FACTORS INFLUENCING THE BOY–CHILD SECONDARY EDUCATION IN THE RICE-GROWING REGION OF KIRINYAGA SOUTH DISTRICT, KIRINYAGA COUNTY, KENYA

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DECLARATION

This research project is my original work and has not been presented to any other institution for any other degree.

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DEDICATION
This work is most dedicated to the Almighty God that helped me to accomplish it. I also wish to dedicate this work to my wife Grace for believing in and encouraging me all through the program and my children for standing by me during the hardest moments of my life, and the entire family for their support, encouragement and prayer while undertaking the course.

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the starring role they played in guiding and advising me on how to organize my research proposal. Special thanks to my wife Grace and three children, Joy, Glory and Claudia, for their warm company throughout the duration of preparing this work. I am also indebted to the permanent Secretary, Ministry of Education for his authority to carry out this study in the ministry under him. I thank the District Education Officer (DEO), Kirinyaga South District. I appreciate Peter Mwangi for his thoroughness and patience in proof reading this work.

ABSTRACT

This study aimed at gaining in-depth understanding of factors influencing the boy–child secondary education in the rice-growing region of Kirinyaga South District, Kirinyaga County, Kenya. Factors leading to this limited success had hitherto not been adequately investigated. The purpose of the study therefore was to identify those influences on the boy-child’s secondary education in this district. The objectives of the study were to determine the boy-child school attendance trends and drop-out rates in the district secondary schools, determine factors affecting his KCSE performance, find out how the rice-growing sub-sector in the district may be used to prop up boy-child education and identify the non-school based factors that cause his dropping out of school. The theory of agrarian transformation and
socio-cultural change formed the basis of the study. The study used an exploratory approach using a descriptive survey design, and the locale was Kirinyaga South District. The district has about 2000 form two and three boy-students, 40 form 2 and 3 class teachers, 20 Heads of Departments (HoDs), and 20 principals from which 8 secondary schools were selected using purposive sampling technique. All the principals and the HODs of the selected schools were sampled, while simple random sampling to pick 2 class teachers, one each from form two and three classes was used. The total sample size was 224. Questionnaires were used to collect data from students, class teachers and HODs while interview guides were used for the school principals. Piloting of the instruments was carried out in two schools outside the sample to ascertain reliability. Validity of the instruments was ascertained through expert judgment. The questionnaires and interview guides were filled by the individual respondents. The data so collected were presented using figures, tables and diagrams. The data generated were qualitative hence was appropriately processed and analyzed using thematic analysis through cut and paste method. The respondents were assigned identification codes which were entered in the computer code sheets. The data were analyzed using SPSS program. The objectives of the study were achieved, in that findings that secondary school access, attendance, retention, completion and KCSE performance of boy-child is influenced by several school and non-school-based factors were made. Such factors include preparing rice farms, levies imposed by schools, level of education, age and gender of the household’s head, income of households, lack of interest, distance between homes and schools, and household’s size. The study concluded that to prop-up the boy-child’s secondary education, concerted efforts by NIB, FBOs, and NGOs should be considered to mobilize resources and raise awareness among key players like heads of households. The study put forward some recommendations for action by education stakeholders such as the government, school managers, teachers and parents, in order to enhance the boy-child’s participation in secondary education. Finally, a further research on a related subject in districts with similar agricultural activities is suggested.
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<td>CDF</td>
<td>Constituency Development Fund</td>
</tr>
<tr>
<td>EFA</td>
<td>Education for All</td>
</tr>
<tr>
<td>ERP</td>
<td>Education for Rural People</td>
</tr>
<tr>
<td>ERS</td>
<td>Economic Recovery Strategy for Wealth and Employment Creation</td>
</tr>
<tr>
<td>FAO</td>
<td>Food and Agricultural Organization</td>
</tr>
<tr>
<td>FAWE</td>
<td>Forum for Women Educationalists</td>
</tr>
<tr>
<td>FBOs</td>
<td>Faith-Based Organizations</td>
</tr>
<tr>
<td>FDSE</td>
<td>Free Day Secondary Education</td>
</tr>
<tr>
<td>FPE</td>
<td>Free Primary Education</td>
</tr>
<tr>
<td>HODs</td>
<td>Heads of Department</td>
</tr>
<tr>
<td>ID</td>
<td>Identification</td>
</tr>
<tr>
<td>KCSE</td>
<td>Kenya Certificate of Secondary Education</td>
</tr>
<tr>
<td>LATF</td>
<td>Local Authority Transfer Fund</td>
</tr>
<tr>
<td>MDGs</td>
<td>Millennium Development Goals</td>
</tr>
<tr>
<td>MIAD</td>
<td>Mwea Irrigation Agriculture Development Centre</td>
</tr>
<tr>
<td>MIS</td>
<td>Mwea Irrigation Scheme</td>
</tr>
<tr>
<td>MOE</td>
<td>Ministry of Education</td>
</tr>
<tr>
<td>NGOs</td>
<td>Non-Governmental Organizations</td>
</tr>
<tr>
<td>NIB</td>
<td>National Irrigation Board</td>
</tr>
<tr>
<td>SPSS</td>
<td>Statistical Package for Social Sciences</td>
</tr>
<tr>
<td>UK</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organization</td>
</tr>
<tr>
<td>US</td>
<td>United States</td>
</tr>
<tr>
<td>WB</td>
<td>World Bank</td>
</tr>
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CHAPTER ONE

INTRODUCTION AND CONTEXT OF STUDY

1.1 Introduction

This chapter deals with the problem under investigation, the background to the problem, statement of the problem, purpose of the study, objectives of the study and research questions. It will also present significance of the study, assumptions of the study, scope and limitations of the study, delimitations of the study, theoretical framework, conceptual framework and definitions of operational terms.

Education is widely recognized as key to national development. An increase to access, retention and completion of quality education is critical to social-economic growth and productivity, increased individual earnings and subsequently reduced income irregularities and poverty. It also contributes significantly to improved health, enhanced democracy, good governance and effective leadership. Besides, education is a right for the school-age children as provided for in the law, specifically in the Children’s Act (2001) in Kenya, and as expounded in the United Nation Human Right Charter (1948), Jiomtien Conference (1990) and the Darkar Framework on implementation of Education For All (2000). The Kenya government has since independence, placed emphasis on the role of education in social-economic and political development. This has resulted in considerable expansion of access through opening of more schools, introduction of free and compulsory basic education (primary and secondary) and expansion of tertiary colleges and universities. In Kirinyaga South District, there are 20 secondary schools, 65 regular primary schools, 1 approved school (at Wamumu) and 1 tertiary college (at Kutus). Free Primary Education (FPE) and Free Day Secondary Education (FDSE) programs have also taken root. Education is further boosted by school-support programs such as Local Authority Transfer Fund (LATF) and Constituency
Development Fund (CDF) initiatives. Despite the government’s efforts, the envisaged benefits on the boy-child in Kirinyaga south District have not been fully realized. The poverty levels in the district remain high. Many farmers continue to employ the traditional farming techniques and therefore failing to improve their lot. Education appears not to have led to mechanized and modern farming techniques. In recent decades, the enrolment of girls at all levels of schooling has been increasing rapidly and faster than that of boys, except in very poor countries (Klein, 2007).

When noticing that girls’ enrolment surpasses that of boys in primary and secondary education, preoccupation with “the reverse gender gap” has been generated in industrialized countries, for example, United Kingdom (UK), United States (US) and Australia. It does appear that notions of masculinity negatively affect the participation and even performance of boys in schooling as reflected in higher rates of repetition, primary and secondary school completion and academic performance in reading (UNESCO, 2006). Governments do establish contacts with women groups that advocate gender-sensitive education, especially the Forum for Women Educationalists (FAWE). In existence since 1991, FAWE’s core membership comprises women who are or have been ministers of education, vice-chancellors or similar educational authorities; and men in similar positions, who serve as FAWE associate members. This group has succeeded in establishing effective alliances with donor agencies and in securing funds not only to advocate girl’s access to schooling, but also to conduct campaigns to raise public awareness of the importance of girl’s education and to implement interventions that introduce gender-sensitive teaching methodologies into the classroom, (Mlama, 2005). There is no counterpart organization or clear effort towards boy’s education.
1.2 Statement of the Problem

The rice-growing sub sector in Kirinyaga South district has unique influences that adversely affect the boy-child’s secondary school’s access, retention, completion and performance in KCSE examination. The research sought to find out the relationship between rice-growing and the boy-child secondary education in Kirinyaga South district.

1.3 Objectives of the Study

The study was based on the following objectives:

i. To determine the school-attendance tendency in the year of the boy-child in secondary schools in the rice belts of Kirinyaga South District.

ii. To find out the drop-out rate of the boy-child in secondary schools in Kirinyaga South District in the last five years.

iii. To determine the factors affecting performance of the boy child in KCSE examination in the rice zones of the district.

iv. To find out how the rice-growing activities in the district may be used to prop up boy-child secondary education.

v. To identify the non-school based factors that cause boy-child drop-out of school in the district.

