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## RESEARCH ARTICLE

### IMPACT OF FREE SECONDARY EDUCATION POLICY ON COMPLETION RATES IN PUBLIC SECONDARY SCHOOLS IN KENYA: A CASE STUDY OF EMUHAYA AND VIHIGA SUB COUNTIES.

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#### ABSTRACT

Worldwide, studies have revealed that countries have invested huge amounts of money in education. In Kenya, Free Secondary Education (FSE) policy was introduced in 2008 to improve retention rates, completion rates, transition rates and student academic performance. Emuhaya and Vihiga sub counties completion rates were 51.1%, 52.8%, 53.2%, 51.7% and 54.7% for Emuhaya, 47.6%, 48.6%, 51.5%, 50% and 52% for Vihiga which were lower than national completion rates of 86%, 88.8%, 87.1%, 89.1% and 89.6% for the period 2008 to 2012. The objective of the study was to determine the impact of Free Secondary Education policy on completion rates in Emuhaya and Vihiga sub counties. A conceptual framework of investment choices by Psacharopoulos and Woodhall (1985) was adopted with Free Secondary Education policy being the independent variable and completion rates as the dependent variable. The study revealed that there was a moderate and positive relationship between Free Secondary Education policy completion rates with a coefficient of 0.664 at a significant level of 0.05. Free Secondary Education policy accounted for 43.0% of the variation in completion rate. The coefficient of efficiency was 86.77%, 87.85% and 91.87% respectively for 2013, 2014 and 2015 cohorts. The study concluded that Free Secondary Education policy enhanced completion rates and improved internal efficiency of public secondary schools in Emuhaya and Vihiga Sub Counties. The study recommended that Free Secondary Education funds be reviewed further upwards and be disbursed on time to schools in order to enhance completion rates. The findings of this study are useful to stakeholders in education as they inform them on the need to review Free Secondary Education policy upwards so as to achieve its objectives fully.

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## INTRODUCTION

In 1948 the United Nations Declaration of Human rights proclaimed that education was a fundamental human right. Every person has a claim to basic level of knowledge regardless of his /her social, economic or political status. This document set a stage for the rise of Free Universal Education Policies around the world in subsequent years. Universal education is one of the principal concerns of governments around the world (Steer & Geraldine, 2010). World over education is viewed as the cornerstone of social, economic and political development, a key means of improving an individual's socioeconomic status (UNESCO, 2010). Education empowers an individual with specific skills required by a firm, project or field of demand. It is believed that the main mechanism for developing human skills and knowledge is education (World Bank, 2008).

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After decolonization, education moved to the top of nation's post-independence development agenda. Many governments in developing countries allocated much of their resources to education after independence as a means of eradicating poverty, for future development and catalyst for social economic and industrial development (Psacharopoulos & Woodhall, 1985). According to UNICEF (2001) investment in education is widely recognized as an important element in a given country's development strategy. This is supported by world summit declaration on Education For All which is a global movement led by the United Nations Education Scientific and Cultural Organization (UNESCO) which aimed at meeting the learning needs of all children, youths and adults by 2015 (World Bank, 2000). According to Universal Declaration of Human Rights Article 28 of 1979, education should be free at least at the elementary level and accessible to all on basis of merit at higher levels. In order to realize these aspirations, the United Nations introduced the Education for All as an international initiative first launched in Jomtien,

Thailand in 1990 to bring the benefits of education to every citizen in every society (Education for All Global monitoring Report UNESCO, 2009). United Nations Human and Regional Organization (2012) point out that education is both a human right in itself and an indispensable means of realizing other human rights. World Bank (2011) states that some countries are now declaring free universal secondary education. In this respect countries like Angola, Benin, Botswana, Uganda and several other Sub-Saharan Africa countries have introduced Free Secondary Education policy to be in line with Education for All goals and Sustainable Development Goals. With the declaration of Free Primary Education policy in January 2003, the government of Kenya accelerated its speed to meet one of the goals of the Education for All of free and compulsory primary Education affirmed at Jomtien, Thailand (1990) and Dakar, Senegal (2000). The world summit for children (1990) and the world summit of population and development (Cairo Summit, 1999) recognized basic education as a human right and a means of social, economic and political development. The Education for All framework for action in sub-Saharan Africa Education for African Renaissance in the 21st Century the Johannesburg declaration for African based on the ideology of African Renaissance. The emphasis is on the fact that education in Africa shall prepare African people to take control of their own destiny, liberate them from dependence and endow them with initiative, creativity, critical thinking, enterprise, democratic values, pride and appreciation of diversity. Secondary school education was incorporated as part of Basic Education in 2008 by the Kenya government and tuition free secondary Education or subsidized secondary education was declared (Republic of Kenya, 2008). Introduction of FSE programme has led to increased enrollment from 2.0 million in 2013 to 2.8 million in 2017. The secondary Gross enrolment rate increased from 54.3% in 2013 to 69% in 2017 while NER increased from 38.5% to 51.1% in same period. This implies that approximately 48.9% of secondary school going age children are not enrolled in secondary schools (Republic of Kenya, 2019). Accordingly, secondary school education is supposed to enable the children from poor households acquire a quality education that enables them to access opportunities for self-advancement and be productive members of the society.

Secondary education is significantly correlated to economic growth, social development and to realization of Sustainable Development Goals, improvement in Individual earnings, decline in fertility and child mortality and increase in overall health and nutritional levels of a nation (UNESCO, 2014). UNESCO (2014) considered low retention in education sector as also to a nation and that it shows unfulfilled objective for an individual and community. Students who are not retained at secondary level means a great loss of potential workforce to a country. This justifies the higher expenditure on education by many national governments which is estimated to be between 4 to 6 percent their Gross Domestic Product (Martinez & Terway, 2016). Completion rates of students in secondary schools vary from one region to another internationally. This is because different nations are in different stages of extending universal secondary education (Booth & Bruce, 2009). Brown (2009) argued that, among developed countries the high school completion rates are generally as high as or higher than in the United States, though the nature of the secondary programs varies considerably. Completion rates in other countries lag behind those in developed countries, but secondary enrollments and completion rates have been increasing

worldwide (Bryk & Thum, 2009). There are also differences in completion rates associated with socio-economic and demographic factors. One notable demographic difference concerns the completion rates for males and females, females are more likely to complete school in developed countries (Bryk & Thum, 2009). In Latin America and the Caribbean both male and female students are more likely to complete schooling leading to high school completion rates than in the rest of the world (Botvin & Eng, 2011). According to World Bank (2005) to achieve high rate of secondary completion rates developed countries such as Germany, Britain, United States of America and others have education subsidized system that adequately fund the poor in secondary education. A study by Lewin (2008) on Financing Education in Mauritius found that subsidized secondary education in Sub Saharan Africa had led to high completion rates. In some African countries, the percentage of high school students reaching final grade in 2006 and 2010 ranged between 47 and 99 percent, with Mauritius having the highest and Ethiopia the lowest. The percentage of girls reaching final grade was higher than boys in Botswana, Algeria, Mauritius, Namibia, Niger and Tunisia. Mauritius had the highest percentage of 99 percent for girls reaching final grade, while Chad had the lowest percentage (Herring, 2009). As countries sought to increase educational participation, higher enrolment was not their only concern. They also sought to ensure that students progressed through the education system smoothly, and that they achieved higher levels of school completion (Herring, 2009).

