

Review Article

INFLUENCE OF FISHING ACTIVITIES ON ACADEMIC PERFORMANCE AMONG SECONDARY SCHOOL STUDENTS IN LAMU EAST SUB COUNTY, KENYA

ABSTRACT

The aim of this study is to investigate the effect of fishing activities on academic performance among secondary school students in Lamu East Sub County. It will be guided by the following objectives; to find out the extent to which fishing activities influence student's school absenteeism, to investigate the extent to which fishing activities influence school dropout among secondary school students, to investigate the extent to which fishing activities influence academic performance among secondary school students. The Conflict Theory by Karl Max *et al.* (2005) will anchor the study. Mixed research methodology will be employed in which both qualitative and quantitative data will be collected. The researcher will employ descriptive survey research design. Target population will be 5 public secondary schools with 1200 students. Purposive sampling technique to select 4 public day secondary schools. The number of students to be involved in the study from each school will be proportionately sampled and then simple random sampling will be used to obtain the students in each school to participate in the study. The sample size will consist of 4 day secondary schools representing 80%, 60 boys and 80 girls who will represent 11% and 12% respectively.; questionnaires and interview schedules. The researcher will carry out a pilot study in one school to test the validity and reliability of the research instruments. A total of 32 students (16 boys and 16 girls) will be randomly selected from form one to form four to participate in the study. The researcher will use administration of questionnaires and interviewing to collect data. Data analysis will involve the use of two statistical methods; descriptive statistics (frequencies, percentages, mean and standard deviation) and inferential statistics (Pearson product moment correlation analysis). The results will be presented using bar graphs, pie charts and tables.

LIST OF ABBREVIATIONS AND ACRONYMS

FAO	Food and Agriculture Organization
ILO	International Labour Organization
IRB	Institution Review Board
KCSE	Kenya Certificate of Secondary Education
NACOSTI	National Commission for Science, Technology and Innovation
SPSS	Statistical Package for Social Sciences
UNESCO	United Nations Education, Social and Cultural Organization
UNICEF	United Nations International Children's Emergency Fund

INTRODUCTION

1.0 Introduction

This chapter presents an introduction to the study under the following subheadings; background to the study, statement of the problem, purpose of the study, research objectives and questions, justification, significance of the study, scope of the study, limitations and delimitations of the study, assumptions and operational definitions of terms used in the study.

1.1 Background to the Study

Across the world, education is a fundamental human right for everyone. According to UNESCO (2018), education is one of the goals in the 2030 sustainable development agenda that has been approved for implementation by the international community. For a long time, education has been considered as the most powerful tool that can be used to eradicate extreme poverty to enhance social and economic equity in all communities of the world. To achieve this, access to universal and quality education services is very key. The international community, national and local governments have established legal and policy frameworks to promote the right to quality education. For example, the United Nations General Assembly passed a resolution on education for sustainable development (2005-2014) that emphasized on quality, access and inclusiveness in the provision of education (UNESCO, 2018). The Convention on the rights of the child, provides that children should be protected from any form of discrimination such as child labour that

denies them an opportunity to attend school. Despite the efforts that have been made to ensure that all children in any part of the world, regardless of socio-economic class attend school and have access to quality education, a substantial number of children miss school and others don't attend school at all for various reasons.

The International Labour Organization (2018) estimated that about 218 million children aged between 5 and 17 years were in employment in different countries of the world. The survey indicated that nearly half of the population is found in Africa and Asia. According to the report, child labour is concentrated in Agriculture (71%) primarily in activities such as fishing, livestock herding, forestry and aquaculture, 17% large scale farming and 12% in the industrial sector. The focus of this study will be on involvement of children in fishing industry. In Brazil, Vieira, Moraes and Nunes (2013) in their study on fishing activities and education established that fishing affected school life of the respondents. It was revealed that 39% of the respondents reported truancy and 63% indicated that school timetable interfered with their fishing activities. The findings clearly indicate that the participants clearly did not value schooling. In the Philippines, ILO (2017) reported that even though the country had made an advancement in reducing child labour especially those working in the fishing industry, the percentage of children in the school going age still remains high. In the report, 7.5% of children were found to be working. The problem continues to persist despite the institutionalization of laws that prohibit employment of children in any industry.

A survey conducted by the ILO in the year 2013 revealed that in Thailand, half of the work force in fishing industry were aged between 18 and 28 years. The study also established that seven of the respondents were below 15 years and 26 were aged between

15 to 17 years. Shockingly, majority of the respondents had very little formal education. The findings imply that in most cases those who participate in fishing activities drop out of school without even completing basic education to engage in fishing. The same trend was observed by UNICEF (2016) report on child labor and exploitation in South Asia. It was revealed that children aged between 5-14 years were employed especially in the fishing sector. This problem was attributed to poverty, weak law enforcement agencies and lack of decent job opportunities for parents to provide for their children.

In Africa, participation of school going children in fishing activities is a matter of serious concern. For instance, in Nigeria government agencies are grappling with students skipping classes to participate in fishing activities (Abane, 2014). The riverine nature of the Southern part of the country exposes the students to fishing activities that tempt them to abandon their studies. Udoh, Achike and Mkpado (2013) studied the effects of fishing activities on academic performance of students in Akwa Ibom state. It was reported that academic performance of the students was statistically inversely related to frequency of fishing activities per week. Part of other literature such as Ray (2002) indicate that there is a tradeoff between education and child labour. Children who participate in labour related activities perform dismally compared to those who do not participate in these activities. All African countries with a coastline and inland large water body experience some form of child labour who get involved in fishing activities (Westaway, Barratt & Seeley, 2009). In Uganda, Walakira *et al.* (2008) noted that child labour in the fishing industry 59% of the children were not attending school, 54% dropped out and 5 percent were never enrolled. The reasons that were cited for school drop outs include; paid work, group influence and lack of money to pay school fees.

In Kenya, communities living around Lake Victoria and along the Indian Ocean majorly derive their livelihood from fishing activities. This is because coastal and lake regions are characterized by extreme climatic conditions that cannot support other economic activities such as agriculture. To work in the fishing industry, one does not require special skills and this opens an avenue for school going children to work in the fishing sites (Westaway, Barratt & Seeley, 2009). A study carried out by K'achieng (2011) investigated how fishing activities affected schooling of primary school pupils in Lake Victoria region. The researcher found that fishing related activities impacted negatively on academic performance of the pupils. Fishing which is considered as a primary form of production is normally concentrated in areas called fishing stations. In these areas, children are involved in activities such as boat making, smoking and drying the fish, removing fish from the nets and sorting among others. In small fishing stations, some activities such as smoking, salting, drying and bagging take place at home (Ojijo, 2016). Students are involved in the evening and in the morning before the catch is taken to the market.

A comparative study by Christopha and Sonja (2007) established that fishing activities affected academic performance of primary school pupils along the beaches. The pupils who were involved in fishing activities had significantly lower academic scores compared to those who were not involved. The results corroborate the findings of Omwenga (2015) who demonstrated that child labour contributed to poor performance and high dropout rates. The work given to the students not only leaves them tired to concentrate on their studies but also robs them learning time. When students start working

for payment, they tend to lose achievement motivation for academics which affects their learning and future career endeavors. Balancing between the demands of work and studies can prove to be difficult for the students. The extensive demands take toll on the children's physical energy leaving them exhausted to attend school or concentrate on their studies.