1.4 Research Questions

The study attempted to seek answers to the following questions: -

i. How does rice-growing influence the boy-child enrolment in secondary school in the district?
i. What are the main causes of boys dropping out of secondary schools in the district in the last five years?

iii. What are major influences of the KCSE performance of the boy-child in the district?

iv. How do parents finance education of their children in secondary schools? Do they use proceeds from the rice-farming for that?

v. What activities do boys engage in after dropping out of school in the district?

1.5 Purpose of the Study
The purpose of this study was to investigate the influences of rice – growing activity on the boy – child’s secondary education in Kirinyaga South District. The aim of this study was therefore to give suggestions on ways of reversing the possible negative factors of rice-growing activities on the boy child’s secondary education in the region.

1.6 Significance
Given the importance of education in social transformation of any society, and given the fact that rice-growing is the mainstay of Kirinyaga South District, this study sought to find out the relationship between rice-growing and education in this region. Findings of the study will assist the Government through the Ministry of Education in policy formulation that engenders planning and programmes of education so as to reverse any negative influences rice-growing activities may have on the boy-child’s secondary education in the rice belts in Kenya. It will also guide the government, if need be, on affirmative action in the area under study, to assist the boy-child recover from any adverse effects of rice-growing on his
secondary education. The research may also assist the teachers in guiding and counseling learners on the importance of accessing and completing education. It may also be a guide to the parents in inculcating a positive attitude towards education by appreciating reasons that make the boy-child abandon school for short term financial benefits.

1.7 Limitations of the study

The scope of the study was limited to only small parts of Kirinyaga South whose mainstay is rice-growing. There is a scarcity of information on rice-growing activities with respect to access to educational provision. It was also not be possible to cover the opinions of the drop-out boys and their parents due to difficulty in tracing them.

1.8 Delimitations of the study

The study limited itself to students, teachers and principals in public secondary schools only. The study did not involve other rice-growing belts like Ahero, Bura, Konchia (Homabay) and Pekerra due to the logistics involved. Other factors such as attitude and horticultural activities may affect education, but this study only focused on the rice-growing activities as having an influence on boy-child secondary education.

1.9 Assumptions of the Study

In the study, it was assumed that all respondents will be co-operative and provide reliable responses, that the researcher did not know the factors of rice-growing activities that influence the boy-child secondary education in the district, that the sampled schools would be a representative of all the schools in Kirinyaga South District, that boys are exposed to the same instructional methods and treated the same as girls at school and that the parents/families of the sampled students are rice farmers.
1.10 Theoretical Framework

The study was based on the Agrarian transformation and socio-cultural change theory. Munyakho, (1994), says that this theory involves transition from “traditionalism” to “modernity”. When society embraces modernization of agriculture, old practices are abandoned in favour of the new or more viable practices. In turn, this change in agriculture creates economic transformation and development in the society. At the same time, these changes bring with them changes in the societal social structure and organization. Development therefore, has to start in rural areas if it has to take place, particularly in agricultural sector. The core problem of widespread poverty, growing irregularity, rapid population growth and rising unemployment, all find their origins in the stagnation and often retrogressions of economic life in rural areas. The key aspects of agricultural change and development have been technological and socio-economic. This means mechanized farming as opposed to unskilled labour. It is argued that a number of critical factors constrain the productivity of small-scale farmers. These include hostile climates, poor soils, rapid population growth and limited market opportunities.

1.12 Conceptual Framework

*Figure 1.1: The correlates of modern farming activities and socio-economic transformation.*

<table>
<thead>
<tr>
<th>Modern farming: Agrarian transformation</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Mechanized farming</td>
</tr>
<tr>
<td>- New farming techniques</td>
</tr>
<tr>
<td>- Skilled labour</td>
</tr>
<tr>
<td>- High crop production/surplus</td>
</tr>
<tr>
<td>- Ready markets</td>
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</table>
1.13 Operational Definition of Terms

**Appreciation** – refers to ability to understand the true nature of a situation.

**Attitudes** – refers to someone’s opinions or feelings about something, especially shown by their behavior.

**Challenges** – refers to something that needs a lot of skill, energy, and determination to deal with or achieve, especially something you have never done before.

**Limitation** – refers to a situation that puts a hindrance on something.

**Mechanized Farming** – refers to use of machines in farming, previously done by people.

**Performance** – refers to the standard to which someone does something such as job or examination.

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**Improvement in family income**

Ability to meet basic needs, like food, clothing, healthcare, shelter, paying school fees, and hire skilled farmhands in the farms.

**Socio-economic transformation of society**

- Availability of social facilities and services like schools, hospitals, security, transport and communication network, light industries for processing agricultural products and ready markets.
CHAPTER TWO
REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter focuses on background information in order to conceptualize the research topic. The author gives a glimpse of the Kenya Government effort at providing quality life-long education to Kenyan children and cites international singular mind on education as the engine of attainment of Millennium Development Goals (MDGs). He then looks at agriculture in general and rice farming in particular which is the mainstay of the population under study. The chapter subsequently narrows down to the population’s lifeline, that is, rice growing in order to understand the factors under play in the region in totality and in reference to boy-child secondary education. This economic activity is carried out under the charge of Mwea Irrigation Scheme (MIS). The author then looks at the prospects of the boy-child in the district in as far as his education in secondary school is concerned and quotes several authorities in the field. He also gives the current prospects of the scheme, given the 12 billion shillings boost from Japan. He concludes by stating the missing link in secondary school prospects for the boy-child in relation to that of rice-growing in the district and revisits the international effort at attaining MDGS through Education for Rural People Initiative (ERP) under Food and Agriculture Organization (FAO) and the United Nations Educational, Scientific and Cultural Organization (UNESCO).

2.2 The Kenya Government Effort on Education

The Daily Nation of 11th March 2010 quoted the ministry of education as saying that the government of Kenya’s vision on education is to have a globally competitive quality education, training and research for sustainable development. Towards this end, the ministry of education is mandated to work with other education stakeholders to provide, promote and co-ordinate quality life-long education, training and research for Kenya’s sustainable
development and responsible citizenry for all, regardless of their socio-economic status or abilities.

2.2.1 The Global Policy Efforts on Education

The international community believes that education is the main driver in the attainment of the millennium development goals (MDGs) which includes to:

1. Eradicate extreme poverty and hunger.
2. Achieve universal primary education.
3. Reduce gender disparity and empower women.
4. Reduce child mortality.
5. Improve maternal health.
7. Ensure environmental sustainability.
8. Develop a global partnership for development.

The introduction of Free Primary Education (2003) and Free Day Secondary Education (2008) by the Kenya government was aimed at achieving the MDGs, and also propel Kenya into the middle level economic league under the auspices of vision 2030. The Kenya Government (2007) notes that the unveiling of Kenya Vision 2030 marks an important milestone in the country’s development as it comes soon after the successful implementation of the “Economic Recovery for Wealth & Employment Creation” (ERS) over the period 2003 to 2007. It says that the Vision also aims at creating a cohesive, equitable and just society based on democratic principles and issues-based politics. According to James Mwangi, Chairman of vision 2030 Steering Committee, the vision hinges on three pillars: - the social,
economic and political pillars. The social pillars in particular envisages access to shelter, water, health and education by all and is thus key to attainment of vision 2030.

2.2.2 Agriculture

Agriculture is one of the most important forms of human activity in the world. It includes the cultivation of crops and domestication of animals. Human beings are fed and clothed from agricultural produce. The history of agriculture dates back to the early days of human civilization. The early human being lived as a gatherer eating fruits, leaves and roots that came his way. As population increased, there was pressure leading to the beginning of fishing, gathering and hunting which marked the start of the endless search for food. Food production came into the picture and animals were tamed to provide milk, meat, skins and later to be used in the farms. When civilization advanced, the demands upon the productivity of the environment increased. Ways and means had to be found to increase agricultural productivity of the land. Canals were dug to bring in more water, better seeds were developed, better farming methods were evolved and mechanization was adopted as agriculture became a global activity. Mechanization led to large crop surpluses which facilitated international trade in agriculture. Some countries grow very little food and yet they are able to support large populations on imported food. Distribution of crops and farm activities is everywhere influenced by environmental controls.

2.2.3 Rice farming in Mwea, Kenya

It’s a cereal crop – used as a staple food in some parts of Kenya. Its grown at Mwea Tebere Irrigation Scheme in Kirinyaga South District, Ahero Irrigation Scheme in Nyando District, Bura Irrigation Scheme in Tana River District and Yala Swamp in Siaya District. Mwea is the largest rice growing project in Kenya and covers an area of over 5,600 hectares. Rice farming is a labour intensive activity which involves the following: Land preparation is the
first stage. The rice growing fields in Kenya are leveled and bunds constructed around them for controlling water. In Mwea Tebere rice irrigation schemes, tractor drawn rotavators are used to work the flooded fields before transplanting. Where tractor drawn rotavators are not available, digging implements such as the hoe can be used to prepare the field before flooding. Water control is very critical. The level of water in the field is increased from the very low level of 5cm at planting time gradually to a height of 15cm by the time the seedlings are fully grown. Water should be allowed to flow slowly through the fields. If the flow of water is not possible, then old water is drained and fresh water added every 2-3 weeks. On fertilizer application, sulphate of ammonia is applied at a rate of 25kg for each nursery unit of 10.5 m x 18.5 m before sowing. Double super phosphate is broadcasted in the field at a rate of 125kg/ha first before transplanting and 125kg/ha just before transplanting and 125kg/ha about 40 days after transplanting.