Rwanda and Uganda abolished lower secondary fees in 2006 and 2007 respectively (Muhindi, 2012). The government of Rwanda has nine years of free basic education from primary to lower secondary for free (UNESCO, 2007). This policy has led to high completion rates. Kazuya Masuda and Chikako Yamauch (2016) did a study on effects of the universal fee-free secondary schooling program in Uganda on access, completion and achievement of the students. Longitudinal survey was used to get data from 940 sampled schools in 2003, 2005 and 2009. Descriptive statistics was used to analyze and report findings. The researcher employed interviews to collect data. This study used descriptive statistics in form of percentages. It used households as unit of analysis. The use of principals and education officers could have added value to this study. The study found out that universal free secondary schooling increased the number of the students taking the secondary school exit exam by 16%. The findings suggested that the cost of schooling remained the major constraint on the post primary education, and the universal free secondary education program improved completion rates. The study also found that universal tuition waiver program increased the share of female among the secondary school graduates, reducing the gender enrolment gap in post primary education. Free Secondary Education policy was introduced to improve; retention rates, completion rates, transition from secondary to university and student academic performance (Ministry of Education, 2007). Despite the introduction of Free Secondary Education policy the situation is still wanting. In Emuhaya and Vihiga sub counties retention rates from 2004 to 2007 were 48.1%, 50.6%, 47.5% and 51.1% respectively for Emuhaya, 48.5%, 49.2%, 54.4% and 52.7% respectively for Vihiga which were lower than national retention rates of 78.4%, 81.0%, 79.7% and 82%. Completion rates were 47.1%, 45.7%, 47.4% and 45.8% respectively for Emuhaya, 44.2%, 48.2%, 44.7%, and 40.3% respectively for Vihiga which were lower than national completion rates of 82.4%, 81.7%, 84.2%, and 83.7%.

Transition rates were 22.0%, 18.0%, 25.0% and 24.6% respectively for Emuhaya, 17.4%, 21.0%, 23.0% and 19.0% respectively for Vihiga which were lower than national transition rates of 41.1%, 43.0%, 46.2% and 47.1%. Kenya Certificate of Secondary Education performances mean score were 4.3, 4.1, 4.9 and 4.6 respectively for Emuhaya, 4.2, 3.8, 4.4 and 3.9 respectively for Vihiga which are below the average mean score of 6.0 (Kenya National Examination Council, 2007). Free Secondary policy was introduced in Kenya in 2008 to enhance completion rates (Ministry of Education, 2007). Massive poverty has crippled many families' efforts to ensure children complete their education despite the introduction of Free secondary education (Kendall, 2008). With the limited resources that some families have, Toldson (2008) argues that, they prefer to send boys to school since it is believed that they are the future wealth sources to their parents than the girls, as it is hoped they will go on to be breadwinners. Reports by the Ministry of Education revealed that despite enormous gains on access to education; there are dropouts of female and male students in secondary school and a decline in completion rates (Ministry of Education Science & Technology, 2010).

Studies by International Labor organization (2010) on micro factors inhibiting education retention and completion by children from vulnerable communities in Kwale District, Kenya revealed various factors. These factors included; parents ignorance, low literacy levels, religious factors, decision by father, absenteeism, early marriages, early pregnancy, human wildlife conflicts, sickness, distances from home to school and beliefs in witchcraft. The study concentrated on factors inhibiting completion rates while this study intended to find out if the factors have been eliminated by FSE policy by determining completion rates and impact of FSE policy on completion rates which the study did not address. Osodo (2010) in his study on socioeconomic factors hindering promotion of secondary education in Siaya revealed that parents with low income were unable to ensure their children complete secondary school education. School levies such as lunch programme, development funds, school uniform fees and money for text books resulted to dropouts leading to low completion rates. Osodo's study embraced questionnaires and interview schedule whereas this study added Focus Group Discussions and document analysis guide as instruments of data collection to get varied results. Study by Kasuma (2012) on completion rates in public mixed secondary schools in Kirinyaga County, Kenya, found that the main factors affecting completion rate are poverty, teenage pregnancy, early marriages, child labor, indiscipline cases, illicit brew, poor performance and lack of guidance and counseling. Kasuma's study used only descriptive survey design and studied girl's completion rate in public mixed day secondary schools. This design was not adequate since the intention of the study was on what has already occurred the use of ex-post facto research design would have made the study more complete in bringing out the real intent of the study. This study employed Ex-post facto, descriptive and co relational research designs to determine the impact of Free Secondary Education policy on completion rates. The use of more than one research design provided better understanding of research problem than either approach alone (Kothari, 2008). Study by Apiyo and Simatwa (2012) on Influence of Free Secondary Education on Girl Child Participation in Education in Mixed Day Secondary School in Siaya, found that there was increase in number of students who completed secondary education after introduction

of FSE policy. Her study was based on girl child participation in mixed day secondary schools. Study that gives equal opportunity to both gender was therefore necessary to determine impact of FSE policy on completion rate in public schools. The current study was based on public secondary schools regardless of category of school and gender so as to give a clear general picture of impact of FSE policy on completion rates. Study by Comboni Missionaries Kenya (2012) established that Turkana District registered one of the lowest gross enrollment, retention and completion in the country. Out of 33% of children of age 5-10 that started schooling, 69.2% did not complete primary school education. Data was analyzed using percentages. The study only used percentages to analyze data but inferential statistics was not done to determine the level of influence. The study focused on Public primary schools. This study looked at the impact of FSE policy on completion rates in Public secondary schools.

A Study done by Ngwili (2014) on factors influencing student's completion rates in public day and boarding secondary schools in Kibwezi District, Makueni County found that funds from Free Day Secondary Education are used to enhance educational facilities in day secondary schools, this has provided ideal environment for quality education, hence improved completion rates. The study design was descriptive survey, the target population was 632 and the sample size was 242 respondents. This design alone was not adequate since the intention of the study was on what has already occurred the use of Ex-post facto research design would have made the study more complete in bringing out the real intent of the study. The study concentrated on the factors influencing students' completion rates in public day and boarding secondary schools but did not compute completion rates. This study employed Ex-post facto, descriptive and co relational research designs to determine the impact of Free Secondary Education policy on completion rates and completion rates were calculated. Makokha (2016) did a study on the Effect of Free Tuition Secondary Education Policy on Completion rate in Public Secondary Schools in Emuhaya Sub County and embraced Ex-post facto and descriptive research designs. The study established that free secondary Tuition education had a positive effect on completion rate since it improved. Data was analyzed using descriptive statistics in form of percentages. Completion rates were determined in general for the Sub County, however if completion rates for individual schools were determined it could have added value. His study looked at effect which is short term while this study looked at impact which is long term effect. Makokha used Ex-post facto and descriptive research designs while this study used Ex-post facto, descriptive and co relational research designs. Ngwacho, Theodre and Chemwai (2017) in their study on impact of hidden costs of Free secondary Education on student completion rate in Kisii County found there was a strong positive inter relationship between completion rates and hidden costs. This implied that as hidden costs increased the number of students who failed to complete the four year of schooling also increased. These findings concur with Osodo (2010) who found that School levies such as lunch programme, extra tuition may also result to dropout leading to low completion rate. The findings also concur with findings by Omandi (2015) who found that parents are still expected to meet educational costs in spite of the subsidized education by free day secondary education by the government.

Muhindi (2012) conducted a study in Nyeri County to establish the challenges facing implementation of free day secondary education: a case study of Nyeri South District, Nyeri County in Kenya. Descriptive survey design was adopted to conduct the study. Data was collected using two sets of instruments, a questionnaire for the principals and observation guide. Data was analyzed and presented using frequency distribution tables, bar graphs, pie charts and frequency polygons. The study found that girl's completion rates at secondary level was low. Despite this study using an appropriate research methodology, the study looked at challenges facing implementation of free day secondary education. It is on this basis that my study found a research gap on the impact free secondary education on Completion rates.