Disturbed by high levels of poverty occasioned by high prevalence of HIV/AIDS in Voi Sub County, Omwenga (2015) carried out a study to investigate the effect of child labour on the academic performance of pupils. The findings showed that majority of the pupils were involved in activities such as hawking and informal businesses. The pupils were introduced to child labour by friends and relatives because they wanted to get money to buy food for their families. The pupils who were not involved in child labor performed better than those who were involved.

1.2 Statement of the problem

The central problem this study seeks to address is below average academic performance among most students in day secondary schools in Lamu East Sub County. In the last three years (2016, 2017 and 2018) the sub county has been performing dismally in Kenya Certificate Secondary Education with mean scores of 1.74(D-), 1.98 (D-) and 2.27 (D-) respectively. In the three years, the sub county was ranked the last in Lamu County. Majority of the students

who score extremely below average grades in KCSE miss out opportunities for further studies and employment. If this trend continues, then the education system will fail to deliver the promises of education. The graduates will be inadequately equipped to contribute optimally to social and economic development. Considering that fishing is the only major economic activity in Lamu East sub county, the below average academic performance may be associated with it.

Past research work as demonstrated in the background to the study that examined the influence of fishing activities on academic performance were conducted outside Lamu East Sub County using samples of primary school pupils. Related studies that were carried out in the coastal region focused on the factors associated with child labour. So far, there are limited studies that have been carried out in Lamu East Sub County to examine the influence of fishing activities on academic performance of students in day secondary schools. Therefore, there is need for the proposed to study to bridge the gap in an effort to provide empirical evidence that may be used to improve the quality of secondary school education in the area.

1.3 Purpose of the study

The purpose of this study is to investigate the effect of fishing activities on academic performance among secondary school students in Lamu East Sub County.

1.4 Objectives

- i. To find out the extent to which fishing activities influence student's school attendance in Lamu East Sub County.

- ii. To investigate the extent to which fishing activities influence school dropout among secondary school students in Lamu East Sub County.
- iii. To find out if there are gender differences among secondary school students in Lamu East Sub County.
- iv. To examine the relationship between fishing activities and learning outcomes among secondary school students in Lamu East Sub County.

1.5 Research questions

- i. What is the extent to which fishing activities influence student's school attendance in Lamu East Sub County?
- ii. To what extent do fishing activities influence school dropout among secondary school students in Lamu East Sub County.?
- iii. Are there gender differences in school attendance and academic achievement among secondary school students in Lamu East Sub County?
- iii. What is the relationship between fishing activities and learning outcomes among secondary school students in Lamu East Sub County?

1.6 Justification of the study

Similar studies that sought to address the problem this study intends to investigate have been carried out in other parts of the country. For instance, some studies have reported that secondary school students participate in fishing activities while attending school. The activities the students were reported to be involved in include; actual fishing, repairing boats and nets and removing the fish from the nets. The students who were involved in fishing activities were found to be performing poorly in academics. Other

studies have revealed that primary school pupils who lived around Lake Victoria were involved in fishing activities. The findings revealed that pupils who were involved in fishing activities performed poorly. Most of the research efforts that have been made, used samples of secondary school students drawn from regions outside Lamu East Sub County. As indicated in the background to the study, majority of the secondary schools in the sub county are grappling with below average academic performance. The sub county is surrounded by the Indian Ocean and as such, fishing is a major economic activity in the area. Since little is known in terms of research on the effects of fishing activities on academic performance, there is need for this study to bridge the gap in an effort to unearth the factors that may be associated with dismal academic performance. The findings may be used to address this problem in order to improve education standards in the region.

1.7 Significance of the Study

The findings of this study will be of benefit to education policy makers, school administrators, teachers and parents. Education policy makers may use the findings to formulate policies that bar secondary school students from being involved in fishing activities so that they can concentrate on their studies. School administrators and teachers may also benefit from this study findings in their collaborative effort to sensitize the parents and the community at large on the effects of fishing activities on academic performance of students. The parents may also use this information to guide their children on the negative effects of being involved in fishing activities while attending school. Future researchers in this area may also use the findings of this study for further research to create new knowledge.

1.8 Scope of the study

This study will be restricted to Lamu East Sub County in Lamu County. According to the records obtained from the sub-county Education Office, the KCSE mean score has been below average and comparatively low in Lamu County. In the year 2016 the KCSE mean score of the sub county was 1.74, in 2017 it was 1.98 while in the year 2018 it was 2.27. The study will focus on public secondary schools because they are the ones that have been mostly affected by dwindling academic results. The researcher will involve selected students from form one to four, class teachers and the school principals to collect data. Questionnaires, document analysis and interview schedules will be used to collect data from the respondents. Mixed method research design will be employed in which both qualitative and quantitative data will be collected, analyzed and then interpreted to establish the nature of relationships among the study variables.

1.9 Study Limitations

The following will be the study limitations;

- i. The study will be carried out in Lamu East Sub County and therefore the results may not be generalized to other regions in Kenya due to social and cultural differences that exist. However, the researcher will use a representative sample to increase the external validity of the research findings.
- ii. The use of questionnaires to collect data is subjective as the respondents may tend to give favorable responses. To enhance the reliability of the responses, the researcher will explain in details to the respondents the purpose of the study and assure them confidentiality of the information they will provide.

1.10 Delimitations of the study

The study will only focus on fishing activities and how they influence academic performance of secondary school students in Lamu East Sub County. There are many other factors that affect academic performance of students but this study will only investigate fishing activities because there is no similar research that has been carried out in the area. The other delimitation of this study is that the sample will be selected from public day secondary schools. All public day secondary schools in the sub county have been registering poor academic performance in national exams. Data collection will only involve the use of self-reports and document analysis because these techniques will give the researcher an opportunity to collect a lot of information within a limited time. This will be appropriate for this study because the respondents are usually very busy.

1.11 Assumptions of the study

The study will make the following assumptions;

- i. There are some students in public day secondary schools in Lamu East Sub County who are involved in fishing activities.
- ii. The students will cooperative and varnish the researcher with honest answers.
- iii. The students involved in fishing activities will accurately report their experiences.

1.12 Operational Definition of terms

Academic performance: It refers to the mean of the marks the student will score in end of term examination

Fishing activities: It refers to the activities such as actual fishing, offloading fish from boats, selling fish, washing and preserving fish, loading and offloading fish merchandise

School dropout: It refers to the act of quitting school by a student to engage in fishing activities.

Student absenteeism: This refers to the number of days a student misses school to engage in fishing activities.

School attendance: The percentage of the total number of days a student attends school in a term.

LITERATURE REVIEW

2.0 Introduction

This chapter presents empirical literature on fishing activities, influence of fishing activities on school attendance, gender differences in school attendance and academic performance influence of fishing activities on school dropout and influence of fishing activities on academic performance. It also presents summary of literature review, research gaps and theoretical framework.

