CHAPTER ONE

INTRODUCTION TO THE STUDY

1.1 Introduction

This chapter introduces the background of the study, then states the problem to be studied. It then follows with the purpose of the study, states the objectives of the study and the research questions, the assumptions of the study, scope of the study, limitations of the study, significance of the study, conceptual framework then finally gives an operational definition of terms.

1.2 Background to the Study

Education is not just the memorization of facts, figures and skills but it is an all round development of the students (Zahid, 2012). Logically, games programs are an integral part of education system. As Yakubu (2012) says, games offer the best chance through which children can express themselves and improve their skills. Games programs are like laboratories for children. Children know each other, even themselves, by means of games and improve their new abilities by discovering them through games programs.Yakubu (2012) proceeds to define games as competitive physical contest that follow certain rules for amusement or recreation. Games, according to him, form part of the non formal school curriculum hence a very important aspect of a studentsô learning process. While the first account of humans engaged in learning may well be the story of Adam and Eve, the origins of games are virtually unknown (Avendon,2009). Avendon (2009) goes further to state that games pre-dates the origins of the Olympic games in ancient Greece. The arguments among educators, however, concerning the relevance of games to the academic life of learners is equally ancient.

Howard Taras (Taras, 2005) states that physical activity is likely to help children perform better in school because physical activity improves general circulation, increases blood flow to the brain and releases brain chemicals which may reduce stress and improve mood and induce a calming effect. These advantages to physical activity according to Taras (2005) can improve academic achievement in school. Thus participation in games may promote physical activity and hence academic achievement. However, this contention has not been supported by other research. For example, Hollrach (2004) does not agree and wonders why a lot of time should be given to games programs. He argues that the little time that students have in a school, needs to be utilized on academics (formal curriculum), and that games programs (non formal curriculum) do not contribute to a studentôs positive academic achievement. According to him, whether a student participates in games programs or not, the academic achievement will be the same at the end of the course.

Different people (Hauser &Lueptow, 2004, Alexandria, 2004) have conducted researches to try and find out how games programs are implemented in secondary schools and college since games programs are a crucial part of the school curriculum. A study by Hauser and Lueptow (2004) concluded that games can be implemented well according to an established policy stated by the ministry of education and the curriculum developers in most developed countries. They found out that there is proper implementation of games programs because there is frequent supervision from the government agencies in charge of quality assurance. They continue to argue that in most schools, poor performance in games is as a result of poor methods used in the implementation. Games teachers are not well equipped with methods to handle games

ot duly compete with those employing modern and up to date methods in games implementation.

Alexandria (2004) observes that little emphasis is given to games programs in a school setting. This is due to lack of conclusive evidence on the efficacy of games programs. According to Nasbe (2008), a commission set up in Indiana State in the United States of America to gather information and report on the implementation of games programs in secondary schools, did find out that games go hand in hand with the formal curriculum but the latter needs to be given priority since it is the base of success in education. The commission stated that most countries, especially in the developing world, do value those who prosper in the formal curriculum but look down upon those who participate in games programs.

When budget constraints result in the elimination of educational opportunities for students, administrators should consider the exploration of options that are supported by research. Foltz (1992) and Howley and Huang (1991) have not clarified the relationship between administrative support for games programs and academic achievement. They have clearly stated the support that the school administration offer games implementation in their various countries of origin. The correlation between these two variables has not been elicited, the key question which needs to be addressed is ñwhat is the relationship between administrative support for games programs and academic achievement.

A study by Kimiko (2005) found out that learners in grades 6 through 8 did well academically when allowed to choose the games programs to participate in. The study did address elementary

e same applies to secondary students. This study ought to address this by carrying out a survey on secondary school learners as the respondents since the findings on elementary school learners cannot be used amongst secondary school learners. Similar studies have also been carried out by Marsh and Kleitman (2002) and Broh (2002). The mentioned studies mostly used students as respondents using questionnaires. This study went further to involve games teachers and head teachers as respondents using questionnaires and interview schedules to help supplement the responses collected from the students.

Studentsô and teachersô attitudes towards games programs need to be determined to clarify the issue of the implementation of games programs and whether participation in games programs influences studentsô (girlsô and boysô) achievement in academic endeavors. It is also important to find out if the level of participation in games programs does affect academic achievement. As Dixon (2004) observes, when teachers are overwhelmed with the amount of content to teach in subject areas due to lack of time, they tend to use games time to make up for what they were not able to cover during class time.

Studies carried out on the methods used in the implementation of games programs in the first world countries (Hauser &Lueptow, 2004, Alexandria, 2004) show that economic ability and modernity are major factors in the successful methods used in implementation of games programs over there. This cannot be compared to the methods employed in third world countries like ours. This creates a gap which this study sought to fill by looking at the methods employed in the implementation of games programs and their effect on academic achievement. Umo (2001) conducted a study in Igbo on the combined effects of games methods as a factor of academic

ıtegies relate with academic achievement differently in Igbo. The cited studies have shown inconsistencies in their findings. The relationship between methods of implementing games programs and academic achievement has not been clarified. This study sought to address the relationship between the methods of implementing games programs and academic achievement in secondary schools in Rongo Sub County to help fill the contextual gap that exists.

Games programs are always carried out at different levels. Alexandria (2004) lists the several levels that games programs can be carried out in a school setting namely class level, inter-dorms level, school level, zone, region and national levels. Each participant in games programs both in team and individual sports strive to reach the highest level of participating in games. Today, it is common to hear faculty discussions degrading the value of games programs from the college level down to junior high school level in the United States of America. According to Griffith (2004), many believe that games programs represent the worst aspects of academia. Yet the tradition of scholastic team sports has survived. This survivorship suggests a symbiosis between games programs and formal curriculum very different from the adversarial relation common in faculty discussions. Griffith (2004) proceeds that it would be odd within a cultural context characterized by competitiveness, to imagine an educational system that denies the relevance of sporting competitions which is highly manifested by the games programs offered in school.

Since Rongo Sub-County secondary schools have been performing dismally academically and have also not been reaching the higher levels of participation in games programs, (Rongo Sub-County Sports Office, 2009), thus this study sought to find if there exists a relationship between

grams and academic achievement in Rongo Sub-County secondary schools. The study went further by testing the correlation between each level of participation in games programs and academic achievement.

Numerous studies have been conducted concerning the relationship between participation in games and academic achievement. Broh (2002) found that games programs are associated with an improved grade point average. Guest and Schneider (2003) also concluded that games programs do in fact, influence academic performance. Both these studies were theoretical in nature hence the need for an empirical study. Anyango (2012) conducted a study on the influence of games programs on academic achievement of public primary school pupils in Kisumu municipality, Kisumu County, Kenya. The study found out that the more pupils participated in games programs, the more their academic performance declined; this was indicated by an inverse relationship between involvements in games programs. Based on the above stated studies, there seems to be some contradiction on the relationship between games programs and academic achievement. The crucial relationship needs to be addressed especially in the Rongo Sub County secondary schools to help establish why games programs and academics have dismal performance..

In Kenya, review and development of education policy and practice has rarely focused on games programs. The first Kenya Education Commission in independent Kenya headed by Simeon Ominde (Rep. of Kenya, 1964) sought to reorient education policies that perpetuated social inequalities in the colonial society. The focus was on promoting academic subjects to produce manpower to take over white collar jobs left by the departing colonial officers. Non-formal

ng to this process. A study of curriculum development in Kenya led by Gordon Bessey (Rep. of Kenya,1972) noted that non-formal curriculum (activities and subjects) were an integral part of helping train Africans to become self-reliant and take over the roles of the departed colonial officers and also cater for those who could not make it in the formal curriculum.

Gachathi Committee (Rep. of Kenya,1976) also emphasized the broad-field approach to the curriculum where both the formal and non-formal curriculum were emphasized, but both Kamunge Commission (Rep.of Kenya,1988) and Koech Commission (Rep.of Kenya,1999) advocated for the development of curriculum for national education and training programs for vocational training and the curriculum being gender sensitive respectively. The Ministry of Education Policy on games is that these activities should be treated equally with the formal curriculum and informal curriculum(Rep of Kenya, 1999), but most schools tend to give the games programs a second priority after the formal curriculum as indicated by Wangari(2012).

The above mentioned commissions recommended to the Ministry of Education the importance of having both the formal and non-formal curriculum and games programs in particular in the school setting, but according to Hausea and Luelptow (2004), most schools have ignored this and have developed the tendency of giving formal curriculum priority over games programs (informal curriculum).

From the above reports on the commissions and policy, it is clear that games programs are not a priority in most secondary schools in Kenya contrary to what is recommended by the Ministry of

y Arogo (2011). What needs to be addressed is the contribution of games programs to the implementation of the complete curriculum whereby the students pass well in their academics (formal curriculum). There is a need to establish the implementation of games programs and its contribution to studentsô academic achievement in secondary schools in Rongo Sub-County since they are part and parcel of the complete school curriculum. There is further need to establish if there is a correlation between participating in games programs and academic achievement.

Rongo Sub-County secondary schools have not featured much at the regional and national games competitions in the recent past. Very few schools from Rongo Sub-County make it past the regional level and when they do manage to proceed to the national level, they perform dismally as shown on Table 1.0.

Table 1.0.Term One Ball games (National level) representation per sub-county.

Year	Rongo	Awendo	Kehancha	Suba	Mabera	Kegogo	Uriri
2008	0	1	4	3	4	4	1
2009	0	2	3	2	5	4	1
2010	0	1	3	2	4	5	2

Source: (Rongo Sub-County Sports Office, 2010)

Most studies (Saylor & William, 1974; Jacobsen & Chase, 1989; Staffo, 1991, and Lisella&Sertwatka, 2007) attribute poor performance to several reasons such as poor methods

programs in secondary schools, less attention given to games programs, less value given to games programs, and challenges faced in implementation of games programs. However, no study examined the contribution of games programs to the academic achievement of learners. According to the sources at the Rongo DEOôS office (DEO, 2010) in the past three years (2008-2010), it is only St. Pius Uriri (now in Uriri Sub-county) and Rapogi Boys (now in Awendo Sub-county) that have made it past the regional level and then performed better at the national level. It is therefore worth trying to dig deep and find the main reasons why these secondary schools do not perform as those from the neighboring sub-counties and regions as seen in Table 1.0.

According to Sifuna (2005), head teachers also discourage students from participating in games programs; they give priority to formal activities thereby limiting the implementation of games programs with the intention of saving on the money that is meant for games programs which in turn is diverted to other uses which schools think will greatly contribute to the academic achievement. Sifuna (2005) proceeds by saying that games programs are expensive to sustain in most secondary schools, thereby, schools limit the number and varieties of games that are offered resulting in poor games programs implementation methods. Preference in the school budget is, as a result, given to the formal curriculum. A formative assessment and evaluation of games programs needs to be done in secondary schools to help establish the implementation of game programs in secondary schools and whether participation in games programs do affect the participantsô achievement in academics. This raises concern regarding the place of games programs in the school curriculum and its implementation. It raises the questions, ñare games programs being implemented as required?ò ñdoes this implementation affect studentsô academic

Curriculum Development (KICD) formerly, The Kenya Institute of Education (KIE) and Government of Kenya need to get feedback on the implementation of games programs in secondary schools.

Ulandagirls high school which today is in Awendo Sub-County, once represented the former larger Migori District at the national ball games competitions in volleyball in the year 2007 but of late have not been performing as expected. The boysô schools have are not fairing any better with only Uriri and Rapogi Boys (now in Uriri Sub-County) that have been to the national level but once there they do not make it beyond the preliminaries. This raised a question on whether there is an aspect of gender in the implementation of games programs. This study went further to find out the relationship between participation in games and academic achievement.

In Rongo Sub-County there has been little investment in games facilities by stakeholders. This is evident in the inadequacy of the facilities in relation to the number of participants who use them (Republic of Kenya, 2002). Most schools in Rongo Sub-County do not have enough games equipment and this slows down the development of games programs in the sub-county. In addition, games programs do not get enough support in schools because many parents and teachers do not see its value (Rongo Sub-County Schools Sports Association, 2006).

There have been constant complains from schoolsô Parents Teachers Associations (PTAs) about this dismal performance (Rongo Sub-County Education Office, 2010). None of the schools in Rongo Sub-County that make it to the regional level of games competitions hence do not make it to the national level as shown in Table 1.0. Things are proving to be even tougher now that teams have to fight it out at the sub-regionals immediately after the county games competitions

al level. The said regions do comprise of three to four counties put together. Rongo Sub-County joins Migori, Awendo, Uriri and Kuria Sub-Counties to form a sub-region. Table 1.0 gives a breakdown of the performance of secondary schools at the regional level.

This study was justified because there has been a public outcry over the poor performance in both games programs and academics in the Rongo Sub-County. In games programs for example, as shown in table 1.0 above, from the year 2008 to 2010, no team (school) had reached the nationals of the Kenya Secondary Schools Sports Competitions (Rongo Sub-County Education Office, 2010). This raises the question of whether this poor performance in games programs at any competitive level is as a result of lack of administrative support, negative attitude towards games programs, outdated methods or challenges faced in the implementation of games programs.

A similar study is also justified by Munuve (2011) and Wood (2007). They advised on the need to assess the contribution of games programs towards studentsô academic achievement in secondary schools. Furthermore, Rongo Sub-County schools have not been performing well in the national examinations. Schools in the sub-county have been getting a mean grade of C- between the years 2007-2009. Table 1.1 is a summary of the mean score for the sub-county in the Kenya Certificate of Secondary Education examinations which show a downward trend in the years 2007-2009.

ary Schools' Mean Scores in KCSE.against other sub counties.

	2007	2008	2009
Rongo	5.1000	5.1471	5.3158
Awendo	6.3712	7.3856	8.2210
Kehancha	6.508	7.0152	7.5031
Suba	6.2358	7.0127	7.5213
Mabera	7.7132	6.8401	6.5012
Kegogo	7.3231	7.3014	7.4256
Uriri	7.5123	8.3451	8.7538

Source: (Rongo Sub-County Education Office,2009).

In the year 2007 the sub-county mean performance in KCSE was 5.3158, which is a mean of C-, while in 2008 and 2009 it was 5.1471 and 5.1000 respectively (Rongo Sub-County Education Office, 2009). In the sub-county, a study of this nature has never been conducted to reveal the contribution of games to studentsô academic achievement. There was therefore, need to establish the implementation of games programs and its contribution to studentsô academic achievement in secondary schools in Rongo Sub-County, Kenya.

Games programs are an integral part of the school curriculum. Although officially part of the school curriculum, the place of games programs in practice and implementation is not clear. Apparently, schools do offer games programs as a matter of choice and not as a matter of requirement. The government of Kenya in the year 2002, made physical education a compulsory subject but there is minimum follow up made by the education officers on whether this directive is implemented or not. (Rongo Sub County Office, 2010)

Several studies have linked games with high academic achievement (Munuve, 2011; Rona &Murites, 2017). A study by Rona and Merites (2017) indicates a positive relationship between participation in games and academic achievement meaning that those who participate in games are likely to have a high academic achievement. A study by Onyango (2012) contradicted Rona and Merites (2017). She discovered a negative correlation between games and academic achievement. These inconsistencies between games and academic achievement

The main focus of schools is belter performance both in sports and academics. Unfortunately, there has been poor performance in both games and academics by secondary schools in Rongo Sub County. Schools in the Sub County hardly make it to the national levels in games competitions; on the other hand they have also been getting low mean grades in academics. Poor implementation methods prevent desired outcomes in games resulting to low achievement. Finding out how games programs are being implemented within the Sub County could help diagnose the problem and help improve implementation hence better academic achievement.

of game in Rongo Sub County secondary schools and its relationship to academic achievement. To do this, the researcher carried out a descriptive survey of the implementation of games and correlated it with academic achievement. This was used to propose better policy interventions.

1.4 Purpose of the Study

The purpose of the study was to establish the implementation of games programs and its contribution to studentsô academic achievement in secondary schools in Rongo Sub-County, Kenya.

1.5 Objectives of the Study

Specific objectives of the study were to:

i). Establish the relationship between administrative support for games programs and academic achievement in Rongo Sub-County secondary schools.

ii). Find out the relationship between studentsôattitude to the implementation of games programs and academic achievement in Rongo Sub-County secondary schools.

iii). Establish the relationship between methods used in the implementation of games programs and academic achievement in Rongo Sub-County secondary schools.

iv). Investigate the relationship between levels of studentsôparticipation in games programs and academic achievement in Rongo Sub-County secondary schools.

v). Examine the relationship between participation in games programs and academic achievement in secondary schools in Rongo Sub-County.

This study sought to answer the following research questions:

1. What is the relationship between administrative support for games programs and academic achievement in Rongo Sub-County secondary schools?
2. What is the relationship between the methods used in the implementation of games programs and academic achievement in Rongo Sub-County secondary schools?
3. What is the relationship between the level of participation in games program and academic achievement in Rongo Sub-County secondary schools?
4. What is the relationship between the level of participation in games programs and academic achievement in Rongo Sub-County secondary schools?
5. What is difference in the academic achievement of participants and non-participants in games programs in Rongo Sub-County secondary schools?

1.7 Assumptions of the Study

The study was based on the following assumptions:

(1) Games programs form an integral part of the secondary school curriculum.

(2) All schools in the sub-county are well equipped to implement games programs.

(3) Score in sub-county examinations is an indicator of studentsô academic achievement.

1.8 Scope of the Study

The study was carried out in Rongo Sub-county and included the following:

a) The study involved the year 2010 form four students, games teachers and head teachers.

ere studied included soccer, netball, volleyball, hockey, rugby and handball.

c) The study focused on academic performance of students in Rongo Sub-County Examinations only.

1.9 Limitations of the study

The following were the limitations of the study:

1. The main research tool used in the study was a questionnaire; however, the use of a questionnaire has ceiling and floor effect limiting the depth of data to be collected. This limitation is particularly evident where the items are closed ended. To overcome this limitation, the researchers supplemented the use of questionnaire with the use of interview schedule and observation schedule for purpose of triangulation of the data collection process and enhance validity. Further, the questionnaire was modified to include open ended items to afford the respondents opportunity to express themselves freely.
2. Qualitative data collected for this study was gathered through interviewing games teachers and head teachers. However, this self reported data is limited by the fact that it rarely can be independently verified because the researcher has to take what people say in interviews at face value which is a potential source of bias. To overcome this limitation, the researcher had to verify the given data on whether it was incongruent with the documents at the Rongo Sub County education office. Further, the researcher had to observe the games progams as being implemented in the schools.

This study examined implementation of games programs in secondary schools and its contribution to studentsô academic achievement. First, the findings have provided what may be of use to the government especially the Ministry of Education. It may provide the Ministry of Education with useful information on how games programs are being implemented in Rongo Sub-County secondary schools which in turn will help in the improvement of the implementation of games programs across the country.

Secondly, the findings have suggested new methods that may enhance the implementation of games in secondary schools. Thirdly, following several researches, this study reinforces the preposition that games programs may be the solution to educational problems, rather than distractions from academic achievement among students. Finally, the findings have come up with areas for future research.

1.11 Conceptual Framework

Games programs are part of the non-formal curriculum which also forms the broader curriculum from time immemorial (Wragg,1997). Games programs just like the formal curriculum are planned, designed and implemented by the same stakeholders in the education system with the aim of bringing better change for an education system. The implementation of games is influenced by several factors which make it fail or succeed. According to Fullan (2001), these factors include attitude towards the games and availability of resources for the implementation of games and other non formal curriculum. Ross (2000) suggests that these factors need to be considered when preparing a curriculum.

d based on suggestions by Fullan (2001) which guided the researcher in this study. The conceptual framework is a rationale for assessing the dynamics of games programs and the other non formal curriculum. Fullan (2001) argues that the more factors supporting implementation, the more change in practice will be accomplished. He goes further to say that we should avoid thinking of sets of factors in isolation from each other. They form a system of variables that interact to determine the success or failure of the planned implementation. The implementation of games programs can be reflected in the outcome of the learnersô examination results.

The role of the teacher in the process of implementation is to ensure that the planned curriculum brings out the required change (Kelly, 2004). The teacher is to provide a rich environment for the spontaneous exploration of the learner. The teacher ensures that all the factors responsible for the implementation of games are in the positive and successful. Such an environment encourages the implementation of games programs through various activities in the school.

Figure 1 is a conceptual framework on the implementation of games programs in secondary schools and its contribution to studentsô academic achievement. It shows the factors affecting implementation of games programs with the dependent variables, independent variables and intervening variables.