Chepkoech (2018) did a study on extent of effect of Tuition Free secondary education subsidy on completion rates in Public secondary schools in Kasarani, Nairobi County. The study used descriptive survey design. Data was analyzed using descriptive statistics in form of percentages. The study established that Tuition Free secondary education subsidy was effective in increasing completion rates as reported by 71.4 percent of principals. The study did not calculate completion rates which could have added more value to the findings. The study looked at extent of effect of Tuition Free secondary education subsidy on completion rates in Public secondary schools. This study looked at the impact of FSE policy on completion rates in secondary schools.

Mwangi (2018) did a study on the Influence of Free Secondary Education Policy on Completion rate in Public Day Secondary Schools in Kitui County and used descriptive research design. The study established that Free Secondary Education policy influenced completion rates significantly by 0.127 level of significant implying that Free Secondary policy had helped students complete their studies. However the funds were inadequate to keep students in school for the whole year. Completion rates were determined in general for County, however if completion rates for individual schools were determined it could have added value. The study focused on day secondary schools only yet even boarding schools receive the money from the government. This study focused on both day and boarding secondary schools. Mwangi used descriptive research design while this study used Ex-post facto, descriptive and correlational research designs. From the studies reviewed Osodo (2010), Kasuma (2012), Apiyo (2012), Comboni Missionaries Kenya (2012), Ngwili (2014), Makokha (2016), Obae, Cheloti and Mwangi (2017), Ngwacho, Theodore and Chemwai (2017), Muhindi (2012), Chepkoech (2018) and Mwangi (2018), no study has addressed the impact of FSE policy on completion rates. This is the knowledge gap that this study filled using Emuhaya and Vihiga Sub Counties as the sites for the study. According to Economic Surveys 2005, 2006, 2007 and 2008 completion rates nationally were 82.4%, 81.7%, 84.2% and 83.7% respectively. However when national data was compared with different Sub counties, disparities was noted. In Emuhaya and Vihiga sub counties completion rates from 2004 to 2007 were 47.1%, 45.7%, 47.4% and 45.8% respectively for Emuhaya, 44.2%, 48.2%, 44.7% and 40.3% respectively for Vihiga which were lower than national completion rates. This implied that in Emuhaya and Vihiga Counties on average 45.4% of students who joined form one were able to continue with their education up to form four which is lower than the average national figure of 80.3%. This indicated that despite national completion rates being high in

Emuhaya and Vihiga Sub Counties only 45.4% of students who joined form one were able to continue with their education up to form four. Table 1 shows completion rates (%) in Vihiga, Sabatia, Emuhaya and Hamisi Sub Counties for the years 2004, 2005, 2006 and 2007. From Table 1, it can be noted that the national completion rates ranged between 81.7% and 84.7%. This mean that nationally 81.7% to 84.7% of students who joined form one were able to continue with their education up to form four. Completion rates for Emuhaya and Vihiga Sub Counties are below the national completion rates with the least being 40.3% and highest 48.2% for the years 2004 to 2007 which means only 40.3% to 48.2% of students who joined form one were able to continue with their education up to form four. Table 2 shows Completion Rates (%) in Vihiga, Sabatia, Emuhaya and Hamisi Sub Counties in the years 2008, 2009, 2010, 2011 and 2012. From Table 2, it can be noted that national completion rates ranged between 86.0% and 89.6%. This implies that nationally 86.0% to 89.6% of students who joined form one completed school. Despite introduction of Free Secondary Education policy completion rates for Emuhaya and Vihiga Sub Counties are still below the national completion rates with the least being 51.1% and highest 54.7% for the years 2008 to 2012 which mean only 51.1% to 54.7% who joined form one have completed school. This was an indication of underlying problem of completion rates. What was not known was the impact of Free Secondary Education policy on completion rates in Emuhaya and Vihiga Sub Counties.

**Synthesis of literature on impact of free secondary education policy on completion rates in schools:** According to World Bank (2005) to achieve high rate of completion in the developed countries such as Germany, Great Britain, United States of America and others they have attached to education subsidized system that adequately funds the poor in secondary education. This has led to increase in access; retention and completion in secondary education (World Bank, 2005). Studies done by State University (2002) indicated that completion rates differ due to various demographic factors. The study showed that main factors preventing learners from completing Secondary Education include absenteeism, discipline related cases, early pregnancy, early marriages, poverty, effect of HIV/AIDS, drug abuse, peer pressure, distance from home and violence. Informal meeting of Organization for Economic Cooperation and Development ministries of education, Oslo 2009, June 9<sup>th</sup> -10<sup>th</sup> indicated that completion rates vary greatly between Organization for Economic Cooperation and Development countries (Organization for Economic Cooperation and Development, 2009).

Study by Gropello (2008) on secondary education in Latin America and East Asia found that lack of Private resources was a key determinant of completion rates of secondary education. Direct costs are potential constraints to schooling in both regions. This study intended to determine whether direct costs were determinants of completion of secondary education in Latin America and East Asia. The results showed that there was decline in completion rates at secondary level indicating that there was direct correlation between government funding and completion rates. The government focused on improving completion rates and the quality of education to raise overall productivity and attainability of the labor force (World Bank, 2005). The United Kingdom abolished fees for state secondary schools through the Butler Act of 1944 and compulsory school

leaving ages were increased from 14 to 15 years which made education more accessible and improved completion rates (Cameroon, 1997). In Israel and USA around 85% of students completed successfully five years after they enrolled into secondary education, 80% in Iceland and in most of the countries completion rates averages at 75%. Most successful countries have managed to keep secondary education completion rates at 88% such as USA, Netherlands, France and Finland (World Bank, 2011). Completion rate of students in secondary schools varies from one region to another internationally. This is because different nations are in different stages of extending universal secondary education (Booth & Bruce, 2009). Brown (2009) argued that, among the developed countries the high school completion rates are generally as high as or higher than in the United States, though the nature of the secondary programs varies considerably. Completion rates in other countries lag behind those in developed countries, but secondary enrollments and graduation rates have been increasing worldwide (Bryk & Thum, 2009).

There are also differences in completion rates associated with socio-economic and demographic factors. One notable demographic difference concerns the completion rates for males and females. Females are more likely to complete education in developed countries like Latin America and the Caribbean leading to high school completion rates than the rest of the world (Breseid & Cailods, 2011). In some African countries, the percentage of high school students reaching final grade in 2006 and 2010 ranged between 47 and 99%, with Mauritius having the highest and Ethiopia the lowest. The percentage of girls reaching final grade was higher than boys in Botswana, Algeria, Mauritius, Namibia, Niger and Tunisia. Mauritius had the highest percentage of 99 percent of girls reaching final grade, while Chad had the lowest percentage (Herring, 2009). As countries sought to increase educational participation, higher enrolment was not their only concern. They also sought to ensure that students progressed through the education system smoothly, and that they achieved higher levels of education rather than repeating classes or dropping out of school (Herring, 2009). Lewin (2008) did a study on Financing Education in Mauritius. Research design was survey. Questionnaires and Interview schedule were used to collect data. The respondents for the study comprised of 153 head teachers, 158 deputy head teachers, 153 treasurers of school management committees and 1 District Education Officer. Simple random sampling was used to select a sample of 93 head teachers, 103 deputy head teachers, and 93 treasurers of school management committee and 1 District Education Officer. Descriptive statistics was used to analyze data collected using questionnaires and presented in frequencies and percentages. The study found out that Subsidized Secondary schooling in Sub-Saharan Africa led to high completion rates. The study did not determine the Impact of Free Secondary Education on completion rates.

Rwanda and Uganda abolished lower secondary fees in 2006 and 2007 respectively (Muhindi, 2012). The government of Rwanda has nine years of basic education of which primary to lower secondary is free (UNESCO, 2007). This policy led to high completion rates. Kazuya Masuda and Chikako Yamauch (2016) did a study on effects of the universal free secondary schooling program in Uganda on access, completion and achievement of the students. The study found out that universal fee-free secondary schooling increased the number of the students taking the secondary school exit exam by 16%.