2.1 Fishing activities

Research on involvement of children in fishing activities has been conducted in various

parts of the world. Ferdousi and Faruk (2016) carried out a study in Bangladesh to investigate engagement of children in the fishing industry. The researchers used the longitudinal study approach to collect data from 492 workers among them 20.33% were identified as children. Structured questionnaire was used to collect data from the child workers. It was established that all the child workers were involved in feeding the fish, feed preparation, sorting and grading of fish. It was reported that the children were involved in the fishing activities because of poverty and school dropout. Most of the children who were found working in the fishing farms in order to support their families and their parents gave the consent to be recruited. ILO (2012) study found that employment of children in the seafood production industry is still practiced. It was noted that in different parts of the world, that children were employed in the fishing industry, fish docks, fish processing and packaging. The study established that in Thailand the prevalence of child labour in the fishing industry was 9.9%. Most of the children were aged 15-17 years who had dropped out of school.

In the Northern Coast of Brazil, Vieira, Moraes and Nunes (2013) reported school going children were involved in fishing activities. Children as young as 7 years were found to be engaged in various fishing activities such as smoking and selling of the fish. About 39% of the children indicated that occasionally they skipped school to engage in fishing activities. The tendency of child labour in African countries bordering coastlines is also common. Achike and Mkpado (2013) demonstrated that 30% of the teenagers who were involved in fishing activities did not do well in school. Most of the teenagers who were involved in fishing activities were from large families. Similar results were reported by ICF Macro (2011) in Uganda. The survey found that a substantial number of

the work force in the fishing industry were teenagers. It was found that some of the children were not attending school while others had dropped out of school to engage in fishing activities.

In East Africa, communities that live around inland large water bodies such as Lake Victoria and along the Indian Ocean coastline are majorly dependent on fishing as a source of livelihood. The industry largely employs unskilled workers who reside around the fishing grounds (UNESCO, 2008). Research has demonstrated that child labour among communities that live around Lake Victoria is very common (Odero, 2013). Engagement of children in fishing activities has been aggravated by the fact that no special skills are required for one to work in the fishing industry. Kwiringira et al. (2019) reported that primary school pupils were involved in fishing activities around Lake Victoria. The study established involvement in fishing activities negatively affected schooling of the children. Ligere, Poipoi and Maragia (2012) also established that primary school pupils were involved in fishing activities in Suba and Homa Bay districts. The pupils who were engaged in fishing activities performed poorly in academics.

2.2 Academic performance

Academic performance of secondary school students and the factors related to it have received a considerable amount of research. In India, Kapur (2018) observed that academic performance in most secondary schools was below average. The researcher noted that children from poor backgrounds were engaged in employment to contribute to family income. It was established that that some school going children were involved in part time employment while others were involved in full time employment. For example,

some students were reported to be employed in the production of handicrafts. Due to the loss in valuable learning time, the students involved in employment score below average grades in academics.

A research by Holgado, Jariego and Ramos-Vidal (2014) investigated the influence of child labour on academic performance of children. The researchers interviewed 3302 children to evaluate child labour variables and how they affected academic performance. Data analysis was done using logistic regression. The findings showed that child labour conditions, number of weekly hours dedicated to work activities negatively affected academic performance of the children. The children who were involved in work activities were found to perform poorly in academics compared to their peers who were not involved in work activities. Poor academic performance of the children was attributed to conflict between work activities and studying.

Abane (2014) carried out a study to investigate the effect of child labour on academic performance of secondary school students in Cross River State, Nigeria. The study examined academic performance of children involved in work activities and those that were not involved in work activities. Post test scores were used to test the research hypotheses and the results showed that child labour negatively affected academic performance of the children. Relatedly, Nyandwi (2014) conducted a study to investigate the factors associated with poor academic performance among secondary school students in Tanzania. The researcher selected the school heads and district education officers through purposive sampling. The students were selected using systematic sampling

procedure. The results of binary logistic and inferential analysis revealed that poor academic performance was associated with poverty. Some students were reported to be attending school irregularly while others completely dropped out of school due to poverty. High poverty levels forced some students to engage in employment to meet the basic needs. Engagement of students in employment negatively affects academic achievement.

In Kenya, Kieti (2017) investigated the factors associated with academic achievement among students in public secondary schools in Machakos County. The sample of the study consisted of 40 teachers, 10 principals and 230 students. Data were gathered from the respondents using questionnaires. The collected data were then analyzed using regression analysis and one way ANOVA. The results showed that inadequate learning resources greatly affected academic performance of the students. The findings also showed that there was a significant and positive relationship between academic performance and administrative practices. Children from low socio-economic background were involved in other activities for income which negatively affected their academic performance.

2.3 Influence of fishing activities on school attendance

Even though child labour in the fishing industry is a common problem along large water bodies, it has not received much research attention on how it influences school attendance. Christoph and Sonja (2007) noted that in many families that are headed by children engage in fishing activities at the expense of going to school. The fishing industry absorbs about 57.6% children who are in the school age worldwide (U.S

Embassy in Kenya, 2002). According to FAO (2004) reported that in Bangladesh there is a high incidence of child labour in the fishing related activities accounting for about 36% of the labour force. It was reported that girls sometimes skip school to fetch firewood that is used to smoke fish. Some girls are indirectly involved in the fishing activities such as taking care of the siblings when the mothers go to attend to fishing activities. In Ghana, it was reported that child labour in the fishing industry contributes about 2.5% to child labour in the world. Some of the children skip school to work in the fishing industry while others drop out of school to engage in fishing activities.

In Nigeria, Udoh, Achike and Mkpado (2013) designed a study to find out the influence of fishing activities on academic performance of students. The researchers used stratified random sampling to select 56 students to participate in the study. Interview schedules, observations, questionnaires, published and unpublished materials were used to collect data. The collected data were then analyzed using descriptive statistics and logit regression analysis technique. The findings indicated that 41% and 42% of the respondents spent 3-4 and 5-6 hours respectively each day on fishing. It was also reported that 64% of the students who participated in the study were involved in fishing 3-4 days in a week at the expense of schooling. Involvement in fishing activities was found to have a negative effect on academic performance of the children.

In another study, Amalu and Abang (2016) examined school absenteeism among primary school pupils. The study used descriptive survey research design with a sample of 320 respondents. The sample of the pupils was selected using multistage sampling technique. Observation checklist and questionnaires were used to collect data. The results indicated that financial constraints and lack of interest were responsible for school absenteeism.

Loraine and Austin (2010) pointed out that absenteeism occurs when parents intentionally keep their children at home so that they can assist them in working at home. Some scholars have identified school absenteeism as a complex and multifaceted problem that is influenced by many factors (Kearny, 2008).

Lugonzo, Chege and Wawire (2017) investigated how the fishing activities around Lake Victoria affected school attendance among secondary school girls in Siaya County. A total of 159 students and 16 teachers were purposively sampled to complete the questionnaires. The researchers also used non-observations and interview schedules technique to collect data from the respondents. The results of the descriptive survey revealed that the number of girls attending school was low compared to the number of boys. It was also reported that the girls who were not attending school were mostly involved in fish processing, fish marketing and sex in exchange for fish. These activities made the girls to miss attending school. There was a significant relationship between fisheries and attendance of girls in secondary schools. The girls got involved in the fishing activities so that they can provide basic needs for their families.