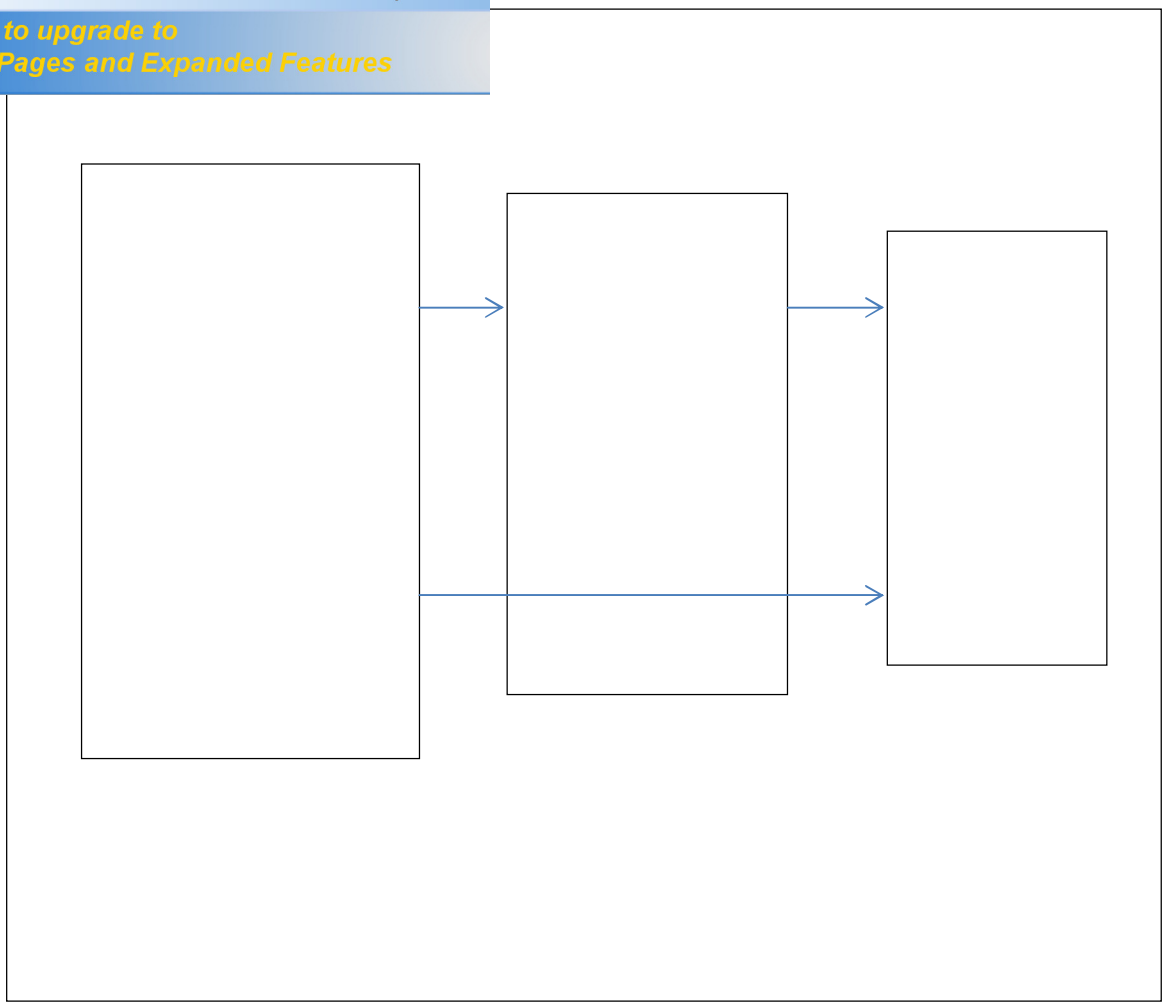

Figure 1. Conceptual framework on games programs implementation and students' academic achievement (Adopted fromFullan ,2001)

The above framework shows the interaction of the variables used in the study. The conceptual framework is summarized as follows:

Independent Variables

a) Attitude-Attitude is one of the factors that affect the implementation of games programs in secondary schools. Both teachers and students have an attitude towards the implementation of

either be negative or positive. If the attitude is negative, games programs cannot be implemented as required. Teachers or students who have a negative attitude will use the time for games programs for the other activities with their argument being, ñit wastes timeò. If games programs do affect a studentsô academic achievement then those with a negative attitude will not perform well in their academic endeavors.If the attitude is positive, then games will be implemented as required. Teachers and students in this case will ensure that these games programs are implemented well to help achieve the set objectives.

b) Methods of implementing games programs-methods play a very important role in the implementation of games programs. If the games teachers have up to date methods and equipment then games programs will be implemented well to help realize the set objectives. Most secondary schools in Kenya lack trained games teachers to help in the implementation of games programs. In cases where well trained personnel are inadequate, it is always advisable to take the available teachers for in services courses to help them update their implementation methods. Games programs implementation methods are a major factor in the implementation of games programs so the stakeholders need to work hard and ensure their schools have enough trained personnel who will employ modern methods for effective implementation of games programs.

c) Administrative support-Secondary schools require a defined system which will help make implementation of games programs as required. Those at the top need to work hand in hand with others to ensure that games programs are implemented well. This support should come in terms of materials and emotions. The school administration headed by the principal should give

o help implement games programs. The administrators should also show their support for games programs by being present whenever there are games activities in or out of the school. Implementation of games programs entirely depends on the financial support awarded to games programs. Teachers in charge of games programs need to make budgets for games programs which enable the administration to work with ease and offer the required support.

d) Level of and participation-Secondary schools do participate in games programs at different levels. They begin at zonal level, then move to the divisional level before moving to the sub-county level. They then move to the county then regional level where teams from different counties converge. The best teams at the regional level then proceed to the national level where the best from all over the country converge. It is the level of participation in games programs that is used to gauge the success of participation in games programs. It is not known whether participation in games programs at different levels does affect the studentsô academic achievement. Any student who has taken part in games programs from school level to the national level is considered a participant.

Intervening Variables

a) Boredom

This is an emotional state experience when an individual is left without anything in particular to do, and not interested in their surroundings. It can also be said to be an unpleasant, transient effective state in which the individual feels a persuasive lack of interest and difficulty concentrating on current activity. It involves problems of engagement of attention. It happens

ed activity or being prevented from engaging in wanted activity. It is characterized by perception of oneôs environment as dull, tedious, and lacking in stimulation. This can result from leisure and a lack of aesthetic interest. Without stimulus or focus, the individual is confronted with nothingness, the meaninglessness of existence, and existential anxiety. Boredom can be overcome by finding something to do, avoiding boring things, and getting busy. In the secondary school situation, most students are forced to participate in games they do not like hence get bored or do it for the sake of the teachersô interest so as not to be punished. In this study, the factor was dealt with by allowing students to take part only in the games programs of their choice. This was done to help avoid them being bored in the game.

b) Fatigue

It is a state of feeling exhausted even after getting enough rest. Fatigue is a normal part of life but sometimes it can be severe or go on for a long time. It is usually due to harmless lifestyle causes. Occasionally it is due to psychological problems or a physical illness. Tiredness is very common; everyone feels tired at some point. It is impossible to say exactly how common it is because most people do not see a doctor. Lifestyle and social causes of tiredness include work, family issues, school work etc. In a school situation, students can get tired of participating in games by having a hectic day in class. Most students stay in class from 8 am to 4 pm, so by the time they get to games programs they are already tired and do not participate in games programs as expected. In this study, the factor was dealt with by encouraging students to participate in games programs when still fresh and not fatigued.

To effectively implement games and get good results in the end, the school management/administration should allocate enough funds to games in their annual budget. These funds are needed to purchase games equipment and facilities, and the building and maintenance of pitches and fields. If at any instance, funds for implementation of games are not availed, then teachers are forced to improve the needed equipment and facilities which will end in games not being properly implemented producing below par performances.

In this study, this factor was dealt with by games teachers improvising the materials and facilities that he schools were unable to purchase.

d) Time

Games need enough time allocation in the time table. This ensures that all the dimensions of the school curriculum are allocated equal timing. If time is not well allocated for the implementation of games, then the games will not be played well because the players will rush in readiness for the next activity resulting in below par performances. Games teachers in collaboration with the school administration need to ensure that games are given enough time and also ensuring this time allocation in strictly adhered to.

In this study, this variable was dealt with by asking the games teachers to adhere the recommended time for games during the period in which the research was being carried out.

nt and facilities

For games to be properly implemented there has to be standardized field, equipment and facilities. This is something that is lacking in most secondary schools. Our secondary schools lack proper fields and adequate equipment and facilities. If there are no proper fields, equipment and facilities then proper implementation of games is negatively affected. School administrations need to put more effort in ensuring that fields, equipment and facilities need to be availed for proper implementation of games.

In this study, this variable was dealt with by the games teachers improvising fields, equipment and facilities that they did not have. This enabled them to carry out the games programs although the improvised fields, equipment, and facilities were below the expected standards.

Dependent Variable

Academic achievement is interpreted in terms of mean score in the mock examinations. Failure can be attributed to several factors, one of them being participation in games programs. At the same time, participation in games programs can contribute to fairing well academically.

This study tried to determine whether academic achievement as a variable is dependent on participation in games programs or not. If academic achievement is dependent on participation in games programs, then, the intervening variables need to be put to check to ensure that participation in games programs run smoothly and that the performance of studentsô academic achievement is appealing.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter is divided into six sections. The first section examines literature on the contribution of administrative support towards games programs and its effect on academic achievement. The second section is about the attitudes of head teachers, teachers and students towards games programs and its effect on academic achievement, while the third looks at the methods used in implementing games programs and its effects on academic achievement, the fourth is about the level of participation in games programs and its effects on academic achievement, the fifth section is about relationship between studentsô participation in games programs and academic achievement, Lastly, there is a summary of what the chapter entails.

2.2 Contribution of Administrative support towards games programs and its effect on academic achievement

Non formal curriculum is one of the three dimensions of the wider school curriculum (Tanner & Tanner, 1975). Oluoch (1982) defines Non formal curriculum as the branch of curriculum that deals with activities such as games programs, sports, clubs and societies. He adds that this dimension used to be traditionally known as extra-curriculum and even more recently it was referred to as co-curricular activities. Ondiek (1986) defines non-formal curriculum as the organized and planned out-of-class learning activities in which students engage in the school or out-of-the school compound. Examples of these learning activities would be community work, games, sports, farming, traditional education and other non-academic learning experiences. This definition clearly states that no game can be done in a school without an organizational

ve as it gives the people involved in the activities, it specifies the activities and where these activities are carried out. One other major aspect that comes out clearly that makes non formal curriculum unique compared to the other two dimensions is that non formal curriculum is non academic. Probably that is why some people think that non formal curriculum is inferior to the dimensions of the curriculum.

The other two dimensions of curriculum are the formal and informal. Oluoch (1982) defines formal curriculum as the aspect of the school curriculum which consists of those learning experiences that students undertake formally as a class as well as curriculum objectives and students assessment methods related to them. He goes further and defines informal curriculum as the guided aspects of the informal learning activities that go on in a school all the time. Examples of the guided informal learning experiences would be the interaction with the planned aspects of the school environment; for instance, the assimilation of desirable habits by students from good example given by the staff of a school. By clearly defining the three dimensions of a school curriculum, it would be easy to know and understand the three distinct aspects to avoid any confusion that would arise when discussing the implementation of non formal curriculum and games programs in particular,

After clearly distinguishing between the three dimensions of the school curriculum, it is proper to narrow in on games programs and know some of the main activities that encompass it. Apart from football and volleyball, there are several other games that students can get involved in (Isenberg & Jacobs, 1982). Rubin and Bommer (2007) give the following range of games programs that students can take part in while in a school: football, volleyball, netball, basketball,

at these are the common games programs in most high schools allover the world. The common games programs in Kenyan secondary schools re soccer, volleyball, hockey, handball, netball, and rugby.

Musvosvi (1998) argues that for games programs to be properly implemented in a school there must be a properly organized structure. He proceeds to say that such a structure in the administration of games programs makes the implementation smooth and effective. This structure begins from the head teacher (principal), teachers, through to the students who are the actual participants in the games programs.

In support ofMusvosvi (1998), other scholars have been trying to define and show the importance of administrative support for games implementation. Brown (2000) laments the effects of lack of administrative support in the implementation of games programs. He argues that games programs will suffer poor organization if the top officers in the school hierarchy do not support it. He gives an example of financial support which he says is a must for the smooth running of games programs in a school.

Coumeaux (2006) argues that teachers and administrators who know the benefits of games programs need to advise the learners of the benefits so as to encourage them to love and participate in games programs.. He is quoted to say that ñprograms in these areas should involve faculty members as possible mentors to student-athletes to offer support and instructions about the importance of their academic pursuit.ò

ments of his predecessors and gives implementation of games programs a new angle. He introduces the use of technology in the implementation of game programs. He proceeds to argue that school administrators only need to come in by helping to purchase equipment and machines which in turn will help in the smooth implementation of games programs. Abbort (2006) is in agreement but argue that the school administration needs to go a step further by taking their teachers or personnel for further training on how to use these machines in the implementation of games. Guskey (2000) is also in support of this. He reasons that these trained teachers on the operation of the machines can form a professional organization to help in the day to day implementation of games by the use of machines.

Tanner and Tanner (1975) say that these games programs are organized in a less rigid manner compared to the formal curriculum. According to Sinclair (2005) games programs are an integral part of the wider school curriculum and for them to be properly implemented, a good environment needs to be set up. This environment will be appropriate for the proper integration of the three dimensions of the curriculum. This crated environment needs to suit the different needs and interest of the learners for it to work well. Sinclair (2005) is quoted as saying that in order for the learning environment to connect with the learners who have varied learning abilities, interests and backgrounds, its necessary for schools to provide multiple environments that properly match the academic needs of an individual group.

Games programs form the bulk of non formal activities in most schools (Sinclair, 2005). He believes that the formal curriculum is not complete without games programs and schools should strive to include these activities in their timetables in order to have a complete and balanced

and says that games programs are necessary in a studentsô life and should be given a slot in the timetable .Dixon (2004)is also of the same opinion, he believes that games programs go hand in hand with the broader curriculum and deserves a rightful place in a school setting . Saylor and William (1974) extends the arguments by saying that the non formal curriculum is an important part of schoolsô efforts to implement its curriculum plans and schools should by all means devote considerable attention to these activities so that they contribute maximally in terms of time, and effort given to them in the realization of the goals of the school.

Trump and Miller (1973) suggest that schools should ensure the proper implementation of games programs and sports, and in the end schools need to evaluate whether games programs are really meeting their intended purpose or not. Hollrach (2004) concurs with Ondiek (1986). He says that those at the top especially head teachers need to follow the laid down structure in ensuring that games programs are well implemented. They need not go directly to the field or farm to check whether things are running according to plan but can put one of the teachers in charge of an activity, and it is this teacher who will have to work directly with the learner to ensure the smooth running of games programs within the school.

According to Dixon (2004), the smooth and effective implementation of games programs depend on the understanding and co-ordination among the individuals within the organizational structure of a school. He likens this organizational structure to a chain which requires all its links to function. If one link is missing then the whole thing cannot function. He is strongly supported by Alexandria (2004) who argues that a school that implements games programs without an

rnment that runs without ministries. She says that those who hold offices within the defined structure need to be given a free hand to carry out their functions, but a lot of co-operation among the stakeholders is the most important aspect. She therefore, concludes by saying that those at the top of the administrative organizational structure should always be evaluating how the non-formal dimension of the curriculum is implemented and should run away from the norm in most schools where the school heads do not bother to inquire whether games programs are properly implemented or not.

Payne (2004) clearly states it that it is the duty of the principal to ensure that the school has properly trained or qualified personnel in the implementation of games programs. He goes ahead to reason that it is the critical role of this principal to ensure that these qualified personnel do implement the games programs as required by regularly making a follow up and supervising the implementation process. Should the administrative organizational structure for the implementation of games programs be similar in all schools? This question is answered or viewed from two different aspects. There are those who agree and those who do not agree. Rubin and Bommer (2007) agree that the organizational structure need to be similar in all schools for uniformity. They religiously support their stand by arguing that this makes it easy for the quality assurance officers especially when they are inspecting the implementation of non formal curriculum in several schools, it really makes it easy for them to compare and contrast the implementation of games among different schools. Sinclair (2005) is also for the idea of having a uniform structure among schools. He says that having a different organizational structure in each and every school is like having a different curriculum for each and every school. According to him, that is unacceptable in an organizational society.

t each school needs to be given a chance to draw their administrative structure that will be able to accommodate their financial capabilities. They say that we have different categories of schools with different financial strength so having a structure which will overburden a given school is not a wise ideas so it is better to let them have what they can ócheweô. Holland and Thomas (1995) say that from their experience, it is easier to work with a schoolsô organizational structure than with a general structure. They say that they have experimented with the two in different schools something that helped them arrive at their conclusion.

Hill (1988) lists some of the qualities of competent personnel when it comes to the implementation of games programs. The said person should have: knowledge acquisition, integration and application, humanitarianism, interpersonal skills, practical competence, persistent and academic achievement, cognitive complexity, team player qualities.

Saylor and William (1974) advice that to get effective manpower to be able to implement games programs, before a fundamental change is brought about in the curriculum, the teachers who are going to implement this particular program should have undergone or should be involved in the preparatory courses, either by pre-service or in-service training which is to be offered by the same curriculum developers.

Wangari (2012) conducted a study in Mwatate District, Kenya to determine the activities that help in developing studentsô talents in secondary schools within Mwatate. The study sought to establish the influence of funding; infrastructural facilities; teachersô roles and parental

tsô talents in co curricular activities in secondary schools. She found out that curriculum activities that were supported by the school administrations were effective in identifying and tapping talents. She went further to state that lack of administrative support in secondary schools within Mwatate was inadequate and thus affected the studentsô participation in games. She recommends for administrative support for games within Mwatate. The administrations can do this by costing each of the games and adequately funding them to ensure proper implementation of games. A similar study was conducted by Choka (1987) on the administration of extra curricular activities in primary teachers colleges in western Kenya. He discovered that most colleges viewed games as an extra duty and not as part and parcel of the school curriculum. This clearly illustrates what most administrations do in the Kenyan case.

Gitonga (1989) conducted a study to find out the factors affecting the performance of students in sports in secondary schools in Mombasa County, Kenya. He discovered tht the factors that affect participation in games are, availability of sports facilities and equipment in secondary schools, training of personnel, time allocation in the school time table for games, and the attitude for games programs among the teachers and students. This clearly shows a clear role that the school administration plays in the implementation of games programs. This is in agreement with what Arogo (2011) discovered when he sought to find out the factors affecting performance of clubs in public secondary schools in Kakamega Central District. He also stated the same factors as affecting the implementation of games programs. Choka (1987) concurs with this finding. He stated that co curricular activities were not taken seriously as they were not examinable hence the academic aspect of the curriculum was given more preference. Most patrons did not have basic interest in the activities and viewed them as extra duty.

ion dwells with the administrative support for games programs. The reviewed literature has not carried the effect of this administrative support for the implementation of games programs on academic achievement. The studies cited above have not elucidated the relationship between administrative support for games and academic achievement. The key question therefore, remains; is there a relationship between administrative support for games programs and academic achievement? Itôs important to address this issue hence the current study

This study, therefore, addressed this issue by showing the contribution of administrative support towards the implementation of games programs and how it eventually results in academic performance in Rongo Sub-County. The study also sought to find out if the findings in the related studies could be applicable in the case of Rongo Sub-County.

2.3 Contribution of Students' Attitude towards participation in games programs and its effects on academic achievement

Sutherland (1997) is a strong proponent of studentsô participation in games programs. He reasons that these programs are necessary in that they prepare the student for life in todayôs societies, once a student sees and knows the importance of these programs the attitude will change into a positive one. He gives seven principles that argue for the inclusion of games programs in the school routine and also help changing studentsô attitude towards games programs. These principles include: to enable a person survive in the surroundings, to earn a living or to follow a career, to give pleasure, to make one a good member of the society, to develop personal and moral qualities, to give culture, to develop ability to think and use knowledge. These principles

ents towards games programs but they also change the attitudes of those within and without the schools environs. The seventh principle is of great importance in that it enables a student to tackle academic challenges with a lot of ease. Downshen (2007) agrees with Sutherland (1997) and goes further and gives other benefits that a student would get from games. These benefits can help in changing positively the attitude of teachers and students towards games programs and give an even greater urge for the effective implementation of games programs. He says that students do get a chance to explore the physical, creative, social, political and career interest with the like minded people. He adds that those activities look good on college and job applications and also show admission officers and employers that you are well rounded and responsible.

Mustapha (2016) bothered by the inconsistent results by many studies on the relationship between competitive sports and academic achievement, decided to study attitude towards games participation in Saudi Arabia. He realized that attitude towards games participation is low among students due to the fear of negative influence of sport on academic achievement. The study examined if attitude towards games participation might play a role in mediating the relationship between games participation and academic achievement. He found out that there is a significant relationship between competitive sports participation and academic performance, mediated by the attitude towards competitive games participation. Bilal (2016) agrees and states that students do perform better on those skills that they value and this may be influenced by underlying motivation to master a given skill. He believes that motivation influences positive attitude in someone which eventually results in better results.

value of games programs in the life of a student. They explain that these activities are designed to provide students with experiences that are not customarily part of the regular academic program but are a valuable part of the curriculum. They proceed to argue that games programs will help change their attitude positively once they realize the benefits of these programs in school and in the life beyond school.

In far East countries, activities that do not require physical involvement such as video games and computer games have been proven to help in intellectual development (Firding& Boyer, 20007). They say that video games can be used in teaching and learning. They proceed to say that such activities are important because they serve as a significant pedagogic practice they learn through doing and performance. Once proven to be of great benefit to the learner, teachers, students and even parents will develop a positive attitude towards such activities and will do anything possible to ensure that they children and students are involved in such activities which can and will affect their academic achievement positively.

Since games programs do consume a large amount of studentsô time while in school, we need to fully and properly utilize their benefits to aid students in improving their academic achievement, once this is done attitude towards games will change from negative to positive.(Saylor & William, 1974). Isenberg and Jacobs (1982) say that games programs are a major vehicle by which children learn several things in life. Play at any age is neutral and should be fun because it teaches more than just how ñto playò it contributes to childrenôs physical, social and emotional development together with intellectual development.Hurwitz (1975) agrees with them, but goes a little bit further by saying that ñgames help children master basic skills arousing a desire to learn and can give him or her an easy and pleasant way of practicing fundamental techniques of

ted and will develop enthusiasm for further learningò. Once such a notion is gained by children and parents then their attitude towards participation in games changes and they will be willing to participate in games programs.

At Jumeriah College, they believe that they have a responsibility to ógrow young people through a holistic education that enriches their minds and bodies.ô To them, participation in character enrichment and sporting activities take equal importance alongside academic performance. Through participation in these games programs, students do expand their horizons, learning skills and developing new competencies. They proceed to add that, through physical development and the exploration of interests, students learn the thrill of challenge and competition, the importance of concentration and dedication, the spirit of teamwork and a sense of accomplishment.Mayne (1990) believes that games programs are a very flexible medium of instruction that can be used to impart knowledge into learners. He reasons that, games programs, like textbooks can guide and reinforce the learning of factual information. He says that they can still do more, they do provide a better understanding of complex processes, generate studentsô enthusiasm about a topic and the larger learning and interpersonal communication.

Meier and Robinson (2004) say that non formal activities have long justification in education which fosters a positive attitude in the learners. They add that these activities are perceived to have positive academic impact on students. According to them, research indicates that participation in games programs minimizes delinquency, mitigates drop outs and has a positive effect on studentsô academic achievement. Thornes and Neary (2002) propagate for a balanced curriculum. They say that ñcurriculum should be balanced between subject content and off class

oceed that ñinterpretation of balance do(es) not always begin from concentration of the knowledge-content of the curriculum but from a concern for the experiences of the student of the different dimensions of the curriculum to the success of students in school. They concluded that games program are an integral part of the high school activities because they are designed to develop cognitive, affective and psychomotor behavior that complements the skills learned in the formal class.

Schrader et al (2003) are of the opinion that games programs in any form are important in a school setting and both students and teachers need to participate in them as a requirement and not as a choice. This summarizes the importance of games programs in the school curriculum.

There are several factors that influence studentsô and teachersô participation in games programs. Games programs and sports do vary from one school to another because of lack of finances and facilities. Holland and Thomas (1995) say that games programs are offered in schools according to the sponsors of the school. Some sponsors believe that some games programs are dangerous and can cause physical harm to students. A good example of a game that some schools discourage is rugby because they view it as a physical and violent game. They say that sport is used to refer to the event where students converge to compete in the various games that are offered.

Tanner and Tanner(1975) say that games programs need to be carried out in accordance with factors such as individual interests. Aptitudes and ages and these activities may be carried out inside or outside the classroom or inside the school compound. Schools need to provide a

dents have a variety to choose from. Sinclair (2005) is quoted as saying that in order for the learning environment to connect with the learners who have varied learning abilities, interest and backgrounds, it is necessary for schools to provide multiple environments that properly match the academic needs of an individual. Examples of these conducive environments include enough administrative support structure, school policy on administration and implementation of non formal curriculum and the provision of adequate trained personnel in areas of non formal curriculum.