The findings suggested that the cost of schooling remained the major constraint on the post primary education, and the universal fee-free secondary education program improves completion rates. The study also found out that universal tuition waiver program increased the share of female among the secondary school graduates, reducing the gender enrolment gap in post primary education. Studies by International Labor organization (2010) on micro factors inhibiting education retention and completion by children from vulnerable communities in Kwale District, Kenya revealed various factors. These factors included; parents ignorance, low literacy levels, religious factors, decision by father, absenteeism, early marriages, early pregnancy, human wildlife conflicts, sickness, distances from home and beliefs in witchcraft. The study concentrated on factors inhibiting completion rates while this study intended to find out if the factors have been eliminated by FSE policy by determining completion rates and impact of FSE policy on completion rates which the study did not address.

Osodo (2010) in his study on socioeconomic factors hindering promotion of secondary education in Siaya revealed that parents with low income were unable to sustain education of their children in secondary schools and this contributed to child labor leading to low completion rates. School levies such as lunch programme and extra tuition may also resulted to dropout leading to low completion rate. Osodo's study used questionnaires and interview schedule whereas this study added Focus Group Discussions and document analysis guide as instruments of data collection. Study by Kasuma (2012) on completion rate in public mixed secondary schools in Kirinyaga County found out that the main factors affecting completion rate are poverty, teenage pregnancy, early marriages, child labor, indiscipline cases, illicit brew, poor academic performance and lack of guidance and counseling. Kasuma's study used only descriptive survey design and studied Girl's completion rate in public mixed day secondary schools. This design was not adequate since the intention of the study was on what has already occurred the use of Ex-post facto research design would have made the study more complete in bringing out the real intent of the study. This study employed Ex-post facto, descriptive and co relational research designs to determine the impact of Free Secondary Education policy on completion rates. Findings by Kasuma (2012) concur with Osodo (2010) who found out that parents with low income were unable to sustain education of their children in secondary schools leading to low completion rates. These findings also concur with studies by International Labor organization which indicated that micro factors inhibiting education completion rates are early marriages and early pregnancy.

Study by Comboni Missionaries Kenya (2012) established that Turkana District registered one of the lowest gross enrollment, retention and completion in the country. Out of 33% of children of age 5-10 that started schooling, 69.2% did not complete primary school education. The study only used only percentages to analyze data but inferential statistics was not done to determine the level of influence. The study focused on Public primary schools. This study looked at the impact of FSE policy on completion rates in Public secondary schools. Study by Apiyo and Simatwa (2012) on Influence of FSE on Girl Child Participation in Education in Mixed Day Secondary School in Siaya, found that there was increase in number of students who completed secondary education after introduction

of FSE policy. Her study was based on girl child participation in mixed day secondary schools. Study that gives equal opportunity to both gender was therefore necessary to determine impact of FSE policy on completion rate in public schools. In addition the current study was based on public secondary schools regardless of category of school and gender so as to give a clear general picture of impact of FSE policy on completion rates. A study done by Ngwili (2014) on factors influencing student's completion rates in public day and boarding secondary schools in Kibwezi District, Makueni County, Kenya found out that funds from Free day secondary school were used to enhance educational facilities in day secondary schools, this provided ideal environment for quality education, hence improved completion rates. The study indicated that factors such as; poverty, teenage pregnancy, early marriages, child labor, unsupportive parents, indiscipline, lack of guidance and counselling, lack of role models, illicit brew, poor academic performance and motorbike boda boda business affect completion rates especially in public secondary schools. The study design was descriptive survey, the target population was 632 and the sample size was 242 respondents. The study concentrated on the factors influencing students' completion rates in public day and boarding secondary schools. This study employed Ex-post facto, descriptive and co relational research designs to determine the impact of Free Secondary Education policy on completion rates and completion rates were calculated. The use of more than one research design provided better understanding of research problem than either approach alone (Kothari, 2008).

Omandi (2015) did a study on Contribution of Free Day Secondary Education in Promoting Students' Completion rates in Public Secondary schools in Mvita Sub-County, Kenya. The study established that there was a high enrolment rate into secondary schools which was not consistent to reflect on completion rates due to a number of factors. The physical facilities in the schools were not adequate to allow easy learning. The schools were not further developed to meet the increasing demand by the learners of the secondary education. The schools did not have adequate instructional materials that affect the educational outcomes. The school funds were a major challenge as the research found out that parents were still expected to meet educational costs in spite of the subsidized education by free day secondary education by the government. These findings concur with Osodo who found out that School levies such as lunch programme, extra tuition may also result to dropout leading to low completion rate. Makokha (2016) did a study on Effect of Free Tuition Secondary Education Policy on Completion rate in Public Secondary Schools in Emuhaya Sub County and embraced Ex-post facto and descriptive research designs. The study established that Free secondary Tuition Education had a positive effect on completion rate since it improved. Data was analyzed using descriptive statistics in form of percentages. Completion rates were determined in general for the Sub County, however if completion rates for individual schools were determined it could have added value. He studied only one cohort which is not adequate to get the impact. Makokha used Ex-post facto and descriptive research designs while this study used Ex-post facto, descriptive and co relational research designs. Obae, Cheloti and Mwangi (2017) did a study on the influence of Free Day Secondary Education subsidy on completion rates in public day secondary schools in Kitui, Kenya. The study found out that based on the principal's responses on the statement that Free Day Secondary Education subsidy had increased

student completion rates, the study showed that out of the 105 principals sampled 103 principals (98.11%) agreed with the statement. On the statement Free Day Secondary Education subsidy had ensured students in ASAL areas benefit from education in Kitui County, 100 principals (95.3%) agreed with the statement. On the statement Free Day Secondary Education subsidy had reduced student dropout rates in public day secondary schools in Kitui County, 97 principals (92.4%) agreed with the statement. On the statement Free Day Secondary Education subsidy has increased transition rate from Public day secondary schools to tertiary institutions, 93 principals (88.6%) agreed with the statement. Further 76 principals (72.4%) disagreed with the statement that there is no relationship between Free Day Secondary Education subsidy and completion rates. Interview conducted with the County Director of Education indicated that Free Day Secondary Education had a significance positive impact on completion rates. The County Director of Education indicated that out of 4413 students who enrolled in form one in 2007 in public day secondary schools 3211 (70.4%) completed secondary education in 2010. The County Director of Education also indicated that out of 4426 students who enrolled in form one in 2008 in public day secondary schools, 3123 (70.6%) completed secondary education in 2011. The County Director of Education further indicated that out of 4522 students who enrolled in form one in 2009 in public day secondary schools 3225 (71.3%) completed secondary education in 2012. In 2010 formal enrolment were 4615 students and 3348 (72.6%) students completed secondary education in 2013. The chi-square test ( $\chi^2$ ) of independence was used to test the hypothesis ( $H_{01}$ ) there was no statistically significant relationship between Free Day Secondary Education and completion rates and it was found that provision of Free Day Secondary Education in public day secondary schools increased students' retention rate and reduced dropout rates leading to high completion rates. However the study did not establish the level of the impact FSE has had on completion rates.

Ngwacho, Theodore and Chemwai (2017) in their study on the impact of hidden costs of Free secondary Education on student completion rate in Kisii County found that for the cohort 2011 to 2014 an average of 56 students failed to complete four cycle per school class. There was a correlation between hidden costs and student completion rates in the 52 sampled schools. The Pearson's moment of correlation of 0.902 indicated that there was a strong positive inter relationship between completion rates and hidden costs. This implied that as hidden costs increased the number of students who failed to complete the four year of schooling also increased. Twenty (13.5%) of 148 sampled parents confirmed that their children had not completed their education due to hidden costs. All the 243 (100%) of the sampled class teachers agreed that students were normally sent home to collect hidden costs and some ended up not completing the four years in school.