Weeds are easily controlled by the flooding. The few weeds that may manage to survive can be controlled by uprooting by hand. Some herbicides such as propanil and Butachlor, which are effective against weeds in rice can also be used though they are rarely needed.

Diseases and pests that affect rice farming must be controlled. For instance, in the Daily Nation of 4th Oct 2010, it was reported that there was a looming rice shortage in the country following an outbreak of a fungal disease in the expansive M.I.S in Kirinyaga South. The disease, known as blast, was spreading fast and was feared it could wipe out 12,000 acres of paddy if urgent measures were not taken. Destructive birds, Qualea quelea must also be scared away. This is mostly done by women and children when rice is ready for harvest. The scheme produces 80% of rice for local consumption of Pishori variety.

Harvesting is done by hand as there is no mechanized rice harvester. Rice is cut by use of sickle, it is then spread under the sun to reduce moisture content. Threshing has to be the
same day with the rice spread on a canvas. Packing is manually done in sacks before ferrying them from the paddy field to storage by back, ox carts or pick-up trucks. The paddy has then to be cleared of the rice stalk. The spilled rice must also be collected by hand, usually by women and children. From these activities, it is evident that a lot of labour is expected either by animals, humans or machines. (See appendix X)

2.2.4 Mwea Irrigation Scheme

The gravity-fed irrigated scheme abstracts its water from Rivers Nyamindi and Thiba through Thiba and Nyamindi head-works. Land tenure is by tenancy with the scheme land being held under Trust Deed by the government through National Irrigation Board (NIB). Every farmer owns an average of 4 acres of land in the scheme. According to NIB which runs the scheme jointly with Water Users Association, the scheme has 30,350 acres out of which 16,000 are put under paddy production every year. The scheme was started in 1954 with labour mainly from detainees from Mwea detention camp. From its inception in 1956, the Mwea Irrigation Scheme was run by various government agencies until 1998 when the management was taken over by the Mwea Rice Farmers Co-operative Society. However, in 2003, the farmers approached the government after they encountered challenges due to unskilled personnel, lack of funds and machinery. Maintenance of water canals was also difficult while the roads deteriorated and those in the lower parts of the scheme abandoned rice farming due to shortage of water.
Mwea Irrigation Scheme accounts for 80% of the country’s rice production, which stands at between 45,000 and 80,000 metric tonnes a year. The national rice consumption stands at 300,000 metric tonnes. The country is estimated to spend Kes. 7 billion on rice imports per year mostly from Pakistan to cover for the deficit. Agriculture experts say that Kenya has the potential to expand the area under rice production to 960,000 acres for rain-fed and 22,400 for irrigated rice. Despite this obvious ‘goldmine’, the benefits appear not to trickle down to the ordinary farmer. The boy-child is heavily burdened to assist the family in the task of improving its fortune in the paddy. This he does at the expense of his school attendance and therefore performance.

2.3 Poor KCSE performance

According to Mwea Irrigation Agriculture Development Centre (MIAD), there are several reasons that inhibit production of rice to capacity by farmers. It cites traditional farming methods due to lack of machinery. Majority of the peasant farmers use ox-plough and human labour. School-age children and youths are used to plough and level fields for planting of rice around August and at times spilling over to September every year. The mostly preferred gender is the boy for his masculinity. This ensures the boy keeps out of school for the better part of this planting season. This pattern of truancy leads to poor performance both in formative and summative exams, if the boy is lucky to hold on to school.

2.4 Drop-out of school

Families also use their children to scare predators- birds, quelea quelea which invade ready-to - harvest paddies, clearing several hectares within hours. After harvesting, spilt rice is collected painstakingly by children. MIAD also cites lack of water all year round, making
farming possible for only six months in a calendar year. The other six months leave the farmers and rice fields idle. This, according to MIAD, impoverishes the farmer, and crime rate rises. Being a labour-intensive activity, a majority of the so-impoverished farmers tend to find solace in the readily available child-labour from their school-going children. After prolonged absence from class, and having no recourse from the parents, the child ends up dropping out of school.

2.5 Empower the locals through education

From various studies carried out, it is evident that agriculture is the mainstay of the Kenyan economy. As such, communities practicing modern farming methods are bound to benefit immensely. This is only possible if the community living here is empowered through education. Gonye (2009), quotes Henry Ford as saying that nothing happens until it is made to happen. He advocates for deliberate and purposive efforts at changing prevailing circumstances. Globally, during the past century, with the rise of technology, and the move away from farming and manual labour toward service occupations, the link between formal education and employment has changed dramatically for both men and women. The 19th century movement of women into education and workplace was strongly related to industrial revolution.

According to Baxandall & Gordon (1995), during this transition, large numbers of men and women moved from self-employment on farms or small businesses to employment for wages. The government and the development partners have pumped in colossal sums of money towards revamping the agricultural sector. In October 2008, Agriculture permanent secretary Romano Kiome said that the scheme would be expanded by 16,000 acres with Japanese financial aid of Kenya shillings 8.3 billion. The Japanese government, through Ambassador Shigeo Iwatani announced on 26th July 2010 a 12 billion shillings loan for construction of
irrigation and drainage facilities at Mwea Irrigation Scheme. The ambassador said the loan was part of the initiative to boost rice production in the country. According to NIB, the expansion of the scheme would help bridge the deficit in rice production before the country turns to exporting the surplus. Towards this, part of the fund will be used to construct a dam at Kabare area to ensure the canals flow all the year round. This will triple production of rice, since farmers will no longer lack water for irrigation and will be engaged 12 months in a year. The Daily Nation of 1st Oct 2010 quoted the manager Mwea Irrigation Scheme, Hosea Wendot, as reporting that the World Bank (WB) has committed to finance the rehabilitation of the giant MIS - brought to its knees by mismanagement and lack of funding. Under the new plan, the lender has released 560 million shilling to give the scheme a serious make over, including fixing roads, canal and water gates which are in bad shape. The design work is in draft stages and rehabilitation work on the MIS will start in February 2011. An irrigation expert from the WB visited the area in Sept 2010 and advised government officials on how to go about the implementation, according to Wendot. Briefing the press in his office at Wang’uru in Kirinyaga South District, Wendot said the project would take two years and affirmed government commitment to bring life into the scheme that had been run down by the farmers.

2.6 Vandalism due to ignorance

As a result of poverty, lack of technical know-how and using under-age personnel to man the rice fields, some farmers result to unorthodox means of irrigating their farms. This leads to losses. According to Wendot, water gates had been vandalized while canals that supply water to the rice fields had burst their banks due to poor maintenance. He said that after the 1998 takeover by farmers, poor management of the scheme has led to deterioration with rice production dropping drastically. He added that poor water control, rationing and the
employment of crude farming techniques had also adversely affected operations. For the project to succeed, he said, the hostile farmers need to be educated on the importance of professional management. The scheme would also be expanded by creating 3,000 more acres of land at Mutithi area and construction of multi-million water dam to double production. Currently farmers from the area produce 40,000 tonnes of rice per season. If expanded, the scheme will reduce rice shortage in the country. Kenya consumes 300,000 metric of rice annually, way above local production, creating a deficit that is bridged by imports. The manager warned that individuals who encroached on NIB rice reception stores and residential areas risk eviction.

According to the NIB – Board chairman, Francis Gichaga, the NIB is embarking on the second cycle of her strategic planning at a time when there are rapid changes in the general environment the board is expected to operate in. These changes have been caused by new developments in the global, regional and national arena and include rising food and oil prices, climate change, rapid technological development, formulation of the Millennium Development Goal, launch of Kenya’s vision 2030, and high poverty levels at national and regional levels. The community living here needs to be carried on board in the envisaged expansion and modernization of the sub-sector. This is only possible if the community living here is empowered through education of the local youth. Gichaga says that agriculture continues to play a dominant role in the growth of Kenya’s economy and is the key to achieving rapid social and economic development. This is because agriculture employs over 70% of the country’s population directly or through linkages with other sectors and therefore, significant improvement of the performance and profitability of the sector will in turn have a profound positive impact on the majority of the Kenya people. He opines that achieving this will have multiplier effects in addressing the high rate of unemployment among the youth by providing direct employment, opening up opportunities for commercial enterprises and
creating market for industry and industrial products. By ensuring that there are opportunities that the country’s youth can seize to earn livelihood, the security, political and health situation in the country will equally improve.