Kumar (2008) gives the idea of attitude towards games programs a totally new view. He argues that attitude towards games can be influenced by somebodyôs gender and locality. He reasons that ladies are likely to like or hate a given game because of their gender, and men are also likely to do the same. He gives an example of soccer and netball saying that the two disciplines have been based on gender for a very long time with soccer being said to be for men, and netball for ladies. That explains why for a very long time ladies have been playing netball and shying away from soccer.

Kumar (2008) proceeds by asserting that oneôs locality can also influence his or her attitude towards games programs. He says that for a very long time games programs have been known to be played according to regions or even countries. This makes people to shy away from a given game believing that it is for a given region of group of people. Schafer (2012) concurs with this argument but does go further to say that no matter the determinant of attitude towards games, one needs to always develop the right at attitude towards all games programs to help ensure effective participation.

need to get a clear difference between the activities that fall under the non formal curriculum, then choose one and specialize in it for effective performance in the given activity that interests them. Pallegrini and Kato (2002) agree by saying that specialization in any given games program is important in that it gives the learner enough time to concentrate and do the given task effectively. Fein (1984) and Saegesser (1984) concur by adding that most students who concentrate in the non formal activity of their interest is likely to perform better in that particular activity.

Scholars such as Gillies (1986) are of the view that students need to specialize in a given game to ensure effective participation in order to yield maximum benefits both physically and academically. He goes further and says that specialization by students in high school appears to be growing and as a result of this, most school administrators are making an effort to implement it, Hill and Hensen (1987) define specialization in an activity as the limiting participation to one activity which is practiced, trained for and/or competed in on a year round basis.

Hill (1988) is another proponent of specialization. He believes that a certain degree of specialization is necessary for optimal individual performance in games programs. He cites the benefits of specialization as development of refined skills in games, fulfillment of desire to achieve excellence and increased recognition and upward mobility. He concludes by saying that specialization can help in avoiding burnout so that a student is tired when it comes to time to study.

Should students be allowed to only take part in games programs that interest them? Griffith (2004) argues that teachers and students should not be forced to take part in every game offered

participate in that which interests them most. Furth and Wachs (1974) say that the demand for participation in many games programs need to be lowered or even removed to allow the learners to participate in that which interests them. They reason that this ensures that the learners work successfully at their appropriate level or pace. They believe that individual differences should be considered and given priority. Benson (1971) shares a common view with Frankel and Masters (1956) on interests on games programs among learners. They say that certain activities are designed for a specific gender and the opposite sex should not be forced to participate in them. They give an example of fast and energetic games that permit the free release of emotional and physical tension so characteristic of boys.

Staffo (1991) says that most African schools have failed in utilizing maximally from games programs in that they have bad intentions with these activities. He says that the biggest criticisms of high school games programs come from over emphasis on winning. He goes on to say that this occurs when administrators, parents and the community expect and in some cases, demand it, thus resulting year round training programs , pressure students to concentrate on one activity, and require coaches to win in order to keep their jobs. He again says that another thing that draws students away from taking part in games is injuries. He argues that there are reported cases of injuries suffered by high school athletes. These injuries can lead to permanent injuries or even the school incurring huge expenses on the casualty. He believes this is one of the major reasons as to why students keep away from games programs especially the very physical games.

óOne thing that is for sure is that within the organizational structure, the person who has direct contact with the learner needs to be a trained personnel in that particular gameô (Hollrach,2004).

wledge in a given game is what brings about poor implementation of games programs. He feels that universities and colleges need to train enough personnel for games programs just the way they do for the formal curriculum. He proceeds to say that if we have a specialist in the different games programs, drama, farming, clubs etc., then the learners will perform equally better as they do in subjects like English, Mathematics, History etc. He proceeds by saying that once these people have been trained in their areas of specialty, and dispatched to the ground, they then need to also be provided with enough materials and equipment to enable them implement these games programs well and effectively to the maximum. According to Lisella and Serwatka (2007), a school that accepts to carry out games programs yet does not have enough human resource competence is doing a lot of disfavor to its clients, the students, and should just close down. They advise governments to step in and ensure that each school has trained personnel in the areas of games in the school for the sake of the proper implementation of games programs.

Raymond and David (2005) liken a school that does not have enough material and personnel to a classroom without textbooks and teachers. He argues that since games programs are an essential part of the school curriculum, schools need to struggle to ensure that they have enough materials for implementing games programs. Fletcher and Tobias (2006) concurs but says that it would have been better had the schools looked for materials and gadgets that can be used both in the field and in the classroom but do not mention or give examples of the said machines. Allesi and Trollip (2001) give suggestions which do not seem to be able to work in almost all developing countries they suggest the employment of multimedia facilities in games programs implementation. This suggestion can easily apply to the developed countries and might be

maybe in thirty years to come.

Fortune and McKeen (1987) have a solution to the problem of lack of trained personnel in games programs in Kenyan secondary schools. They suggest in-service courses or seminars which will help train these people in charge of games programs, and in the end they will become experts in their areas thereby employing the most effective strategies when implementing games programs. Freitas and Grifiths (2008) agree with what Fortune and McKeen (1987). They advise schools to move with times and employ techniques that will help implement games the way it should in the 21st century. Old and obsolete methods of implementing games programs need to be abolished. They encourage schools and school heads to be open to change and desist from resisting it.

He is strongly supported by Alexandria (2004) who argues that a school that implements games without an administrative structure is like a government that runs without ministries. She says that those who hold offices within the defined structure need to be given a free hand to carry out their functions, but a lot of co-operation among the stakeholders is the most important aspect. She therefore, concludes by saying that those at the top of the administrative organizational structure should always be evaluating how the non-formal dimension of the curriculum is implemented and should run away from the norm in most schools where the school heads do not bother to inquire whether games are implemented or not.

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According to a report appearing in a local daily dated 23rd November 2007, in Kenya we have very few trained personnel in our high schools who handle games programs. The report says that those with interest are the ones who are allowed to handle the activities with an exception of a few schools which have trained drama teachers. What actually happens in Kenyan secondary schools, according to the report, is that teachers who are given to be in charge of these games go out and hire specialists like coaches in games who come and prepare the teams for competitions. The teacher is only left with the job of organizing how these activities are carried out.

Ondiek (1986) blames the shortage of personnel in games programs to the curriculum developers. He says that training of personnel is an important aspect when a new curriculum is being developed. If it is not done, than the implementation of this new curriculum becomes difficult. He goes further to state that personnel training is an important component of curriculum development because it is the training of personnel involved or to be involved in improvement of the curriculum and in the implementation of the new curriculum. He says the most important category in this component is the teaching force. He is quoted as saying

omponent of curriculum development but here in Kenya, curriculum developers usually concentrate in the learning opportunities, syllabi, textbooks and so on while they do very little about the personnel development or training.ô

Mwangi et al (2015) and Wanjohi (2016) conducted similar studies on the role of co curricular activities on social development among students in secondary schools in Kenya. In their findings, they state that participation of students in the co curricular activities helped them to gain certain social values such as discipline, tolerance, co operation and spirit of team work. This plays a very big role in forming the attitude of students towards co curricular activities and games in particular. Once these values are obtained, then the students will form a positive attitude towards games programs.

The Literature reviewed in this section dwells with attitude as a factor in the implementation of games programs. The relationship between studentsô attitude towards implementation of games programs and academic achievement has not been clarified in these studies. The key question remains to be answered ñ is there any relationship between attitude towards games programs and academic achievement?ò This study sought to establish the relationship between studentsô attitude towards games programs and academic achievement in secondary schools in Rongo Sub County.

ames programs and their effect on students' academic achievement

For the proper and effective implementation of games programs, there are some and methods that need to be employed by those in charge of games programs. These are methods that have been suggested by specialists in games programs. It is not wise to just use one of them but to employ a variety of them for the success of games programs.

Fortune and McKeen (1987) list some methods that would make implementation of games programs effective. The methods include the following: employing conflict builders, team builders, physical builders and concentration, teaching group work, improvisation, developing a school policy on the implementation of non formal curriculum, employing a variety of learning methods-role playing, debates, group analysis, in-service, teamwork, video and audio methods-videos, slides etc., having an organogram (Administrative Organizational Structure.), establishing resource centers.

It is better to scrutinize each of these listed methods in the implementation of games programs, one at a time.

a) Employing confident builders, team builders, physical builders and concentration

Jacobson and Chase (1989) argue that confidence is an important aspect of success in every endeavor and students need to cultivate this virtue in whatever they do. Teachers need to employ methods that will help build confidence in the learners, this confidence makes the learner believe in themselves and do whatever they are doing well. The need of teamwork in every non formal activity is also very important be it in competition or not. Once the learner knows the

know they need one another for success. LaGuire (1982) concludes this by saying that if a learner agrees to concentrate in whatever he or she does then it will eventually end up well. All these virtues once developed in the learners, and then the teacher finds it easy to implement games programs.

b) Teaching Group work

According to Saylor and William (1979), Group work and teamwork go hand in hand. They proceed to state that teachers need to heavily let learners know that unity is strength, they need one another to succeed and once this virtue is planted into our learners, then the work of the teacher becomes easy, they will find no difficulties in implementing games because whatever is being done moves from ñmineò to ñoursò.

c) Improvisation

Improvisation is the art of utilizing the available resources. According to Sutherland (1997), not all schools have the required materials and equipment for implementing games. He says that the implementation of games should not stall just because of lack of facilities. He suggests that in such a case, the teacher, together with the learners need to improvise and use the available materials and resources. This will ensure that games are effectively implemented. Joekel (1985) agrees with Sutherland (1997)ôs idea of improvisation. He believes that improvisation is an aspect that needs to be cultivated in every teacher in charge of games. He goes further to say that a teacher who cannot improvise is not competent enough to handle games simply because he or she lacks creativity.

mplementation of games programs organogram

A school should have a policy guiding it on how games programs should be implemented. This policy will always be referred to and followed throughout. Some of the ideas that should appear in the policy are; the time for conducting games programs, how the learners and teachers should appear during these activities. Lisella and Serwatka (2007), argue that this policy is the one that should act as a guideline in the implementation of games programs. He goes further to say that the policy should define an organogram where each and everyone within the laid down procedure is assigned a duty and function which is clearly defined. Once people know their duties and roles then the implementation becomes effective.

e) Employing a variety of teaching/learning methods when implementing non formal curriculum

This is one of the best methods that teachers need to employ when implementing the curriculum, whether formal or non formal. A teacher should not be using one implementation method all the time, methods need to vary for the proper implementation. Joekel(1985) believes that teachers need to employ a variety of methods when conducting games and some of the methods that he suggests which effectively work are; role playing, debates, group analysis, workshops, in service, teamwork etc. The school can also use video and audio methods where the learners can be made to watch or listen to successful groups and imitate what they have seen and employ it in their lives.

ıd In-servicing

The Resource Center is where teachers and learners can keep their equipment and materials for games programs. They can also use these resource centers to practice and effect the non formal curriculum. This center acts s a laboratory for the non formal curriculum where demonstrations can be conducted and then later transferred to the fields, halls and farms. The learning resource center will definitely improve the implementation of games programs in any school. According to Indoshi (1999) in-servicing of teachers is crucial in the updating of teachers with the current and up dated means of tackling issues. This can effectively be employed in the case of the resource centers. Once these resource centers are up dated, the games teachers can always be visiting them to help them in updating their implementation of games programs. This is also in line with Pivec (2003) suggests on the issue of learning centers. They reason that these centers need to be availed within reach of teachers for improvement of service delivery.

The literature reviewed in this section deals with suggested methods for effective implementation of games programs. It does leave a gap by not suggesting clearly what methods of games programs implementation can be effectively used in the case of Rongo Sub-county. This study, therefore, addressed this issue by listing the most effective methods of implementing games which can be applicable in the case of Rongo Sub-County and other neighboring sub-counties in Lake regionand beyond. This was made possible in that most of the methods of implementation will be suggested by the students and teachers in the said sub-county, making it more applicable.

n in games programs and its effect on academic achievement

Implementation of games programs in secondary schools is not a smooth process. There are several challenges that games teachers do go through in the process of implementing games programs which influences the level in which a school reaches in their participation in games programs. One of the major challenges is budget constraints. When budget constraints result in elimination of educational opportunities for students, administrators should consider the exploration of options that are supported by research. That is the reason it is worth finding out if the level of participation in games programs affect academic achievement. Although some literature was found that indicated a positive relationship between level of participation in games and academics (Foltz, 1992; Howley& Huang, 1991), a need for more research definitely exists in this area.

Students do participate in games at different levels depending on the country. In Kenya for example, the highest level of participation is the East African regional level where students who win in their respective countries converge. The lowest level that a student can participate in games programs is the school level and this is the level in which most students participate. Most scholars have not written to show whether students who participate at the highest level do perform better in examinations than those who do not reach the higher levels. This study therefore, intends to fill this gap by comparing the performance of students at the different levels of participation in games.

Performance is the outcome of education- the extent to which a student, teacher or institution has achieved their educational goals. This is the main objective that all students aim at when they go to school. The big question that comes up is whether they all pass or some do not. According to Magnuson(2007), academic achievement is commonly measured by examinations or continuous assessment but there is no general agreement on how it is best tested or which aspects are most important-procedural knowledge such as skills or declarative knowledge such as facts Thomas (2011) also attests to this fact. Von Stumm (2011) on the other hand says that academic achievement is something you do or achieve at school, college or university-in class, in a laboratory, library or fieldwork. It does not include sport or music. He proceeds to say that an academic achievement , such as graduating 1st class, is sometime a purely quantitative matter, while having the findings of lengthy, comprehensive research published by a recognized journal is also a notable academic achievement.

Why do some students perform better than others in exams? Tomporoski (2008) argues that individual differences in academic achievement have been linked to differences in intelligence and personality. Students with higher mental ability demonstrated by IQ tests and those who are higher in conscientiousness tend to achieve highly in academic settings.

High school life can be stressful, although it is undoubtedly one of the most memorable experiences in oneôs life. It represents a critical developmental period for both late adolescence and young children (Yakubu,2012). Social factors such as romantic relationships, organizations and clubs, and sport activities have been found to have effects on studentsô academic performance. The social factors affect academic performance in times of time demanded and the psychological state they may cause. A student may be influenced to be involved in any of the

one strikes a balance between the stressful academic attainment and social activities.

The poor academic performance of most of our students in major external examinations had triggered so many accusations and counter accusations by various groups and individuals. Some had accused parents for their improper caring of their children at home and at school and others point fingers to students for their lackadaisical attitudes forwards their future progress and development while some had launched verbal and physical assault on teachers and school administration and some had blamed the entire education system. The experts in the country responsible for the coordination and administration of education in the country advised people not to put the blame on each other rather help the system to come up with a surmountable and lasting solution to the problem which is seemingly persistent

.

Kirui (2010) did an analysis of the extend of students involvement in games activities in secondary schools in Kenya. She discovered that the trend of schools reaching the national level of participation in sports is very predictable in Kenya. You can easily predict which schools would reach the nationals and easily predict who will win the championships. The same is applicable to who will reach the zone, and other lower levels of participation in games programs. Munuve (2011) conducted a study on the influence of participation in extra-curricular activities on academic performance of primary schools students in Kitui Central District, Kenya. She realized that extra curricular activities influence studentsô academic performance with varied effect of the influence depending on the specific extra curricular activity in which the particular students are involved in and the level at which the student reaches in participation. Mustapha

he implementation of games programs to the level of participation in games. He discovered that the higher the subjectsô participation in competitive games programs, the higher their academic performance, especially when they exhibit positive attitude towards participation in competitive sports.

The literature in this section dealt with the level of participation in games programs and its relationship with academic achievement. It is clear that this relationship has not been clarified by the different studies encountered. No clear relationship between level of participation in games programs and academic achievement has been elucidated. This raises a key question that remains to be answered. Is there a relationship between level of participation in games programs and academic achievement? It is important to address this question hence this study.

2.6 Relationship between students' participation in Games programs and Academic achievement

Games programs and co-curricular activities in general were once regarded as extra-curricular activities but due to their recognition of their importance, now they are regarded as co-curricular. Whether these activities have any relation with academic achievement or not, these are important in their own right due to many reasons.

Most of the classical and almost all modern educationists admit that education is not just memorization of certain facts, figures and skills but it is all round development of the students. So it is logical to think that games programs are an integral part of educational systems (Bashir &Hussain, 2012). According to Kimiko(2005), numerous studies have been conducted

xtra-curricular activities which games form part of, and academic performance. Guest and Schnerder (2003) say that researchers have found positive associations between extra-curricular participation and academic achievement. Although researchers agree that extra-curricular do, in fact, influence academic achievement, the specific effect that various activities produce is debated. A study conducted by the National Educational Longitudinal Study, found out that participation in some activities improves achievement, while participation in others diminishes achievement (Broh, 2002). Marsh and Kleitman(2002) concluded in their research that students participating in games and other extra curricular activities did better academically than students who did not.

Ahmed (2016) conducted a study on the participation in games program and its relationship to performance of college students in Kashmir Valley. He found that there is a link between participation in games programs and performance in education. He proceeds that participation improves academic performance. He argues that skills gained from doing games programs such as learning to focus and to improvise, could improve your academic performance. He continues to say that a healthy body can lead to a healthy mind, enabling you to write essays without procrastinating. The perspective of the Kashmir people is that participation in games programs enhances the physical and mental abilities of the participants, an idea that was confirmed by Ahmed (2016).

Games programs are part and parcel of the school curriculum and students should be allowed to participate in them fully provided that they are interested in a particular activity. According to Lumpkin and Favor (2012), games programs are part of the objective developed by schools and

lum. She does not shy away from linking games with better performance in formal curriculum. Darling et al (2005) concurs with this finding. They conducted a research concerning extra-curricular activities and their effect on the various aspects of development including academic performance. They found out that adolescents who participated in extra-curricular activities reported higher grades, more positive attitudes toward school, and higher academic aspirations than those who did not participate in extra-curricular activities.

Pachuki(2005)conducted a research on the effects of extra-curricular activities onstudentsô performance on scientific studies. He discovered that extra-curricular activities do promote both social and cognitive skills and have been found to improve grades. On the same line, Howard Torres, a Pediatrician and school health expert, states in his study of the relationship between physical activity and students performance that ñphysical activity improves that general circulation, increases blood flow to the brain and releases chemicals which may reduce stress and improve mood and induce a calming effect. He concludes that these advantages of participating in extra-curricular activities can improve achievement in school. These findings were later confirmed by Rona and Marites (2017) who conducted a study on the academic achievement of influenced by sports in selected universities in the Philippines. They discovered that there is a significant relationship between athletes participation in games programs and academic excellence.

According to National Federation of State High School Association (NFSHA), co-curricular activities support the academic mission of the school and teach students life long lessons as

oom (Black, 2002). Black found out that extra-curricular activities and academic achievement went hand in hand in the development process. Additional studies cited by Black(e.g, Dancun,2002; Gillman, 2001;Rombokes,1995) indicated that students who participated in structured extra-curricular activities were more likely to have a higher academic achievement and higher levels of commitment and connections to school.

Sudhi (2010) examined the effects of games programs on academic achievement of seventh-and eight grades. The study compared the academic achievement of participants in math and language arts. The study found out that participants outscored non-participants but the differences between them was not significant. The explanation given was that students who participated in games had a better social and academic outlook and concluded that participation in games clearly appeared to have influenced academic achievement positively.

Cocke(2002) says that youths receiving additional physical activity tend to show improved attributes such as increased brain function and nourishment, higher concentration levels, changes in body building affecting self-esteem, increased self-esteem, and better behavior which may all support cognitive learning.

Griffith (2004) believes that games programs play a beneficial role in the development of children into educate d and well-rounded students. He proceeds by recommending that games programs and sports have become such an integral part of schools and must be actively involved to ensure they complement student learning. He cites that some schools and institutions have placed conditions which students must meet before they are allowed to participate in any game

y that though games are part of high school experience, academic achievement should be given first priority and those who perform well in class are allowed to take part in games.

Some of the non-academic benefits of participating in games programs include: games provide extrinsic rewards to students and help them form bonds in school, participation in games creates intrinsic values for students, and athletic participation is related to identity foreclosure, particularly for males.

Bowman (2008) believes that games programs have provided reluctant students with specific talent-related groups of other students with whom they can identify and interact with in meaningful goal oriented contexts. He suggests some ways to increase at risk studentsô participation in games programs. He says that research has demonstrated that games have positive impact on at risk children. He suggests some ways to increase their participation: be sure that games are of interest to the student involved, develop goals for the program, have competent and skilled leaders and facilitators, provide economic assistance for struggling students, encourage parental support, and evaluate the program

La Guire (1982) gives an example of the Los Angeles School board that passed a rule that for a student to participate in any game program in the school he or she must have at least a grade of óCô This enables students who are interested in games to set a target to meet then later work towards excellence. Furth and Wachs (1974) however, disagree with La Guire (1982), they are of the idea that the demands put for students in order to participate in games programs need to be

learner to participate in that which interests him or her. They reason that this ensures that the learner works successfully at his or her own pace.

The role of games participation for high school students in the educational process has been a topic of debate for decades. Critics observe that games activities deflect time away from the classroom. Supporters of high school games and sports programs argue that games participation improves studentsô achievement motivation, improves studentsô grades, keeps them in school, raises their educational aspirations, helps them appreciate health exercise and fitness, helps them learn about themselves and learn to handle adversity, and helps them experience team work and sportsmanship (Feng,2006). Whether high school sport programs and games benefit or negatively impact the impact the academic achievement of student participants remains a topic of controversy. While the quantity of research literature in this field is growing, its uneven quality provides no evidence to afford a clear understanding of the nature on the issue.

The main objective of a student in school is to achieve higher and better grades and arguments have cropped to whether games do help students who take them up, do get good grades or not. Hollrach (2004) conducted a research in Iowa State University to find out if students who are involved in games do get better grades than those who are not involved. She discovered that there are several benefits that a learner would get by getting involved in games programs. The benefits include: enhancing both intellectual and social development of students, students learn character building lessons that they apply to their study habits and to their lives, learn life skills that benefit their studies, since games take time out of studentsô schedules. Therefore, students involved must plan their time wisely and efficiently to complete tasks.

ake part in gamesprograms have a greater advantage over those who do not when it comes to both academic and physical pursuits. These students will improve their ability to: concentrate over a prolonged period of time, being able to focus on the task at hand and block out distractions and negative thoughts, balance their time, both in and outside of school, and be balanced when physically active, relax and stay in control when in class, taking tests, doing homework, and participating in physical activities, exert appropriate amounts of power without undue stress, establish rhythm by maintaining regular schedules and routines, be flexible in order to establish better relationship with teachers and classmates, be open to new ideas and remain injury free, trust and act on instinct in order to enhance test scores, creativity, decision making and reactions, develop an attitude consisting of patience, perseverance and staying positive in order to see tasks through to completion.