2.4 Influence of fishing activities on school dropout

In India, Gouda and Sekher (2014) conducted a research to find out the factors associated with school dropouts in India. Based on Family health survey data, 75% of children aged 6 to 16 years were attending school. Approximately 14% of the children were not schooling and about 11% of the children dropped out of school for various reasons. The rate of dropout was found to be higher with parents who were not working. The parents allowed their children to be employed to supplement family income. Husain (2005) observed that low level of parental education contributed to school dropout. Poverty was also cited as one of the causes of school dropout. In the study it was concluded that school attendance varied directly with socio economic status.

A research by Ekegre and Edet (2010) examined the factors associated with school dropout among students in Ghana. The study used survey design to examine the extent to which the independent variables influenced the dependent variable. Probability and purposive sampling techniques were used to select a sample of 200 pupils and 200 parents. Data were collected using cumulative records, registers and then analyzed using correlational statistics. The results showed that there was a significant relationship between parental socio-economic status and school dropout. It was also revealed that some pupils especially those from poor backgrounds dropped out of school to engage in employment.

In Kenya, Makorani and Muli (2017) examined the factors associated with school dropout among primary school pupils in Lamu County. The researchers employed descriptive survey research design with a sample of 32 respondents. To collect data, each of the respondents was supplied with a self-constructed questionnaire. The responses were summarized using means, frequencies and standard deviation. The findings indicated

that socio economic factors such as family background and culture affected retention rate in secondary schools. Students from poor backgrounds dropped out of school to engage in payed labour due to lack of school fees.

Another study by Lugonzo, Chege and Wawire (2017) investigated the factors that associated with school dropout among secondary school girls. The researchers adopted descriptive survey research design. Purposive sampling was used to select 159 students and 16 teachers to participate in the study. Questionnaires and non-participant observations were used to generate quantitative data while interview guides were employed to generate qualitative data. The results of data analysis showed that 84% of the participants agreed that girls drop out of school to engage in fishing activities. The results also showed that the school dropout rate for girls was higher than that of boys. Fishing activities and poverty were cited to be among the reasons why girls dropped out of school.

Segumba (2015) conducted a study to investigate the factors associated with school dropout among primary school pupils in Tanzania. The sample size comprised of 36 pupils, 30 teachers, 6 head teachers and one DEO. The respondents were selected using purposive and simple random sampling techniques. Quantitative and qualitative data were collected and then analyzed. The results showed that due to poverty some of the children dropped out of school to engage in employment to supplement family income. This problem was found to be common among uneducated families.

In another study, Anyango (2011) explored the influence of fishing activities on school participation among primary school pupils in Karachuonyo Division. The study employed descriptive survey research design with a sample size of 123 respondents consisting of class

teachers and the head teachers of the sampled schools. The researcher used questionnaires and interview schedules to collect data from the teachers and school heads respectively. Quantitative data were analyzed using descriptive statistics while qualitative data were examined using thematic analysis. The results showed that various fishing activities affected the participation of the pupils in school activities. Some of the activities that were found to affect school participation include actual fishing, seasoning and selling the fish. The respondents reported that some of the pupils dropped out of school to engage in fishing activities.

2.5 Gender differences in school attendance and academic achievement

2.5.1 Gender differences in school attendance

The issue of gender differences in school attendance has been a topic of scholarly discussion for some time but findings of the studies conducted in different parts of the world are contradictory. Sackey (2007) studied the factors that influence school attendance focusing on gender perspective. The study utilized data from surveys that were conducted in different areas. It was established that household resources and parents education affected school attendance for both boys and girls. Regarding gender differences in school attendance, it was found that the number of boys attending school was higher than that of girls.

A study by Livumbaze and Achoka (2017) explored school attendance and gender differences in public secondary schools in Hamisi Sub County. The researchers sought to address the problem of sporadic attendance in most public schools in the area. The study adopted descriptive survey research design. The sample size consisted of 523 respondents; 383 students, 128 teachers and 12 principals. Document analysis, questionnaires and semi structured interview guides were used to collect data. Both descriptive and inferential

statistics were used to analyze the collected data. The results indicated that there were gender differences in school attendance. School attendance for boys was higher than that of the girls.

Makorani and Muli (2017) carried out a study to examine the factors that affect retention rate in primary schools in Lamu County. The research was conducted using closed and open ended questionnaires which were administered to 32 head teachers. The findings revealed that the gender of children affected retention rate in secondary schools. The results also showed that more boys were attending school than the girls. The results are consistent with early findings of the ministry of education which reported that enrolment of boys in secondary schools was 53.2% while that of girls was 46.8% (MOE, 2012).

Another study by Tarus (2016) investigated the effect of gender mainstreaming in secondary education on career aspirations and psychological adjustment. The students filled questionnaires while interview schedules were used to collect data from the head teachers and the guidance and counseling teachers. Chi square, linear regression analysis and ANOVA were used to analyze the data. The results showed that there was a significant relationship between gender mainstreaming and career aspirations among girls. The study focused on gender mainstreaming to address the problem of gender disparity in school attendance in secondary schools. The current study intends to explore gender differences in school attendance in Lamu East Sub County to provide current empirical literature on this topic.

Granda and Oprong (2013) carried out a study to investigate the factors associated with girl child drop out from secondary schools in Kenya. The tools used in data collection include

questionnaires, interview guides and document analysis. The results of data analysis revealed that poverty, education level, social and cultural environment and early marriages contribute to school drop out of female students. The results also confirmed the hypothesis that there were more male students in secondary schools than female students in the area of study.

2.5.2 Gender differences in academic achievement

There is an abundance of literature on the factors that influence academic performance of students. One of such factors that has been found to have a considerable effect on academic achievement is gender of the student. Adigun, Onihunwa, Irunokhai, Sada and Adesina (2015) carried out a study to investigate the influence of gender on academic performance of secondary school students in Nigeria. Questionnaires were administered to 275 students who were randomly sampled from federal government schools. The study used ex post facto research design and multistage sampling technique to select the respondents. The data obtained from the students were analyzed using independent samples t-test and the results showed that male students performed better than female students. However, the gender difference in academic performance was not statistically significant.

Another research by Sayid and Milad (2011) investigated gender differences in the factors that affect academic achievement among high school students. A total of 363 students who were in their first, second and third years were randomly selected to fill the questionnaires. The results showed that there were gender differences in the factors that were investigated and academic achievement. Majority of the girls who participated in the study had internal locus of control using attitude, time management and motivation and scored better marks in achievement tests. With regard to cognitive-motivational strategies, girls were found to

have more adaptive approach to learning and better academic achievement compared to boys.

