

Contribution of Administrative Support towards Implementation of Games Programs on Academic Achievement in Secondary Schools in Rongo Sub-County, Migori County, Kenya

Okinyi Deya Derrick

Department of Educational Communication Technology and Curriculum Studies, Maseno University, Kenya

Email: okide2002@yahoo.com

Indoshi, F. C

Department of Educational Communication Technology and Curriculum Studies, Maseno University, Kenya

Oracha P.

Department of Special Needs Education, Maseno University, Kenya

DOI: 10.6007/IJARBSS/v5-i3/1512 URL: <http://dx.doi.org/10.6007/IJARBSS/v5-i3/1512>

Abstract

Games are part of non-formal curriculum and they do complement the formal curriculum. However, in secondary schools, games have been treated as second rate. Implementation of games varies from one school to another because of the varied support given and its value in enhancing academic achievement has not been established. The purpose of this study was to investigate the implementation of games and its contribution to students' academic achievement in secondary schools in Rongo Sub-County, Kenya. The objective of this study was to establish the contribution of administrative support towards implementation of games programs on academic achievement in Rongo Sub-County secondary schools. The study adopted correlation, survey and ex post facto designs. The target population included 50 games teachers, 50 head teachers and 2000 form four students in 50 schools in Rongo Sub-county that sat for the Rongo Sub-County Examinations in the year 2010. Saturated sampling technique was used to select 46 games teachers and 46 head teachers used in the study. Stratified random sampling technique was used to select 700 form four students who were a divided into two equal groups (n=350) named as experimental group and control group. Students' questionnaires, games teachers' questionnaires, games teachers' interview schedules, head teachers' interview schedule and an observation schedule for games facilities were used to collect data. Quantitative data was analyzed using descriptive statistics while qualitative data was received in verbatim form, transcribed and reported according to emerging themes. Findings for the study indicated that; administrative support

affects implementation of games, students have a positive attitude towards games, various methods were used in the implementation of games, most students participated in games up to the zonal level T-test results showed that participants in games performed better than non-participants in academics. It was recommended that school administrations should provide adequate material and support for implementing games and special attention should be given to the academic wellbeing of participants in games since games do contribute to better academic achievement of students.

Key words: Administration, support, implementation, games, academic, secondary, schools, Kenya

Introduction

Education is not just the memorization of facts, figures and skills but it is all round development of the students (Zahid, 2012). Logically, games 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 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. 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.

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 Prof. 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 curriculum was identified as contributing 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.

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 below.

Table 1. Term One Ball games (National level) representation per sub-county.

Year	Rongo	Migori	Kisii	Nyamira	Kisumu	Siaya	Homa bay
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, 2009)

Most studies (Saylor and William, 1979, Jacobsen and Chase, 1989, Staffo, 1991, and Lisella and Sertwatka, 2007) attribute poor performance to poor methods used in the implementation of games programs in secondary schools, less attention given to games programs, less value given to games programs, challenges faced in implementation of games programs. However, no study attributes the contribution of games programs to the academic achievement of learners to academic achievement. According to the sources at the Rongo DEO’S office (DEO, 2009) in the past three years it is only St. Pius Uriri (now in Uriri Sub-county) and Rapogi Boys 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. above. In Rongo Sub-County there has been little investment in games programs facilities by stakeholders which is seen 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.

Statement of the Problem

The state of games in Rongo Sub-County has entered the public domain. Games programs do have benefits to learners and the community at large but in Rongo Sub-County it has not been effected as seen in the South Nyanza district Development Plan of 1989-1993 (Rongo Sub-County Office,2009), where the establishment of facilities to help in the implementation of games programs was proposed but to date nothing has taken off. The head teachers and principals of secondary schools seem to be reluctant to offer support in the implementation of games programs while games teachers are unwilling to offer training to students participating in games. In addition, the government of Kenya made Physical Education a compulsory subject in the year 2002. There is minimal follow up made by the education officers on whether this directive is implemented or not, a factor that complicated the existing problem. This has led to many challenges being encountered in the implementation of games programs within Rongo Sub-County.

Contribution of Administration supports towards games programs and its effect on academic achievement

Non formal curriculum is one of the thre 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 structure. The definition is all inclusive 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 encompasses it. Apart from football and volleyball, there are several other games that students can get involved in (Isenberg & Jacobs, 1982). Robin and Bommer (2007) give the following range of games programs that students can take part in while in a school: football, volleyball, netball, basketball, handball and hockey. They believe that these are the common games programs in most high schools all over the world. The common games programs in Kenyan secondary schools re soccer, volleyball, hockey, handball, netball, and rugby (Kitula 2007). Studies by Musvosvi (1998) argued 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 of Musvosvi (1998), other scholars have been trying to define and show the importance of administrative support for games implementation. Brown (2007) 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.