These findings concur with Osodo who found out that School levies such as lunch programme, extra tuition may also result to dropout leading to low completion rate. The findings also concur with findings by Omandi who found out that parents are still expected to meet educational costs in spite of the subsidized education by free day secondary education by the government. Chepkoech (2018) did a study on extent of effect of Tuition Free secondary education subsidy on completion rates in Public secondary schools in Kasarani, Nairobi County. The study used descriptive survey design.

Data was analyzed using descriptive statistics in form of percentages. The study established that Tuition Free secondary education subsidy was effective in increasing completion rates as reported by 71.4 percent of principals. The study did not calculate completion rates which could have added more value to the findings. The study looked at extent of effect of Tuition Free secondary education subsidy on completion rates in Public secondary schools. This study looked at the impact of FSE policy on completion rates in secondary schools. Muhindi (2012) conducted a study in Nyeri County to establish the challenges facing implementation of free day secondary education: a case study of Nyeri South District, Nyeri county in Kenya. The researcher used adopted descriptive survey design to conduct the study. Target population consisted of all public secondary schools in Nyeri South District. Stratified random sample of 18 schools was selected. The sample size was 403 respondents which consisted of 18 principals, 105 teachers and 280 students. Data was collected using two sets of instruments, a questionnaire for the principals and observation guide. Data was analyzed using Statistical package for Social Sciences. Data was analyzed and presented using frequency distribution tables, bar graphs, pie charts and frequency polygons. The study found that girl's completion rates at secondary level was low. Despite this study using an appropriate research methodology, the study looked at challenges facing implementation of free day secondary education. It is on this basis that my study found a research gap on the impact free secondary education on Completion rates.

Mwangi (2018) did a study on the Influence of Free Secondary Education Policy on Completion rate in Public Day Secondary Schools in Kitui County and embraced descriptive research design. The study established that Free Secondary Education policy influenced completion rates significantly by 0.127 level of significant implying that Free Secondary policy had helped students complete their studies. However the funds were inadequate to keep students in school the whole year. Completion rates were determined in general for the County, however if completion rates for individual schools were determined it could have added value.

The study focused on Day secondary schools only while current study focused on both day and boarding secondary schools. The use of only descriptive research design was not adequate since the intention of the study was on what has already occurred, the use of Ex-post facto and co relational research designs would have made the study more complete. This study employed Ex-post facto, descriptive and co relational research designs to determine the impact of Free Secondary Education policy on completion rates. From the studies reviewed Osodo (2010), Kasuma (2012), Apiyo (2012), Comboni Missionaries Kenya (2012), Ngwili (2014), Makokha (2016), Obae, Cheloti and Mwangi (2017), Ngwacho, Theodore and Chemwai (2017), Muhindi (2012), and Mwangi (2018), no study has addressed the impact of FSE policy on completion rates. This is the knowledge gap that this study sought to fill using Emuhaya and Vihiga Sub Counties as the sites for the study.

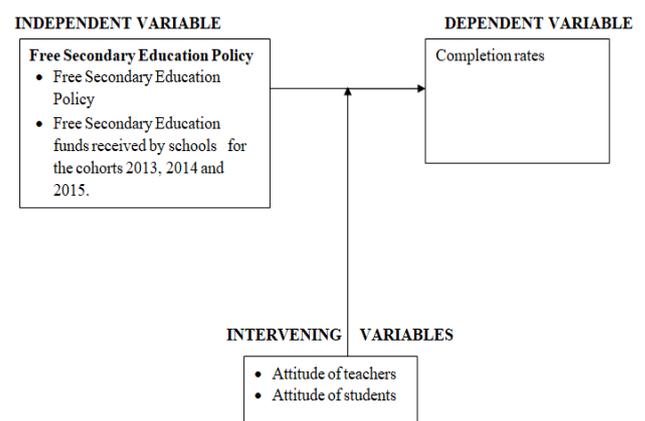
### Research Objective

**The research objective was:** To determine the impact of free secondary education policy on completion rates in public secondary schools in Emuhaya and Vihiga sub counties.

## CONCEPTUAL FRAMEWORK

This study was based on conceptual framework of investment choices by Psacharopoulos and Woodhall (1985). According to the model there is a relationship between inputs and output into education system. Conceptual framework postulates that FSE policy impacts positively on completion rates. The independent variable in this study was Free Secondary Education policy while the dependent variable was completion rates. Adaptation of this model involved one independent variable, one dependent variable and with intervening variables. The model provides a production function equation in which we have one independent variable and one dependent variable. The use of this model was justified because according to Woodhall (2004) education is a form of investment that yields economic benefits and contributes to countries future wealth by increasing productive capacity of its people. This model was also justified because it has been used by several researchers like Ngeno and Simatwa (2015); Ndolo and Simatwa (2016) and gave valid results. The concept was relevant because the government has made a choice to invest in education in order to improve retention rates, completion rates, transition rates and student academic performance.

Conceptual frame work in Figure 1 presupposes that provision of Free Secondary funds to secondary schools has an impact on completion rates. Free secondary funds enable students from poor families to remain in schools and schools to provide resources to students. This was expected to improve completion rates which intern will enable more students to transit to university. Intervening variables were controlled by sampling technique which allowed the positive and negative influence to neutralize each other. FSE policy was looked at in terms of the money the government sends to schools for the cohorts 2013-2016, 2014-2017 and 2015-2018. Conceptual framework helped the researcher to focus on the variables of the study.



**Figure 1. Conceptual Framework Showing Impact of Free Secondary education Policy on Completion Rates in Public Secondary Schools**

The conceptual framework was adapted to focus on the independent and dependent variables. Independent variable was Free secondary policy while dependent variable was completion rates. According to McBurney and White (2010) an independent variable is chosen by a researcher to determine the effect and behavior while dependent variable is a measure of a subject's behavior that determines independent variable.

FSE funds are used to cater for; repair maintenance and improvement, medical Insurance (safety and protection), local travel and transport, administration cost, electricity, water and conservancy, personal emoluments, Strengthening Mathematics and Science Education, text books, exercise books, laboratory equipment's, chalk, reference/Library material and exam and assessment. FSE policy is expected to have an impact on retention rates, completion rates, transition rates and student academic performance. Completion rate was calculated using a formula. Pearson moment of correlation coefficient and Coefficient of determination was used to establish the impact of FSE funds on completion rates in Emuhaya and Vihiga Sub counties.

## RESEARCH METHODOLOGY

Ex-post facto, descriptive survey and correlation research designs were used. Emuhaya and Vihiga sub counties were used as the site for the study. The Study population comprised of 56 principals, 130 form four class teachers, 2 Sub County Quality Assurance Standards Officers and 6490 form four students. Fisher's formula (Mugenda & Mugenda, 2003) was used to determine the sample size. Saturated sampling was used to select principals and Sub County Quality Assurance Standards Officer. Simple random sampling was used to select 98 form four class teachers and 377 form four students. Questionnaire, interview schedule, document analysis and focus group discussions were used to collect data. Validity of the instruments was determined through the help of Supervisors. Reliability was established through test-retest method using 6 schools. Data obtained from pilot study was correlated. Cronbach's alpha was used to determine reliability of the instruments. Reliability indices for principals' and class teachers' questionnaires were 0.76 and 0.72 respectively. Since they were higher than 0.70, the instruments were considered reliable. Quantitative data was collected using closed items of questionnaires and document analysis guide. Descriptive and inferential statistics were used to analyses quantitative data. Qualitative data was transcribed and analyzed in emergent themes and sub themes.