He further states that without investment in irrigation development and water storage, the country will continue being vulnerable to underdevelopment, poverty and hunger. Irrigation development, he says, has been recognized as a key input for the achievement of economic development in Africa. According to Gichaga, it is in line with this that Kenya’s vision 2030 has placed a high emphasis on investments in irrigation and envisages a development rate of 32,000 hectares per annum. The vision also emphasizes development of water storage facilities for multi-purpose use, irrigation being a major consumer and beneficiary of the same. In view of this, Gichaga says NIB is realigning and repositioning itself with a view to making major contributions to the achievement of vision 2030, being the government of Kenya’s arm for irrigation development. He notes that making this contribution will require resources – human, physical and financial, which will require support from the government, development partners, stakeholders and the general public to realize.

2.7 Summary
Despite the enormous resources earmarked for revamping the rice-growing/irrigation sector, no tangible effort towards boosting the farmer’s expertise through education is evident. The factors of rice-growing that influence the prospects of secondary education of the boy-child in the region are largely unexplored. This is in spite of the argument by Temu, A.M, Chakeredza, S.M, Munthali, D and Murlinge, R. (2003), that awareness has developed over the last several years among agricultural specialists and agricultural educators that an equally
important (and inextricably linked) Millennium Development Goal is the second goal, of achieving universal primary education, or “Education for All”. Among agriculturalists, the most important MDG is the first one – eradicate extreme poverty and hunger. From the profile of the district, it is clear that poverty levels are high amongst the residents. According to Temu, et al, (2003), education is one of the most powerful weapons in the fight against rural poverty and sustainable development, and that farmers with basic education are better equipped to make informed decisions for their lives and communities.

Nyerere (1967) argues that education liberates individuals by causing them to be self-reliant. He further argues that if there is a deficit of educated people, then society will stop its continued progress. It is widely acknowledged that owing to excess of rural labour (Deficient in literacy and numeracy skills), individuals are unlikely to be hired for anything more than basic labour. This escalates poverty levels and further illiteracy in rural areas. Temu, et al (2003) argue that, although rural children and youth are the farmers of the future and most of them start farming at a very early age, access to education in rural areas is still much lower than in urban areas and the quality of rural education is poorer and often irrelevant to rural life. This assertion easily fits the locale of the study. Realizing that the achievement of education for all and food for all could only come through concerted efforts of cooperating agencies, Food and Agriculture Organization of the United Nations (FAO) and United Nations Educational, Scientific and Cultural Organization (UNESCO) jointly launched during the World Summit on Sustainable Development (Johannesburg, 3 September 2002) the new partnership initiative on “Education for Rural People” which is a new flagship within the Education for All (EFA) initiative, a key contributor to the MDGs.

Education for Rural People (ERP) initiative is a worldwide call to action focusing on education for rural children, the youth and adults through formal and non-formal processes.
ERP aims at improving rural people’s access to quality education as a way of contributing to the fulfillment of their basic right, and to promotion of rural development and transformation of rural communities through capacity building for rural people.
CHAPTER THREE

RESEARCH, DESIGN AND METHODOLOGY

3.1 Introduction
In this chapter, the researcher presents the research design and locale of the study, the district profile, the target population and sampling techniques, research instruments (types and development), data collection techniques and data analytical techniques.

3.2 Research Design
The study adopted an exploratory approach using a descriptive survey design to investigate whether there is a correlation between rice-growing activities and poor performance in boy-child secondary education in Kirinyaga South District. Orodho (2003) notes that this method allows researchers to gather information, summarize, present and interpret for the purpose of clarification. According to Borg and Gall (1989), descriptive survey research is intended to produce statistical information about aspects of education that interest policy makers and educators.

3.3 Locale of the Study
The study was carried in Kirinyaga South District of Kirinyaga County, as this is home to the rice-growing activities which form the basis of the study. This district, formerly Mwea Division was curved out of the larger Kirinyaga District. It is 100 kilometres North-East of Nairobi. Kirinyaga South District is composed of Tebere, Kangai, Mutithi, Murinduko, Miuu, Thiba, Nyangati and Mt. Kenya Forest Division.(See appendix ix) The district has 87.4% primary school enrolment rate and a 31.1% secondary school enrolment rate. The district is largely semi-arid and the least developed area of the larger Kirinyaga region. The main
economic activity is growing rice and horticultural products. The majority of the residents are peasant farmers, who barely produce enough to feed themselves as they use unskilled labour in their farms (See appendix x).

3.4 Target Population

The study targeted all the form two and three boys, all their class teachers, all the HoDs, guidance and counseling department and all principals of the 20 secondary schools in the district. This totals to about 2100. In particular, the study focused on class teachers since they deal with students directly on a daily basis and keep their attendance registers. It also targeted heads of department of guidance and counseling since they handle problematic cases. The principals are the overall charge for students’ affairs.

3.5 Sampling Techniques and Sample Size

The sampling units were the eight divisions of the district namely Miuu, Mt. Kenya Forest, Mutithi, Tebere, Kangai, Murinduko, Nyangati and Thiba. From the zones, a purposive sampling technique was applied to select 8 secondary schools according to status, either boarding or day and whether unisex (boys) or mixed. Of the 8 schools, all the principals, all the heads of guidance and counseling departments were selected, making a total of 8 principals and 8 HoDs Guidance and Counseling. Each school also produced 2 class teachers, one each from form two and three classes, making a total of 16 class teachers using simple random sampling. This made a sample size of 32 respondents under the category of informed specialists. The researcher then targeted 12 form two and 12 form three students from the 8 sampled schools using systematic or interval sampling. The boys of the two classes are more prone to dropping out of school. This totaled 192 students, under the category of users of education. The total sample size was 224 for the study.
3.6 Research Instruments

The researcher collected data from the sampled respondents using questionnaires and interview schedule.

3.6.1 Questionnaires

The questionnaires were given to the students, class-teachers and heads of departments. This was appropriate to the subject of study. The respondents were literate and therefore understood the questions and responded appropriately. Questionnaires were free from distortions. Part of the questionnaires were structured to collect data on respondents’ opinion about various aspects of rice-growing and its influence on the boy-child education. (See appendices I and II)

3.6.2 Interview Schedule

This was applied on the principals sampled. This made it possible to obtain data required to meet specific objectives of the study. Through this, the principals shed the light on the challenges they face in regard to the influence of rice-growing on the boy-child secondary education. (See Appendix III)

3.7. Piloting

This study carried out piloting in two schools selected from outside the sample. The researcher conducted a pilot study before the final collection of data. This was mainly to verify whether the items generated by the researcher displayed stimulus homogeneity hence being valid and reliable. Piloting was also done with the purpose of detecting any weakness and finding out if the questionnaires were clear to the respondents. The researcher administered research instrument in two randomly selected schools that were not selected for the study.
3.7.1. Validity

Validity is the degree to which results obtained from the analysis of the data actually represent the phenomenon under investigation. It is the degree to which an empirical measure, or several measures, of a concept accurately represent that concept (Orodho, 2009). Validity of the instruments was done through expert judgment. The researcher’s supervisors were requested to evaluate the content of the instruments and give their input to enrich them.

3.7.2 Reliability

Reliability refers to the measures of the degree to which a research instrument yields consistent results or data after repeated trials (Mugenda & Mugenda, 2003). Orodho (2008), defines reliability as the degree to which a particular measuring procedure gives similar results over a number of repeated trials. This was ascertained using test retest. This involved 8 students and 5 teachers randomly selected from the two schools. They were requested to fill questionnaires. The same questionnaires were filled by them after two weeks and answers obtained in the two sessions compared using spearman rank order coefficient in order to establish the extent to which the contents of the questionnaire gave similar or consistent results every time it is administered.

3.8 Data Collection Techniques

The researcher sought authority from the Ministry of Education before the process of collecting data from the field commenced. The researcher followed the chain of command by writing to the D.E.O. Kirinyaga South district for authority to conduct the study in her jurisdiction. (See appendices iv, v & xi). The researcher paid a visit to the sampled schools to get the green light from the school heads to collect data from the respondents and made all the required arrangements. (See Appendices iv, v and vi). He also used the visit to meet the respondents to break the ice and assure them of confidentiality of the information so
collected. The researcher then visited the respondents in person to administer the collection of data exercise. The students, class-teachers and HODS respondents filled the questionnaires individually. This instrument was ideal for students and teachers since all were able to read, interpret the questions and react appropriately. Interviews were conducted on the principals at individual level using interview guides and the researcher recorded the responses. This enabled the researcher get the deeper insight through face to face interactions with the respondents. Data collection took a period of two weeks.