Nnamani and Oyibe (2016) conducted a study to investigate gender differences and academic performance of secondary school students in Ebonyi State. The study used all 3479 students in the state to collect data. The researchers tested the null hypothesis using analysis of covariance and the results showed that the mean of academic performance of female students was higher than that of the male students. The results also revealed that female and male students taught by male teachers performed better than students who were taught by female teachers. The gender difference in social studies scores was found to be statistically significant.

In Kenya, Wangu (2014) conducted a study to find out if there were gender differences in academic performance among secondary school students in Kiambu County. Simple random sampling and purposive sampling techniques were used to select 40 students, 30 teachers, 5 head teachers and 5 directors. Data collection involved the use of interview guides and questionnaires. The results showed that male students performed better in certain subjects than female students and vice versa. Specifically, girls performed better in languages than boys while boys performed better in sciences and mathematics than girls. Concerning the views of the teachers on gender differences in academic performance, majority of them strongly agreed that boys perform better in academics than girls.

Another study by Mwangi and Ileri (2017) examined gender differences in academic performance among secondary school students. The study employed descriptive correlational research design with a sample of 390 students. The students completed

California Healthy Kids Survey questionnaire. The researchers hypothesized that there were no significant gender differences in academic performance. The hypothesis was tested using independent samples t-test and the results showed that there was significant gender difference in academic performance in favour of female students ($t = 1.97$, $df = 388$, $p = .05$).

2.6 Influence of fishing activities on academic performance

The influence of fishing activities on academic performance has received a considerable research attention. Vieira, Moraes and Nunes (2013) conducted a study on fishing and educational level of young fishers on the Bonifacio village, Braganca, Northern coast of Brazil. The study employed a descriptive study. A sample of 41 young fishers aged 7-8 years was used. Data was collected monthly in 2006 using interviews and exploratory surveys with participatory observation. The findings of the study showed that there were fishing activities done by school going children either accompanied by their parents or by themselves. The young fishers interviewed stated starting fishing activities at 7 years of age. The results of the study also showed that 39% admitted being absent from school. Approximately 52% (11-18years) having gone up to sixth grade and 63% of the young fishers indicated school as a priority.

Another study was conducted by Udoh, Achike and Mkpado (2013) to investigate the effects of fishing activities on the academic performance of teenagers in Nigeria. Purposive and stratified random sampling techniques were employed to select a sample size of 56 teenage students. Questionnaires, interviews and observations were used to collect data which was then analyzed using descriptive and logit regression technique. The results showed that more males (54%) participated more in fishing activities than females (46%).

It was reported that 12% of the teenagers who engaged in fishing were position 1st-5th in their classes while 30% were positions 16th-20th in their classes. Teenagers who were not engaged in fishing performed better in their classes with 60% whose positions were from 1st-15th. Teenagers from large families participated more in fishing activities than those from smaller families. The large family's size negatively and significantly related to academic performance.

A study by Walakira and Byamungisha (2008) noted that school going children were involved in fishing activities in Uganda. The researchers established that 59% of the respondents were not attending school while 54% dropped out of school. An in-depth analysis established that students from fishing communities performed relatively poorer in academics than students from non-fishing communities. The findings of Walakira and Byamungisha (2008) also revealed that the rate of school dropout was high among children from fishing communities. School dropout was associated with poor academic performance which made the children to opt for paid work.

In Kenya, Ojijo and Kibera (2017) did a study on fishing activities and academic performance among secondary school students in Rachuonyo. A descriptive survey design was employed with a sample size of 292 respondents. Questionnaires were used to collect data which were analyzed using SPSS and Microsoft excel software. The results of the study showed that 91.7% of the students agreed that students who engaged in fishing activities tended to perform poorly in academics compared to their counterparts while 90% agreed that students engage in truancy to engage in fishing activities. Students engaged in fishing activities and associated activities pre-occupying them at the expense of academic work. The respondents reported 82.9% being involved in actual fishing,

74.2% repairing of fishing net, 84.4% setting of nets in the lake and 83.9% removal of fish from the nets.

Relatedly, Ligere, Poipoi and Maragia (2012) conducted a study to investigate the influence of fishing activities on academic achievements of primary school pupils in Suba and Homa Bay Districts. A casual-comparative research method was employed. The sample size consisted of 337 pupils. Descriptive and inferential statistics were used to analyze data. The findings of the study showed that pupils engaged in fishing activities had significantly lower academic mean scores than those not engaged. The findings also showed that boys not engaged had a significantly higher academic achievements mean score than girls not engaged.

2.7 Theoretical Framework

Conflict Theory by Karl Max *et al.* (2005)

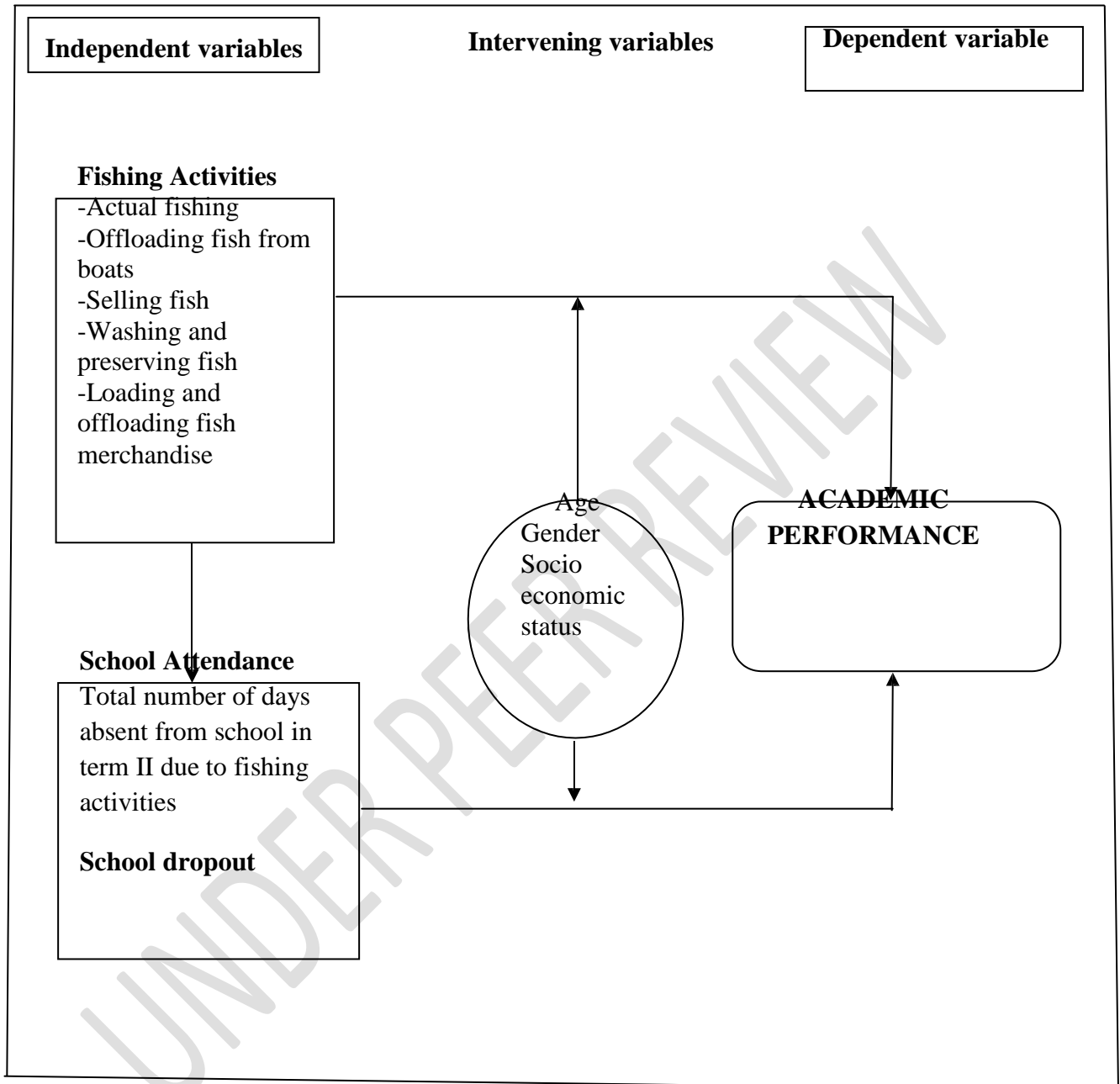
Karl Max developed this theory to explain that in society there is conflict among individuals, groups and social entities. The theorist argued that resources for achieving goals in life are scarce and there is always competition for the limited resources. The theory examines the resources that individuals or group of people have at their disposal and how they can be utilized to achieve goals. Examples of the scarce resources the theorist talked about include status, material resources, wealth privileges and knowledge. Due to the scarcity of these resources, Max argued that the history of any society can be described as a history of class struggle. The examples of struggle the theorist gave include; struggle between the haves and the have nots; the ruling class and the ruled; the educated and the uneducated. The stratification of social and economic structures has led to conflicts in each stratum.