Gomeaux (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 “programs 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.”

Tapia (2008) deviates from the arguments 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. Abbott (2006) are 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 curriculum. Sutherland (1997) agrees and says that games programs are necessary in a students’ 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 schools’ 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.

After realizing the importance of games programs to a school administration, Trump and Miller (1973) suggest that schools should ensure the proper implementation of games programs and sports, in the end schools need to evaluate whether games programs and sports are really meeting their intended purpose or not. Wollrach (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 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 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.

Tanner and Tanner (1975) believe that 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 'chew'. Holland and Thomas (1995) say that from their experience, it is easier to work with a schools' 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 a 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. The Literature reviewed in this section dwells with the contribution of administrative support for games programs to the academic achievement of students. The reviewed literature does create a gap in that it does not show how the administrative support does affect academic performance and also their impact on the implementation of games programs.

This study, therefore, wishes to fill this gap by showing the contribution of administrative support towards the implementation of games programs and how this will eventually result in academic performance in Rongo Sub-County. The study will also seek to find out if the findings in the related studies can be applicable in the case of Rongo Sub-County.

Methodology

The study was based on both 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). The target population for this study was 50 head teachers, 50 games teachers, and 2000 Form Four students. All the 50 secondary schools were offering games to their students. The study opted to use head teachers because they are the ones in charge of disbursing funds and offering administrative support to teachers and students. 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 how learners play (Fullan, 2001). Form four students were used in the study because of their wide experience with games in secondary schools and they were likely to give genuine and accurate responses ,at the same time their results in the district exams was required for the study.

The study comprised head teachers, games teachers, and students. Simple Random Sampling technique was used to select pilot sample. The study then used saturated sampling technique to select the 46 head teachers and 46 games teachers. The study also used the stratified random sampling technique to include 700 Form Four students in the sampled schools. The strata involved 350 students who participate in games and 350 students who did not participate in games. The samples represent at least a third of the total population (Gall et al

1996). Data for this study was collected using questionnaires, interview schedule, observation schedule and document analysis guide

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.

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 “strongly agree” to “strongly disagree” 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 Cronbach’s alpha (Darleen, 1997).

Results and discussion

This section presents more findings from the analysis of data to test the research question below:

Hypotheses

In this study, the following null hypothesis was tested at 5% significance level:

There is no significant relationship between administrative support towards games programs and academic achievement in Rongo sub-county, Migori county, Kenya.

The study sought to establish ways in which the administration support games programs in the study area. Consequently, administrative support was analyzed first descriptively through the student and teacher questionnaires and then thematically through the head teachers’ interview schedule.

Students’ perceived Administration support towards implementation of games

Administration support towards implementation of games 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 (0-undecided, 1-strongly disagree, 2-disagree, 3-agree, 4-strongly agree).

Table 2: Students Perceptions of Administration Support of Implementation of Games

Games activities	M	SD
Equipment, facilities, and materials are purchased and availed	3.46	.877
There are structures in place to help the administration in implementing games.	3.13	1.346
The school administration provides funds to support games	3.73	.660
The school administration ensures games teachers are always present when games are implemented.	2.74	1.306
The school administration avails enough time for games.	2.21	1.330
Qualified games teachers are employed to take charge of games.	2.10	1.222
Schools that cannot afford equipment and facilities are allowed to improvise these equipment	2.99	1.331
The administration ensures the school keeps games records.	3.19	1.216

Source: Survey Data (2010)

Results presented in table 2 indicate that most students agreed with most items. More specifically, students strongly agreed that the administration provides funds to support games programs (M=3.73, SD=0.660). They also tended to agree that equipment, facilities and materials are purchased and availed (M=3.46, SD = 0.877); that the administration ensures the school keeps games records (M=3.19, SD=1.216); that structures are put in place to help the administration in the implementation of games (M=3.13, SD = 1.346); that schools improvise equipment and facilities they lack (M=2.99, SD=1.331); and that the administration ensures that games teachers are always present when games programs are implemented (M=2.74, SD=1.306). The students however disagreed that enough time is availed for games programs (M=2.21, 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.

Teacher Perceptions’ of Administration Support towards implementation of games programs

Teacher perceptions of administration 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 (0-undecided, 1-most effective, 2-effective, 3-least effective, 4-not effective).