3.9 Data Analysis and Reporting

The study adopted a thematic analysis using cut and paste method since a majority of questions were open-ended and generated qualitative data. A code book was developed by changing the questions into statement format but with the same meaning. The question number was changed into a variable number and the possible answers to each question given unique numerical values. In essence, the code book indicated what each research question stands for, the values associated with each question, and their numerical representation or codes. Student respondents were assigned identification codes for both privacy and for ease of identification, for example ID code 001 up to 192. The ID codes 01 up to 24 were used for teachers and also identify their ranks, for example, the first two digits were used as the unique identifier, while the third was used to identify HODs (1) and class teachers (2). The fourth digit was used to identify the sex of subject as male (1) or female (2). For principals, ID codes 1 to 8 were used as unique identifier while the second digit was for identifying the sex as male (1) and female (2). The ID codes were entered in the appropriately designed computer code sheets. The processing and analysis of the data were done using Statistical Package for Social Science (SPSS-x). This was appropriate as it was comprehensive,
integrated collection of computer programmes for managing, analyzing and displaying data. Results of the study were presented using descriptive statistics such as percentages, frequency distribution tables and graphs.

CHAPTER FOUR
FINDINGS AND DISCUSSIONS

4.1 Introduction

This chapter contains demographic characteristics of the population under study and a systematic presentation of both qualitative and quantitative findings based on study objectives which were: to analyze the school-attendance trend in the year of the boy-child in secondary schools; to find out the drop-out rate of the boy-child in secondary schools; to investigate the factors affecting performance of the boy child in KCSE examination in the rice zones of the district, to find out how the rice-growing activities in the district may be used to prop up boy-child secondary education and investigate the non-school based factors that cause boy-child drop out of school in the district. It also carries the discussions of the findings of the study.

4.2 Demographic Variables

This section brings forth the demographic characteristics of the locale. They include respondents by gender, responsibilities of teacher-respondents and schools sampled.

4.2.1 Respondents by Gender
A total of 23 teachers responded to the questionnaires. In order to ensure that the responses relatively represented both gender, the questionnaires were issued purposely to both gender. The study revealed that 50% were male and 50% were female. This ensured that the responses obtained the views of both gender.

4.2.2 Responsibilities of Teachers

In a bid to establish the responsibilities of the teachers in schools, an item was included in the questionnaires which sought for information on the exact responsibility of the teachers. Figure 4.1 presents the findings.

*Figure 4.1: Responsibilities of the Teachers*

![Bar Chart]

According to Figure 4.1, majority 39.1 percent of the teachers were heads of guidance and counseling and class teachers of form two students respectively; 21.8 percent were class teachers of form three. The balanced number of respondents was in line with the researcher’s expectation of receiving responses from teachers of different classes and different responsibilities including class teachers since they deal with students directly on a daily basis.
and keep their attendance registers; heads of departments of guidance and counseling since they handle problematic cases and the principals who were interviewed since they are the overall charge for students’ affairs. As for the students who responded, 52.5 percent were form twos, 43.0 percent form threes and 4.5 percent did not indicate their classes.

4.2.3 Schools sampled

Out of the 20 secondary schools in the District, the study sampled 8 schools where the students were sampled. Table 4.1 shows the sampled schools and the number of students.

Table 4.2: Sampled Schools and Students

<table>
<thead>
<tr>
<th>Name of the School</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>23</td>
<td>14.6</td>
</tr>
<tr>
<td>B</td>
<td>23</td>
<td>14.6</td>
</tr>
<tr>
<td>C</td>
<td>23</td>
<td>14.6</td>
</tr>
<tr>
<td>D</td>
<td>2</td>
<td>1.3</td>
</tr>
<tr>
<td>E</td>
<td>10</td>
<td>6.4</td>
</tr>
<tr>
<td>F</td>
<td>29</td>
<td>18.5</td>
</tr>
<tr>
<td>G</td>
<td>24</td>
<td>15.3</td>
</tr>
<tr>
<td>H</td>
<td>23</td>
<td>14.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>157</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

According to Table 4.2, the students were proportionately sampled to ensure the population is represented in the sample in proportion to their numbers in the population itself as this ensures the generalizability of the study results.
4.3 The School-Attendance Trend of the Boy-Child.

In a bid to establish the attendance trend in schools, an objective of the study, an item was included in the questionnaires which sought information from the teachers on the level of accessibility of the boy-child in their respective schools. Table 4.3 presents the results:

Table 4.3: Level of accessibility of the boy-child

<table>
<thead>
<tr>
<th>Level of Accessibility</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very accessible</td>
<td>2</td>
<td>9.1</td>
</tr>
<tr>
<td>Accessible</td>
<td>15</td>
<td>68.1</td>
</tr>
<tr>
<td>Fairly accessible</td>
<td>5</td>
<td>22.7</td>
</tr>
</tbody>
</table>

According to Table 4.3, a majority about three-quarters of teachers informed the study that the boy-child were accessible to their respective schools. The child’s father emerges as key in deciding a child’s enrolment, this trend being more prevalent in the rice growing area of Kirinyaga district as stated by 55.9% of the respondents. Joint decision-making by both parents is next, more prevalent as stated by 30.0% of the teachers. This implies that the role of a father as head of household and decision-maker comes through as one of the key influencing factors in taking the decision for boys or girls to enroll in school, especially in the rural areas. Another factor that determined the enrolment trend of the boy-child was that decision to enroll a child in school was predominantly shaped by the perceived physical readiness of the child, monetary costs and the child’s interest to go to school to better their future. This agrees with Temu, et al.( 2003), that education is one of the most powerful weapons in the fight against rural poverty and sustainable development, and that farmers with basic education are better equipped to make informed decisions for their lives and communities.
4.4 The Drop-Out Rate of the Boy-Child

The level of dropout rate of the boy-child is another indicator of internal efficiency of the education system. The dropout rate was highest in Form 2 at 16 percent according to the teachers, reflecting the diversity of factors contributing to wastage of the boy-child partly due to non affordability among other factors. The reasons for dropping out of school were as shown in Table 4.4

Table 4.4: Key reasons for dropping out school by the Boy-child

<table>
<thead>
<tr>
<th>Reasons for Dropping out of School</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sickly/disabled (Physical considerations)</td>
<td>3</td>
<td>1.9</td>
</tr>
<tr>
<td>Monetary costs in education</td>
<td>123</td>
<td>77.8</td>
</tr>
<tr>
<td>Students indifferent to education</td>
<td>12</td>
<td>7.6</td>
</tr>
<tr>
<td>Orphaned</td>
<td>3</td>
<td>1.9</td>
</tr>
<tr>
<td>Need to work</td>
<td>10</td>
<td>6.4</td>
</tr>
<tr>
<td>School too far</td>
<td>7</td>
<td>4.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>158</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

According to Table 4.4, concern about the boy-child’s monetary costs in education tops the factors that drive decision to drop out of school; school distance and the students’ physical readiness were other factors that drive the decision to drop out of school. Other reasons cited were qualitatively analyzed as follows:

4.4.1 Rural-Urban divide
Results of the general study indicated that a child dropping out from secondary school reduces as one moves from rural to urban areas. This concurs with Temu, et al (2003) that, although rural children and youth are the farmers of the future and most of them start farming at a very early age, access to education in rural areas is still much lower than in urban areas and the quality of rural education is poorer and often irrelevant to rural life. This could perhaps be attributed to the fact that it is easier to access schools in urban areas as compared to rural areas. As far as age is concerned, the study revealed a significant drop as a child grows older. This implies that at older ages, the influence of locality to the probability of a child dropping out of school reduces.

4.4.2 Gender of Household Head of Student

The gender of household head was found to be insignificant across. This finding is contrary to the general belief that female headed households are more likely to experience school dropout. This could be attributed to the fact that secondary school education is largely free, and as such, even female headed households with limited finances can also afford to sustain their children in school. These findings were predominant in the rice fields where majority of the farm workers were female assisted by their boy-children.

4.4.3 Age of the household head

The age of household head was cited as very important factor for boy-child education. This study suggested that the younger the household head’s age the lower the probability of a child dropping out of school. These findings point to the role of parental decisions in influencing children remaining in schools. Young parents often appreciate the importance of education and influence their children to stay at school. But as children grow, they begin to take on their
own decisions and the influence of parents tends to reduce as reflected by a teacher cum farmer at Mwea.

4.4.4 Household Size

From the study, 36.9% of the students had brothers not in school. For that reason, an item was included in the questionnaire which sought for the reasons. The study revealed that children in smaller households are less likely to drop out of school than children living in larger households. These interesting findings could perhaps be attributed to the fact that smaller household members are easier to take care of so that the children could take advantage of subsidized secondary education or contribute part of their earnings to educating members of the household. On the other hand in smaller households, children are not likely to be diverted to offer family labor as only 34.2% were the students whose families owned rice farms. This is supported by the fact that only 43.6% assisted their parents in the paddy farms. The study further revealed that only 10.1% of the families had farm machines to assist in rice farms but interestingly lack of farm machinery to assist in the paddy farms was not cited as a major factor that could cause the boy-child to dropout as 90.2% percent did not miss schools to assist in rice farms.

4.4.5 Academic achievement of mother and father

In a bid to establish the academic achievement of the family members, an item was included in the questionnaires which sought for the highest level of education. Table 4.45 presents the findings.