## RESULTS

**Demographic Characteristics Respondents:** This section provides the characteristics of principals in relation to gender, highest professional qualification and experience in leadership (Table 3). Table 3 shows that 50 (100%) principals involved in the study 32(64%) were male while 18 (36%) were female. This shows that few female teachers are appointed as principals in Emuhaya and Vihiga Sub Counties. This implies that female principals are fewer than male principals to the task of school planning and management public secondary schools in Emuhaya and Vihiga Sub Counties.

Concerning highest professional qualification for principals 5(10%) had master's degree, 45(90%) holds Bachelors of Education, 0(0.00%) holds Diploma in Education. This shows that 95% of the principals in the public secondary schools in Emuhaya and Vihiga Sub Counties possess degree qualifications hence are well trained thus had rich information and knowledge on the impact of FSE policy on retention rates, completion rates transition rates and student academic performance in Emuhaya and Vihiga Sub Counties and therefore could offer reliable information. Principals' experience indicated that 4 (8%) had experience of between 1-

5 years, 12 (24%) had an experience of 6-8 years while 34(68%) had an experience of more than 8years. This means that majority of the principals are experienced and it means they have better understanding of FSE policy because of the long years of service in leadership position. This findings are in agreement with a study carried out by Omandi (2015) where it was indicated that out of 40 sampled school principals one (2.5%) had headship experience between 1-5 years, 12(30%) had an experience of 6-10 years, 17(42.50%) had an experience of 11-15 years while 10 (25%) had an experience of 16-20 years. This again implies that in this study Principals had enough experience on management and they were able to give important information on enrolment, experience to answer questions concerning repetition, retention rates, completion rates, transition rates and student academic performance in Emuhaya and Vihiga Sub Counties. Principals with experience can be relied on for the authenticity of the data collected Omandi (2015). Table 4 shows that 67 (68.37%) of the class teachers involved in the study were males and only 31 (31.43%) were females. On highest professional qualification 10 (10.20%) of class teachers hold master's degree, 80 (81.64%) hold a degree in Bachelor of Education and 8(8.16%) hold Diploma in Education. From Table 5, two (4%) of schools are boys boarding, 10(20%) of schools are girls boarding, 32(64%) of schools are mixed day schools, 3(6%) of schools are boys day and boarding, 1(2%) of schools are girls day and boarding while 2(4%) of schools are mixed day and boarding.

## Research Objective

The research objective was to determine impact of FSE Policy on Completion Rates in Public Secondary Schools in Emuhaya and Vihiga Sub Counties. To address the objective, null and alternative hypotheses: "Free secondary education policy has no impact on completion rates in public secondary schools in Emuhaya and Vihiga Sub Counties" and "Free secondary education policy has impact on completion rates in public secondary schools in Emuhaya and Vihiga Sub Counties, were used." To respond to this hypotheses data in Table 6 was used to calculate completion rates in Emuhaya and Vihiga Sub Counties for the 2013, 2014 and 2015 cohorts using UNESCO formulae (UNESCO, 2009a) and presented as shown in Tables 7 and 8. Table 6 shows enrollment, completion, new students and graduates in Emuhaya and Vihiga Sub Counties for the 2013, 2014 and 2015 cohort. The data was used to compute retention rates for 2013, 2014 and 2015 cohorts and presented as shown in Table 7. Table 7 shows that completion rates for 2013 cohort were; 73.58%, for 2014 cohort completion rates improved to 75.65%. For 2015 cohort completion rates improved further to 82.55%. With the increase in FSE funding completion rates improved since the number of students who completed form four improved that is for the 2013 cohort which received Ksh 10,625 per student, 7358 students completed form four for every 10,000 students who joined form one. After the amount was increased to Ksh 22,244 in 2017, for every 10,000 students who joined form one 8255 students completed form four. FSE policy has minimized cases of drop out and repetition hence students can remain in school and complete. The government is paying their school fees hence those who could have dropped out of school because they don't have school fees do not drop out of school. This finding of this study agree with Obae, Cheloti and Mwangi (2017) who found that Free Day Secondary School subsidy had increased student completion rates Kitui County.

**Table 1. Completion Rates % in Vihiga, Sabatia, Emuhaya and Hamisi Sub Counties in 2004 to 2007**

	2004	2005	2006	2007
National	82.4	81.7	84.2	83.7
Emuhaya	47.1	45.7	47.4	45.8
Vihiga	44.2	48.2	44.7	40.3
Sabatia	50.1	52.4	58.8	60.8
Hamisi	56.2	54.6	51.9	57.0

Source: Vihiga County Education Office, 2018, Economic Survey 2005, 2006, 2007 and 2008 Ministry of Education Statistic Section 2007

**Table 2. Completion Rates % in Vihiga, Sabatia, Emuhaya and Hamisi Sub Counties in 2008 to 2012**

	2008	2009	2010	2011	2012
National	86.0	88.8	87.1	89.1	89.6
Emuhaya	51.1	52.8	53.2	51.7	54.7
Vihiga	47.6	48.6	51.5	50.0	52.0
Sabatia	52.4	54.0	56.8	60.0	62.4
Hamisi	58.4	56.0	58.1	61.2	66.4

Source: Vihiga County Education Office, 2018, Economic Survey, 2010, 2012 and 2013.

**Table 3. Demographic Characteristics of Principals n = 50**

Demographic Characteristics	Frequency f	Percentage %
Gender		
Male	32	64.00
Female	18	36.00
Total	50	100.00
Highest Professional Qualifications		
Doctor of Philosophy	0	0.00
Master of Education	5	10.00
Bachelor of Education	45	90.00
Diploma	0	0.00
Total	50	100.00
Principals' Experience		
1-5 years	4	8.00
6-8 years	12	24.00
Above 8 years	34	68.00
Total	50	100.00

Source: Field Data, 2020.

**Table 4. Demographic Characteristics of Class teachers n=98**

Demographic Characteristics	Frequency f	Percentage %
Gender		
Male	67	68.37
Female	31	31.63
Total	98	100.00
Highest Professional Qualifications		
Doctor of Philosophy	0	0.00
Master of Education	10	10.20
Bachelor of Education.	80	81.64
Diploma	8	8.16
Total	98	100.00

Source: Field Data, 2020.

**Table 5. Distribution of Public Secondary Schools in Emuhaya and Vihiga Sub Counties by category**

School Category	F	Percentages %
Boys boarding	2	4.00
Girls boarding	10	20.00
Mixed day school	32	64.00
Boys day and boarding	3	6.00
Girls day and boarding	1	2.00
Mixed day and boarding	2	4.00
Total	50	100.00

Source: Field Data, 2020.

Table 8 shows comparison of completion rates in public secondary schools in Emuhaya and Vihiga Sub counties as given by Principals in 50 public secondary schools for 2013, 2014, and 2015 cohorts. For 2013 cohort, schools that had completion rates between 30.00-39.99 were 2.00%, 40.00-49.99 were 6% 50.00-59.00 were 20.00%, 60.00-69.99 were 22%, 70.00-79.00 were 36%, 80.00-89.99 were 14% while 90.00-99.99 were 0.00. For 2014 cohort, schools that had completion rates between 30.00-39.99 were 0.00%, 40.00-49.99 were 0.00% 50.00-59.00 were 4%, 60.00-69.99 were 24%, 70.00-79.00 were 44%, 80.00-89.99 were 22.00% while 90.00-99.99 were 6.00. For 2015 cohort, schools that had completion rates between 30.00-39.99 were 0.00%, 40.00-49.99 were 0.00% 50.00-59.00 were 0.00%, 60.00-69.99 were 2.00%, 70.00-79.00 were 36%, 80.00-89.99 were 54% while 90.00-99.99 were 8.00%.