Brown (2000) goes ahead to say that students develop and individualized plan for improving their grades and physical performance. Besides participating in a vigorous goal-setting process, students develop strategies to reach their goals. They also learn monitoring and evaluation techniques to keep them on track toward reaching their goals.

Brown (2000) says that games lift the self-esteem of young athletes. The American Psychological reveals that students who take part in non formal activities get time to expose their strengths and ability thereby helping them build selfconfidence to excel in whatever they are doing. If this self esteem is transformed to academic work then there is no reason as to why a student cannot perform well in academics.

How does a game help in the intellectual development of a person? Firding and Boyer (2007)

argue that games programs not only motivate learning but also enrich it. This emphasis is all the time on play and activities accompanied by the pleasures of competition that comes from success and childôs growing sense of mastery. This is the way to build his or her confidence, intellect and also to encourage further effort.

Isenberg and Jacobs (1982) argue that games programs can be used as learning tools to help students learn faster and better. This means that these activities can be used to instruct learners and equip them for examinations. Krulik and Rudnick (1984) declare that games for example, can be used to teach problem solving. They go ahead to say that studies reveal some positive transfer of knowledge form instruction in strategy games and problem solving. Besides that, students enjoy playing games and they have been involved in different kinds of games to prepare for the real-world situations virtually all their lives. These games programs self-motivate, unlike the routines of drills and practice; they can subtly lead students to investigate new problem solving techniques and they promote active rather than passive learning.

The American Sports Institute (ASI) gathered and reported on give years data comparing the grades of students participating in games programs with those who do not. At the beginning of the school year and again at the end, grades for all subjects were collected for those who take part in games and those who do not. Students who take part in games outperformed their counterparts who do not take part. They concluded that non formal activities, by its very nature has possibilities of tapping into a studentsô personal meaning system more than many conventional program, it helps students to succeed in all areas of their lives.

of Sports Medicine (ACSM) children who participate in vigorous physical activity such as sports and games programs perform better in school. The examination of activity and physical education compared to academic achievement shows the most active kids more often have better grades. The study is published in the August issue of medicine and science in sports and exercise, the official journal of ACSM.

Participation in games programs is an important criterion for determining social status of adolescents, (Holland &Thormas, 1995). They argue that participation in games programs is an important criterion for determining social status of adolescents (Holland &Thormas, 1995). They argue that games programs improve learnersô self esteem which is very important and necessary for their academic work. Gaylene (1992) agrees with them, but adds that participating in games programs do develop positive qualities and attitudes, and contributes to the total educational commitment. He proceeds to reveal that physical education and activity during the school day may reduce boredom and help keep kids attention in the classroom. He says that students who participate in games programs do get better grades because of the opportunity to be active during the school day, but enrollment in PE alone does not influence grades. The students who performed better academically are most active meaning those who participate in a sport or other vigorous activity have an edge over those who do not.

Students attend schools with the expectation of performing well in the formal curriculum and specifically academically. Games programs are part and parcel of a schoolsôroutine and learners are expected to participate in these activities while in school. Arguments have cropped up on whether games influence studentsôperformance or not.

n studentsô participation in games programs and their various psychosocial and psycho-educational factors provide mixed findings and influences an individualôs interest in an activity. The findings of a group of studies indicate that participation in games programs increased studentsô overall interest and commitment to schooling as well as their engagement in more student-teacher contact, more positive attitudes about schooling, and more parent-school contact.

Hollrach (2004) conducted a research in Iowa State University to find out if students who are involved in games programs do get better grades that those who do not get involved. She discovered that there are several benefits that the learner gets by taking part in games programs other than just academic benefits. Hausea and Lueptow (2004) say that accumulating research based upon cross-sectional designs has shown relationships between involvement in athletics and academic achievement and aspiration. They reveal that a previous research done by Coleman in 1998 concluded that athletics and games programs diverted athletes from academic programs. However, more recent studies question the interpretation for the effects of high school athletics upon academic achievement. Griffith (2004) complicates this relationship. He reasons that there is a remarkable little research on the interplay of games programs and academic achievement to warrant a definite conclusion.

A research by Lisella and Serwatka (2007) on the effect of games programs on academic performance of males and females found out that almost 50 % of the cases, male studentsô participation in games programs were associated with the lower achievement levels. For female students, the results were not definite.

ut it that ñparticipation in games programs leads to better academic performance.ò They cite a research by Phillips and Schofer in 1971 which reported elevated point averages of athletes during the seasons when the students were participating in games. Their other findings showed that athletes had fewer discipline problems, more aggressive, persistent and potentially leader-like individuals. According to Staffo (1991) students can learn many positive values from those who participate in games. He says that these values cannot be derived from any other part of a school curriculum apart from the games. His advice to students is that the key factor to the relationship between participation in games programs and academic achievement is how the individual athlete balances the demands of participating in games.

Griffith (2004) argues that schools in the Eastern African region that are games and sports oriented do misuse athletes and students for their own good. He cites examples where schools retain their students who do better in games irrespective of their academic achievement. Such students are retained in school long beyond their date of graduation just to represent the school in sporting competitions. He also cites instances where students go as far as using steroids and other performance enhancing drugs to make them perform better in sporting competitions.

Pupils do not go to school only to study, but to also showcase their potential in other fields like sports, dance and other activities. Pupils of Bhayani Primary School in Kisumu East talked on how they feel about sports and academics. Kevin Ndialo, a 13 year old standard eight pupil said ñthe activities help us stay fit and healthy. Being brilliant in academics is not the only thing we should aim at. Perfecting our talent in co-curricular activities help us to face the world.ò Henry

aid, ñit affords us the opportunity to develop our skills in other areas. It also builds self esteem in us because as soon as the pupil finds he or she is good in a particular activity, they will want to perfect that talent.ò Alex Ayiecho, a 13 year old standard seven, said that there is a common saying that goes: ówork without play makes Jack a dull boyô. He goes further to say that these games programs make the student break from class boredom and relax their mind. In the same school, Jennings Ochiengô, a 13 year old standard eight is quoted to have said that when one engages in co-curricular activities they come to realize that they have potential of doing something well, hence they try to perfect it. I think it helps us in developing our personality. In the same article, Allan Inungu is the captain of Kenya Union Premier League leaders, Gladiators (Strathmore University). He has emerged the 2011 Strathmore Universityôs sportsman of the year. He says that sport has been a major booster to this academic success. He proceeds to say that sports helps one to relieve stress and relaxes the mind which eventually enables one to grasp more in class.(Onyango Justice, December 19,2007)

Munuve (2011) conducted a study on the influence of participation in extra curricular activities on academic performance of primary school students in Kitui Central District, Kenya. He indicated that although some of the earlier conducted studies long before the assessing the influence of specific extra curricular activities or academic performance had indicated that there were positive correlations between students scholastic achievement with specific extra curricular activities there were still doubts whether all of such academic successes can be entirely pegged on participation in extra curricular activities. The study revealed that studentsô playing games, music and drama, those involved in volunteer community service work and the general social influence derived from participation in extra curricular activities improves studentsô academic

d that extra curricular activities positively influences studentso academic performance with varied effect of the influence depending on the specific extra curricular activities in which the particular student is involved in. The study recommended a mutual co existence of both extra curricular and formal curricular activities so as to allow the students to maximize in academic achievements. Gitonga (1989) agrees and cites similar findings on the relationship between games programs and academic achievement.

Anyango (2012) conducted a study on the influence of co curricular activities on academic achievement of public primary school pupils in Kisumu municipality Kisumu County Kenya. She examined the influence of co curricular activities on academic achievement. She came up with results which seem to contradict what most studies have found on the same topic. She found out that the more pupils participated in co curricular activities, the more their academic achievement deteriorated.

Since most Kenyan students have leisure time, they can borrow a leaf from Crowder (1989) who argues that students need to use their leisure time wisely and effectively. Students need to balance between academic achievement and games thereby not ignoring one at the expense of the other since both are of equal importance to the learner.

Based on the findings of the studies cited on the relationship between implementation of games programs and academic achievement, it has not yet been clarified on what is the exact relationship between the two variables. These inconsistencies in the relationship between participation in games programs and academic achievement have not been clarified. This study

ablishing the type of relationship between participation in games programs and academic achievement in Rongo Sub-County.

2.7 Summary

Chapter two examined related literature in terms of implementation of games programs and its relationship to academic achievement. Studentsô and teachersô perception of the implementation of games were discussed in detail. The chapter further discussed literature relating to the factors influencing studentô and teachersô perception in games. Factors such as attitude, availability of material and competent personnel, and administrative personnel were found to be influential in determining participation in games. The chapter also examined the methods that can be employed to ensure proper implementation of games programs. Finally, the chapter looked at the relationship between studentsô participation in games and academic performance. Different people hold different opinions and views towards games programs and a personôs view towards this dimension will highly determine how they will implement these games.

The studies reviewed her provide reference point of assessing the present status of implementation of games programs in secondary schools. As already shown in the studies, the situation in most countries and schools is discouraging in terms of quality and quantity. In particular, the games program curriculum intended is not carried out as wanted, consequently, there is mediocrity and biasness in the implementation. Most schools tend to put more emphasis on the formal curriculum at the expense of non-formal curriculum games inclusive. Hausea and Luelplow (2004) advice that whatever feelings and attitudes that we can have towards games programs, be it a student or teacher, should not be used to affect how it is implemented. They

s not in any way of less importance to the learner so it should also be effectively implemented just like the formal and informal dimensions of the curriculum.

Several professionals advice that for the proper implementation games programs, there should be an established organogram and policy for the implementation of games programs. They also argue that it is upon the curriculum developers to ensure that enough personnel is trained when a new curriculum is being developed to make its implementation effective and each school should ensure that all the factors affecting the implementation of games programs are put in place for the maximum benefit of the learners which includes excelling in their academic endeavors.

Researchers have indicated that student participation in games programs and other extra-curricular activities has a positive effect on student achievement.(Otto & Alvin,1997). Even if such participation has a positive impact for the participating students, the impact of games on academic achievement remains an open question. Many people consider participation in games in a school an important component of the overall educational component of the overall educational experience. Although several studies addressed this topic, the results have not been consistent. Games and other extra-curricular activities can have a positive impact on academic achievement (Cairns, 2003). However, not all research on games and extra curricular participation has produced convincing results with regards to students performance. Hunt (2005) looked at the relationship between academic achievement and extra-curriculum participation by investigating whether participation affects achievement. He concluded that participation in games programs showed no consistent academic results. Previous studies have investigated

articipating and non-participating students; however, the results are inconclusive.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter deals with the procedures and techniques that were used in carrying out the study. It gives a description of the study area, research design, target population, sample and sampling procedure, research instruments, validation of research instruments, data collection procedure, and data analysis techniques.

3.2 Research Design

This study was based on the survey, ex post facto, and correlation designs. Goetz and Le Compte (1984) advised that the main criterion for selection, development and implementation of a research model is whether the design allows the study to effectively address the research goals and questions. The survey design was used in this study because it gave the researcher a chance to get the feelings and attitudes of the respondents on the implementation of games programs through questionnaires, interviews, and observation schedule(Orodho, 2005). It also helped in analyzing the timetables to help see how much time is allocated to games programs and whether the schools stick to this timetable or not. The information gathered here was used to evaluate the implementation of games programs in secondary schools in Rongo Sub-County.

The Ex Post Facto research design was used on the grounds that the implementation of games programs in schools can be effectively studied by analysis of the day to day methods of implementation and the methods used (Gay, 1996). For example, different games programs cannot be arranged in order to study their implementation, but can be studied by document

tion of questionnaires on how games programs are implemented. The Ex Post Facto design tries to find out the cause of the existing differences in the status of groups where evidence exists before the study is done. This study intended to compare participation in games programs and academic achievement. This was done by examining already existing RAUJET sub-counties examination documents in the selected schools. In this study, participation in games was the main predictor variable while academic achievement was the criterion variable. Other variables included: administrative support for games programs, attitude towards games programs, methods employed in the implementation of games programs and level of participation in games programs. The extraneous or intervening variables were time and funds.

According to Cohen and Manion (1994), correlational research relies on its exploratory suggestive character and does yield some measures of association. A correlational study involves the collection of two or more sets of data from a group of subjects with the aim to determine the subsequent relationship between two or more quantifiable data (Turkman,1994). Gay (1996) asserts that correlational research attempts to determine whether, and to what degree a relationship exists between two or more quantifiable variables. The correlation design was therefore, used in this study to help establish the relationship between studentsô participation in games and their academic achievement. The design assisted in the analysis of the nature and magnitude of the relationship between participants in game programs, attitude, methods for implementing games and the level of participation and academic performance. Gay (1996) proceeds by saying that correlational studies typically study a number of variables believed to be related to a major, complex variable, such as achievement. Being that this study was interested in

a number of variables like attitude, methods used in implementation of games programs, level of participation in games programs, participation in games programs with their academic achievement, the researcher saw it fit to use correlational design.

3.3 Study Area

This study was carried out in secondary schools in Rongo Sub-County, Kenya(See Appendix, J). Rongo Sub-County is one of the sub-counties forming the wider Migori County. It borders Kisii County to the east, Awendo Sub-County to the south and Homa Bay county to the north. The latitude and longitude of Rongo Sub-County are 0^0-$47^0 60^0$N and $34^0 36^0$E respectively. Administratively the sub-county has two divisions namely Rongo and Chamgiwadu. There are a total number of 50 secondary schools in the sub-county (1 National, 11 regional, 27 county, 8 private.) The study was conducted in Rongo Sub-County because hardly do 2 schools proceed to the national level in sports competitions in a single term. Very few schools from Rongo Sub-County qualify to represent Lake region at the national level in games competitions because they get knocked out by schools from other counties within Lake region. The same schools in Rongo Sub-County do not perform well in the national examinations. This has led to a public outcry from parents and other stakeholders which need attention. (Rongo Sub-County Office, 2009; Onyango Justice, December 19, 2012).

3.4 Study Population

The target population for this study was 50 head teachers, 50 games teachers and 2000 Form Four students. All the 50 secondary schools in the sub county were offering games to their

eachers because they are the ones in charge of disbursing funds and offering administrative support to teachers and students. They are also the overall supervisors of the implementation of games programs in a school. Games teachers were used in the study due to the fact that they are the patrons in charge of guiding the learners during games, and are influential in determining the methods of play (Fullan, 2001). They are also the implementers of games programs in a school. Form four students were used in the study because their long experience in games and it was their results in the mockexams which was used as the academic variable in the study.

3.5 Sample size and Sampling Techniques

The study comprised head teachers, games teachers, and students. Simple Random Sampling technique was used to select the pilot sample. The study then used saturated sampling technique to select the 46 head teachers and 46 games teachers. All the head teachers and games teachers were used in the study because 46 is a manageable number that does not need sampling. The study also used the simple random sampling technique to include 700 Form Four students from the 2000 in the sampled schools. This was done to help compare participation in games programs and academic achievement. The samples represent at least a third of the total population (Gall, 1996). The sample frame for the study was as shown in Table 3.0

Category of Respondents	Population sizesize (N)	Sample (n)	Percentage of sample (%)	Sampling method
Head Teachers	50	46	90	Saturated
Games Teachers	50	46	90	Saturated
Form Four students	2000	700	30	Simple Random Sampling

3.6 Research Instruments

Data for this study was collected using questionnaires, interview schedule, observation schedule and document analysis guide as described below.

3.6.1 Students' Questionnaire

Questionnaires helped the researcher gather data on administrative support for games, studentsô attitude towards the implementation of games programs, the factors affecting implementation of games programs, effective strategies for the implementation of games programs and the relationship between academics and participation in game programs(See Appendix A). The same data helped the researcher establish the studentsô view of the implementation of games in secondary schools. The questionnaires held the confidentiality of the respondents and did save time. They were also ideal in obtaining data from a wide geographical area like Rongo Sub-County.

Questionnaires were used to help the researcher gather data on administrative support for game, games teachersô attitude towards the implementation of games programs, the factors affecting implementation of games programs, effective strategies for the implementation of games programs and the relationship between studentsô academic achievement and participation in games programs (See Appendix B). The same data helped the researcher establish how games programs are implemented in secondary schools. The questionnaires held the confidentiality of the respondents and did save on time. They were also ideal in obtaining data from a wide geographical area like Rongo Sub-County.

3.6.3 Head Teachers' Interview Schedule

Interviews for head teachers were supplement to the questionnaires, and were also used for the purposes of establishing rapport with the subjects in order to gauge the reliability of the responses they made in the questionnaires. Interview schedules consisted of structured items (See Appendix C). The head teachersô interview schedule was used to help gather data on the support that the administration gives to the implementation of games programs, the factors that affect studentsô participation in games programs, the techniques used in the implementation of games programs, the level of participation in games programs that the students have reached, the challenges faced in the implementation of games programs, how to overcome these challenges, the relationship between participation in games programs and academic achievement.

Observation schedule was used by the researcher to help observe how games programs were implemented in the sampled schools. It helped the researcher establish the place of games programs in the secondary school curriculum (time allocation on the timetable). The researcher used unstructured schedule to help collect observeddata in the form of descriptive data on matters such as the number of times games programs were allotted in the time table, the facilities and equipment available in the school (See Appendix D). Observations were carried out in the months of May and June, 2010 in the secondary schools in Rongo Sub-County. The direct observation was used in this study because it is useful for evaluating aspects of learning such as skills which is difficult to evaluate with paper-pencil method (Gronlund, 1985). The observation schedule also helped to ascertain the answers given in the questionnaires regarding to the availability of facilities and equipment.

3.6.5 Document Analysis Guide

The researcher employed this strategy to get insights on the implementation of games programs in the secondary schools. It was used to gather information based on organizational structures of implementing games programs the schools and the studentsô achievement and performance. The researcher perused the RAUJET examination results of the respondents. Document analysis helped the researcher to approve or disapprove the responses made in the questionnaires, interviews and the actual practices. The document analysis guide is attached as Appendix E.

h instruments

Before the research instruments were put into use, they were subjected to validity and reliability tests. Once the instruments had been developed, they were piloted on a small group of representatives. The pilot study was carried out in four secondary schools in Rongo Sub-County. The inconsistencies and weaknesses noted were corrected to make them reliable.

3.7.1 Validity of research instruments

Validity of the research instruments is the extent to which it can measure what it is intended to measure (Kerlinger,1993). To validate the instruments, experts in the area of curriculum studies and research methods at Maseno University were consulted to examine the tools of data collection with the view to check on their content and face validity. This was to clear the instruments of unclear directions, vocabulary, poor sentence, poorly constructed items, ambiguity, improper arrangement and identifiable pattern of answers. Their suggestions were used to revise the questionnaires, interview schedules, and observation schedule before preparing the final copies.

3.7.2 Reliability of research instruments

Reliability is a measure of the degree to which a research instrument yields consistent results after repeated trials (Mugenda&Mugenda, 2003). Cohen and Manion (1994) assert that reliability of a research instrument refers to the extent that a measure of a concept would deliver the exact same results no matter how many times it is applied to random members of the same target group.The researcher took measures to ensure that the study generated important information

e population. A pilot study was done on the research instruments in 4 schools that were not part of the study.

The pilot was intended to identify any unforeseen items during the initial development of the instruments and also to determine field experiences. Before the instruments were used for gathering data for the study, a pilot study was conducted in four secondary schools in the area. This was to ensure that the instruments provided the required information and identify any problems the respondents would have encountered while responding to them. The pilot also provided an opportunity to the researcher to ascertain the extent to which the results would be consistent and give an accurate representation of the total population under study.

The test-retest method was used to estimate the reliability of the instruments because it involves administering the same instrument to the same respondents under the same circumstances on two occasions and correlating the scores (Rust &Golombok, 1999). The instruments were administered to the same respondents within an interval of 2 weeks. The responses to the items were analyzed accordingly. Specifically, the responses to the items on the questionnaires were assigned numerical scores. Those items requiring the responses to range from ñstrongly agreeò to ñstrongly disagreeò were scored from 5 to 1. The scores of the responses from the questionnaires used on the two occasions were used to calculate the reliability coefficient using Cronbachôs alpha (Darleen, 1997).

Questionnaires were administered to 20 students participating in games programs (5 from each school) and to 4 games teachers (1 from each school), interview schedules were administered to

and to 4 games teachers (1 from each school) while the observation schedule was completed by 4 games teachers (1 from each school). This was repeated after a time span of 14 days using the same group of respondents. Pearson product-moment correlation coefficient was calculated on the scores for the first occasion and the scores on the second occasion for each respondent to determine the instrumentsô reliability. Test-retest reliability for students questionnaire (n=20) was found to be 0. 83 which indicated a very high correlation that was found to be significant at 5% level. The value for r for games teachers questionnaire (n=4) was 0.87, the games teachersô interview schedule (n=4) was 0.79, while the head teachersô interview schedule (n=4) was 0.80. The observation schedule (n=4) had a coefficient of stability at 0.89. The test reliabilities attained did prove that the research instruments were reliable (Nunnaly, 1978).

3.8 Data Collection Procedures

The researcher obtained a permit from the National Council for Science and Technology through the School of Graduate Studies, Maseno University. A copy of the permit is attached as Appendix G. This was for smooth entry into the field. The schools were then mapped out for the purpose of selecting the sampled schools. Thereafter, notification letters were sent to the DEO, Rongo Sub-County and to the head teachers of the respective schools. The researcher visited the sampled schools to meet the head teachers and talked to them about the intent to collect data from their institution, clear with them by making necessary arrangements for data collection. Thereafter, data was collected.

inistered as follows: the researcher administered the head teacherso interview, games teacherso and studentsô questionnaires directly to the respondents. These actual visits to schools made it possible for the researcher to clarify the purpose of the study to the respondents, and seeking further clarifications from the responses regarding some of their responses. The researcher asked the head teachers and games teachers to spare time for the interview and for filling their questionnaires respectively. They were told of the importance of the study then assured of confidentiality of their responses. The head teachersô responses for the interview schedule were given to all the head teachers in the sampled schools then answers recorded in the researcherôs notebook.

The researcher then requested to be allowed to administer questionnaires to the students sampled for the study. The sampled students were then assembled in a room where they were guided by the researcher on how to fill the questionnaires. The students were also assured of the confidentiality in handling their responses. The students were then given questionnaires and allowed to respond freely. The questionnaires were then left with the students to give them more time to complete the questionnaires.