Table 4.5: The highest Level of Education of Parents

<table>
<thead>
<tr>
<th>Level of Education</th>
<th>Father</th>
<th>Mother</th>
<th>Brother</th>
<th>Sisters</th>
</tr>
</thead>
</table>


<table>
<thead>
<tr>
<th>Level</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary school</td>
<td>57(39.9%)</td>
</tr>
<tr>
<td></td>
<td>74(48.7%)</td>
</tr>
<tr>
<td></td>
<td>55(47.0%)</td>
</tr>
<tr>
<td></td>
<td>56(48.3%)</td>
</tr>
<tr>
<td>Secondary school</td>
<td>69(48.3%)</td>
</tr>
<tr>
<td></td>
<td>74(48.7%)</td>
</tr>
<tr>
<td></td>
<td>47(40.2%)</td>
</tr>
<tr>
<td></td>
<td>40(34.5%)</td>
</tr>
<tr>
<td>College level</td>
<td>13(9.1%)</td>
</tr>
<tr>
<td></td>
<td>3(2.0%)</td>
</tr>
<tr>
<td></td>
<td>6(5.1%)</td>
</tr>
<tr>
<td></td>
<td>4(4.3%)</td>
</tr>
<tr>
<td>University</td>
<td>3(2.1%)</td>
</tr>
<tr>
<td></td>
<td>1(0.6%)</td>
</tr>
<tr>
<td></td>
<td>2(1.7%)</td>
</tr>
<tr>
<td></td>
<td>4(3.4%)</td>
</tr>
<tr>
<td>None</td>
<td>1(0.6%)</td>
</tr>
<tr>
<td></td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>6(5.1%)</td>
</tr>
<tr>
<td></td>
<td>11(9.5%)</td>
</tr>
</tbody>
</table>

The respondents particularly the teachers informed the study that high academic attainment of a mother and father significantly reduces chances of secondary school dropout for both girls and boys in Kirinyaga South district. This concurs with Nyerere (1967) who argues that education liberates individuals by causing them to be self-reliant. He further argues that if there is a deficit of educated people in a given society, then the said society will stop its continued progress. For a mother, this phenomenon could perhaps be attributed to the fact that, educated mothers reduce the time spent doing household chores while increasing the time spent with their children than their uneducated counterparts. Besides, educated mothers are more effective in helping their children in academic work. In doing so, they are also able to monitor and supervise their children’s academic progress. For fathers, it’s attributed to the fact that educated fathers have pride and are also interested in the academic progress of their children. Thus, they would be willing to spend more time helping their children in academic problems. Also, as suggested by one respondent, a father-educated parentage are more aware of the possible returns to their children’s education. They are therefore more likely to seek and have access to information and social networks necessary for their children to engage in relatively high human capital intensive activities yielding high returns to education. In conclusion, the academic attainment of parents enhances positive attitudinal change towards children’s education.

### 4.4.6 Distance to school
This study revealed that drop out of secondary school increases with increase in the distance a student travels to school. Students in day secondary schools traveling long distances to school are more likely to drop out of school. Whereas distance was found to be insignificant in influencing dropout for urban households, it is generally significant in rural areas. This phenomenon could be attributed to the easier access to schools in urban areas as compared to rural areas. The influence of distance to school on the chances of drop out is more pronounced among the younger boys.

4.4.7 School fees payment

The effect of fees payments across was found to be the most significant factor that could contribute toward boys dropping out of schools. However subsidized secondary education could largely in a way reduce the school fees burden. Qualitative analysis revealed that school fees is the most significant factor cited by both teachers and the students as the contributing factor toward the boy child drop-out.

4.5 Factors affecting KCSE performance of the boy-child

The study revealed that the performance of students in secondary schools is influenced by attendance and retention. In a bid to establish the boys’ general performance, the study revealed that there are various factors that affect the boys’ performances as shown in Table 4.6.

Table 4.6: Factors affecting Performance of the boy child

<table>
<thead>
<tr>
<th>Factors affecting performance</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparing rice farms</td>
<td>123</td>
<td>77.8</td>
</tr>
<tr>
<td>Engaging in domestic chores</td>
<td>3</td>
<td>1.9</td>
</tr>
<tr>
<td>Students indifference to education</td>
<td>12</td>
<td>7.6</td>
</tr>
<tr>
<td>Curriculum delivery</td>
<td>3</td>
<td>1.9</td>
</tr>
<tr>
<td>Need to work</td>
<td>10</td>
<td>6.4</td>
</tr>
</tbody>
</table>
Preparing the farm 123 (77.8%), students indifference to education 12 (7.6%) and need to work 10 (6.4%), were some of the factors cited as affecting the boy-child performance. This implies that a big proportion of the population had engaged in rice farm preparation; hence the pupils lack good role models to emulate from. They therefore would not strive to excel in examinations.

According to the school principals interviewed, 50% said that parents rarely consult on their children's education. Parents are too busy to go to school to find out about their children's performance or they do not value education as a tool of positively transforming their children’s future lives. This agrees with Narayan, D, Pritchett, L. & Kapoor, S. (2007), who carried out studies in Uganda and Ruvuma, Tanzania, on future expectations of parents and children. According to the findings, higher percentages of households expect to be worse-off. However, 94% of respondents in Senegal expect to be better-off. Lack of commitment by the student in school curriculum activities was also cited as a major reason for poor academic performance. According to students' responses, lack of textbooks (78%), lack of facilities (46%) and noise making (49%) top the list as factors that create un-conducive environment in schools. Curiously, the existence of noise making as a factor may either mean that teachers do not occupy the students well enough or that no assignments are left to be done. Narayan, D (2002), says that studies around the world show that when communities can hold teachers, administrators and government officials accountable through formal institutional mechanisms, community members become more interested in school improvement and more willing to commit their own resources to the task. Yet still, it is noteworthy that even in the
above leading studies, interference factors particularly engaging in farm activities and
tiredness could probably be associated with poor performance.

4.6 Non-school Based Factors that Cause Boy-child Drop-out

Table 4.7: Causes of Boy Child-Drop-out

<table>
<thead>
<tr>
<th>Causes of Dropout</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Too old</td>
<td>2</td>
<td>1.2</td>
</tr>
<tr>
<td>Got married</td>
<td>5</td>
<td>3.2</td>
</tr>
<tr>
<td>Must work in the rice field</td>
<td>22</td>
<td>13.9</td>
</tr>
<tr>
<td>Too expensive</td>
<td>112</td>
<td>70.9</td>
</tr>
<tr>
<td>School useless/uninteresting</td>
<td>13</td>
<td>8.3</td>
</tr>
<tr>
<td>School too far</td>
<td>4</td>
<td>2.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>157</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

The qualitative analysis of non-school based factors that caused the boy child to drop out of school was as indicated below:

4.6.1 Level of education of household heads

The level of education of the household head, especially male household head’s, increases the odds for a household decision on enrolling a child in secondary school education. This can be associated with the positive relationship between earnings and educational attainment, which increases the probability of schooling, while reducing the opportunity cost for schooling. Further, low parental education is associated with low family incomes, which in effect can be a barrier to participation in secondary school education. Some less educated parents have the perception that education may not be beneficial. It can be argued that male household heads with high levels of schooling may be having more economic power within the household than those with low levels, hence more ability to allocate more household resources to education. Other arguments are that male household heads are the main decision makers on resource
allocation at household level and are therefore more likely to enroll their children in school when financial resources are available. Thus, any strategies aimed at secondary education expansion should consider measures of improving household heads’ level of education either through awareness, or adult literacy programs.

### 4.6.2 Household income level

This study revealed that lack of resources and opportunities is limiting the capacity of households to take their children to school. The level of household income increases the odds of household decision to enroll a child for secondary school education. This is because income provides the much needed resources that a household can share among the unlimited needs. This is consistent with Atkinson, A.B, Maynard, A.K & Trinder, C.G (1983), whose study found that children from low-income families are likely to spend a shorter time in full-time education.

### 4.6.3 Secondary education costs

School fees decreases the odds of secondary education demand, implying that any strategies aimed at lowering the cost of secondary education on households will lead to more households taking their children to school. Descriptive analysis of factors for school non-attendance indicate that majority of the school age students were not in school due to the cost burden, 48% could not afford the fees charged.

### 4.6.4 Student’s age

The school principals interviewed informed the study that students’ age has a highly significant negative effect on participation in secondary schooling. This is because as a child’s age advances, especially more than that of his/her classmates, the likelihood of dropping out of a secondary school is higher. In other instances, one principal mentioned that
a child of between the secondary schooling going age is considered ripe for marriage; more so for girls who are married off and boys forced to marry.