The study undertook regression analysis to get actual impact of FSE policy on completion rates for the period 2013 to 2018. To achieve this data on FSE funding and completion rates for the three cohorts for every school were computed and the results were as shown in Tables 9 and 10. From Table 9 for 2013 cohort 54% of schools received less than Ksh 399, 999, 38% of schools received between Ksh 4,000,000 and Ksh 7,999,999, 6% of schools got between Ksh 8,000,000 and Ksh 11,999,999, (2%) of schools got between Ksh 12,000,000 and Ksh 15,999,999, 0.00% of schools got between Ksh 16,000,000 and Ksh 19,999,999 while 0.00% of schools got between Ksh 20,000,000 and Ksh. 23,999,999. For 2014 cohort 52% of schools received less than Ksh 399, 999, 40.00% of schools received between Ksh 4, 000, 0000 and Ksh 7,999,999, 2% of schools got between Ksh 8,000,000 and Ksh 11,999,999, 6% of schools got between Ksh 12,000,000 and Ksh 15, 999, 999, 0.00% of schools got between Ksh 16,000,000 and Ksh 19,999,999 while 0.00% of schools got between Ksh 20,000,000 and Ksh. 23,999,999. For 2015 cohort 26% of schools received less than Ksh. 399,999, 44% of schools received between Ksh 4, 000, 0000 and Ksh 7,999,999, 24% of schools got between Ksh 8,000,000 and Ksh 11,999,999, 0.00% of schools got between Ksh 12,000,000 and Ksh 15, 999, 999, 4.00% of schools got between Ksh 16,000,000 and Ksh 19,999,999 while 2% of schools got between Ksh 20,000,000 and Ksh. 23, 999, 999.

From Table 10 it shows that 3 (6.00%) of schools had average completion rates of between 50.00% and 59.99%, 10(20.00%) of schools had average completion rates of between 60.00% and 69.99%, 24 (48.00%) schools had average completion rates of between 70.00% and 79.99%, 12(24.00%) schools had average completion rates of between 80.00% and 89.99%, while 1(2%) of schools had average retention rates of between 90.00% and 99.99%. From Table 11, results showed that there was a moderate and positive relationship between FSE funding and completion rates as signified by Pearson's Coefficient of 0.664. This relationship was statistically significant since 0.000 is less than 0.05 the p-value that was set. The null hypothesis was therefore rejected. This means that increase in FSE funding would lead to increase in completion rates. From the table schools which received more funds have high completion rates while those that received fewer funds have low completion rates. From Table 11 it can also be noted that the impact of Free Secondary policy accounted for 43.0% of the variation on completion rates as signified by the coefficient of 0.430. The other 57.0% could be explained by other factors. Some factors leading to low completion rates were eliminated

by FSE policy. There are other factors that affect completion rates. To determine whether FSE policy is a significant predictor of completion rates, ANOVA was computed and the results tabulated in Table 12. Table 12 shows that FSE policy was a significant predictor on completion rates. This means that FSE policy can be relied on to explain the impact of FSE policy on completion rates as the calculated p-value  $0.000 < 0.05$ . This means that Free Secondary Education policy can be relied on as a significant predictor of completion rates because most children were not completing school because they were unable to pay fees but now that the government pays their school fees, it is possible to know if they will complete or not because one of the reasons affecting completion has been removed. In order to establish the actual impact of Free Secondary education on completion rates a linear regression analysis was performed and tabulated as shown in Table 13. From Table 13, it can be observed that one unit increase in Free Secondary education funding led to an increase in Completion rates by 0.007 units as indicated by the coefficient of 0.007 and the regression equation is  $Y = 0.644 + 0.007X$ . For instance using this equation it can be demonstrated that if FSE funding in one school for the period 2013 to 2018 was 48.34 million Kenya shillings, the completion rate would be  $0.644 + 0.007(48.34) = 0.9824$  that is, 98.24%. If Free Secondary Education funding is increased to 60.22 million Kenya shillings, then completion rate would be 106.6%. This means that to achieve 100% completion rate FSE funding can be increased close to 60 million Kenya shilling. This is because students basic needs in the school would have been catered for and therefore they would be sustained to the completion of their schooling. The basic needs would include provision of appropriate physical infrastructure, teaching learning materials and apparatus for co-curricular activities.

## DISCUSSION

For 2013 cohort most schools had completion rates between 50.00% and 79.99%. For 2014 cohort most schools had completion rates between 60.00% and 89.99% while for 2015 cohort most schools had completion rates between 70.00% and 99.99%. When FSE funding was increased it led to increase in completion rates. This is because students remained in school until they complete secondary education because the fund met most of their requirements which otherwise they could have been sent home. With FSE funding children are not sent home to bring money to pay workers, electricity, build class rooms and activity money.

With Free Secondary Education policy all this are catered for by the government. Findings of this study agree with findings of Obae, Cheloti and Mwangi (2017) who found that Free Day Secondary Education subsidy had increased student completion rates Kitui County. Most schools had completion rates between 60.00% and 89.99% meaning that FSE policy has improved completion rates hence students are going to school and remaining there to learn until they complete secondary education. Economies of scale is realized when addition of one more student result to lower average cost in instructional contact hour or their unit service. Schools that have higher enrolment receive more funds therefore can acquire more goods at a lower cost since they are purchasing them in bulk. This means they can be able to acquire more facilities that is, textbooks, exercise books, maintenance of more classrooms, and employment of more workers which in turn increase completion rates.

Table 6. Flow Chart showing Flow of 2013, 2014 and 2015 Cohorts

Year		Form 1	Form 2	Form 3	Form 4	Graduates
2013	E	5875				
	R	91				
	N	10				
2014	E	6017	5051			
	R	81	206			
	N	17	30			
2015	E	6231	5255	4679		
	R	26	115	110		
	N		23	18		
2016	E		5723	4866	4323	4323
	R		31	101	121	
	N			19	26	
2017	E			5299	4542	4542
	R			53	113	
	N			32	27	
2018	E				5144	5144
	R				48	
	N				29	

KEY: E – Enrolment R – Repeater N- New Students Source: Field Data, 2020.

Table 7. Completion rates in Emuhaya and Vihiga Sub Counties for 2013, 2014 and 2015 cohorts

Cohort	Completion rate %
2013	73.58
2014	75.65
2015	82.55

Source: Field Data, 2020

Table 8. Comparison of Completion Rates in Public Secondary Schools for 2013, 2014 and 2015 cohorts in Emuhaya and Vihiga Sub Counties

Completion Rates %	No. of schools 2013 cohort		No. of schools 2014 cohort		No. of schools 2015 cohort	
	f	%	f	%	F	%
30.00-39.99	1	2.00	0	0.00	0	0.00
40.00-49.99	3	6.00	0	0.00	0	0.00
50.00-59.99	10	20.00	2	4.00	0	0.00
60.00-69.99	11	22.00	12	24.00	1	2.00
70.00-79.99	18	36.00	22	44.00	18	36.00
80.00-89.99	7	14.00	11	22.00	27	54.00
90.00-99.99	0	0.00	3	6.00	4	8.00
Total	50	100.00	50	100.00	50	100.00

Source: Field data, 2020

Table 9. FSE Funds received in Emuhaya and Vihiga Sub Counties by Public Secondary schools for 2013, 2014 and 2015 cohorts

Amount in Ksh	No. of schools 2013 cohort		No. of schools 2014 cohort		No. of schools 2015 cohort	
	F	%	F	%	f	%
Below 3,999,999	27	54.00	26	52.00	13	26.00
4,000,000-7,999,999	19	38.00	20	40.00	22	44.00
8,000,000-11,999,999	3	6.00	1	2.00	12	24.00
12,000,000-15,999,999	1	2.00	3	6.00	0	0.00
16,000,000-19,999,999	0	0.00	0	0.00	2	4.00
20,000,000-23,999,999	0	0.00	0	0.00	1	2.00
Total	50	100.00	50	100	50	100.00