The researcher visited the schools after two weeks to collect the studentsô questionnaires and observation schedule for games facilities. In cases where students lost their questionnaires, more were given to the same students so as to ensure that those who had not responded were not systematically different from those who had in order to reduce both external and internal invalidity based on experimental mortality and to reduce potential increase in sampling error.

er visited the 46 schools and used the observation criteria to observe the fields and equipment in the 46 schools, during the second term of the year 2010. The researcher also observed the games programs sessions in the 46 schools. Regarding the document analysis, the researcher studied the school time table to see the allocation of time for games in the school time table. Information regarding level of participation in games programs was verified from team lists and match sheets got from the zonal sports organizers, sub-counties and regional schools sports secretaries. The researcher also analyzed the RAUJET (Rongo, Awendo, Uriri, Joint Examinations Trials) examination results for the students from the masters and mistresses, deputy head teachers and head teachers in the respective schools. This was to help correlate academic performance with participation in games programs.

3.9 Ethical Issues

The researcher began by seeking for permission to conduct the research from the sub county education office. The researcher then proceeded to seek for permission from the respective head teachers. Once the permission was granted, the researcher sought the consent of the respondents in order to be allowed to involve them in the study. The respondents were informed of the confidentiality of their responses. Their names and identity would not appear anywhere in the study and were assured of their anonymity. They were assured that the data gathered from them would be used only for research purposes.

3.10 Data Analysis Procedures

Data collected was sorted, edited, coded, classified according to groups and then tabulated ready for analysis. Quantitative data was analyzed using descriptive statistics i.e. frequency counts,

and standard deviation. Inferential statistics i.eProduct Moment Correlation, Bonferroni Post Hoc Multiple Comparisonwere also used. Qualitative data was received in verbatim, and reported according to emerging themes after which a thematic analysis was done.

Pearson Product moment Correlation was used to investigate relationship between studentsô attitude towards games, methods used in games programs, studentsô participation level and academic achievement. The Bonferroni Post Hoc Multiple Comparison Test is an analysis method that was used to establish multiple levels of participation to prove relationship with academic achievement. Jaccard (1984) says that Bonferroni Post Hoc Multiple Comparison Test can be used to determine the significance between group means in an analysis of variance setting. It is very conservative when a large number of means are being compared. The independent variables were measured in terms of a five point Likert scale while the dependent variable was measured in terms of mean scores in RAUJET.

CHAPTER FOUR

LTS AND DISCUSSION

4.1 Introduction

The purpose of this chapter is to analyze the variables involved in the study and estimate the model described in the previous chapter. Data collected was both qualitative and quantitative. Quantitative data was analyzed using descriptive statistics i.e. frequency counts, percentages, means, tables and graphs, and also inferential statistics such as Pearson Product Moment Correlation. Qualitative data was received in verbatim and reported. The objectives of the study were to;

1). Establish the relationship between administrative support in games programs and academic achievement in Rongo Sub County secondary schools.

2). Find out the relationship between studentsô attitude to the implementation of games programs and academic achievement in Rongo Sub County secondary schools.

3). Establish the relationship between methods used in the implementation of games programs and academic achievement in Rongo Sub County secondary schools.

4). Investigate the relationship between levels of studentsô participation in games programs and academic achievement in Rongo Sub County secondary schools.

5). Examine the relationship between participation in games programs and academic achievement in Rongo Sub County secondary schools.

4.2 Contribution of Administrative support towards games programs and Academic Achievement

Research objective one sought to establish ways in which the administrative support games programs in the study area. Consequently, administrative support was analyzed first descriptively

onnaires and then thematically through the head teachers interview schedule.

4.2.1 Students' views on the administrative support towards implementation of games

Administrative support towards implementation of games programs was measured using eight items. Student respondents were asked to indicate their level of agreement to the eight items which were designed to reflect some of the ways through which the administration could support implementation of games. Responses were elicited on a 5-point scale (1-undecided, 2-strongly disagree, 3-disagree, 4-agree, 5-strongly agree).

Table 4.1: Students views on Administrative Support for Implementation of Games

Administrative support	M	SD
-Equipment, facilities, and materials are purchased and availed	4.46	.877
-There are structures in place to help the administration in implementing games.	4.13	1.346
-The school administration provides funds to support games	4.73	.660
-The school administration ensures games teachers are always present when games are implemented.	3.74	1.306
-The school administration avails enough time for games.	3.21	1.330
-Qualified games teachers are employed to take charge of games.	3.10	1.222
-Schools that cannot afford equipment and facilities are allowed to improvise these equipment	3.99	1.331
-The administration ensures the school keeps games records.	4.19	1.216
Overall Mean	3.91	

Source: Survey Data (2010)

Results presented in Table 4.1 indicate that most students agreed with most items. The results were interpreted on a scale of 2 and 3 meaning disagreement and 4 and 5 meaning agreement. Students agreed that the administration provides funds to support games programs (M=4.73, SD=0.660). They also tended to agree that equipment, facilities and materials are purchased and

e administration ensures the school keeps games records (M=4.19, SD=1.216), that structures are put in place to help the administration in the implementation of games (M=4.13, SD = 1.346); that schools improvise equipment and facilities they lack (M=3.99, SD=1.331); and that the administration ensures that games teachers are always present when games programs are implemented (M=3.74, SD=1.306). The students however disagreed that enough time is availed for games programs (M=3.21, SD=1.330) and that qualified games teachers are employed to take charge of games programs (M= 2.10, SD=1.222).

These results imply that students perceived highly efforts undertaken by the administration to support implementation of games programs. They were particularly encouraged by provision of funds to support games programs.

4.2.2 Teacher Perceptions' of Administrative Support towards implementation of games programs

Teacher perceptions of administrative support towards implementation of games programs were measured using a seven item scale. Respondents were asked to indicate how effective the administration was in supporting implementation of various games programs. Responses were elicited on a 5-point scale (1-undecided, 2-most effective, 3-effective, 4-least effective, 5-not effective).

ministrative Support for Implementation of Games

Games Activities	M	SD
-Equipment, facilities and materials are purchased and availed	3.74	.444
-Qualified teachers are employed to take charge of games.	3.96	1.186
-The school administration avails enough time for games.	1.93	.998
-The school administration provides funds to support games.	1.91	1.170
-There are structures to help the administration implement games.	1.74	.976
-The administration ensures games teachers are always present when games are implemented.	2.39	1.358
-The school keeps games records	1.67	.967
Overall Mean	2.34	

Source: Survey Data (2010)

As shown in Table 4.2, the average score in most items was approximately 2.00 a value coded to represent most effective. The results were interpreted on a scale of 2 and 3 to mean effective while 3 and 4 to mean ineffective. The results indicate that teacher respondents tended to rate the administration most effective in its support of games programs implementation. In particular, teachers found the administration to be most effective in availing enough time for games programs (M=1.93, SD=0.998); providing funds to support games programs (M=1.91, SD=1.170); initiating structures to help in implementation of games (M=1.74, SD= 0.976); keeping games records (M=1.67, SD = 0.967); and ensuring that games teachers were always present when games were implemented (M=2.39, SD=1.358). The teachers however, found the administration support to be least effective when it came to purchasing and availing equipment, facilities and materials (M=3.74, SD = 0.444) as well as when it came to employing qualified teachers to take charge of games programs (M=3.96, SD= 1.186).

The implication of these results is that teachers in Rongo Sub-County approve of the efforts undertaken by schools administrations towards implementation of games. In this regard, the

in which administrators in schools in Rongo Sub-County support implementation of games programs include: providing structures, providing funds, ensuring that games programs teachers were always present when games programs are on, keeping games records, and to a lesser extent purchasing and availing equipment, facilities and materials.

4.2.3 Head Teachers' views of administrative support towards implementation of games programs

Thematic analysis was used to analyze responses from interviews conducted with the sampled head teachers on the ways that administration supports the implementation of games programs. Two questions were used to elicit responses from head teachers regarding the ways administration support implementation of games programs. First, the head teachers were asked whether the school administration supports the implementation of games. Second, they were asked to enumerate ways in which the school administration supports games programs.

Interviews were held with the 46 head teachers involved in the study. Names and identity were changed to protect participant confidentiality. The participants were asked to state if the school administration supported the implementation of games programs or not. They were then asked to mention some of the ways the administration supported the implementation of games programs incase they did support it. One major theme of ways of supporting games programs emerged.

ents as an administrator and the efforts they make to support the implementation of games programs. One obvious answer that they gave was that the school administration did support the implementation of games programs. One head teacher said:

> ñThatôs an obvious question with an obvious answer. Of course, we do support Games programs as administrators.No head teacher would give you a NO for this Question.ò

When asked of the ways they do support the implementation of games programs as administrators, they gave a variety of ways and means. John, one of the head teachers had this to say:

> ñOne of the major ways that administration supports games programs is by Providing the necessary funds necessary for the implementation of games. This Proves how important the administration is in the implementation of games Programs.ò

He proceeds to say that:

> ñWithout funds there would be no games. The funds are necessary because they Are used in the purchasing of equipment and the necessary facilities. Without These, no games can take place.ò

Peter, another head teacher said that the administration supports the implementation of games programs by ensuring that a teacher is assigned the role of being in charge of games. This ensures that there is an element of responsibility in the implementation of games programs. He said:

> ñOnce a teacher is assigned the responsibility of being in charge of games, the Head teacher rests assured that everything is under control. The role of the head Teacher is to ensure that there is a teacher each and every time students are out in The field playing games.ò

ñIncase a teacher specialized in a game cannot be found within the school, the Administration goes an extra mile and hires coaches from outside school to help In the preparation of the teams for competitions. This method though does not Work well because it compromises on the discipline of the students.ò

Carolyne, a head teacher in one of the girlsô schools within Rongo Sub-County stated that the head teacher as the main administrator as no option but closely supervise the implementation of games in her school. She said:

ñVery close supervision of the implementation of games programs ensures Efficiency. Once in a while I do go to the field to see how activities are going on In the fields. When the students and teachers also see me there, they are Motivated.ò

She proceeds to say that:

ñShe ensures that games records are well kept. Records of equipment and Facilities must be up to date. There must also be records of any trophies won By the school. This ensures that the schools saves on the idea of buying Equipment and facilities too often.ò

All the 46 head teachers who participated in the study indicated that rewarding teachers and students who excel in games programs is a must. One of the stated:

ñTeachers who excel in games need to be rewarded. Teachers can be rewarded in Monetary terms or other ways to make them feel appreciated. Students who excel Can also be appreciated by being given certificates or any other way to motivate Them but not in monetary terms.ò

Results from the observation schedule showed that all schools within Rongo Sub-County had football fields situated within and without the school compound. Netball fields were conspicuously missing in the boysôschools. All the girls and mixed schools had netball fields. 46 schools had volleyball fields, 4 schools had rugby fields, only 3 schools had hockey fields and 46

observed that 46 schools offered football as a game, 31 schools offered netball as a game, 46 offered volleyball, 4 offered rugby as a game, only 3 offered hockey as a game to its students and 46 offered handball as a game to its students. It was also observed that very few schools within Rongo Sub-County had adequate equipment to aid in the proper implementation of games programs. 5 schools had 2 footballs to be shared amongst all the students who played football, 31 schools had one netball each, 6 had 2 volleyballs while 40 had one volleyball each. The 3 schools that played hockey had one field each with enough hockey sticks and cocks. The 4 schools that played rugby all had a rugby field which doubled up as a football field. The rugby antennae were erected on top of the football goalposts. The 46 schools that offered handball had several handballs which were shared by the students.

The findings in the current study that schools administrations in Rongo Sub-County proactively support implementation of games programs is consistent with the views of Hollrach (2004), that those at the top especially head teachers need to follow the laid down structures in ensuring that games programs are implemented. Consequently, by initiating structures to implement games programs, they are able to check whether games activities were being effectively implemented. This further concurs with the views of Dixon (2004), which indicated that smooth and effective implementation of games programs depends on the understanding and coordination among individuals within organizational structure of a school.

The finding regarding existence of structures to oversee implementation of games programs supports the findings by Alexandria (2004). According to this author, a school that implements games programs without an administrative structure is like a government that runs without

es in Rongo Sub-County schools therefore, implies that teachers charged with responsibilities to oversee games programs have a free hand to carry out their functions as one of the head teachers comments during the interviews;

> ñI believe that games programs cannot properly be implemented if the school Administration does not offer full support. The games teachers are given full Support then given a free hand to run the games programs within the requirements Of the ministry of education,ò

The finding further concurs with the findings of Baron (2007) which indicated that schools ought to have functional departments fully supported by the school administrations for effective implementation of games. Such departments according to Hollrach (2004) facilitate easy and smooth operations of the school games departments.

The perceptions by both students and teachers that the administration does support games programs are consistent with the findings by Elmore (1996) and Payne (2000). These authors discovered that most schools gave support for the implementation of games. Besides, the finding that funds were provided for the purchase of materials supports the views of Raymond and Falvo (2005). The two observed that teachers tend to shy away from games whenever materials and facilities are not available. In support of these notions, Alessi and Trollip (2001) noted that schools needed to avail materials and facilities for proper implementation of games programs.

4.2.4 The Relationship between administrative support for games programs and academic achievement.

To investigate the relationship between studentsô administrative support for games programs and studentsô academic achievement, product moment correlation was used. The mean score for the

ort for games programs was (M=3.9126) while the mean score for academic achievement was (M= 6.6614) as shown in Table 4.3. .

Table 4.3: Mean scores for administrative support and academic achievement

	Mean	SD	N
Administrative support for games	3.9126	0.50028	700
Final grade in mock exam	5.6614	0.81716	700

To compute the correlation between administrative support for games programs according to students and their academic achievement, Pearson product moment correlation was used. A measure of the mean of studentsô administrative support for games and the mean score (academic achievement) for each individual was correlated.

The results of the correlation between studentsô administrative support for games and academic achievement is shown in Table 4. 4

between administrative support for games programs

		Administrative Support	Final grade
Admin Support	Pearson Correlation	1	.017
	Sig. (2-tailed)		.645
	N	700	700
Final grade	Pearson Correlation	.017	1
	Sig. (2-tailed)	.645	
	N	700	700

*Correlation is significant at the 0.05 level (2-tailed)

Source: Survey Data (2010)

Results presented in Table 4.5, indicates a correlation that was significant at the 5% level (r=0.017,ß=0.645) this implies a minimal positive correlation between administrative support for games programs and academic achievement which was measured using the mock exam. The results imply that if the school administration gives enough administration support for the implementation of games programs, it is likely that there can be high academic achievement.

This finding is consistent with the findings of several other studies. (e.gCoumeaux 2006, Brown 2000,Tapia 2008). According to Coumeaux (2006), administrators need to advice learners on the benefits of games programs. He concluded that administrators need to identify the full potential

t games programs then in return they will gull academic returns from the learners who participate in games. Brown (2000), agrees and proceeds to say that lack of administrative support for games programs will lead to poor performance in games programs and eventually low academic achievement. Tapia (2008) goes further by saying that school administrators need to give technological support to games programs which will result into high academic achievement.

4.3 Students Attitude towards participation in games programs

Objective two sought to establish studentôs attitude towards participation in games programs. Student attitude towards participation in games programs was measured using a total of seven items on the studentôs questionnaire and two questions on the head teachers interview schedule. Respondents who are participants in games, were asked to indicate their level of agreement to the seven items which were designed to reflect attitude towards games programs. Responses were elicited on a 5-pont scale (1-undecided, 2-strongly disagree, 3-disagree, 4-agree and 5-strongly agree).

lysis of Student's Attitude towards Participation in Games Programs

Attitude items	M	SD
-I get positive physical self-concept from participating in games.	4.44	.737
-I derive satisfaction from participating in games.	3.73	1.323
-I believe games promotes good health	4.23	1.257
-I believe games contributes to positive academic achievement	3.84	1.194
-Am willing to try new activities	3.13	1.291
-Am encouraged by what others achieve in games	4.39	.766
-Am offered the opportunity to participate in games.	4.24	.727
-I get negative self concept from participating in games	4.01	2.147
-Participation in games does not give satisfaction	4.15	1.216
-I lack encouragement to participate in games	4.14	1.264
-I find games boring	4.01	1.408
-I find games frustrating	4.11	1.707
-Games are inferior to the formal dimension of the curriculum	4.37	1.24
Overall Mean	4.0	

Source: Survey Data (2010)

Results presented in Table 4.5 indicate the attitude of the students towards the implementation of games programs. The results were interpreted on a scale of 2 and 3 to mean disagree and 4 and 5 to mean agree. Some of the students elicited a positive attitude towards the implementation of games programs while others elicited a negative attitude towards the implementation of games programs. Most of the students who participated in games exhibited positive attitude towards game programs. The mean response score in most items was approximately 4.00 which indicated agreement. In particular, students agreed that they got positive self concept from participating in games programs (M=4.44; SD=0.737); that they were encouraged by what others achieve in

); that they were offered the opportunity to participate in games programs (M=4.24, SD = 0.727); that they believed that games promote good health (M=4.23, SD=1.257); that they believed that games programs contributed to positive academic achievement (M=3.84, SD=1.194); and that they derived satisfaction from participating in games programs (M=3.73, SD=1.323). They however tended to disagree that they were willing to try new games programs (M=3.13, SD=1.291).

Amongst those who elicited a negative attitude towards the implementation of games programs agreed with most of the negative statements. Students agreed that they do get a negative self-concept from participating in games programs (M=4.01; SD=2.147). They also agreed that they do not get any satisfaction from participating in games programs (M=4.15; SD=1.216). They also agreed that they lack encouragement to participate in games programs (M=4.14; SD=1.274). They also agreed that they find games programs boring (M=4.01; SD=1.707). They also agreed that they find participating in games programs frustrating (M=4.11; SD=1.707). They also agreed that they think games are inferior to the formal dimension of the curriculum (M=4.37; SD=1.247).

The implication of these results is that students who participate in games programs view games programs positively while those who do not participate in games have a negative attitude towards games, this could be the main reason why they do not participate in games. Those who participate in games elicited positive attitude towards most of the items which means that students in schools in Rongo Sub-County appreciate the relevance of games programs in their development in terms of among other areas, self concept, good health and academic

echoed by the head teachersô views as observed through the results of thematic analysis of head teachersô interview schedules.

4.3.1 Thematic analysis of the head teachers views on students' attitude towards the implementation of games programs.

Through the interviews conducted with head teachers, respondents were first asked their studentsô attitude towards participation in games programs. Next, they were asked factors that affect their studentôs participation in games programs. Interviews were held with the 46 head teachers. Names and identity were changed to protect participant confidentiality. The themes were identified as; positive attitude and negative attitude.

Positive attitude

This theme encapsulates each participantôs idea of how students feel towards their participation in and implementation of games programs. They listed some of the factors that encourage students to take part in games programs. The head teachers initially indicated that they always never had direct contact with learners thereby not being in a position to talk about their attitudes. After some explanation and elaborations on the issues at hand, they were able to open up and continue with the interview.

One of the participants when asked about the attitude of students towards games programs, said that attitude towards games program was either positive or negative. There are those who participated after being forced to do so. He said:

e part in games have a positive attitude towards games in games as a result of both intrinsic and extrinsic motivation.ò

A second head teacher supported this view and said:

> ñPositive attitude influences students to participate in games of their choice. Very few students who take part in games programs are forced to do so. They are given a free will to choose a game they are interested in.ò

For Ms. Linet, a head teacher in one secondary school, the support that the administration offers to games programs implementation will influence their attitude towards the games programs. She is quoted:

> ñMy administration offers full support for games programs. When the girls see this support for games, they get encouraged to take part and put more effort towards performing well in games.ò

For Mr. Victor, a head teacher in s secondary school, the placing/timing of games program in the school itinerary plays a great role in shaping the attitude of the learners towards the implementation of games programs. He said:

> ñWhenever the school time table is flexible to accommodate both learning and games programs, learners get encouraged and can easily play both roles. They love it mostly when they begin with classwork then games programs come immediately after classes at 4 PM in the afternoon. Taking part in games at this time offers relaxation after a long day of sitting down in class.ò

Negative Attitude

This theme captured the negative attitudes that students have towards implementation of games programs in their school according to the head teachers. The head teachers were asked to give some of the reasons why their students could develop negative attitude towards the implementation of games programs in their schools.

ıdary school within Rongo Sub-County stated that if the school administration does not support games programs by providing equipment and facilities, then students always opt out of games programs. He said:

> ñIf games facilities and equipment are availed, then students are encouraged to take part in games but if they are not availed and students are left to fight over the few resources then the weak one are forced to opt out and leave the few resources to those who are fit to survive.ò

For Mr. Peter, a head teacher of a secondary school in Rongo Sub-County, said that most students get discouraged from taking part in games programs once they notice that there are no teachers in charge of games programs or if they notice that teachers in charge of games are not competent enough to handle the game. He said:

> ñOnce a student notices that the games in charge is not competent enough to handle the game, they tend to get discouraged. The good students in the game will tend to get discouraged whenever they realize that their teacher is not adding any value to what they already know.ò

The finding that students in Rongo Sub-County who participated in games programs exhibited positive attitude towards games programs was significant since as observed by Staffo (1991), students with the right attitude towards games were more likely to participate in them. Besides, Kumar (2008) noted that teachers and other administrators needed to strive and ensure that students develop positive attitude towards games programs in order to reap maximum benefits from participating in games programs. The finding that administrators view of participation in games programs provides the framework for successful games activities are consistent with the views of Sinclair (2005) showing that in order for the learning environment to connect with learners who have varied learning abilities, interests and backgrounds it is necessary for schools to provide multiple environments that properly match the academic needs of individual students.

ls and qualified personnel affects students participation in games programs resonates with the views of Hollrach (2004), that the person who has direct contact with the learner needs be adequately trained in that game. This further supports the findings by Lisella and Serwatka (2007), which indicate that a school that accepts to carry out games yet does not have enough human resource competence is doing a lot of disfavor to students. This finding further reflects the views by Raymond and Falvo (2005), who likens a school that does not have enough material and personnel to a classroom without textbooks and teachers.

4.3.2 The relationship between student attitude to games programs and academic achievement

To investigate the correlation between student attitude in games programs and studentsô academic achievement, Pearson product moment correlation was used. The mean score for the variable studentsôattitude to games programs was (M=4.000) while the mean score for academic achievement was (M=5.66614) as shown in Table 4.6

Table 4.6 : Mean scores for students' attitude towards games and academic achievement.

	Mean	SD	N
Attitude for games	4.0000	0.61239	700
Final grade in mock exam	5.6614	0.81716	700

A measure of the mean of students attitude for games programs and the mean test score (academic achievement) for each individual was correlated.

en students attitude to games programs and academic achievement is shown in Table 4.7

Table 4.7: Results of the Correlation between Students Attitude towards Games and Academic Achievement

		Studentsô attitude	Final grade
Studentsô attitude	Pearson correlation	1	.089*
	Sig. (2-tailed)		.027*
	N.	612	612
Final grade	Pearson correlation	.089*	1
	Sig. (2-tailed)	.027	
	N	612	700

*Correlation is significant at the 0.05 level (2-tailed)
Source: Survey Data (2010)

Results presented in Table 4.7 indicate that there was a minimal positive correlation between student attitude towards games and their academic achievement which was measured using the grade attained in the mock exam. This correlation was significant at the 5% level (r=0.089,ƃ=0.027). These results imply that a studentôs attitude is likely to affect the academic achievement. This means that students who have a positive attitude towards games are likely to have high academic achievement while those who have a negative attitude towards games are likely to have low academic achievement.