Schools and communities where students come from experience different types of conflicts due to the scarcity of resources. This theory is considered as the most appropriate for this study because students engaging in fishing activities when they are supposed to be in school in its very nature is a conflict. The students have to consider to work in the fishing industry for immediate financial gains or go to school and secure a decent job after completion of studies. In other instances, a student may be willing to attend school but due to the scarcity of financial resources the student will be forced to stay out of school. Such students may be forced to engage in fishing activities not because of their choice but because of social economic background. Involvement in fishing activities becomes the only option to earn an income to meet basic needs and even raise school fees to educate themselves. Based on the tenets of this theory, the proposed study seeks to investigate the influence of fishing activities on academic performance of secondary school students in Lamu East Sub County.

2.8 Conceptual Framework

The independent variable for this study will be fishing activities which will include; actual fishing, offloading fish from boats, selling fish, washing and preserving fish, loading and offloading fish merchandise. The researcher conceptualizes that student involvement in fishing activities influences school attendance and school dropout. The dependent variable will academic performance of the student. It will be measured using end of term examination mean score. As presented in *figure 2.1*, involvement in fishing activities affects academic performance of the students. The intervening variables will be age, gender of the student and socio-economic status of the parents or guardians.

2.9 Conceptual Framework



—————→ Anticipated relationship

Figure 1 Model for the relationships between independent and dependent variables

Source: Researcher (2019)

2.10 Research Gaps

Past research work on the influence of fishing activities on school absenteeism showed that some students missed school occasionally to work in the fishing sites

Some of the students were reported be absent from school due to lack of school fees. Other research findings pointed out that absenteeism occurs when parents intentionally keep their children at home so that they can assist them in working at home. Regarding school dropout, students from poor backgrounds were found to drop out of school to engage in payed labour due to lack of school fees. Studies on gender differences in school attendance and academic performance reported contradictory findings; some in favour of male students while others in favour of female students. This calls for more research in this area to contribute to this debate for more conclusive findings. It was also established that some students drop out of school to engage in fishing activities and fishing activities negatively affected academic performance of students.

The findings of past studies are important to address the problem this study seeks to investigate but the studies were carried out outside Lamu East Sub County.

Furthermore, the studies used samples of drawn from different social and economic contexts which limit the generalization of the findings. Therefore, there is need to conduct this study in Lamu East Sub county to compare the results.

2.11 Summary of Literature Review

The literature reviewed indicates that teenagers in school going age were involved in fishing activities in different countries across the world. However, most of the studies used samples of primary school pupils. The findings of studies on the influence of fishing activities on school attendance indicated that learners who were involved in fishing activities occasionally skipped school to work in fishing sites for pay. Concerning the influence of fishing activities on school dropout, reviewed literature showed that incidences of learners quitting school to be employed in the fishing industry have been reported. However, the age of the learners and reasons for quitting school vary from place to place.

Research on gender differences in school attendance and academic performance reported mixed findings. Some studies reported that school attendance and academic performance for male students was higher than that of female students while others reported otherwise. Reviewed literature on the influence of fishing activities on academic performance of learners demonstrated that students who were involved in fishing activities performed poorly in academics. Poor performance in academics was attributed to school absenteeism, fatigue and lack of concentration to benefit fully from learning time.

RESEARCH DESIGN AND METHODOLOGY

3.0 Introduction

This chapter presents the research methodology, research design, variables, locale of the study, target population, sampling procedures and sample size. It also discusses the research instruments, pilot study, reliability and validity of the research instruments, data collection techniques, data analysis and presentation, logistical and ethical considerations.

3.1 Research Methodology

This study will employ mixed research methodology in which both qualitative and quantitative data will be collected. The data will then be analyzed to answer research questions. Kothari (2004) stated that quantitative methodology involves the collection of data using numbers while qualitative methodology involves the use of narratives to collect data which is then analyzed to test hypothesis. This methodology is appropriate for this study because it will make the findings more reliable since the methodologies complement each other.

3.2 Research Design

The researcher will employ descriptive survey research design. This design is used in exploratory studies in which the researcher collects data, summarizes and presents it for interpretation to explain an existing phenomena (Orodho, 2002). According to Mugenda and Mugenda (2003) states that descriptive surveys are used when the aim of the study is to explain the current state of affairs with reference to two or more variables. This

design is concerned with describing, recording, analyzing and reporting phenomena that exists or existed. This design is appropriate to this study because fishing activities and academic performance are states that exist. Using this design, therefore, the study seeks to investigate how fishing activities influence academic performance of students in day secondary schools in Lamu East Sub County.

3.3 Research Variables

The independent variable will be fishing activities. The researcher will focus on actual fishing, offloading fish from boats, selling fish, washing and preserving fish, loading and offloading fish merchandise. The variables will be measured on a five point Likert scale ranging from never (1) to always (5) (See appendix). The fishing activities will be conceptualized to influence school attendance, drop out and academic performance. School attendance and school dropout will be measured at five point Likert scale. The scale will consist of strongly agree (5), agree (4), don't know (3), disagree (2) and strongly disagree (1).