4.7 How rice-growing activities in the district may be used to prop up boy-child secondary education.

This study revealed that policies linked to rice-growing industry aimed at benefiting secondary education expansion in the district are non-existent. Some school principals-respondents suggested that such should be put in place to address affordability and accessibility challenges. This rhymes with Temu et al (2003) who say that awareness has developed over the last several years that a critical MDG is the second one - of achieving universal basic education while agriculturalists take MDG’s first goal- eradicate extreme poverty and hunger as key. A fraction of the enormous resources mobilized in boosting rice-growing activities could be channeled towards enhancing future farmers’ skills through secondary education. The strategies for increasing access to secondary education include expansion of school infrastructure; reducing costs of secondary education especially among households and improving efficiency and effectiveness in poverty mitigation measures such as bursary schemes. This could be done through enhancing sub-sector partnerships such as involving NIB in corporate social-responsibility, and local and national resource mobilization to fund education initiatives. Increasing pupil-teacher ratio and class size; increasing internal efficiency; enhancing community awareness campaigns on importance of secondary education on modernized farming; and bridging the gender and regional gap in secondary schooling could also be explored through partnerships with NGOs and FBOs.

4.7.1 Expansion of secondary school infrastructure
Transition from primary to secondary schools is suggested to be pegged on the number of available spaces in public secondary schools. Besides the shortage of schools, there is uneven distribution of the same, which increases accessibility difficulties in some areas. From analysis of this study, expansion of secondary school’s infrastructure has a positive impact on access to secondary education.

### 4.7.2 Reducing costs of secondary education

One principal informed the study that secondary education attracts various categories of costs, including tuition and boarding fees shouldered by the households, and teachers’ remuneration shouldered by the government. Therefore, one of the mechanisms of reducing costs related to secondary education is to build more days schools. Other cost effective modes of secondary education that can be explored include distance learning and reforming the curriculum to reduce the number of optional subjects to enable rational specialization for higher rates of teacher utilization. Reforming the curriculum would even reduce costs related to textbooks that households have to bear.
CHAPTER FIVE
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction
This chapter covers summary of the document and conclusions drawn from the study as well as recommendations based on the study findings and suggestions for further studies.

5.2 Summary
The study sought to find out the factors influencing the boy-child secondary education in the rice-growing region of Kirinyaga South District, Kirinyaga county in Kenya. In chapter one of the project, the background information was well outlined. The statement of the problem was well stated as well as the problem under investigations. The objectives to guide the study were developed. They included: to analyze the school-attendance trend in the year of the boy-child in secondary schools in the rice belts; to find out the drop-out rate of the boy-child in secondary schools in Kirinyaga South District in the last five years and to investigate the factors affecting performance of the boy child in KCSE examination in the rice zones of the district. Other objectives included, finding out how the rice-growing activities in the district may be used to prop up boy-child secondary education and to investigate the non-school based factors that cause boy-child drop-out of school in the district.

5.2.1 School-Attendance Trend of the Boy-Child
In this study, both the students and the teachers were proportionately sampled to ensure the population is represented in the sample in proportion to their numbers in the population itself as this ensures the generalization of the study results. Education is one of the most powerful weapons in the fight against rural poverty and sustainable development, and that farmers with
basic education are better equipped to make informed decisions for their lives and communities. The study therefore established that the child’s father emerges as key in deciding a child’s enrolment in school, this trend being more prevalent in the rice growing area of Kirinyaga district. The decision to enroll a child in school was predominantly shaped by the perceived physical readiness of the child, monetary costs and the child’s interest to go to school.

5.2.2 The Dropout Rate of the Boy-Child

The level of dropout rate of the boy-child was found to be another indicator of internal efficiency of the education system. The top factors that drive decision to drop out of school are the home-school distance and the students’ physical readiness. The study established that the boy-child could drop out of school more in rural than urban set-ups. This could perhaps be attributed to the fact that it is easier to access schools in urban areas as compared to rural areas. As far as age is concerned, the study revealed a significant drop in school drop-out rate as a child grows older. The role of parental decisions in influencing children remaining in schools was emphasized from the findings. Young parents often appreciate the importance of education and influence their children to stay at school. But as children grow, they begin to take on their own decisions and the influence of parents tends to reduce as reflected by a teacher cum farmer. Children in smaller households are less likely to drop out of school than children living in larger households. These interesting findings could perhaps be attributed to the fact that smaller household members are easier to take care of, so that the children could take advantage of subsidized secondary education or contribute part of their earnings to educating members of the household. Finally, high academic attainment of a mother and father significantly reduces chances of secondary school dropout for both girls and boys in their households in this district.
5.2.3 Factors affecting performance of the boy-child

The study revealed that the performance of students in secondary schools is influenced by attendance and retention. A big proportion of the population had engaged in rice farm preparation, hence the students lack good role models to emulate from. It was observed that parents rarely consult schools on their children's education progress. They are either too busy to go to school to find out about their children's performance or they do not value education. Lack of commitment by the student in school curriculum activities was also cited as a major reason for poor academic performance of the subject under study.

5.2.4 Academic Achievements of the Parents

The level of education of the household’s head, especially male, increases the odds for a household decision on enrolling a child for secondary school education. This can be associated with the positive relationship between earnings and educational attainment, which increases the probability of schooling, while reducing the opportunity cost for schooling. Other arguments are that male household heads are the main decision makers on resource allocation at household level, and are therefore more likely to enroll their children in school when financial resources are available. Thus, any strategies aimed at secondary education expansion should consider measures of improving household heads’ level of education, either through awareness, or adult literacy programs. Descriptive analysis of factors for school non-attendance indicates that majority of the school-age students were not in school due to the cost burden.

5.2.5 Strategies for propping up boy-child secondary education in the district

The strategies for increasing access, retention and completion of the boy-child secondary education include; expansion of school infrastructure, reducing cost of secondary education
especially among households, improving efficiency and effectiveness in poverty mitigation measures such as bursary schemes, enhancing sub-sector partnerships, and local and public resource mobilization, increasing pupil-teacher ratio and class size, increasing internal efficiency, enhancing community awareness campaigns on importance of secondary education and bridging the gender and regional gap in secondary schooling.

5.3. Implications of the Findings

This study revealed that if the members of household are not economically well-endowed, there is likelihood of secondary school dropout rates for the boy-child to increase, other factors held constant. This implies that a good number of the economically active people are actually unproductive. This finding points to the need to expand employment opportunities, especially for the parents. Policies and programs aimed at enhancing productive capacities at household levels could go a long way in curtailing this problem. This also suggests that expanding free universal education to secondary and vocational levels is important, as it would allow some of those who cannot afford secondary education to continue with schooling. This has the effect of reducing the number of unproductive members in the household. The role of a father as head of household and decision maker comes through as one of the key influencing factors in taking the decision for boys or girls to enroll in school, especially in the rural areas. The study revealed that at older ages, the influence of locality to the probability of a child dropping out of school reduces.

5.4 Conclusion

Participation rates in secondary education in the rice-growing region in Kirinyaga South district are notably low since more than three quarters of secondary school going age population have no access to secondary education. Regional and gender disparities also exist due to factors which include income levels, household head’s education level, sex of child,
availability of schools, student age and cost of secondary education. All these factors have to be considered when designing secondary expansion strategies. Over the coming years, secondary school enrolment is expected to increase, assuming high efficiency gains by reduced boy-child repetition and dropout rates in both primary and secondary education and improved transition rate. There is need for expansion which may result to increased human and capital resources. Expansion in private sector provision is also critical. Identified strategies for secondary education expansion include poverty mitigation and targeting measures, reduction in cost of secondary schooling, expansion of physical infrastructure and high level of parents’ education. A comprehensive plan for expanding secondary education linking resource inputs like teaching and non-teaching staff resources, funding and physical infrastructure expansion to overall resource availability on one hand, and secondary education outputs and outcomes to the overall labor market needs is required in order to facilitate the boy-child education.

5.5 Research Recommendations

Several aspects were noticed in the study which elicited recommendations which should be adopted by the parents, stakeholders and the government in order to enhance the boy-child participation in secondary schooling. The recommendations made by the researcher are:-

5.5.1 To the Government

The study findings indicate that there is insignificance of distance to school and total average amount of school dues paid by students in influencing dropout of students. However, it is important for the government to maintain a close watch on non-school fees payments by parents to schools as these has the potential to derail the EFA goals and undermine the Children’s Act’s (2001) provision on education especially in rural areas.
5.5.2 To the Parents

i. The parents and the community should be sensitized on the importance of boy-child education. The parents should be enlightened on the importance of giving proper parental guidance to their boys and to be more involved in the education of the boys.

ii. To create more time for the boys while at home for their studies, the parents need to be sensitized on the importance of proper monitoring of the boys and assign them less domestic chores and avoid engaging them in farm activities.

5.6 Further Research

Similar studies could be carried out to find out factors influencing the boy-child secondary education in the rice-growing regions of other districts in the country to establish whether there is a correlation between them and the current study’s locale, in a bid to execute a common approach at mitigation.
REFERENCES


APPENDIX I

QUESTIONNAIRE FOR STUDENTS

Hello Students? This is not an exam. It is a questionnaire which seeks vital information about what you know about access to education.

Please answer all the questions as honestly as possible.
You do not have to write your name or sign on the questionnaire. No one will know how you answered the questions.