This finding is consistent with the findings of several other studies (e.g Kumar 2008, Griffith 2004, Lisella and Serwatka 2007). According to Kumar (2008), students participate in games programs according to region or locality which they come from. This affects their attitude

ely to influence academic achievement. Griffith (2004) argues that if one is given the option of choosing the games program to participate in, he or she is likely to perform better in it. He proceeds to say that this is likely to effect all other aspects of the curriculum academic achievement inclusive. Lisella and Serwatka (2007) are of the opinion that schools need to have enough personnel to implement games programs in order to impact a positive attitude influence on games participants. They link having personnel in the implementation of games programs to high academic achievement.

This finding is consistent with the findings of several other studies.(e.gCoumaux 2006, Brown 2000, , Tapia, 2008). According to Coumeaux (2006) administrators need to advise learners on the benefits of games programs. He concluded that administrators need to identify the full potential of learners in games programs, support games programs then they will get full academic returns from the learners who participate in games. Brown (2000) agrees and proceeds to say that lack of administrative support for games programs and eventually low academic achievement. Tapia (2008) goes further by saying that school administrations need to give technological support to games programs which in return will reflect high academic achievement.

4.4 Methods used in implementation of games programs and its effects on academic achievement

The third objective of the current study focused on determining methods used in implementing games programs in schools within Rongo Sub-County. Consequently, analysis of methods used

rs questionnaire responses and then thematically through head teachersõresponses in the interviews.

4.4.1 Students views of methods used in implementation of games programs

Eleven items were proposed to measure studentõs perceptions of the methods used to implement games programs. Students were asked to indicate their level of agreement on whether suggested techniques were used in implementing games programs. Results presented in table 4.8 suggest that several methods are employed in implementation of games programs among the schools in the sub-county. The mean response scores in eight of the eleven items were approximately 4.00 which had been coded to represent agreement.

Table 4.8: Results of Descriptive Analysis of Students views of the Methods used in Games programs in Schools in Rongo Sub-County

Probable Techniques	Mean	Std. Deviation
-Teachers improvise equipment that they lack.	3.20	1.228
-Employing confident builders	3.59	1.389
-Employing team builders	3.72	1.494
-Employing physical builders	3.35	1.587
-Concentration in games	3.86	1.359
-Employing video and audio methods	3.71	1.337
-Teaching group work	3.79	1.385
-Teaching improvisation	3.52	1.491
-Developing a school policy on implementing games	4.04	1.318
-Having an organogram for running games	3.84	1.361
-Having a resource centre for games	3.06	1.321
Overall Mean	3.76	

Source: Survey Data (2010)

Results on Table 4.8 were interpreted on a scale of 2 and 3 to mean disagree while 4 and 5 mean agree. More precisely, students tended to agree that schools had developed policies on

4.04, SD=1.361); that schools concentrated in games programs (M=3.86, SD=1.359); that they had organograms for running games programs (M=3.84, SD=1.361); that they were taught group work (M=3.79, SD = 1.385); that team builders were employed (M=3.72, SD=1.494); that schools employed video and audio methods (M=3.71, SD= 1.337); and that confidence builders were employed (M=3.59, SD = 1.389). They however, disagreed that schools had resource centers for games programs (M=3.06, SD=1.321); that teachers improvise equipment that they lack (M=3.20, SD=1.228) and that physical builders were employed (M=3.35, SD=1.587).

4.4.2 Teachers views of Methods used in implementation of games programs

Teachers were also asked to indicate methods used in implementing games programs in secondary schools in the sub-county. Teacher perceptions were measured using eight items. Responses were elicited on a 5-poit scale ranging from 1-undecided to 5-strongly agree.

Table 4.9: Results of Teachers views of the Methods used in Games programs

	Mean	Std. Deviation
-Use of skilled personnel	3.91	1.226
-Administrative support	4.89	.315
-Intrinsic motivation	4.43	1.259
-Extrinsic motivation	3.83	1.253
-Availability of time	3.98	1.125
-Games teachers given free hand in implementation	4.57	.583
-Teachers given enough materials to help implement games	2.96	.942
-Learners given equal opportunities to take part in games	4.35	.897
Overall Mean	4.25	

Source: Survey Data (2010)

a scale of 2 and 3 to mean disagreement while 4 and 5 to mean agreement. The mean response scores in most items were approximately 4.00 indicating that the respondents agreed that the suggested methods were being used. Teachers strongly agreed that administrative support as a strategy was used (M=4.89, SD= 0.315) and that games teachers were being given a free hand in implementing games programs (M=4.57, SD=0.583). They tended to agree that other methods were intrinsic motivation (M = 4.43, SD=1.259); giving learners equal opportunities to take part in games (M=4.35, SD=0.897); availing time for games programs (M=3.98, SD=1.125); using skilled personnel (M=3.91, SD=1.226); and extrinsic motivation (M=3.83, SD= 1.253). They however disagreed that enough materials were provided (M=2.96, SD=0.942). Table 4.8 above presents this information.

The implication of the results of student and teacher perceptions is that schools in Rongo Sub-County have designed strategies and methods to use in implementing games programs. Strategies such as use of skilled personnel, motivation and giving teachers freedom to perform their games responsibilities are extensively used. In addition, methods such as use of confidence and team builders, video and audio methods as well as use of organograms are also being put in use. The only impediments to effective implementation of games programs in the sub-county were noted to be lack of materials and resource centers for games.

Thematic analysis of Head teachers views of the methods used in games in schools in Rongo Sub-County secondary schools. Interviews were held with the 46 head teachers. Two questions were used to explore head teachers views of methods used in implementing games programs. First, head teachers were asked the methods employed in their schools to implement games. Next they were asked to identify methods which they would like to see their teachers use. Results are

emes were identified as : Head teachers centered, Games teacher centered, and student centered.

Head teacher centered methods

This theme encapsulates each participantôs effort as head teachers to help in the implementation of games programs. They listed some of the methods they employ in the implementation of games in their respective schools. In the beginning of the interview, it was not easy for the head teachers to explain the methods employed in the implementation of games programs in their schools since they delegated most of the activities to do with games to their teachers. It would later also emerge that this delegation of duties and responsibilities is in itself a method of implementing games.

Later on, perhaps when they become more comfortable with the interview process, they were more capable of talking openly about the methods and their experiences. One of the participants when asked if the school administration was supporting games programs said that:

> ñOf course we support games programs in our school. There is no way that games programs can exist if we offer no support as the administration.ò

For Mr. Joshua, a head teacher in another school, the school administration was supporting games programs but not to the level or extent it deserves. He said:

> ñWe are required to fully support games programs in every way possible but due time and budget constraints we are not able to do it as required.ò

The head teachers were then further asked to list some of the ways in which the school administration supported games programs in their schools. They offered several ways. Mr. Peter, a head teacher in one of the secondary schools said that:

in our school by sourcing for qualified personnel or us in implementing games programs. We verify their qualifications by their success in coaching other successful schools.ò

Another head teacher responded by saying that:

> ñWe support games in our school by allowing our games teachers to attend seminars and coaching clinics. These coaching clinics equip them with proper current skills in the implementation of games programs. We always sponsor them to attend such clinics with the hope of them coming back and improving games in the school.ò

Another head teacher responded that they support games programs by:

> ñRewarding games teachers who perform well with their teams. The rewards are based on the level in which they games teacher reaches with the teams. To help motivate the teacher even more, they are given a free hand to plan and manage their teams well.ò

Games teachers Centered methods

This theme captured the methods that participants use with the games teachers to help in the implementation of games programs in their secondary school. Although the participants believed in delegating administrative duties to the games teachers, they still believed in closely following and supervising them.

For example, Mr. Moses a head teacher in one of the secondary schools states that :

> ñI delegate most of my administrative duties to my games teacher because I trust his abilities. I determine his potential by the results I see in the field. I always encourage my games teacher to encourage the students to participate in games without discrimination.ò

In addition, Mr. John, a head teacher in another secondary school says that:

> ñGames teachers are given a free hand to condition the students well for games. The students are to be conditioned both physically and mentally in readiness for competitions. Students who participate in games are given special treatment in terms of better diet. Students participating in games programs are given special food to help energize them.ò

e secondary school had similar thoughts but believes that rewarding excelling students should go beyond food. She commented:

> ñExcelling students in games in my school are rewarded whenever they perform well. I sometimes give those certificates or go further and give them monetary rewards.ò

From the observations made, it was generally observed that most schools within Rongo Sub-County carried out games programs as stipulated in terms of duration. Games started at 4 pm to 6 pm. It was also observed that in most schools, it was the side coaches who led out the students during games practices. It was also observed that all the 46 schools studied had games appearing in the school timetables. It was also observed in all schools that all the learners were given equal opportunities to participate in games programs but only those who had a positive attitude towards games took part in games programs. It was also observed that the schoolsô administrations were supportive in the purchase of facilities and equipment which aided implementation. The administrations also did their best to ensure the schools reached the highest level of participation. It was however, observed that not in a single school did the games teacher work hand in hand with the class teacher to make a follow up on the academic achievement of the games participants.

It was observed that in all the schools that the only formal organization of games was the head teachers, games teacher and the student. These were the only people involved in the implementation of games. It was observed that teachers were always not present during the implementation of games but the side coaches were always present. It was also observed that there was no evaluation of the implementation of games in all the schools. It was observed that all the schools had the required facilities and equipment for the implementation of games. The

t schools were goal posts which were made out of wood instead of the required metals. It was observed in all the schools that the only record kept in games programs was the one at the games store where various ball and equipment were being recorded when being issued out to the players.

The findings that methods such as confidence, team and physical builders are employed are consistent with the methods listed by Fortune and Mckeen (1987). According to these authors, implementation of games programs would be effective if methods such as employing team builders, physical builders and concentration, as well as using teamwork, video and audio methods among others were to be used. These findings also support the views by Jacobson and Chase (1989) who argued that teachers need to employ methods that would help build confidence in the learners, this confidence would then make learners to believe in themselves and do whatever they do well.

The findings regarding team building reflects the findings by Saylor and William (1979) that group work and teamwork go hand in hand. Consequently, games teachers need to inculcate unity among the participants so that they work together to succeed. In addition, the findings that games teachers incorporate video and audio methods in their training programs is consistent with recommendations by Joekel (1985) that teachers need to employ a variety of methods when conducting games for proper implementation. In watching and listening to successful groups, students can imitate what they see and employ them in their games programs.

ods used in Games programs and Students' Academic Achievement

To investigate the relationship between the methods used in games programs and students achievement, product moment correlation was once again used. The mean score for the variable methods used in games programs was (M=3.7644) while the mean score of academic achievement was (M=5.6614) as shown in table 4.10 .

Table 4.10: Mean scores for methods used in implementing games and academic achievement

	Mean	SD	N
Methods used in implementing games	3.7644	0.46239	700
Final grade in mock exam	5.6614	0.81716	700

To compute the correlation between methods used in games programs and studentsô academic achievement, Pearson product moment correlation was used. A measure of the mean of methods used in games programs and the mean test score (academic achievement) for each individual score was correlated. The results on the correlation between methods used in games programs and studentsôacademic achievement is shown in Table 4.11.

n between methods used in Games and Academic

		methods used in games	final grade in mock
Techniques used in games	Pearson Correlation	1	.139**
	Sig. (2-tailed)		.000
	N	691	691
final grade in mock	Pearson Correlation	.139**	1
	Sig. (2-tailed)	.000	
	N	691	700

**. Correlation is significant at the 0.05 level (2-tailed).

Source: Survey Data (2010)

Table 4.11, shows a positive correlation exists between methods used in implementing programs and the final grade in mock (r=0.139). The relationship was significant (p< 0.5). This means that the methods employed by games teachers in the implementation of games influenced the learnersô academic achievement.

These results imply that methods used in games programs have a bearing on the achievement the student attains in academics. This can possibly be explained by noting that some methods are light on the student and therefore do not leave them so exhausted but rather invigorated and fresh for studies. Besides, some methods may take up so much time thereby interfering with the students study time.

ngs on other studies. (e.g. Lisella&Serwatka 2007, Pivec 2003). Lisella and Serwatka (2007) identify policy on implementation of games programs as a very realistic method in the implementation of games programs. They reason that the policy will define an organogram that will aid the smooth implementation of games programs. This is likely to have an impact on the learnersô academic achievement. Pivec et al (2003) give the use of learning centers as a good method in the implementation of games programs. They argue that proper methods in the implementation of games programs will eventually lead to higher academic achievement.

4.5 Levels of student participation in games programs and their effect on academic achievement in schools in Rongo Sub-County

Research objective four sought to determine levels of student participation in games programs and their effect on academic achievement. Consequently, the level of participation was measured using a five item scale (1-school, 2-zonal, 3-district (now sub county), 4-provincial (now regional) and 5-national). Students were asked to indicate the level to which they participated in games.

Level of participation	f	%
School	392	56
Zonal	54	08
District (Sub County)	162	24
Provincial (Regional)	86	12
National	06	07
Total	700	100

Source: Survey Data (2010)

Results presented in Table 4.12 indicates that 392 (56 %) of the students participating in games programs participated up to the school level, 54 (08%) of the students participated up to the zonal level, 162 (24 %) of the students participated in games programs up to the district level, 86 (12 %) of the students participated up to the provincial level, while 06 (07%) participated up to the national level.

students participated in games programs up to the school level, and the number kept on going down as the level increased.

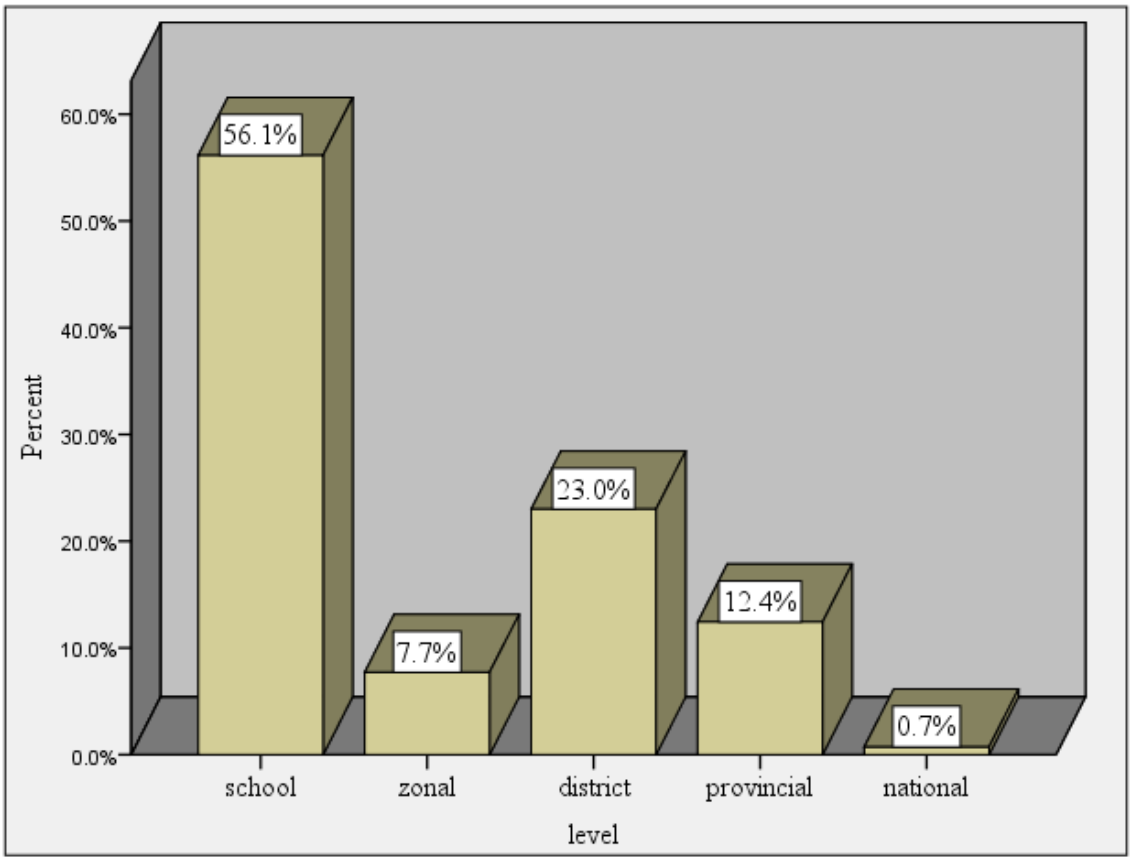

Figure 4.1: Level of Student Participation in Games

Results presented in figure 4.1 indicate that a majority of the students (56.1%) participated in games programs only up to the school level. Twenty three percent participated up to the sub-county level (formerly the district level); 12.4% up to the regional level(formerly Provincial level); 7.7% up to zonal level; and only 0.7% participated in games programs up to national level.

ools in Rongo Sub-County participate in games programs at least up to some level. While most of the students reported to participating in games programs only at school level, others were able to remain competitive up to levels beyond the school level.

4.5.1 The Relationship between levels of participation in games programs and students' academic achievement

To investigate the relationship between level of participation in games programs and studentsô academic achievement, level of student participation was first cross tabulated with studentôs grade in mock exam. Table 4.13 presents the results of this cross tabulation.

Table 4.13: Results of Cross-tabulating Final grade in mock on Level a Student takes part in Games Programs

		final grade in mock				
		'b'-moderate pass	'c'-pass'	'd'-fail'	'e'-poor'	Total
level one takes part in games	school	76	84	16	21	197
	zonal	8	12	4	3	27
	Sub county	25	34	20	2	81
	regional	7	24	11	1	43
	national	0	2	0	0	2
Total		115	158	51	26	350

Source: Survey Data (2010)

Table 4.13 shows the following. Out of the 197 students whose participation level in games programs was only school, 76 scored a B-moderate pass in mock; 84 scored a C-pass; 16 scored a D-fail, while 21 scored an E-Poor. Out of the 27 students who participated up to zonal level, 8 scored a B; 12 scored a C; 4 scored a D; while only 3 scored an E. out of the 81 students who participated up to sub-county level, 25 scored a grade B, 34 grade C, 20 grade D; while only 2 attained grade E, out of the 43 students who participated up to regional level; 7 attained grade B;

All the 2 students whose participation in games programs was up to national level attained grade C.

These results imply that most of the students who attained grades B and C had participated in games programs up to some level. Besides, the significant chi-square statistic tends to suggest that the grade scored in the mock exam dependent on the level of participation in games programs. This in turn leads to improved academic achievement. These findings are consistent with the findings of several other studies (e.g Griffith, 2004; Bowman 2008; Kibunge&Marete, 2008; Njagi, 2008; Mathenge, 2008; Hollrach, 2004).

The implication of the results on the level of participation in games programs and academic achievement is that the grade scored in the mock examination is dependent on the level of participation in games programs. Students who reach higher levels of games programs are likely to score higher achievement academically.

According to Griffith (2004), games programs play a beneficial role in the development of children into educated and well rounded students. In supporting these views, Bowman (2008), observed that games provided reluctant students with specific talent related groups of other students with whom to identify and interact with in meaningful goal oriented contexts. The findings that participation in games programs had the potential to lead to improved academic achievement were also echoed by Kibunge and Morete (2008), Njagi (2008) and Mathenge (2008). These authors noted that Dennis Omenda, the top student in Nyanza in the 2007 KCSE had been fully involved in games to the extent of captaining the schoolôs basketball team and yet

Mollrach (2004) indicates that there were several benefits that learners could reap by participating in games. Such benefits include intellectual and social development which among others focuses students to study habits. These findings further concurred with the findings by Brown (2000) that students who take part in games have a greater advantage over those who do not when it comes to both academic and physical pursuits.

4.5.2 Comparing Academic Achievement of students' across different levels of participation in games programs

The Bonferroni Post Hoc Multiple comparison test was further used to establish levels of student participation for which there were significant differences in academic achievement. Table 4.14 presents the results of these comparisons.

Table 4.14: Results of the Bonferroni Post-Hoc Multiple-Comparisons Test

(I) level one takes part in games	(J) level one takes part in games	Mean Difference (I-J)	Std. Error	Sig.
Sub-county	school	.426*	.074	.000
	zonal	.222	.124	.750
	regional	-.082	.105	1.000
	national	-.093	.359	1.000
regional	school	.508*	.094	.000
	zonal	.303	.137	.271
	Sub-county	.082	.105	1.000
	national	-.011	.364	1.000
national	school	.519	.356	1.000
	zonal	.315	.370	1.000
	Sub-county	.093	.359	1.000
	regional	.011	.364	1.000

*. The mean difference is significant at the 0.05 level.
Source: Survey Data (2010)

e significant mean differences in academic performance between students who participated up to sub-county level and those who participated only at school level (mean difference = 0.426, $p<0.01$) as well as between those who participated up to regional level and those who participated only at school level (Mean difference = 0.508, $p<0.01$). In both cases, the mean difference was positive which implies that students whose participation was up to sub-county and regional levels tended to achieve better grades in the mock exam than those who participated only at school level.

These results suggest that participating in games programs tends to impact positively on the studentsô academic achievement according to the level of participation. These findings are consistent with the findings by Brown (2000) which indicated that students who take part in games programs have a greater advantage over those who do not in that they develop individualized plans for improving their grades and performance. In addition, Brown noted that games tended to lift students self esteem. The findings further support the views by Ferding and Boyer (2007). The two authors argued that games programs not only motivate learning but also enriches it.

4.5.3 Correlation between level of participation in games programs and academic achievement

To investigate the relationship between the level of participation in games programs and studentsôachievement, product moment correlation was once again used. The mean score for the variable level of participation in games programs was (M= 0.9386) while the mean score of academic achievement was (M= 5.6614) as shown in table 4.16

ation in games and academic achievement .

	Mean	SD	N
Level of participation in games	0.9386	1.16233	700
Final grade in mock exam	5.6614	0.81716	700

To compute the correlation between level of participation in games programs and studentsô academic achievement, Pearson product moment correlation was used. A measure of the mean of methods used in games programs and the mean test score (academic achievement) for each individual score was correlated. The results on the correlation between level of participation in games programs and studentsôacademic achievement is shown in Table 4.16.

Table 4.16:Correlation between level of participation in games programs and academic achievement.