3.4 Location of the study

The study will be carried out in Lamu East Sub County. Statistics obtained from the sub County Education Office indicate that the sub county has been performing below average in the last three years. The KCSE mean scores for the sub county for the year 2016, 2017 and 2018 were 1.74(D-), 1.98 (D-) and 2.27 (D-) respectively. There are many factors that affect academic performance of students and research efforts have been made to address the problem. But there is a scarcity of research literature on the influence of fishing activities on academic performance yet in the area fishing is a major

economic activity. Therefore, there is need for the proposed study to bridge the gap in an effort to unravel the factors associated with poor academic performance in the area.

3.5 Target Population

The target population for this study will be all students and principals in day secondary schools in Lamu East Sub County in the year 2019. There are a total of 4 public day secondary schools with 1200 students. The researcher will target public day secondary schools because day scholars have very high chances to be involved in fishing activities than boarders because they reside at their homes. The school principals will also be targeted because they are better placed to provide reliable information on how fishing activities affect academic performance of secondary school students.

3.6 Sampling Techniques and Sample size

The researcher will use purposive sampling technique to select public day secondary schools. Statistics obtained from the sub county education office indicate that most public day secondary schools have been performing far below average in KCSE. From 5 secondary schools, purposive sampling will be used to select 4 schools. If the schools that will be sampled will have more than one stream, the researcher will use simple random sampling to select the stream to be involved in the study. The number of students to be involved in the study from each school will be proportionately sampled and then simple random sampling will be used to obtain the students in each school to participate in the study. The use of simple random sampling will give the students an equal chance of participating hence increasing the reliability of the findings.

Table 1 *Target population and Sample size*

Target		Population		Sample Size	
<u>Schools</u>	<u>Students</u>		<u>Schools</u>	<u>Students</u>	
	Boys	Girls		Boys	Girls
5	523	677	4 (80)	60 (11)	80 (12)
Total	1200		4(80)	140 (12)	

Note. () Percentage

The sample size will consist of 4 day secondary schools representing 80%, 60 boys and 80 girls who will represent 11% and 12% respectively. Mugenda and Mugenda (2003) recommends that a sample size of 10% or more is representative to give reliable findings.

3.7 Research Instruments

The researcher will use two self-constructed instruments to collect data; questionnaires and interview schedules.

a. Questionnaire

The student's questionnaire consists of four sections (Appendix). Section A will collect data on gender of the student, age, form and the marks the student scored in term II examination. Section B will collect data on fishing activities using a five point Likert scale. The highest score in this section will be 25 while the lowest score will be 5. A student who will score 25 will imply that the student is always involved in fishing activities and the one who will score 5 will indicate that the student is never involved in fishing activities. Section C will collect information on how fishing activities influence student absenteeism. Section D will collect information on the influence of fishing activities on school dropout. In the two sections the maximum score will be 25 while the minimum score will be 5.

b. Interview schedule

The researcher will use interview schedule to collect qualitative data from the school principals. The information that will be sought from the principal include gender, teaching experience, and highest education level. The researcher will also seek information on students who engage in fishing activities, absenteeism and school dropout due to fishing activities.

3.8 Piloting of the instruments The researcher will carry out a pilot study in one school to test the validity and reliability of the research instruments. A total of 32 students (16 boys and 16 girls) will be randomly selected from form one to form four to participate in the study. The sample size for the pilot study will be 23% of the sample size of the actual study. Connelly (2008) recommends that a sample size of 10-30 respondents is appropriate for a pilot study. The school where the pilot study will be conducted will not be involved in the actual.

3.9 Validity and reliability of the research instruments

3.9.1 Validity of the research instruments

The researcher will use the university supervisor and competent peers to establish face and content validity of the research instruments. Before conducting the pilot study, the research instruments will be presented to the university supervisor for expert judgement. The findings of the pilot study will be used to enhance the validity of the research instruments.

3.9.2 Reliability of the research instruments

Test-retest technique will be used to ascertain reliability of the research instruments. A total of 32 questionnaires will be administered to students who will be randomly sampled from one school. After one week, the researcher will re-administer the research instruments to the same number of students and then after that the reliability coefficient will be calculated using Pearson product moment correlation analysis. The findings will be discussed with the university supervisor.

3.10 Data collection procedures

The researcher will use administration of questionnaires and interviewing to collect data. The questionnaires will be administered to students who will be randomly sampled from form one to form four. Interviewing technique will be used to collect data from the school principals. The researcher will administer the research instruments and collect them the same day.

3.11 Data Analysis

Qualitative data will be organized into thematic areas and then categorized to answer research questions. Quantitative data will be coded into SPSS program version 21 and then checked for missing values and extreme scores. Data analysis will involve the use of two statistical methods; descriptive statistics and inferential statistics. Demographic information and data on fishing activities will be analyzed using descriptive statistics (frequencies, percentages, mean and standard deviation). Data on the influence of fishing activities on academic performance will be analyzed using Pearson product moment correlation analysis. The results will be presented using bar graphs, pie charts and tables.

3.12 Ethical Considerations

The researcher will observe all the ethical requirements in research process. Participation in this study will be voluntary and the respondents will not be required to write their names on the questionnaires. The questions in the research instruments will be written in a way that will not embarrass the respondents. The aim and purpose of the study will be well explained in the consent form which the respondents will be required read and understand and then make a decision to participate or decline to participate in

this study. The information the respondents will provide will be treated with uttermost confidentiality.

3.13 Logistical Considerations

The researcher will seek authorization letter to carry out the study from IRB Mount Kenya University. The researcher will then apply for a research permit from the National Commission for Science, Technology and Innovation (NACOSTI). Once the research permit is obtained, the researcher will assemble all the financial and material resources required to conduct the study. The County and Sub County Education Offices will be visited for authorization to carry out the study. The researcher will then book appointments with the principals of the sampled schools to agree on the appropriate date and time to collect data. The respondents will be briefed about the study and once they indicate that they have understood the instructions, they will be given the questionnaires to fill.

REFERENCES

- Abane, P. O. (2014). The negative effect of child labour on academic performance of secondary school students in Central Senatorial District of Cross River State, Nigeria. *Global Journal of Educational Research*, 13(1), 37-44.
- Anyango, J. A. (2011). *Influence of fishing related activities on pupils' participation in primary school education: a case of beaches in West Karachuonyo Division, Kenya*. Masters thesis, University of Nairobi, Kenya.
- Schools in New Bussa, Borgu Local Government of Niger State. *Journal of Education and Practice*, 6(33), 1-7.
- Amalu, N.M. & Abang, B. K. (2016). School absenteeism among primary school pupils in Cross-River State: psychological implication for national development. *Global Journal of Educational Research*, 15, 49-56.
- Basu, K. (1999). Child labour: Cause, Consequence and Cure, with Remarks on International Labour Standards. *Journal of Economic Literature*, 37, 1083-1119.
- Cain, M. 1977. The Economic Activities of Children in a Village in Bangladesh. *Population and Development Review*, 3.
- Cain, M. 1977. The Economic Activities of Children in a Village in Bangladesh. *Population and Development Review* (3), 37-45.
- Ekegre, E. & Edet, P. (2010). Parental socio-economic status, family type and school

