical proof implying that females have higher

intrinsic motivation to learn in some learning fields more than males. As such, Narayanan, Rajasekaran and Iyyappan (2007) discovered that females had a higher intrinsic motivation over males when it comes to learning English. Lavonen, Juuti and Meisalo (2012) also found that females have a higher intrinsic motivation to study Physics. The two results indicate that intrinsic motivation to learn between the two genders depend on the courses they are learning and the subject under study.

The relation between age and the intrinsic motivation to learn is challenged by the findings of the current study. This outcome contradicts the findings Martin (2010) made in a study which revealed that school children who were delayed before joining primary school had an academic disadvantage that was characterised by low motivation and low academic achievement. Dobkin and Ferreira (2010) also confirm that younger students who were registered in the secondary education had low intrinsic motivation and poor academic achievement. The discrepancy between the findings of the present study and the reviewed literature (Martin, 2010; Dobkin & Ferreira, 2010) could be explained by the fact that the findings from the reviewed literature were from a younger population (10-17 years old), while the findings of the present study are from an older population.

In relation to entry grade, the study showed that TVET students who were admitted with C+ had the highest intrinsic motivation. This sort of outcome suggests that intrinsic motivation has no association with academic performance. Otherwise, one would expect students who have A as entry grade to have the highest intrinsic motivation in this study. As such, this result has disproved Moneta and Siu (2002), who documented in their study that intrinsic motivation associates positively with academic performance. It also challenges the findings of Gottfried,

Clayton, Gottfried, and Morris (2005) who discovered in a longitudinal study that intrinsic motivation significantly influences greater academic achievement.

The majority of the sampled TVET students' opinion on society's view on the TVET system of education contradicts findings made by some studies in the literature review. For instance, Bortei-Doku, Aryeetey and Andoh (2011) stated in their study that TVET is often looked down upon with the view that it is a field for students who lack the qualification to enter the university. Furthermore, the present study contradicts the finding of Simiyu (2009) who stated that the manual labour that is linked with TVET elicits negative views about the system of education. On the contrary, the finding of the current study has depicted society as having a positive view over the TVET system of education.

5.2.3 Relationship between socio-demographic features and Academic Performance

One among the objectives of the this study was to reveal the relationship between socio-demographic features such as, gender, age, entrance results, department and students' perception of the TVET system of education and academic performance. The analysis in this study discovered no relationship between gender and academic performance. Therefore, this finding suggests that one's upbringing, environment and other factors could be responsible one's academic performance more than the difference in gender. This finding concurs with Johnson (1976) who discovered in a study that there are abilities, achievements and performances that favour the male and female gender differently. In relation to age and academic performance, the study discovered that they have no association. This could mean that age on its own does not influence academic achievement. This finding disputes the study carried out by Dobkin and Ferreira (2010) who reported in their study among secondary school students that academic

outcome is influenced by age. This study discovered no association between societal opinion and academic performance among TVET students. The finding could suggest that societal opinion of TVET students does not influence TVET students. This result somewhat disagree with the findings of Simiyu (2009) who found out that some people view TVET negatively because it involves manual work, although Simiyu did not find out if this negative attitude towards TVET has adverse effect on the academic performance of TVET students.

The present study revealed a significant association between students' performance and entrance grade, showing that students who entered with high grades whether KCSE or KCPE put up a better academic performance as compared to those who entered with low grades. This finding could be a suggestion that students' entrance grade indicates their academic outcome in their learning endevour. The finding of this study contradicts the finding of Adewale and Adhuze (2014), who found among polytechnic students a weak relationship between entry qualification and academic achievement. However, the current study agrees with the findings of Bush (2012) who reported in a study among Master of Pharmacy Degree Program that entrance grade relates with academic achievement positively. The analysis for the current study further discovered that there is association between department and academic performance, as it showed that students from hair design & beauty, fashion & design and computer departments perform better than students from Masonry, Accounting and Fine Tuner departments. This finding is in agreement with the finding of Hartnett and Centra (1976) as they discovered among university students that the impact of education on learners is more effective when learners focus on their learning fields in their departments. In addition, Ramsden and Entwistle (1981) in a study among learners from different higher learning institutions discovered that the divisions in higher institutions of learning have relationship with teaching and knowledge acquisition of students.