1. Name of your school: ________________________________________________
   ________________________________________________

2. What class are you? Form two [ ] Form three [ ]. Tick where appropriate

3. a). Do you have brother(s) not in school today?
   Yes [ ] No. [ ]

   b) If yes, what made him/them miss school?
   ________________________________________________
   ________________________________________________
   ________________________________________________
   ________________________________________________
   ________________________________________________
   ________________________________________________

4. a) Does your family have a rice farm?
   Yes. [ ] No. [ ]

   b) If yes, how many acres are under paddy at the moment?___________

   c). Do you assist your parents in the paddy farm?
   Yes [ ] No. [ ]

   d). If yes, what specific duties in the farm are you usually assigned?
e). Does your family own any farm machine like a tractor?
   Yes [ ] No [ ]

f). If no, how do you accomplish all the tasks involved in rice farming?

g). Have you ever missed school yourself?
   Yes [ ] No [ ]

h). If yes, what was the reason for it? ________________________________

5. a) Do you have a friend who dropped out of school before completing form 4?
   Yes [ ] No [ ]

   b) If yes, why? (Please Explain) ________________________________

6. What is the highest education level of:
   a. Your father? ________________________________

   b. Your mother? ________________________________

   c. Your brother? (if any) ________________________________

   d. Your sister? (if any) ________________________________

7. a) Do you think education can improve your family’s socio-economic situation?
   Yes [ ] No [ ]

   b) Explain your answer above.

   ________________________________________________________

   ________________________________________________________

   ________________________________________________________

   ________________________________________________________
8. In your view, what could be done to avoid missing school?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Thank you for filling this questionnaire.
APPENDIX II

QUESTIONNAIRE FOR TEACHERS

Dear Colleague,

The aim of this questionnaire is to seek information you hold about the factors influencing the boy-child secondary education in your school. Please answer all the questions as objectively as possible. Your response will be treated with utmost confidentiality.

**Answer all questions honestly.**

1. Gender : Male [ ] female [ ]

2. Your responsibility in the school? (tick where appropriate)
   - HOD – Guidance and Counseling [ ]
   - Class Teacher: Form two [ ] Form three [ ]

3. Rate the level of accessibility of boy-child to your school. (tick where appropriate)

<table>
<thead>
<tr>
<th>Very Accessible</th>
<th>Accessible</th>
<th>Fairly Accessible</th>
<th>Inaccessible</th>
<th>Very Inaccessible</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. If a class teacher, how many boys have dropped out of school this year from your class? ____________________________________________

5. What was the possible reason(s) for dropping out? __________________________
   __________________________
   __________________________
6. a) In your opinion, do you think the parent’s level of literacy determine success or lack thereof of boys education?
   Yes [ ] No. [ ]

b) Explain your answer above.

7. In your opinion, do you think the boys in your school have a positive attitude towards education?
   Yes (Explain) __________________________________________

   No (Explain) __________________________________________

8. What are the common reasons given for boys’ absence from school?
Sickness  [  ]  Helping at family’s rice paddy  [  ]  Lack of school fees  [  ]
others  [  ]  Please specify ____________________________________________
________________________________
________________________________
________________________________
________________________________

9. a). Are there boys known to you who succeeded in life after dropping out of school?

    Yes  [  ]  No  [  ]

b). If yes, and in your opinion, do they serve as role models to those still in school?

    ____________________________________________
    ____________________________________________
    ____________________________________________

Thank you for your participation.
APPENDIX III

INTERVIEW GUIDE FOR PRINCIPALS

1. Name of your school?
2. Students enrolment?
3. Students drop-out rate in the school?
4. What reasons are offered by parents, teachers and other students on the drop outs?
5. Rate of truancy in the school?
6. What reasons are given for truancy by culprits they report back?
7. What is the parents’ general attitude towards education?
8. What is the general boy’s performance in KCSE in your School?
9. a). Are you satisfied with the boy-child’s overall access, completion and KCSE performance?
    Yes [   ] No [   ] (tick whichever is applicable).
    b). If no, what do you think should be done to improve access, retention, completion and KCSE performance in your school?
APPENDIX IV

AUTHORITY REQUEST

THE PERMANENT SECRETARY,
MINISTRY OF EDUCATION,
JOGOO HOUSE ‘‘B’’
P.O. BOX 30040,
NAIROBI.

Dear Sir,

RE: AUTHORITY TO CONDUCT A RESEARCH PROJECT

Please allow me to introduce myself. I am a Master of Education (Curriculum Studies) student at Kenyatta University under institutional-based programme. I have completed my course work as scheduled. I am now expected to carry out a research project under the title: Factors influencing the boy-child secondary education in the rice-growing region of Kirinyaga South district, Kirinyaga County, Kenya.
I write to seek authority to commence the undertaking whose schedule is Feb to March 2012.

Thanking you.

Yours faithfully,

Peter W. Kamanja.
APPENDIX V

REQUEST FOR CONSENT

THE DEO,
KIRINYAGA SOUTH DISTRICT.

Dear Sir/Madam,

RE: AUTHORITY TO CONDUCT EDUCATIONAL RESEARCH IN SELECTED SECONDARY SCHOOLS IN THE DISTRICT

Please allow me to introduce myself. I am a Kenyatta University’s master of education student. I am at the moment preparing to conduct an academic research work in sampled secondary schools in your district. The study aims to investigate the influences of rice-growing activities on the boy-child’s secondary education.

Attached please find the authorization letter from the National Council for Science and Technology.

I write to seek your authority to undertake the project between the months of Feb to March 2012.

Thanking you in advance.

Yours faithfully,

Kamanja Peter W.

Encl.
APPENDIX VI

REQUEST FOR APPOINTMENT

THE HEADTEACHER,
____________________ SEC.SCHOOL.

Dear Sir/Madam,

RE: REQUEST TO CONDUCT EDUCATIONAL RESEARCH IN YOUR SCHOOL

I am a Kenyatta University Master of Education student pursuing curriculum studies. I am currently conducting a study on the influences of rice-growing activities on the boy-child secondary education in the rice-growing region of Kirinyaga South district. Your school was sampled to be involved in this exercise.

Attached, please find authorization letter from the DEO Kirinyaga South District.

Granted an opportunity, I propose to conduct the study at your convenient time for the form two and three students, their class-teachers and HoDs guidance and counseling on the __/____/2012. I also humbly propose to interview you on the same day.

I look forward to working with you closely on the said study.

Yours Sincerely,

Peter W. Kamanja.

Encl.
## APPENDIX VII:

### WORK PLAN

<table>
<thead>
<tr>
<th>Activity</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Writing concept</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proposal Development</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Literature Review</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Development of Research Instruments/Defense at School</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Data collection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data analysis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Writing report/submission</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: X indicates the months where the activity is scheduled.*
APPENDIX VIII:

BUDGET

<table>
<thead>
<tr>
<th>Activity</th>
<th>Cost (Kes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposal development</td>
<td></td>
</tr>
<tr>
<td>Typing 120 pages @ 30/= per page</td>
<td>3,600.00</td>
</tr>
<tr>
<td>Photocopying 100 pages @ 3/= per page</td>
<td>300.00</td>
</tr>
<tr>
<td>Traveling</td>
<td>6,000.00</td>
</tr>
<tr>
<td>Lunch - 21 days in a hotel @ 500/=per day</td>
<td>10,500.00</td>
</tr>
<tr>
<td>Literature Review photocopying 200 Pages @ 3/= per page</td>
<td>600.00</td>
</tr>
<tr>
<td>Research Instruments Photocopying 240 pages @ 3/= per page</td>
<td>720.00</td>
</tr>
<tr>
<td>Project Report writing (data analysis,typing printing and binding)</td>
<td>5,000.00</td>
</tr>
<tr>
<td>Incidentals</td>
<td>1,000.00</td>
</tr>
<tr>
<td>Total</td>
<td>27,720.00</td>
</tr>
</tbody>
</table>
APPENDIX X

RICE FARM

Rice Trans-Planting in Mwea Scheme-Kirinyaga South District
APPENDIX XI

AUTHORIZATION LETTER

REPUBLIC OF KENYA

NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

Telegram: "SCIENCE TECH", Nairobi
Telephone: 254-020-241349, 2213102
254-020-310571, 2213123.
Fax: 254-020-2213215, 318245, 318249
When replying please quote

Our Ref: NCST/RRI/12/1/SS-011/1630/4

Date: 21st December, 2011

Peter Waweru Kamanja
Kenyatta University
P. O. Box 43844 – 00100
NAIROBI

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on “Factors influencing the boy-child secondary education in the rice growing region of Kirinyaga South District, Kirinyaga County, Kenya” I am pleased to inform you that you have been authorized to undertake research in Kirinyaga South District for a period ending 31st March 2012.

You are advised to report to the District Commissioner & the District Education Officer, Kirinyaga South District before embarking on the research project.

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

Said Hussein
FOR: SECRETARY/CEO

Copy to:
The District Commissioner
Kirinyaga South District

The District Education Officer
Kirinyaga South District