- dropout in the Ewutu Educational Circuit Winneba, Ghana – Implication for Counseling. *Online Journal of Academic Leadership*, 4(46), 1-11.
- Ferdousi, K. & Faruk, R. A. (2016). Involvement of child labour in aquaculture activities in Mymensingh district, Bangladesh. *Journal of Research in Agriculture, Livestock and Fisheries*, 3(3), 433-442.
- Gouda M. S., & Sekher, T. V. (2014). Factors Leading to School Dropouts in India: An Analysis of National Family Health Survey-3 Data. *Journal of Research & Method in Education*, 4(6), 75-83.
- Holgado, D. Jariego, M. I. & Ramos-Vidal, I. (2014). Impact of child labour on academic performance: Evidence from the program “Educame Primero Colombia”. *Journal of Educational Development*, 34, 58-66.
- Husain, Z. (2005). “Analysing Demand for Primary Education Muslim Slum Dwellers of Kolkata”, *Economic and Political Weekly*, January 8, 2005
- ILO. (2013). *World Report on Child Labour: Economic Vulnerability, Social Protection and the Fight Against Child Labour*. International Labour Office.
- Geveva
- ILO. (2018). *World Report on Child Labour: Economic Vulnerability, Social*

Protection and the Fight Against Child Labour. International Labour Office.

Geneva

Kapur, R. (2018). *Factors influencing the students academic performance in secondary schools in India*. Retrieved from <https://www.researchgate.net/publication/324819919> on 3/11/2019.

K'achieng, J.A.(2011). *Influence of Fishing Related Activities on Pupils Participation in Primary School Education: A Case of Beaches in West Karachuonyo Division, Kenya*. Unpublished Med. Thesis. University of Nairobi.

Kanbargi, R. (1991). *Child Labour in the Indian Subcontinent – Dimensions and Implications*. London, Sage Publications.

Kearny, C., 2008. School absenteeism and school refusal behaviour. A review and suggestion for school based health professional. *Journal of School Health*, 76(1), 3-7.

Kieti, M. J. (2017). *An investigation into factors influencing students' academic performance in public secondary schools in Matungulu Sub-county, Machakos county*. Masters project, South Eastern Kenya University, Machakos.

Koech, J. K., Ayodo, T.M.O. & Ngare, N.N. (2017). Free Day Secondary School

Education: Causes of High Drop Out Rates of Students in Secondary Schools
in

Kipkelion Sub-County, Kericho County, Kenya. *Kabarak Journal of Research & Innovation*, 5(1), 1- 11.

Kothari, C. R. (2004). *Research Methodology, methods and techniques* (2nd ed.), New age

Technopress. New Delhi.

Ligere, N.S., Poipoi, W.M. & Maragia, N. S. (2012). The influence of participation in fishing activities on academic achievements of primary school pupils in Suba and Homa Bay Districts, Kenya. *International Journal of Academic Research in Progressive Education and Development*, 1(3), 226-248.

Ligeve, S.N., Poipoi, M. W. & Maragia, S. N. (2012). The Influence of Participation in Fishing Activities on Academic Achievement of Primary School Pupils in Suba And Homa-Bay Districts, Kenya. *International Journal of Academic Research in Progressive Education and Development*, 1(3), 99-109.

Lugonzo, M.H., Chege, F. & Wawire, V. (2017). Fisheries around Lake Victoria and attendance of girls in Secondary schools of Nyangoma Division in Siaya County, Kenya. *Greener Journal of Educational Research*, 7(4), 49-60.

Makorani, H. S. & Muli, S. (2017). Factors Affecting the Retention Rate of Pupils in

Public Primary Schools in Hindi Division, Lamu West Sub-County, Lamu

County. *International Journal of Scientific Research and Innovative technology*,

4(9), 33-41.

Makorani, H. S. (2017). Factors Affecting the Retention Rate of Pupils in Public Primary

Schools in Hindi Division, Lamu West Sub-County, Lamu County.

International Journal of Scientific Research and Innovative Technology, 4(9),

33-41.

Mugenda, O. & Mugenda, A. (2003). *Research methods: Qualitative and Quantitative*

Methods. Nairobi: Acts press

Mwangi, N. C. & Ileri, M. A. (2017). Gender Differences in Academic Resilience and Academic Achievement among Secondary School Students in Kiambu County, Kenya. *Psychol Behav Sci Int J*. 5(5): 555673. DOI:

10.19080/PBSIJ.2017.05.555673

Nag, M. B. White & R. C. Peet 1978. "An Anthropological Approach to the Study of

the Economic Value of Children in Java and Nepal," *Current Anthropology*,

19 (2), 293-306.

- Narad, A. & Abdullah, B. (2016). Academic performance of senior secondary school students: Influence of parental encouragement and school environment. *Rupkatha Journal on Interdisciplinary Studies in Humanities*, 8(2), 12-19.
- Nyandwi, M. D. (2014). *Determinants of poor academic performance of secondary school students in Sumbawanga district, Tanzania*. Masteres Thesis Sokoine University of Agriculture, Tanzania.
- Ojijo, A. G. & Kibera.W.L. (2017).Fishing activities and academic performance of secondary school students in Rachuonyo North sub-county Kenya.*International Journal for Innovation Education and Research*, 5 (7), 12-25.
- Omwenga, C. P. (2015). *The effect of child labour on academic achievement of primary school pupils: a case of Voi division of Voi district, Taita-Taveta county, Kenya*. Unpublished masters thesis, Moi University.
- Rosenzweig, M. R. & R. Evenson 1977. Fertility, schooling and the economic contribution of children in rural India: An econometric analysis. *American Economic Review*, 45(5), 1065-79.
- Sayid, D. G. & Milad, K. (2011). Gender differences in factors affecting academic performance of high school students. *Procedia Social and Behavioral Sciences*, 15, 1040–1045.
- Segumba, I. S. (2015). *Factors leading to problems of drop out in primary school pupils*

in Temeke. Masters Theses, University of Tanzania, Arusha.

Udoh, M. Achike, A. & Mkado, M. (2013). Effects of fishing activities on the academic performance of teenagers in Riverine areas of Nigeria. *Journal of Studies on social Sciences*, 2(2), 211-227.

UNESCO (2008). *Water Portal Bi-Monthly Newsletter*. No.198: The Lake Victoria Region. 15th January 2008

Vieira, C.N. Moraes, S. C. & Nunes, Z. M. P. (2013). A study of fishing and educational level of young fishers on the Bonifácio village, Bragança, Pará, northern coast of Brazil. *Bol. Inst. Pesca, São Paulo*, 39(2), 195 – 204.

Walakira, J. E. & Byamungisha, J. (2008). *Child Labour in the Fisheries Sector in Nigeria: A rapid Assessment Towards Ending Child Labour in the Fishing Communities*. For ILO & Fedral of Uganda Employers.

Westaway, E., Barratt, C & Seeley, J. (2009). A journal on Attainment and Literacy in Ugandan Fishing Communities; Access for All. *MAST* 8(2), 73-97.

White, B. 1994. Children, Work and “Child Labour”: Changing Responses to the Employment of Children. *Development and Change*, 25, 849-78.