		Final grade in mock	Gender of respondent
Final grade in mock	Pearson Correlation	1	.260
	Sig. (2 tailed)		.000
	N	700	700
Level of participation	Pearson Correlation	.260	1
	Sig. (2 tailed)	.000	
	N	700	700

**Correlation significant at the 0.05 level (2 tailed)

Results presented in Table 4.16 indicates a correlation that was significant at the 5% level (r=0.260). This implies a minimal (weak) positive correlation between the studentsô level of participation in games programs and academic achievement which was measured using the mock exam. The results imply that a learner who reaches a higher level of participation in games program is likely to achieve a higher academic achievement. Since this is a group statistic, it is difficult to conclude anything about individual performance and impossible to attribute causality.

s programs and academic achievement.

Objective five was to investigate the relationship between participating in games programs and academic achievement. To investigate the relationship between participation in games programs and studentsô achievement, product moment correlation was once again used. The mean score for the variable participation in games programs was (M=0.5086) while the mean score of academic achievement was (M=5.6614) as shown in Table 4.17.

Table 4.17: Mean score for participation in games and academic achievement

	Mean	SD	N
Do you participate in games programs?	0.5086	0.50028	700
Final grade in mock exam	5.6614	0.81716	700

To compute the correlation between level of participation in games programs and studentsô academic achievement, Pearson product moment correlation was used. A measure of the mean of participating in games programs and the mean test score (academic achievement) for each individual score was correlated. The results on the correlation between participation in games programs and studentsôacademic achievement is shown in Table 4 18.

Table 4.18: Correlation between participating in games and academic achievement

		Final grade in mock	Do you participate in games?
Final Grade in Mock	Pearson Correlation	1	.173
	Sig. (2 tailed)		.000
	N	700	700
Do you participate in games?	Pearson Correlation	.173	1
	Sig. (2 tailed)	.000	
	N	700	700

Correlation significant at the 0.05 level (2 tailed)

ates a correlation that was significant at the 5% level (r=0.173), this implies a minimal (weak) positive correlation between participation in games programs and academic achievement which was measured using the mock examinations results. The results imply that if a learner participates in games programs, it is likely that he or she will get a better academic achievement.

The implication of this is that students who participate in games programs are likely to perform better academically than those who do not participate in games programs, but since it is a group statistic, it is difficult to conclude anything about individual performance and impossible to attribute causality.

These findings are consistent with the findings of several other studies. (e.gOkello, 2010; Schnerder, 2003; Marsh &Kleitman, 2002; Joekel, 1985). According to Okello (2010), sports and games help students to perform better in examinations as a result of participating in games programs. He concluded that students who take part in games programs averagely perform better academically than those who do not participate in games programs. Schnerder (2003) observed that there are positive association between extra-curricular participation and academic achievement. The same effects of participation in games programs and academic achievement were also echoed by Marsh and Kleitman (2002) concluded that students participating in games programs did better academically than those who did not. Joekel (1985) linked games with better academic performance. Pachuki (2005) also concluded that games programs and other extra-curricular activities do promote cognitive skills which in turn improve studentsô academic grades.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the study findings. It also gives conclusions drawn from the study findings and makes recommendations both for theory and practice as well as for future research.

5.2 Summary of Findings

The summary of findings focuses on the following sub-headings which formed the research questions for the study.

5.2.1 Relationship between administrative support for the implementation of games programs and academic achievement

Research question one sought to find out the relationship between administrations support for games programs and academic achievement in Rongo Sub-County. Using descriptive analysis of student and teacher responses on the methods that are used in the implementation of games, a thematic analysis of head teachers responses and finally correlating the means of studentsô responses with the means of their academic achievement, the study found out that there exists a minimal positive relationship between administrative support for games programs and academic achievement. This means that if the school administration offers support for the implementation of games programs, the academic achievement of the students will be higher.

' Attitude towards participation in Games programs and academic achievement

Research question two focused on establishing if there is a relationship between studentsô attitude towards participation in games programs and their academic achievement. Using descriptive statistics of student responses on attitude towards games programs, a thematic analysis of head teacherôs perceptions of student attitude towards games and finally correlating the means of students attitude towards the implementation of games and the mean of their academic achievement, the study established that there is a minimal positive relationship between students attitude towards games programs and academic achievement in Rongo Sub-County. This means that if the students have a positive attitude towards the implementation of games programs, then they will get higher academic achievement.

5.2.3 Relationship between methods used in implementing games programs and academic achievement

Research question three sought to find out the relationship between the methods used in implementing of games programs and academic achievement in secondary schools in Rongo Sub-County. Using descriptive analysis of student and teacher perceptions of the methods used in implementing games, a thematic analysis of head teachers perceptions of the methods used, and a correlation analysis of the means of the methods used in the implementation of games programs with the mean of the studentsô academic achievement, the study found out that there is a positive relationship between the methods used in the implementation of games programs and academic achievement in secondary schools in Rongo Sub-County. This means that the better the methods used in implementation of games programs, the higher the academic achievement.

f students' participation in Games programs and academic achievement

Research question four sought to find out if there is a relationship between the level of studentsô participation in games programs and their academic achievement. Using a bar chart, the study established the different levels that the students in schools in Rongo Sub-County participated in games programs. The study found out that there were students whose participation was up to zonal, sub-county, regional and even national level.

The study also used the Bonferroni Post-Hoc Multiple Comparison test to establish the differences in the means between the different levels of participation in games programs. The study found out that there was a significant difference in mean academic achievement of students at different levels of participation in games programs. Using a correlational analysis of the means of the different levels of participation in games programs and the studentsô academic achievement, the study established that there was a minimal positive relationship between the level of participation in games programs and academic achievement. This means that the higher the level of participation in games programs, the higher the studentsôacademic achievement.

5.2.5 Relationship between participating in games programs and academic achievement

The fifth research question of the current study focused on establishing whether there is a relationship between participating in games programs and academic achievement. Using a correlational analysis of the means of participation in games programs and the means of the studentsô academic achievement, the study established that there is a minimal positive

ames and academic achievement.This means that if you participate in games programs, you will get higher academic achievement.

5.3 Conclusions

On the basis of the above findings, the study drew the following conclusions.

1. There is a positive relationship between administration support for games programs and academic achievement in secondary schools in Rongo Sub County. If the schoolsô administration provides enough support for the implementation of games programs, there is likelihood that the students will get a high academic achievement.
2. There is a minimal positive relationship between studentsô attitude towards games programs and academic achievement in secondary schools in Rongo Sub County. A studentsô attitude towards games programs whether positive or negative is likely to affect the academic achievement.
3. There is a significant relationship between methods used in implementing games programs and academic achievement in secondary schools in Rongo Sub County. Proper methods used in implementing games programs are likely to improve academic achievement.
4. There is a minimal positive relationship between studentsô level of participation in games programs and academic achievement in secondary schools in Rongo Sub County. The higher the level of participation in games programs, the higher the academic achievement.

lationship between participation in games programs and academic achievement in secondary schools in Rongo Sub County. Students who participate in games are likely to have higher academic achievement.

5.4 Recommendations

The following recommendations were made based on the findings of the study.

1. The secondary schoolsô administration in Rongo Sub County should offer full support for games programs so as to help improve in the implementation of games programs and help improve academic achievement.
2. Students in secondary schools in Rongo Sub County need to develop a positive attitude towards the implementation of games programs so as to help improve their performance in games programs and academic achievement.
3. Games teachers in secondary schools in Rongo Sub County need to employ a variety of up to date methods in the implementation of games programs so as to improve on the academic achievement.
4. Head teachers and games teachers in secondary schools in Rongo Sub County need to support their students reach the highest level of participation in games programs so as to help get high academic achievement.
5. Students in secondary schools in Rongo Sub County need to be encouraged to participate in games programs so as to help improve their academic achievement.

It is recommended from the findings of this study that further research should be carried on:

1. The role of the school administration in ensuring effective implementation of games programs.

2. The relationship between positive satisfaction in participating in games programs and academic achievement.

3. Factors affecting implementation of games programs in Rongo Sub-County Secondary schools.

4. The effects of participating in drama on academic achievement.

5. A similar study should be carried out elsewhere in Kenya to establish whether the observed trends are peculiar to Rongo Sub-County.

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Appendix A: Questionnaire for Students

on of games programs.

INSTRUCTIONS

This questionnaire deals with the implementation of games in secondary schools in Rongo Sub County. Students are normally involved in the implementation of games in one way or another. So there is nothing strange, be honest as possible in responding to the questions. All your responses and information obtained will be treated with outmost confidentiality and will be used for purpose of this study only

If you accept to participate, please sign below.

Sign---------- Date----------

Questionnaire.

Students are involved in the implementation of games programs. So respond to questions in the questionnaire honestly. The questions are not in any way meant to test your knowledge on games. Furthermore, your responses will be used for purposes of the study only.

Part One

a). Your school_____

b). Your Sex. 1. Male 2. Female

c). Which games are offered in your school?_____

d). Do you participate in games? 1. Yes. 2. No. (Tick one)

e). What game do you participate in? _____

f). Index number_____

Part Two

The Statements below indicate different ways that the school administration supports the implementation of games. You may agree or disagree with anyone of them. If you strongly agree, encircle **"SA",** if you agree, encircle **"A",** if you are uncertain, encircle **"U"**, if you disagree encircle **"D",** and if you strongly disagree, encircle ñ**SD**ò.

	SA	A	U	D	SD
purchased and availed by the administration for implementing games					
Qualified games teachers are employed to take charge of games implementation.					
The school administration avails enough time for implementing games.					
The school administration provides enough funds for implementing games					
There should be structural organization to help the school administration implement games.					
The school administration always ensures that games teachers are always present whenever games are being implemented					
The school allows for improvisation of equipment that cant be afforded					
The school keeps games records.					

The Statements below indicate the studentsô attitude toward participation in games. You may agree or disagree with anyone of them. If you strongly agree, encircle **"SA",** if you agree, encircle **"A",** if you are uncertain, encircle **"U",** if you disagree encircle **"D",** and if you strongly disagree, encircle **"SD**ò.

a). Positive Attitude

Statement	SA	A	U	D	SD
I get a positive physical self-concept form participating in games					
I derive satisfaction from participating in games.					
I believe games promote good health					
I believe games contributes to positive academic achievement.					
Am willing to try new games activities					
Am encouraged by what others achieve in games					

b). Negative Attitude

Statement	SA	A	U	D	SD
I get a negative physical self-concept from participating in games					
Participation in gams does not give satisfaction					
I find games frustrating					
I lack encouragement to participate in games.					
Games are inferior to the formal dimension of the school curriculum.					
I find games boring					

The Statements below indicate the methods used in implementing games. You may agree or disagree with anyone of them. If you strongly agree, encircle **"SA",** if you agree, encircle **"A",** if you are uncertain, encircle **"U"**, if you disagree encircle **"D",** and if you strongly disagree, encircle **"SD".**

Statement	SA	A	U	D	SD
Teachers need to improvise equipment that they lack					
Teaching group work improves implementation of games					
Schools need to develop a school policy on implementing games					
Schools should have organograms and resource centers for implementing games.					
Employing confident builders as a method of implementing games					
Employing team builders as a method of implementing games					
Employing concentrating in a single games as a method of implementing games					
Employing integration as a method of implementing games					
Employingvideo, and audio methods make implementation of games simple					
Learnersôperformance in games need to be recorded and evaluated					
Games teachers need to be given pre-service and in-service training to help implement games.					
Games teachers need to be given a free hand in implementing games					

Part 5

The Statements below indicate the different level of studentsôparticipation in games. Tick (ã) the highest level which you have participated in games.

1. __School
2. __Zonal
3. __District
4. __Provincial
5. __national

...hers

TEACHERS' VIEWS ON THE IMPLEMENTATION OF GAMES PROGRAMS IN SECONDARY SCHOOLS.

INSTRUCTIONS.

This questionnaire deals with the implementation of games in secondary schools in Rongo Sub-county. Teachers are normally involved in the implementation of games in one way or another. So there is nothing strange , be honest as possible in responding to the questions. All your responses and information obtained will be treated with utmost confidentiality and will be used for the purpose of this study only.

If you accept to participate please sign below.

Sign---------- Date----------

Please tick (ã) or fill in as appropriate.

Part 1.

a) Name of your school_____
b) Your Sex: 1. Male. 2. Female.
c) Are you professionally trained to handle games? 1. Yes. 2. No.

Part 2.

The Statements below indicate different ways that the school administration supports the implementation of games. You may agree or disagree with anyone of them. If you strongly agree, encircle **"SA",** if you agree, encircle **"A",** if you are uncertain, encircle **"U",** if you disagree encircle **"D"**, and if you strongly disagree, encircle **"SD".**

Statement	SA	A	U	D	SD
Equipment, facilities and materials are purchased an availed by the administration for implementing games					
Qualified games teachers are employed to take charge of games implementation.					
The school administration avails enough time for implementing games.					
The school administration provides enough funds for implementing games					
There should be structural organization to help the school administration implement games.					
The school administration always ensures that games teachers are always present whenever games is being implemented					
The school keeps games records.					

Part 4

The Statements below indicate the techniques used in implementing games. You may agree or disagree with anyone of them. If you strongly agree, encircle **"SA"**, if you agree, encircle **"A"**, if you are uncertain, encircle **"U",** if you disagree encircle **"D"**, and if you strongly disagree, encircle **"SD".**

Statement	SA	A	U	D	SD
Teachers need to improvise equipments that they lack					
Teaching group work improves implementation of games					
Schools need to develop a school policy on implementing games					
Schools should have organograms and resource centers for implementing games.					
Employing confident builders, team builders, concentration, integration, video, and audio methods make implementation of games simple					
Learnersô performance in games need to be recorded and evaluated					
Games teachers need to be given pre-service and in-service training to help implement games.					
Games teachers need to be given a free hand in implementing games					

Part 5.

The Statements below are on the use of funds in implementing games. You may agree or disagree with anyone of them. If you strongly agree, encircle **"SA**ò, if you agree, encircle **"A",** if you are uncertain, encircle **"U",** if you disagree encircle **"D",** and if you strongly disagree, encircle **"SD".**

Statement	SA	A	U	D	SD
The school administration gives enough funds for purchase of games facilities.					
Games become difficult to implement if funds are not provided					
Games can be implemented even if funds are not provided					

The statements below are on the availability of time in implementing games. You may agree or disagree with anyone of them. If you strongly agree, encircle **"SA",** if you agree, encircle **"A",** if you are uncertain, encircle **"U**ò, if you disagree encircle ñ**D**ò, and if you strongly disagree, encircle ñ**SD"**.

Statement	SA	A	U	D	SD
Games implementation require a lot of time.					
Games require equal time in the timetable as the formal activities.					
The school schedule is too tight to accommodate games.					
Lack of enough time influences implementation of games.					

Head Teachers.

1. Is the school administration supporting the implementation of games?
2. What ways can the school administration support games?
3. What factors affect studentsô participation in games?
4. What techniques are employed in your school to implement games?
5. Are there techniques that your games teachers do not use but you wish they would use?
6. Are games inferior to the other dimensions of the school curriculum?
7. To what level have your students participated in games?
8. What are some of the challenges face in implementation of games in your school?
9. How have you overcome these challenges?
10. Does participation in games affect studentsô academic achievement?
11. Do students who participate in games perform better academically than those who do not participate in games?

ULE

A. Physical facilities and instructional materials.

Facilities/Activities	Available	Not Available
1. .Games. i. Football/soccer ii. Netball iii. Volleyball iv. Hockey v. Rugby vi. Handball **2.** School fields. i. Football/soccer ii. Netball iii. Volleyball iv. Hockey v. Rugby vi. Handball **3.** Equipment/balls. i. Football/soccer ii. Netball iii. Volleyball iv. Hockey v. Rugby vi. Handball		

B. Organization and nature of games and sports offered.

1. Are the games carried out as stipulated e.g. time duration?

Yes/No. _____

Comments based on the observation.

2. Are the games carried out as stipulated e.g. organization?

Yes/No . _____

Comments based on the observation.

3. Do games have a place in the school timetable?

Comments based on the observation

4. Do all the pupils get equal opportunities to participate in games?

Yes/No . _____

Comments based on the observation

5. Is the administration supportive of games by following an organizational structure in implementing games?

Yes/No _____

Comments based on the observation

6. Do teachers in charge of games work hand in hand with the class teachers to know the performance of those who participate in games ?

Yes/No _____

Comments based on the observation.

6. Other aspects of the organization and nature of non formal curriculum observed.

C. Methods of Implementation.

1. Is there a formal organization of games to help guide their implementation?

Yes/No . _____

Comments based on the observation

2. Teachers are always present when the non formal activities are carried out?

ne observation

3. Evaluation is an integral part of the implementation of games.

Yes/No_____

4. Is there improvisation of facilities and equipment that are not available

Yes/No_____

Comments based on observation

5. Does the school have enough equipment and facilities for implementation of games?

Yes/No_____

Comments based on observation

6. Are records of games kept?

Yes/No_____

Comments based on observation.

7. Other aspects of implementation observed.

S GUIDE

Document:

		Comment
1.	Author/Creator/School	
2.	Context (Place, Time of Document creation	
3.	Intended Audience	
4.	Purpose of creation	
5.	Document type (Photograph, government doc, dairy entry)	
6.	Main Points Expressed	
7.	General Message	
8.	Significance of Document	

COUNCIL EXAM 2010

STUDENTS ORDER OF MERIT

CANDIDATE	GENDER	PARTICIPANT	MEAN GRADE	MEAN SCORE
1	MALE	YES	A	12
2	MALE	YES	A	12
3	MALE	YES	A	12
4	MALE	YES	A-	11
5	MALE	YES	A	12
6	MALE	YES	A	12
7	MALE	YES	A-	11
8	MALE	YES	B	9
9	MALE	YES	B	9
10	MALE	YES	B-	8
11	MALE	YES	B	9
12	MALE	YES	B+	10
13	MALE	YES	B	9
14	MALE	YES	A	12
15	MALE	YES	A	12
16	MALE	YES	B	9
17	MALE	YES	C	6
18	MALE	YES	B	9
19	MALE	YES	C	6
20	MALE	YES	C+	7
21	MALE	YES	C	6
22	MALE	YES	B+	10
23	MALE	YES	B-	8
24	MALE	YES	B	9
25	MALE	YES	B-	8
26	MALE	YES	B	9
27	MALE	YES	B-	8
28	MALE	YES	C+	7
29	MALE	YES	C	6
30	MALE	YES	C	6
31	MALE	YES	C	6
32	MALE	YES	C-	5
34	MALE	YES	B	9
35	MALE	YES	B+	10
36	MALE	YES	B	9
37	MALE	YES	B-	8
38	MALE	YES	B-	8
39	MALE	YES	B	9
40	MALE	YES	C	6

			C+	7
			B	9
43	MALE	YES	A-	11
44	MALE	YES	B	9
45	MALE	YES	B	9
46	MALE	YES	B	9
47	MALE	YES	B-	8
48	MALE	YES	C	6
49	MALE	YES	C	6
50	MALE	YES	B	9
51	MALE	YES	B	9
52	MALE	YES	B-	8
53	MALE	YES	B-	8
54	MALE	YES	C+	7
55	MALE	YES	C	6
56	MALE	YES	C	6
57	MALE	YES	C+	7
58	MALE	YES	B	9
59	MALE	YES	B	9
60	MALE	YES	B	9
61	MALE	YES	B-	8
62	MALE	YES	B+	10
63	MALE	YES	B+	10
64	MALE	YES	B	9
65	MALE	YES	B	9
66	MALE	YES	C	6
67	MALE	YES	C	6
68	MALE	YES	C+	7
69	MALE	YES	A	12
70	MALE	YES	A-	11
71	MALE	YES	C	6
72	MALE	YES	B	9
73	MALE	YES	B	9
74	MALE	YES	B-	8
75	MALE	YES	B	9
76	MALE	YES	B-	8
77	MALE	YES	A	12
78	MALE	YES	A-	11
79	MALE	YES	B-	8
80	MALE	YES	B-	8
81	MALE	YES	B	9
82	MALE	YES	C	6
83	MALE	YES	B	9
84	MALE	YES	C	6
85	MALE	YES	C	6

			B	9
			B-	8
88	MALE	YES	B-	8
89	MALE	YES	B-	8
90	MALE	YES	B+	10
91	MALE	YES	C	6
92	MALE	YES	A-	11
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95	MALE	YES	B	9
96	MALE	YES	B	9
97	MALE	YES	B-	8
98	MALE	YES	B-	8
99	MALE	YES	B+	10
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101	MALE	YES	C	6
102	MALE	YES	C-	5
103	MALE	YES	C+	7
104	MALE	YES	C+	7
105	MALE	YES	C	6
106	MALE	YES	C	6
107	MALE	YES	C	6
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109	MALE	YES	B	9
110	MALE	YES	B-	8
111	MALE	YES	B	9
112	MALE	YES	B+	10
113	MALE	YES	B+	10
114	MALE	YES	B-	8
115	MALE	YES	B-	8
116	MALE	YES	C	6
117	MALE	YES	A	12
118	MALE	YES	A-	11
119	MALE	YES	A-	11
120	MALE	YES	B	9
121	MALE	YES	C	6
122	MALE	YES	C+	7
123	MALE	YES	C	6
124	MALE	YES	B	9
125	MALE	YES	B-	8
126	MALE	YES	B-	8
127	MALE	YES	A	12
128	MALE	YES	C+	7
129	MALE	YES	B	9
130	MALE	YES	C	6

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			B	9
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134	MALE	YES	B-	8
135	MALE	YES	B-	8
136	MALE	YES	B+	10
137	MALE	YES	B	9
138	MALE	YES	D	3
139	MALE	YES	D	3
140	MALE	YES	C-	5
141	MALE	YES	C	6
142	MALE	YES	C	6
143	MALE	YES	C	6
144	MALE	YES	D	3
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149	MALE	YES	B	9
150	MALE	YES	B+	10
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152	MALE	YES	B	9
153	MALE	YES	B	9
154	MALE	YES	C	6
155	MALE	YES	C-	5
156	MALE	YES	C	6
157	MALE	YES	C-	5
158	MALE	YES	C+	7
159	MALE	YES	B	9
160	MALE	YES	B	9
161	MALE	YES	B-	8
162	MALE	YES	B+	10
163	MALE	YES	B	9
164	MALE	YES	A	12
165	MALE	YES	B+	10
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167	MALE	YES	B	9
168	MALE	YES	B-	8
169	MALE	YES	B+	10
170	MALE	YES	A-	11
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173	MALE	YES	C	6
174	MALE	YES	D	3
175	MALE	YES	C-	5