Source: Field Data, 2020

Table 10. Average Completion rates in Public Secondary Schools for the three cohorts 2013, 2014 and 2015 cohorts

Retention rates %	Number of schoolsf	Percentage %
50.00-59.99	3	6.00
60.00-69.99	10	20.00
70.00-79.99	24	48.00
80.00-89.99	12	24.00
90.00-99.99	1	2.00
Total	50	100.00

Source: Field data, 2020

**Table 11. Regression Analysis of the impact of FSE funds on Completion Rates in Public Secondary schools in Emuhaya and Vihiga Sub Counties**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.664 <sup>a</sup>	.441	.430	0.0614739	.441	38.894	1	48	.000

a. Predictors: Constant, FSE funds

**Table 12. Analysis of Variance of the impact of Free Secondary Education policy on completion rates in Public Secondary schools in Emuhaya and Vihiga Sub Counties**

Model	Sum of Squares	Df	Mean Square	F	Sig.	
1	Regression	0.143	1	0.143	38.894	.000 <sup>b</sup>
	Residual	0.181	48	0.004		
	Total	0.325	49			

a. Dependent Variable: Completion rates

b. Predictors: Constant, FSE funds

**Table 13. Linear Regression analysis of impact of FSE policy on completion rates in Public Secondary schools in Emuhaya and Vihiga Sub Counties**

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	Constant	0.644	0.018		35.163	.000
	Free secondary education Funds	0.007	.001	.664	6.156	.000

a. Dependent Variable: Completion rates. Regression equation  $Y=a+bx$ 

Sub County Quality Assurance Officer said; “some of the factors that affect completion rates are early pregnancy, early marriages, lack of parental guidance, poverty, child labor, indiscipline, low education level of parents, cultural beliefs, peer pressure, drug abuse, child labor, lack of guidance and counseling in schools, over age of some students and poor academic performance.” This findings agree with findings by Ngwili (2014) who found out that factors such as; poverty, teenage pregnancy, early marriages, child labor, unsupportive parents, indiscipline, lack of guidance and counselling, lack of role models, illicit brew, poor academic performance and motorbike boda boda business affected completion rates especially in public secondary schools in Kibwezi district, Makueni County. This agrees also with findings from Students Focus Group Discussion, During Students Focus Group Discussions in one of the mixed day schools a student said; “Though our school fees is paid by the government through FSE policy fifteen of our classmates are not with us in form four they left us on the way, four boys got employed as motorbike operators, three boys were seriously taking bhang and alcohol even in school, while the others were girls, three got married while five were pregnant and never went back to school.” During interviews and focus group discussions it was reported that FSE has helped to increase completion rates. One of the principals gave this comment; “After the introduction of FSE policy students from poor families who were unable to afford school levies are in school and can be able to finish the cycle without leaving on the way.” During interviews another principal also said; “though completion rates of less than 100% are still witnessed in Emuhaya and Vihiga Sub counties many pupils who would have dropped out of school are in school due to FSE policy.” This agrees also with findings from interview where Sub County Quality Assurance Standards Officer said; “Before introduction of FSE policy some children who joined school could not complete, absenteeism was high because when sent home for school fees they never used to come back, those who had not completed paying school fees principals could chase them left and right until they could prefer to drop out of school.

Before introduction of FSE policy repetition was high because most of students were absent because they have not paid school fees. This made them to perform poorly in examination therefore not promoted to next class. This made them drop out of school. With introduction of FSE policy the government pays school fees hence in day schools parents have to pay for only lunch and buy school uniform and other personal needs of the student. The government pays examination money for the candidates which have also attracted students because when you reach form four you are sure you will sit for examination. Before this students could drop out of school because they are unable to pay examination money. This has led to improvement in completion rates. This has led to improved completion rates.”

The findings of this study concur with the findings of World Bank (2005) which found that to achieve high rate of completion rates in developed countries such as Germany, Great Britain and United States of America, attachment has been done on subsidized education system that adequately funds the poor in secondary education. This has led to increase in completion rates in secondary education. It also agrees with (Cameron, 1997) who found that the United Kingdom abolished fees for state secondary schools through the Butler Act of 1944 and compulsory school leaving ages was increased from 14 to 15 years which made education more accessible and it improved completion rates. Findings of this study agree with those of Lewin (2008) who found that financing secondary education leads to high completion rates. It also agrees with (UNESCO, 2007) which found that government of Rwanda has nine years of basic education of which primary to lower secondary is free. This policy led to high completion rates. Similarly the findings agree with Kazuya Masuda and Chikako Yamauch (2016) who found that Universal Free Secondary schooling increased the number of the students taking the secondary school exit exam by 16%. The findings of this study disagree with Omandi (2015) who established that there was a high enrolment rate into secondary schools in Mvita Sub-

County due Free Secondary Education policy which was not consistent to reflect on completion rates due to a number of factors. The physical facilities in the schools were not adequate to allow easy learning. The schools are not further developed to meet the increasing demand by the learners for the secondary education. The schools did not have adequate instructional materials that affect the educational outcomes. The school funds were a major challenge as the research found out because parents are still expected to meet educational costs in spite of the subsidized education by free day secondary education by the government. These findings concur with Osodo (2010) who found out that School levies such as lunch program and extra tuition may also result to dropout leading to low completion rate. The findings agree with Obae, Cheloti and Mwangi (2017) who found that Free Day Secondary School Education subsidy had increased student completion rates Kitui. This finding also agrees with Chepkoech (2018) who found that Tuition Free Secondary Educational Subsidy increased completion rates. From his findings majority 75.3 percent of the students indicated that the subsidy affected retention rates to a very great extent 9.1 percent to a little extent and 27.3 percent to great extent. Majority of teachers 71.4 percent indicated that the subsidy affected completion rates to a very great extent 0.6 percent to a little extent and 28.0 percent to great extent. Majority of principals 80.4 percent indicated that the subsidy affected completion rates to a very great extent 2.8 percent to a little extent and 16.8 percent to great extent. Interview and focus group discussion findings were important in this study since they helped to explain regression model which indicated that the impact of Free Secondary policy accounted for 43.0% of the variation on completion rates as signified by the coefficient of 0.430. The other 57.0% could be explained by other factors. This factors include early pregnancy, early marriages, lack of parental guidance, poverty, child labor, indiscipline, low education level of parents, cultural beliefs, peer pressure, drug abuse, child labor, lack of guidance and counseling in schools, over age of some students and poor academic performance.

## Conclusion

Free secondary education policy enhanced completion rates in Emuhaya and Vihiga sub counties. This means that more students who enrolled in public secondary schools completed their studies by sitting for their Kenya Certificate of Secondary education examination. This also implies that increase in Free Secondary Education funding would further increase the completion rates.

## Recommendation

### The study made the following recommendations:

- The government through Teachers Service Commission should continue employing more teachers to manage increased enrollments so as to improve completion rates.
- There is need to seek more financial support from other government agencies like Constituency development fund to supplement funds for Physical infrastructure so as to improve student completion rates
- Principals of secondary schools should be encouraged to strengthen guidance and counseling in schools so as to help address challenges faced by students that hinder completion of schooling.

- Principals of secondary schools should encourage parents and guardians to be more involved in schooling of their children.
- Principals of secondary schools should sensitize students and their parents on the economic returns to education to enable them complete their schooling.
- The government should be advised to provide vouchers for lunch program and other basic needs targeting students from poor families.

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