5.2.4 Association between intrinsic motivation and academic performance

Another goal this research has achieved is that it has elicited information on the link between intrinsic motivation and academic performance among TVET students. Consequently, data analysis revealed that there was no link between intrinsic motivation and academic performance. Students who scored D almost shared the same high intrinsic motivation as students who scored B. This finding negates the discoveries previous studies have made. For instance, Moneta and Siu (2002) reported that intrinsic motivation associates positively with academic performance. In addition, Lemos and Verissimo (2014) revealed in their study that intrinsic motivation was well associated with better academic performance. And so, the finding from the present study suggests that high academic performance could be the interplay between intrinsic motivation and other factors not established by this study.

5.2.5 Prevalent component of intrinsic motivation among TVET students

The fourth question that guided this study sought to find out which among the three components of intrinsic motivation, pleasure, value or competence was prevalent among TVET students. Results indicated that personal value in learning had the highest score. This finding relates to Deci (1971) who also discovered in a study with a separate group that students had high intrinsic motivated value in learning, to a level where external rewards to encourage them rather lessened their intrinsic motivated value. The sampled TVET students score highest on value, probably because knowing that the skills they are acquiring from their institutions will guarantee them a means of livelihood after graduation.

5.3 Conceptual Framework Revisited

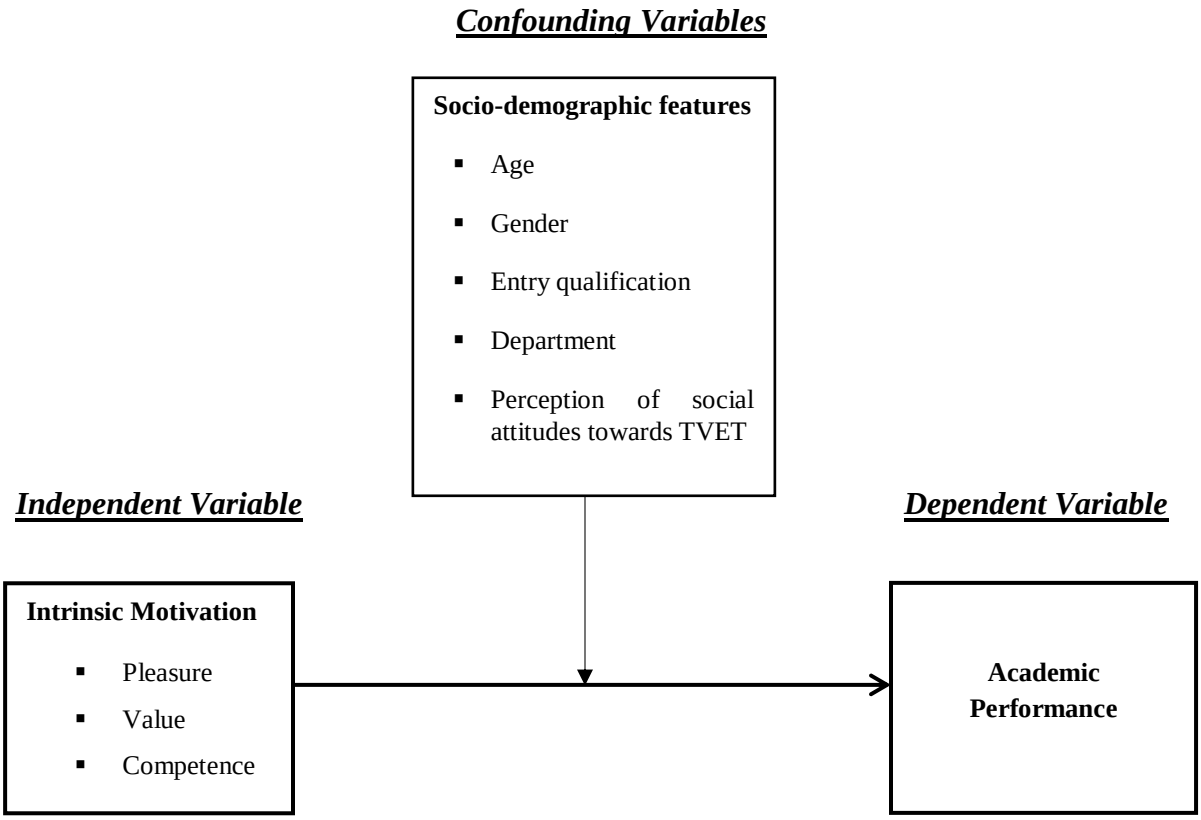

Figure 5.1: Conceptual Framework Revisited

The present study started with the assumption that intrinsic motivation is associated with academic performance. And so, intrinsic motivation was placed as the independent variable, and academic performance was placed as the dependent variable. The study took into consideration that variables such as, gender, age, entrance results, last academic results, department and society's view of the TVET system of education externally strengthen intrinsic motivation in students, thereby leading to high intrinsic motivation and subsequently high academic performance. Those socio-demographic factors formed the confounding variable for the study.