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			C	6
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179	MALE	YES	C+	7
180	MALE	YES	C-	5
181	MALE	YES	C	6
182	MALE	YES	C	6
183	MALE	YES	D	3
184	MALE	YES	B	9
185	MALE	YES	B-	8
186	MALE	YES	B+	10
187	MALE	YES	B	9
188	MALE	YES	B-	8
189	MALE	YES	B	9
190	MALE	YES	B	9
191	MALE	YES	B	9
192	MALE	YES	C	6
193	MALE	YES	C	6
194	MALE	YES	D	3
195	MALE	YES	B	9
196	MALE	YES	B-	8
197	MALE	YES	B	9
198	MALE	YES	A-	11
199	MALE	YES	A	12
200	MALE	YES	B+	10
201	MALE	YES	B	9
202	MALE	YES	B	9
203	MALE	YES	B-	8
204	MALE	YES	C	6
205	MALE	YES	E	0
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207	MALE	YES	C-	5
208	MALE	YES	C+	7
209	MALE	YES	A	12
210	MALE	YES	B	9
211	MALE	YES	C	6
212	MALE	YES	B	9
213	MALE	YES	C	6
214	MALE	YES	D	3
215	MALE	YES	A	12
216	MALE	YES	A-	11
217	MALE	YES	B-	8
218	MALE	YES	C	6
219	MALE	YES	B	9
220	MALE	YES	B-	8

			B+	10
			C	6
223	MALE	YES	C-	5
224	MALE	YES	D	3
225	MALE	YES	A-	11
226	MALE	YES	B-	8
227	MALE	YES	C	6
228	MALE	YES	B	9
229	MALE	YES	B+	10
230	MALE	YES	B	9
231	MALE	YES	C	6
232	MALE	YES	C-	5
233	MALE	YES	D	3
234	MALE	YES	D+	4
235	MALE	YES	A-	11
236	MALE	YES	B	9
237	MALE	YES	B+	10
238	MALE	YES	C	6
239	MALE	YES	B	9
240	MALE	YES	B-	8
241	MALE	YES	B	9
242	MALE	YES	B	9
243	MALE	YES	B+	10
244	MALE	YES	B	9
245	MALE	YES	C	6
246	MALE	YES	C	6
247	MALE	YES	C-	5
248	MALE	YES	D	3
249	MALE	YES	A-	11
250	MALE	YES	B+	10
251	MALE	YES	B	9
252	MALE	YES	B-	8
253	MALE	YES	C	6
254	MALE	YES	C+	7
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262	MALE	YES	B+	10
263	MALE	YES	B	9
264	MALE	YES	B	9
265	MALE	YES	B	9

			B	9
			B-	8
268	MALE	YES	C+	7
269	MALE	YES	C	6
270	MALE	YES	C-	5
271	MALE	YES	C	6
272	MALE	YES	C	6
273	MALE	YES	B	9
274	MALE	YES	D	3
275	MALE	YES	D-	2
276	MALE	YES	D	3
277	MALE	YES	C	6
278	MALE	YES	C-	5
279	MALE	YES	B-	8
280	MALE	YES	B-	8
281	MALE	YES	C	6
282	MALE	YES	C+	7
283	MALE	YES	D	3
284	MALE	YES	B	9
285	MALE	YES	B	9
286	MALE	YES	B-	8
287	MALE	YES	C	6
288	MALE	YES	C+	7
289	MALE	YES	A-	11
290	MALE	YES	B	9
291	MALE	YES	B+	10
292	MALE	YES	A	12
293	MALE	YES	A-	11
294	MALE	YES	B	9
295	MALE	YES	C	6
296	MALE	YES	C-	5
297	MALE	YES	B	9
298	MALE	YES	D	3
299	MALE	YES	C	6
300	MALE	YES	C-	3
301	MALE	YES	D+	4
302	MALE	YES	C	3
303	MALE	YES	B-	8
304	MALE	YES	B	9
305	MALE	YES	B+	10
306	MALE	YES	C	6
307	MALE	YES	C+	7
308	MALE	YES	C+	7
309	MALE	YES	C+	7
310	MALE	YES	C	6

			B	9
			B-	8
313	MALE	YES	B	9
314	MALE	YES	B	9
315	MALE	YES	A	12
316	MALE	YES	B	9
317	MALE	YES	A-	11
318	MALE	YES	B+	10
319	MALE	YES	B	9
320	MALE	YES	B	9
321	MALE	YES	B	9
322	MALE	YES	B	9
323	MALE	YES	B-	8
324	MALE	YES	C	6
325	MALE	YES	C+	7
326	MALE	YES	C-	5
327	MALE	YES	B	9
328	MALE	YES	B-	8
329	MALE	YES	B-	8
330	MALE	YES	B-	8
331	MALE	YES	B+	10
332	MALE	YES	A	12
333	MALE	YES	C	6
334	MALE	YES	C	6
335	MALE	YES	C-	5
336	MALE	YES	C	6
337	MALE	YES	D	3
338	MALE	YES	B	9
339	MALE	YES	B	9
340	MALE	YES	C	6
341	MALE	YES	D+	4
342	MALE	YES	D	3
343	MALE	YES	B	9
344	MALE	YES	B	9
345	MALE	YES	B-	8
346	MALE	YES	A	12
347	MALE	YES	C	6
348	MALE	YES	C+	7
349	MALE	YES	B+	10
350	MALE	YES	C	6
351	FEMALE	YES	B	9
352	FEMALE	YES	B	9
353	FEMALE	YES	C+	7
354	FEMALE	YES	C-	5
355	FEMALE	YES	B	9

			B-	8
			A	12
358	FEMALE	YES	A-	11
359	FEMALE	YES	B+	10
360	FEMALE	YES	B-	8
361	FEMALE	YES	B	9
362	FEMALE	YES	B+	10
363	FEMALE	YES	B	9
364	FEMALE	YES	B-	8
365	FEMALE	YES	C	6
366	FEMALE	YES	C+	7
367	FEMALE	YES	B	9
368	FEMALE	YES	B-	8
369	FEMALE	YES	B	9
370	FEMALE	YES	B	8
371	FEMALE	YES	B+	10
372	FEMALE	YES	C	6
373	FEMALE	YES	C+	7
374	FEMALE	YES	C-	5
375	FEMALE	YES	D	4
376	FEMALE	YES	B	9
377	FEMALE	YES	B	9
378	FEMALE	YES	A-	11
379	FEMALE	YES	C	6
380	FEMALE	YES	B	9
381	FEMALE	YES	B	9
382	FEMALE	YES	B-	8
383	FEMALE	YES	C	6
384	FEMALE	YES	C	6
385	FEMALE	YES	C+	7
384	FEMALE	YES	C-	5
385	FEMALE	YES	A	12
386	FEMALE	YES	B	9
387	FEMALE	YES	B-	8
388	FEMALE	YES	B-	8
389	FEMALE	YES	B	9
390	FEMALE	YES	B	9
391	FEMALE	YES	C	6
392	FEMALE	YES	C	6
393	FEMALE	YES	C-	5
394	FEMALE	YES	C+	7
395	FEMALE	YES	B	9
396	FEMALE	YES	B-	8
397	FEMALE	YES	A	12
398	FEMALE	YES	A-	11

			B	9
			B-	8
401	FEMALE	YES	C	6
402	FEMALE	YES	C	6
403	FEMALE	YES	C+	7
404	FEMALE	YES	C-	5
405	FEMALE	YES	A-	11
406	FEMALE	YES	B-	8
407	FEMALE	YES	C-	5
408	FEMALE	YES	B	9
409	FEMALE	YES	B	9
410	FEMALE	YES	C	6
411	FEMALE	YES	C	6
412	FEMALE	YES	C	6
413	FEMALE	YES	C+	7
414	FEMALE	YES	C-	5
415	FEMALE	YES	C	6
416	FEMALE	YES	B+	10
417	FEMALE	YES	B-	8
418	FEMALE	YES	B	9
419	FEMALE	YES	B	9
420	FEMALE	YES	C	6
421	FEMALE	YES	C	6
422	FEMALE	YES	C+	7
423	FEMALE	YES	B	9
424	FEMALE	YES	B	9
425	FEMALE	YES	B-	8
426	FEMALE	YES	B	9
427	FEMALE	YES	B-	8
428	FEMALE	YES	C	6
429	FEMALE	YES	C+	7
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431	FEMALE	YES	C	6
432	FEMALE	YES	C-	5
433	FEMALE	YES	B-	8
434	FEMALE	YES	A-	11
435	FEMALE	YES	C	6
436	FEMALE	YES	C	6
437	FEMALE	YES	C+	7
438	FEMALE	YES	B	9
439	FEMALE	YES	B+	10
440	FEMALE	YES	C	6
441	FEMALE	YES	C+	7
442	FEMALE	YES	D	3
443	FEMALE	YES	D+	4

			C	6
			C-	5
446	FEMALE	YES	B-	8
447	FEMALE	YES	C	6
448	FEMALE	YES	C-	5
449	FEMALE	YES	D	3
450	FEMALE	YES	D+	4
451	FEMALE	YES	D	3
452	FEMALE	YES	C	6
453	FEMALE	YES	C-	5
454	FEMALE	YES	C	6
455	FEMALE	YES	B	9
456	FEMALE	YES	B	9
457	FEMALE	YES	A	12
458	FEMALE	YES	A-	11
459	FEMALE	YES	B+	10
460	FEMALE	YES	B-	8
461	FEMALE	YES	C+	7
462	FEMALE	YES	C	6
463	FEMALE	YES	C	6
464	FEMALE	YES	C+	7
465	FEMALE	YES	A	12
466	FEMALE	YES	B	9
467	FEMALE	YES	B+	10
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471	FEMALE	YES	B	9
472	FEMALE	YES	B	9
473	FEMALE	YES	B	9
474	FEMALE	YES	B+	10
475	FEMALE	YES	C	6
476	FEMALE	YES	C-	5
477	FEMALE	YES	C	6
478	FEMALE	YES	C	6
479	FEMALE	YES	B	9
480	FEMALE	YES	B	9
481	FEMALE	YES	C	6
482	FEMALE	YES	D	4
483	FEMALE	YES	C	6
484	FEMALE	YES	C-	5
485	FEMALE	YES	B	9
486	FEMALE	YES	B+	10
487	FEMALE	YES	B	9
488	FEMALE	YES	B	9

			B-	8
			B	9
491	FEMALE	YES	C	6
492	FEMALE	YES	C	6
493	FEMALE	YES	C-	5
494	FEMALE	YES	C+	7
495	FEMALE	YES	C	6
496	FEMALE	YES	C	6
497	FEMALE	YES	C-	5
498	FEMALE	YES	C+	7
499	FEMALE	YES	D	3
500	FEMALE	YES	D+	4
501	FEMALE	YES	B	9
502	FEMALE	YES	B	9
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509	FEMALE	YES	C-	5
510	FEMALE	YES	D-	2
511	FEMALE	YES	D	3
512	FEMALE	YES	C-	5
513	FEMALE	YES	A-	11
514	FEMALE	YES	B	9
515	FEMALE	YES	B	9
516	FEMALE	YES	B-	8
517	FEMALE	YES	B	9
518	FEMALE	YES	B+	10
519	FEMALE	YES	B	9
520	FEMALE	YES	B	9
521	FEMALE	YES	C	6
522	FEMALE	YES	C	6
523	FEMALE	YES	C	6
524	FEMALE	YES	C	6
525	FEMALE	YES	C+	7
526	FEMALE	YES	C-	5
527	FEMALE	YES	C	6
528	FEMALE	YES	C+	7
529	FEMALE	YES	C	6
530	FEMALE	YES	B	9
531	FEMALE	YES	B-	8
532	FEMALE	YES	B	9
533	FEMALE	YES	B+	10

			B	9
			C	6
536	FEMALE	YES	C+	7
537	FEMALE	YES	C	6
538	FEMALE	YES	B	9
539	FEMALE	YES	B	9
540	FEMALE	YES	B+	10
541	FEMALE	YES	D	3
542	FEMALE	YES	D-	2
542	FEMALE	YES	D	3
543	FEMALE	YES	C	6
544	FEMALE	YES	C+	7
545	FEMALE	YES	C	6
546	FEMALE	YES	C	6
547	FEMALE	YES	B	9
548	FEMALE	YES	B	9
549	FEMALE	YES	B	9
560	FEMALE	YES	B-	8
561	FEMALE	YES	B	9
562	FEMALE	YES	B-	8
563	FEMALE	YES	B+	10
564	FEMALE	YES	C	6
565	FEMALE	YES	C	6
566	FEMALE	YES	D	3
567	FEMALE	YES	B	9
568	FEMALE	YES	B	9
569	FEMALE	YES	A-	11
570	FEMALE	YES	A	12
571	FEMALE	YES	A	12
572	FEMALE	YES	A	12
573	FEMALE	YES	A-	11
574	FEMALE	YES	A	12
575	FEMALE	YES	B	9
576	FEMALE	YES	B	9
577	FEMALE	YES	B-	8
578	FEMALE	YES	C	6
579	FEMALE	YES	C	6
580	FEMALE	YES	C	6
581	FEMALE	YES	C-	5
582	FEMALE	YES	C+	7
583	FEMALE	YES	C	6
584	FEMALE	YES	C	6
585	FEMALE	YES	C	6
586	FEMALE	YES	D	3
587	FEMALE	YES	D+	4

			B	9
			C	6
590	FEMALE	YES	C+	7
591	FEMALE	YES	C	6
592	FEMALE	YES	D	3
593	FEMALE	YES	B	9
594	FEMALE	YES	B	9
595	FEMALE	YES	B-	8
596	FEMALE	YES	B+	10
597	FEMALE	YES	A-	11
598	FEMALE	YES	A	12
599	FEMALE	YES	B+	10
600	FEMALE	YES	B	9
601	FEMALE	YES	C	6
602	FEMALE	YES	C+	7
603	FEMALE	YES	D	3
604	FEMALE	YES	B	9
605	FEMALE	YES	B	9
606	FEMALE	YES	B+	10
607	FEMALE	YES	C	6
608	FEMALE	YES	C+	7
609	FEMALE	YES	C	6
610	FEMALE	YES	D	3
611	FEMALE	YES	A	12
612	FEMALE	YES	A-	11
613	FEMALE	YES	B	9
614	FEMALE	YES	D	3
615	FEMALE	YES	B	9
616	FEMALE	YES	B-	8
617	FEMALE	YES	B	9
618	FEMALE	YES	A-	11
619	FEMALE	YES	B	9
620	FEMALE	YES	D	3
621	FEMALE	YES	D	3
622	FEMALE	YES	C	6
623	FEMALE	YES	C	6
624	FEMALE	YES	C-	5
625	FEMALE	YES	C+	7
626	FEMALE	YES	D	3
627	FEMALE	YES	B	9
628	FEMALE	YES	B	9
629	FEMALE	YES	B-	8
630	FEMALE	YES	B	9
631	FEMALE	YES	B-	8
632	FEMALE	YES	B-	8

			C	6
			C+	7
635	FEMALE	YES	C	6
636	FEMALE	YES	B	9
637	FEMALE	YES	D	3
638	FEMALE	YES	C	6
639	FEMALE	YES	C-	5
640	FEMALE	YES	C+	7
641	FEMALE	YES	C	6
642	FEMALE	YES	A	12
643	FEMALE	YES	A-	11
644	FEMALE	YES	B	9
645	FEMALE	YES	B-	8
646	FEMALE	YES	B+	10
647	FEMALE	YES	C	6
648	FEMALE	YES	C	6
649	FEMALE	YES	C-	5
650	FEMALE	YES	D	3
651	FEMALE	YES	C	6
652	FEMALE	YES	D	3
653	FEMALE	YES	D+	4
654	FEMALE	YES	B	9
655	FEMALE	YES	B	9
656	FEMALE	YES	B-	8
657	FEMALE	YES	B	9
658	FEMALE	YES	B+	10
659	FEMALE	YES	C	6
660	FEMALE	YES	D	3
661	FEMALE	YES	C	6
662	FEMALE	YES	C	6
663	FEMALE	YES	A	12
664	FEMALE	YES	A-	11
665	FEMALE	YES	B	9
667	FEMALE	YES	B	9
668	FEMALE	YES	B-	8
669	FEMALE	YES	D	3
670	FEMALE	YES	D+	4
671	FEMALE	YES	C	6
672	FEMALE	YES	C+	7
673	FEMALE	YES	B	9
674	FEMALE	YES	B-	8
675	FEMALE	YES	B	9
676	FEMALE	YES	B	9
677	FEMALE	YES	B	9
678	FEMALE	YES	B-	8

			C	6
			C	6
681	FEMALE	YES	C-	5
682	FEMALE	YES	C+	7
683	FEMALE	YES	A	12
684	FEMALE	YES	A-	11
685	FEMALE	YES	C	6
686	FEMALE	YES	B	9
687	FEMALE	YES	B	9
688	FEMALE	YES	B-	8
689	FEMALE	YES	B	9
690	FEMALE	YES	B+	10
691	FEMALE	YES	B	9
692	FEMALE	YES	B-	8
693	FEMALE	YES	D	3
694	FEMALE	YES	C-	5
695	FEMALE	YES	D	3
696	FEMALE	YES	D	3
697	FEMALE	YES	D-	2
698	FEMALE	YES	A-	11
699	FEMALE	YES	D	3
700	FEMALE	YES	A	12

ZATION.

CONDITIONS

1. **You must report to the District Commissioner and the District Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit**
2. **Government Officers will not be interviewed with-out prior appointment.**
3. **No questionnaire will be used unless it has been approved.**
4. **Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.**
5. **You are required to submit at least two(2)/four(4) bound copies of your final report for Kenyans and non-Kenyans respectively.**
6. **The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice**

GPK6055t3mt10/2009

REPUBLIC OF KENYA

RESEARCH CLEARANCE PERMIT

(CONDITIONS— see back page)

PAGE 2

THIS IS TO CERTIFY THAT:

Prof./Dr./Mr./Mrs./Miss DEYA DERRICK OKINYI

of (Address) MASENO UNIVERSITY P.O. BOX 333 MASENO

has been permitted to conduct research in

.....**Location,**

RONGO .....**District,**

NYANZA .....**Province,**

on the topic Dynamics of implementation of Non-formal curriculum in Secondary Schools with reference in Rongo District, Kenya.

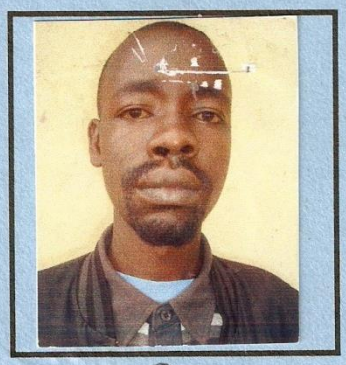
for a period ending 1ST OCTOBER **20** 10

PAGE 3

Research Permit No NCST/RRI/12/1/SS/31

Date of issue 12/05/2010

Fee received SHS 2,000



Applicant's Signature

Secretary National Council for Science and Technology

REPUBLIC OF KENYA

NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

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

P.O. Box 30623-00100
NAIROBI-KENYA
Website: www.ncst.go.ke

Our Ref: NCST/RRI/12/1/SS/314

Date: 12th May, 2010

Deya Derrick Okinyi
Maseno University
P. O. Box 333
Maseno

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Dynamics of Implementation of Non Formal Curriculum in Secondary Schools with Reference to Games in Rongo District , Kenya"*** I am pleased to inform you that you have been authorized to undertake your research in ***Rongo District*** for a period ending ***1st October , 2010.***

You are advised to report to ***the District Commissioner and the District Education Officer of Rongo District*** before embarking on your research project.

Upon completion of your research project, you are expected to submit two copies of your research report/thesis to our office.

P. N. NYAKUNDI
FOR: SECRETARY/ CEO

Copy to:
The District Commissioner
Rongo District

ONGO DISTRICT

SECONDARY SCHOOL DATA TERM II 2010

S/NO	NAME OF SCHOOL	STATUS	BOYS	GIRLS	MALE	FEMALE
1	PE-HILL	PUBLIC	435	-	10	3
2	ST. ALBERTôS ULANDA	PUBLIC	-	107	16	6
3	OMWARE	PUBLIC	93	36	1	-
4	KAMGUNDHO	PUBLIC	81	40	1	1
5	SIGIRIA	PUBLIC	170	61	4	3
6	ST. TIMONôS RABONDO	PUBLIC	163	69	3	2
7	DEDE GIRLS	PUBLIC	-	678	10	7
8	BISHOP ODERA AGONGO	PUBLIC	68	28	2	-
9	GAMBA	PUBLIC	194	112	6	-
10	NYAKURU	PUBLIC	77	73	2	1
11	ST. JOSEPHôS KAMYAWA	PUBLIC	74	69	2	1
12	KWOYO KODALO	PUBLIC	113	60	2	2
13	YAGO	PUBLIC	237	148	1	4
14	KOGELO MIXED	PUBLIC	90	75	5	1
15	MANYATTA	PUBLIC	508	-	13	8
16	KOKURO	PUBLIC	361	-	12	4
17	OWIRO AKOKO	PUBLIC	-	254	8	8
18	KOMOLORUME	PUBLIC	129	100	7	-
19	KANGA	PUBLIC	954	-	31	3
20	OYUGI OGANGO	PUBLIC	-	730	11	10
21	KANGESO	PUBLIC	191	-	5	2
22	KANYAWANGA	PUBLIC	849	-	22	3
23	RAKWARO	PUBLIC	108	95	3	-
24	ST. MARYôS NYANGôAO	PUBLIC	155	47	4	3
25	NYAMUGA	PUBLIC	88	62	3	-
26	WINYO	PUBLIC	141	69	3	2
27	NYARACH	PUBLIC	267	232	4	3
28	KUJA SPECIAL	PUBLIC	101	58	4	4
29	KODEROBARA	PUBLIC	700	-	6	7
30	KAMEJI	PUBLIC	274	184	4	-
31	KANYASREGA	PUBLIC	296	179	7	2
32	MINYENYA	PUBLIC	121	57	4	1
33	MALUNGA	PUBLIC	54	45	1	-
34	ARUNDO	PUBLIC	53	24	1	-
35	LANGO AREK	PUBIC	59	29	1	-
36	GOT OGWAMRONDO	PUBLIC	27	8	2	1
37	ST. PETERôS OFWANGA	PUBLIC	42	40	1	-
38	RANEN SDA	PRIVATE	53	34	7	1
39	SUSANA MILLENIUM	PRIVATE	-	254	8	3

		PRIVATE	183	136	10	5
		PRIVATE	200	-	10	2
42	KAMAGAMBO	PRIVATE	21	27	4	2
43	ST. BONAVENTURE	PRIVATE	70	30	4	3
44	ST. BENEDICT (RONGO)	PRIVATE	61	66	8	4
45	ST. BENEDICT (AWENDO)	PRIVATE	20	12	3	1
46	RONGO MASOGO	PRIVATE	70	50	4	2

	BOYS	GIRLS
PUBLIC	7265	4735
PRIVATE	681	609
TOTAL	**7946**	**5344**

LOCATION DIAGRAM (130 1 & 130 3)