5.3.1 Intrinsic motivation in the conceptual framework

Results from the study showed that intrinsic motivation is high among TVET students. A look at the three intrinsic motivation components showed that Value/Usefulness had the highest score. The next in line was Interest/Enjoyment and the last one was Perceived Competence. High score in these aspects of intrinsic motivation suggest that TVET students are not studying necessarily for external reward. The students meet the description of intrinsic motivation put forth by Coon and Mitterer's (2010) when they say that intrinsically motivated students do not engage in their learning task for external reward, but for the purpose of achieving their potential.

5.3.2 Academic performance in the conceptual framework

This study set out with a postulation that academic performance is influenced by intrinsic motivation. Therefore, academic performance was placed as dependent variable. It is reasoned that when an individual has high intrinsic motivation, his or her academic performance is supposed to be high as well. On the contrary, the analysis result showed that high intrinsic motivation did not equal to high academic performance. Some TVET students scored D in their academic performance, but they had high intrinsic motivation, almost similar to those who scored B. Therefore, the finding of this study was contrary to Lemosa and Veríssimo (2013) who found that there is a significant relationship between students' academic achievement and intrinsic motivation. Also the study controverts Lepper, Corpus and Iyengar (2005) who reported that intrinsic motivation associates with academic achievement. Learning is more than academic results. Therefore, it could be possible that students who scored D in their 2015 third term exams have also acquired knowledge and skills at the same level with the students who scored B; however, they were not able to translate their skills into higher academic performance that is the reason they scored D.

5.3.3 Socio-demographic features in the conceptual framework

Socio-demographic features such as, gender, age, entrance results, last academic results, department and society's view of the TVET system of education formed the confounding variable for this study. Incidentally, there was no association between intrinsic motivation and academic performance and any of the socio-demographic variables. Nonetheless, students from the Welding department scored highest on intrinsic motivation, the next department was Hair Design and Beauty, and the last one was Motor Vehicle Mechanic. This scoring trend in the intrinsic motivation probably suggests that the real estate in Kenya is flourishing, and so there is prospect for job opportunities for welders in the real estate industry and that is why the students are highly motivated intrinsically in their learning task. Owing to the reality in our society that people have become more conscious of personal grooming and physical appearance, the students in the Hair Design and Beauty department might be looking forward to job openings after graduation, and as such they could approach learning with high intrinsic motivation. More so, with the upsurge of motor vehicles in Kenya, students from the Motor Vehicle Mechanic department could reason that competence in their field could secure them steady employment. In this regard, Véronneau, Koestner and Abela's (2005) claim that external motivators are capable of influencing intrinsic motivation is appreciated.

As regards entrance grade, students who were admitted with C+ had the highest intrinsic motivation, and those with the lowest score on intrinsic motivation were those who were admitted with the primary school marks of 400 to 500. Low intrinsic motivation among primary school leavers who seemingly scored high at the end of their school year could be a pointer showing that such students do not have value for what they are learning. This could be because they probably saw themselves as students with the qualification to join secondary school and eventually enter the university to take up white collar careers. Therefore, finding themselves in a TVET institution

because of austere conditions of life could be discouraging to them and that is why their intrinsic motivation score is low. As such, this finding agrees with Misganaw (2011) who discovered that society views TVET negatively because of the low financial and social return it offers.

The study has demonstrated that intrinsic motivation cannot exclusively influence high academic performance implying consequently that there are other learning and examining factors which the present study did not take into consideration as the objective of the study was framed.

5.4 Findings in Relation to Literature Review

The phenomenon that obliged this research had backing from empirical research and other academic literary sources. Therefore, the following paragraphs discuss research results of the current study, alongside the reviewed literature for the study.

5.4.1 Society's attitude towards the TVET system of education

The attitude of society around the TVET system of education and TVET students' steady determination is what called for the present study. Findings of some studies (Bortei-Doku, Aryeetey & Andoh, 2011; Misganaw, 2011; Simiyu, 2009) indicated that society has a negative view about the TVET system of education. Misganaw (2011) cited poor financial income associated with graduates of TVET. Simiyu (2009) revealed that the manual work that is linked with TVET gives it a negative connotation. Additionally, Agyarkor (2013) pointed out that graduates of TVET face discrimination at their work place in regards to remunerations. Contrary to the reviewed literature, participants for the study perceive society as having positive attitude towards the TVET system of education.

Society's positive attitude towards TVET as reflected in the finding of this study concurs with the opinion the Kenyan Government has over TVET. The Kenyan Government

acknowledge TVET as a means for productive transformation (Republic of Kenya, 2008b). Furthermore, the positive attitude society has towards TVET as it is discovered in this study also corresponds with UNESCO (2013) as it views TVET as a system that is capable of equipping learners with practical skills for employment.

5.4.2 Level of intrinsic motivation among TVET students

Findings from the present study agree with the study carried out by Omar, Jain and Noordi (2013) stating that students from a low achiever polytechnic have high intrinsic motivation. The current study further confirmed findings from Niehaus, Rudasill, and Adelson's (2012) study concerning students with similar characteristics as TVET. The study found out that the students had high intrinsic motivation. Deci (1971) carried out a study from an entirely different population, and at the end Deci discovered that the students had high intrinsic motivation, confirming the current study that students indeed have high intrinsic motivation.

Therefore, in a society that seems to look down on the benefits of TVET, as reported by some studies, the high presence of intrinsic motivation among TVET students can keep the students focused, and so they can persevere, because they find value, pleasure and competence in their study.

5.4.3 Relationship between intrinsic motivation and academic performance

There is a good amount of empirical studies (Sonja, Sabine & Waldemar, 2011; Lemosa & Veríssimo, 2013; Corpus & Wormington, 2014; Gest, Rulison, Davidson & Welsh, 2008) that have supported the claim that intrinsic motivation is associated with academic performance. Sonja, Sabine and Waldemar (2011) discovered that there is a relationship between intrinsic motivation and academic performances. Also, Lemosa and Veríssimo (2013) in their study discovered that there is a significant relationship between intrinsic motivation and academic

achievement. Corpus and Wormington (2014) established the prevalence of intrinsic motivation among their respondents. In addition, Gest, Rulison, Davidson, and Welsh (2008) reported that intrinsic motivation relates well with academic achievement.

Contrariwise, the present study differed with the previous studies which revealed that intrinsic motivation relates positively with academic performance. The current study found that intrinsic motivation does not relate with academic performance. Perhaps this study contradicts other findings because examinations cannot be completely relied upon as a means of measuring students' knowledge, and also, some conditions under which examinations are administered inhibit students' performance.

5.5 Finding in Relation to Counselling Psychology

Academic performance is seen as a significant means used for assessing students' academic ability. However, there are disturbing incidences in our society whereby some students are found to have entered into depression or even committed suicide because they were dissatisfied with their academic performance in a course they placed so much interest and value in, and in which they also thought they had high competence (intrinsic motivation). In this regard, the finding of the study will help school counsellors to offer psychoeducation to students concerning the need to choose careers based on intrinsic motivation, as well as their intellectual ability in the course of their choice. Intrinsic motivation without intellectual ability in a field of study would yield low academic outcome.

5.6 Suggested Improvement of the Self Determination Theory

The Self-determination Theory has been utilised by many studies, (Litman, 2005; Vansteenkiste, Simons, Soenens, & Lens, 2004; Olsson, 2008; Soenens, Vansteenkiste, & Sierens, 2009). The theory lays emphasis on the mind-set of carrying out activity for its natural satisfaction and not for some outside pressure or coercion. As such, one gains pleasure and enjoyment merely from carrying out an activity, and that is the core of what is referred to as intrinsic motivation. Consequently, this intrinsic motivation is supposed to produce high academic performance among students who have it (Deci & Ryan, 2004).

However, having used the Self-determination Theory in the present study, statistical evidence show that in the field of learning, students can have high intrinsic motivation, but it will not be manifested in their academic performance. High academic performance should serve as a proof that a student has enjoyed, valued and has gained competence in an academic task. On the contrary, the present study has proven otherwise, as there are students who have D in their semester result but have indicated that they enjoy, value and have competence in what they have learned.

Therefore, the proponents of the Self-determination Theory could think of including individual intelligence alongside intrinsic motivation in learning. This is because intrinsic motivation on its own cannot give the desired academic outcome (high academic performance) when it comes to learning.

5.7 Generalisability and Transferability

Transferability is when research results from a given situation are linked to other related circumstances, while generalisation is when results from a study is given a broad view that embraces the general population (Shadish, 1995). Therefore, since quantitative study fosters

generalizability and transferability, the finding of this study can be applied to other TVET institutions in Kenya. In any case, the present study sampled students from two counties out of the 47 counties in Kenya, and two TVET institutions among the 855 TVET institutions in the country. More so, the study sampled both male and female students, and given that all TVET students have similar goal which is knowledge acquisition in the field of technical skills for employability, the primary finding of this study which states that intrinsic motivation is high among the sampled TVET students can be true for other TVET institutions in Kenya.

CHAPTER SIX

CONCLUSION

This chapter presents a brief summary of the present study. By so doing, it discusses the limitations of the study. The chapter goes ahead to give insights into future orientation in regards to intrinsic motivation, and academic performance among TVET students.

6.1 Conclusion

The current study set out with the objective to answer four questions, and at the end, it succeeded in responding to the questions. First, the study discovered that the overall average level of intrinsic motivation was high among TVET students, and Don Bosco Boys Town Training Institute had the highest level of intrinsic motivation. Secondly, the study found that there was no connection between intrinsic motivation and the socio-demographic variables. Thirdly, the study found no relationship between intrinsic motivation and academic performance. Lastly, the prevalent component of intrinsic motivation was value and usefulness, followed by interest and enjoyment. Perceived competence had the lowest score.

6.2 Limitations of the Work

Trafimow, (2014) describes limitations in social research as shortcomings that influence an empirical study in which the researcher has no control, but could be avoided in any similar work in the future. As such, the paragraphs below have pointed out the various limitations that a reader or a reviewer may notice in this study.

Efforts have been made to carry out a comprehensive literature review for this study. However, for the purpose of time and because of a lack of resources there may have been

some important literature related to this topic which could have enriched this study, but the researcher could not gain access to them. For example, the literature review came across study materials on the internet that needed payment before they could be viewed.

The result of this study depended entirely on the honesty with which the respondents approached the instrument that was used to collect data for this study. More so, their understanding of the research may have influenced the way they responded to the questionnaire. In addition, it would have been more enriching to also collect data on how teachers stimulate intrinsic motivation in students, but due to limited time and resources, this could not happen.

Also, the findings of this study would have been more revealing if more TVET institutions were sampled for the study, since only two out of 855 TVET institutions in Kenya were sampled for the study.

Lack of time and resources hindered the researcher to employ mixed research methodology in this study. The study would have included a more profound data. The result would have been more comprehensive if qualitative and quantitative data collection were used, since the qualitative research method captures information on contextual experiences.

6.3 Future Orientations

The following areas are pointed out as future orientations for this study:

There could be more revealing results and insight on the level of intrinsic motivation among TVET students if a mixed method research was carried out. With the use of a qualitative and quantitative research approach, TVET students will be able to express their personal experiences around this topic.

A longitudinal study to assess the relationship between intrinsic motivation and socio-demographic variables such as gender, age, entry qualification, department and society's attitude towards TVET will enhance and enrich the discoveries this study has made.

A better understanding of the relationship between intrinsic motivation and academic performance could be obtained if more TVET institutions are sampled, since this study was only able to sample two institutions out of 855 TVET institutions in Kenya.

In order to have a more comprehensive knowledge on the prevalence of intrinsic motivation components among TVET students, an inclusive study targeting students, teachers and administrators of TVET institutions should be carried out. Then it could be revealed which aspect of intrinsic motivation is more encapsulated in the TVET curriculum.

6.4 Reflexivity

According to Malterud, (2001) reflexivity is the conscious mind set the researcher assumes in order to scientifically construct knowledge without allowing background and personal perspective and position to influence the outcome of the knowledge attained. In the present study, the researcher's background and personal perspective influenced the topic the researcher chose to investigate. However, the researcher made deliberate efforts to see that the research was systematically carried out. The study was devoid of personal value and interest, as quantitative research approach and a theoretical framework coupled with a certified research instrument were used in the study. Therefore, the researcher designed the topic springing from past experience, and the result of the systematic study brought enlightenment to the researcher as the study revealed that TVET students have high intrinsic motivation.

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APPENDIX A

Table of Recommended Sample Sized (S) for Populations (N) with finite Sizes

N	*S*		*N*	*S*		*N*	*S*
10	10		220	140		1,200	291
15	14		230	144		1,300	297
20	19		240	148		1,400	302
25	24		250	152		1,500	306
30	28		260	155		1,600	310
35	32		270	159		1,700	313
40	36		280	162		1,800	317
45	40		290	165		1,900	320
50	44		300	169		2,000	322
55	48		320	175		2,200	327
60	52		340	181		2,400	331
65	56		360	186		2,600	335
70	59		380	191		2,800	338
75	63		400	196		3,000	341
80	66		420	201		3,500	346
85	70		440	205		4,000	351
90	73		460	210		4,500	354
95	76		480	214		5,000	357
100	80		500	217		6,000	361
110	86		550	226		7,000	364
120	92		600	234		8,000	367
130	97		650	242		9,000	368
140	103		700	248		10,000	370
150	108		750	254		15,000	375
160	113		800	260		20,000	377
170	118		850	265		30,000	379
180	123		900	269		40,000	380
190	127		950	274		50,000	381
200	132		1,000	278		75,000	382
210	136		1,100	285		100,000	384

Adapted from: Krejcie, R. V., & Morgan, D.W. (1970). Determining sample size for research activities. Educational and Psychological Measurement, 30, 607 – 610.

APPENDIX B

Participant's Consent Form

Tangaza University College-CUEA

Topic: Association between Intrinsic Motivation and Academic performance among Technical Vocational Education and Training Students

.

• This study is being conducted by a student at Tangaza University College. • It has been approved by the Lecturer (contact: iysmas@tangaza.org) • The study involves no known risk to participants and contains no deception. It takes approximately one hour to take part in the present phase of the study. • The task requires the participant to answer a series of questions. • The participant is required to give his last semester's result. Participants' school attendance record will be needed as well. • All responses will be treated as strictly confidential. No participant's results will be presented individually but only in aggregate form. • Participation in this study is voluntary and there will be no monetary compensation. A refusal to take part will not lead to an individual being penalized in any way, and all participants have the right to withdraw themselves and their data from the study at any time.
Name of Researcher: Biin T. Godwin
Position of researcher: MA Student
Address and telephone number of the College: 0728782107 Tangaza University College, Lang'ata, Nairobi, Kenya 150055-00509
Signed by researcher:…….Date:
Statement to be signed by the participant: • I confirm that the organizer has explained fully the nature of the project and the range of activities which will be asked to undertake and that I have received an information sheet. I confirm that I have had adequate opportunity to ask questions about this project. • I understand that my participation is voluntary and that I may withdraw at any time during the project, without having to give a reason. • I agree to take part in this project, by filling in the questionnaire.
Signed by participant:…….Date:……..

Section A: Demographic Details

1. What is your gender? Male ☐ Female ☐
2. What is your age? _____
3. What was your mark when you came to this institution? _____
4. Last Semester's Academic Result: _____
5. What is your admission Number? _____
6. Department: _____
7. In your opinion, how does society view TVET education system? Negative ☐ Positive ☐

Section B: Instructions

Below is a list of statements dealing with general thought about your studies. Please indicate how very true or not at all true each statement is for you. There is no right or wrong answers. The right answer is the answer that is most true for you. Your answer is CONFIDENTIAL. Thank you!

Please tick (√) the appropriate response from the boxes provided below.

ITEMS	Not at all true			Somewhat true	Very true		
	1	2	3	4	5	6	7
8. I think studying is important for me.							
9. Studying is enjoyable.							
10. I am very good at studying.							
11. Studying does not hold my attention at all.							
12. After studying for a while, I felt pretty competent.							
13. I think school assignments are important because they can help me.							
14. While doing school work, I think of how much I enjoy it.							
15. I think studying can help me to improve my life.							
16. I think I am better at school work, compared to other students.							
17. I would describe school work as very interesting.							
18. I am satisfied with my performance at school tasks.							
19. I think studying is boring.							
20. I believe studying can be beneficial to me.							
21. I believe studying can be of some value to me.							
22. I think it is useful for me to study.							
23. I am will to continue studying because it has some value to me.							
24. I think I am pretty good at my school work.							
25. I can't study very well.							

APPENDIX C

Research Permit from Tangaza University College

Tangaza University College
Institute of Youth Studies
P.O. Box 15055 Lang'ata 00509 Nairobi, Kenya Email: iys@tangaza.org
Tel: 254-20-890018/890340, Mob: 0722-204724/ 0733-685059/0734-420935

12 February 2016

To whomsoever it may concern

Re: Biin Godwin Tarnongu (Reg. No. 14080Y)

This is to state that the above mentioned is a Bona Fide student of the MA Counselling programmes at the Institute of Youth Studies, Tangaza University College, Catholic University of Eastern Africa, Nairobi.

He is currently carrying out a research related to his MA dissertation. His research proposal has been approved by the committee appointed by the Coordinator of the MA programmes. Any assistance offered to him to complete this task will be highly appreciated by the institute.

Please do not hesitate to contact me for any further enquiry: iysma@tangza.org.

Yours Sincerely,

Rev. Prof. Sahaya G. Selvam
MA Coordinator

TANGAZA UNIVERSITY COLLEGE LANGATA, NAIROBI GRADUATE PROGRAMMES INSTITUTE OF YOUTH STUDIES

APPENDIX D

A Copy of Research Permit from NACOSTI

NACOSTI

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471, 2241349, 310571, 2219420
Fax: +254-20-318245, 318249
Email: secretary@nacosti.go.ke
Website: www.nacosti.go.ke
When replying please quote

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

Ref: No. **NACOSTI/P/16/30979/9782**

Date: **20th April, 2016**

Biin Godwin Tarnongu
Tangaza University College
P.O.Box 15055-0509
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Effects of intrinsic motivation on academic performance among TVET students,"*** I am pleased to inform you that you have been authorized to undertake research in **Nairobi and Nakuru Counties** for the period ending **19th April, 2017.**

You are advised to report to **the County Commissioners and the County Directors of Education, Nairobi and Nakuru Counties** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.

BONIFACE WANYAMA
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Nairobi County.

COUNTY COMMISSIONER
NAIROBI COUNTY
P. O. Box 30124-00100, GPO
TEL: 341088

MINISTRY OF EDUCATION
19 MAY 2016
MINISTRY OF EDUCATION, NAIROBI
P. O. Box 74629

The County Director of Education
Nairobi County.

The County Commissioner
Nakuru County.

National Commission for Science, Technology and Innovation is ISO 9001: 2008 Certified

APPENDIX E

A Copy of Research Permit from the Commissioner of Nakuru County

OFFICE OF THE PRESIDENT
Ministry of Interior and Coordination of National Government

Telegram: "DISTRICTER" Nakuru
Telephone: Nakuru 051-2212515
When replying please quote

DEPUTY COUNTY COMMISSIONER
NAKURU SUB COUNTY
P.O. BOX 81
NAKURU

Ref No ED.12/10 VOL.V/2

3rd May 2016

TO WHOM IT MAY CONCERN

RE:- RESEARCH AUTHORIZATION
BIIN GODWIN TARNONGU

The above named student from Tangaza University College has been authorized to carry out research on effects of intrinsic motivation on academic performance among TVET students at Nakuru Mwangaza College in Nakuru Sub County for a period ending 19th April, 2017.

Please accord him all the necessary support to facilitate the success of his research.

J. B. ALUODO
FOR DEPUTY COUNTY COMMISSIONER
NAKURU SUB COUNTY

APPENDIX F

A Copy of Research Permit from TVET Nakuru County

REPUBLIC OF KENYA

MINISTRY OF EDUCATION, SCIENCE & TECHNOLOGY
STATE DEPARTMENT OF SCIENCE AND TECHNOLOGY

Telephone: **051-2212819**
Email: **regionaldtvetnakuru@gmail.com**
When replying please quote

Ref./MOHEST/RVP/TT/1/8 (13)

REGIONAL DIRECTOR, TVET
SOUTH/CENTRAL RIFT
P. O. BOX 15880 - 20100
NAKURU.
17th May,2016

Biin Godwin Tarnongu
Tangaza University College
P.O Box 15055-0509
NAIROBI

RE: RESEARCH AUTHORIZATION

Authority is hereby given to the above, a student in Tangaza University College to carry out research on "**effects of intrinsic motivation on academic performance among TVET students.**" within Nakuru County for a period ending 19th April, 2017.

Kindly accord him the necessary support.

Eng. G. K. Matoke
REGIONAL DIRECTOR, TVET
SOUTH /CENTRAL RIFT

Copy to :

Tangaza University College
P.O Box 15055-0509
NAIROBI