Table 3: Teacher Perceptions of Administration Support of Implementation of Games programs

Games Activities	M	SD
Equipment, facilities and materials are purchased and availed	2.74	.444
Qualified teachers are employed to take charge of games.	2.96	1.186
The school administration avails enough time for games.	.93	.998
The school administration provides funds to support games.	.91	1.170
There are structures to help the administration implement games.	.74	.976
The administration ensures games teachers are always present when games are implemented.	1.39	1.358
The school keeps games records	.67	.967

Source: Survey Data (2010)

As shown in table 2, the average score in most items was approximately 1.00, a value coded to represent most effective. This indicates 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=0.93, SD=0.998); providing funds to support games programs (M=0.91, SD=1.170); initiating structures to help in implementation of games (M=0.74, SD= 0.976); keeping games records (M=0.67, SD = 0.967); and ensuring that games teachers were always present when games were implemented (M=1.39, 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=2.74, SD = 0.444) as well as when it came to employing qualified teachers to take charge of games programs (M=2.96, 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 study established that among the ways 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.

Thematic analysis was used to analyze responses from interviews conducted with the sampled head teachers. 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. Results of this analysis are displayed in the thematic matrix in table 4.

Table 4: Results of Head Teachers Perceived Administration Support toward implementation of games programs

Question	Thematic issue	Sub-thematic issue
Is the school administration supporting the implementation of games?	Yes (n=46, 100%)	
In which ways can the school administration support games?	Provision of funds	<ul style="list-style-type: none"> The administration provides funds for among other functions, purchase of games equipment, maintenance of games facilities and materials.
	Provision of structures	
	Supervision	<ul style="list-style-type: none"> The administration ensures that there is a teacher in charge of coordinating games The administration occasionally hires coaches to assist games teachers The administration supervises games activities by making sure that teachers were always present whenever games were being held
	Motivation	<ul style="list-style-type: none"> The administration keeps games records as well as taking stock of games trophies. The administration rewards teachers who excel in their games activities. The administration facilitates participation in all games activities organized within and outside the district.

Source: Survey Data (2010)

As shown in table 4. all the school heads interviewed agreed that the administration supports implementation of games programs. Thematic analysis revealed four key themes around which administration support of games implementation revolves. First, the school heads indicated that the administration provides funds for purchase of games equipment and for maintenance of games facilities and materials. Second, the head teachers stated that the administration

provides structures for effective implementation of games programs. These structures include ensuring that there was a teacher in charge of coordination of games and hiring coaches from outside the school to assist games teachers. Third, the administration supports games implementation through supervision. In this regard, the administration makes sure that teachers were always present whenever games were being held. In addition, the administration keeps games records and takes stock of games trophies the school wins. Fourth, the head teachers indicated that the administration plays the role of motivation through giving rewards to excelling teachers and also facilitating participation in games activities organized within and outside the sub-county. 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 headteachers 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 support the findings by Alexandria (2004). According to this author, a school that implements games without an administrative structure is like a government that runs without ministries. Existence of such structures in Rongo district schools therefore implies that teachers charged with responsibilities to oversee games activities have a free hand to carry out their functions. 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 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 activities.

Conclusions

Using descriptive analysis of student and teacher responses as well as thematic analysis of head teachers responses, the study found out that school administrations supported games programs by providing relevant structures for implementation of games programs, providing funding for games programs, supervising participation of games teachers particularly whenever there were games functions in the schools, maintaining records pertaining to games achievement and events and purchasing and availing requisite games materials. The study

however, established that most schools did not have adequate materials and equipment for games programs.

The administration in schools in Rongo Sub-County support games programs through several ways. Among the most common ways are provision of funds, provision of structures relevant for effective implementation of games programs, and supervision of games activities.

Recommendations

Secondary school administrations in Rongo Sub-County need to provide adequate materials and equipment for implementing games programs. This may have an effect on their academic achievement.

REFERENCES

- Abbott, M.(2006). Using game-based teacher support tools. *Reading and Writing Quarterly* 22(1), 47-64.
- Alessi, S.M., & Trollip, S. R. (2001). *Multimedia for learning*. Boston MA: Alister And Bacon.
- Alexandria, B.F. (2006). Academic Achievement Higher in Most Active Kids. *Journal of Medicine and Science in Sports and Exercise*. Retrieved from www.acsm.org
- Alexandria, B.F. (2004). *Non-Formal Activities in Schools*. Retrieved from www.wikipedia.org
- Baron, C. (2007). *Gaming Administrative Support-Department of Public Safety Corrections*. Public Safety Services: Louisiana State Police.
- Benson, D. (1971). *Gaming. The fine Art of creating simulation/Learning games*. Nashville, Tennessee: Parthenon Press.
- Best, J. W & Kahn, J. V. (1993). *Research in Education*. New Delhi: Prentice-Hall.
- Blume, L. B., & Zembar, M. J. (2011). *Gender and Academic Achievement*. Pearson Allyn Bacon: Prentice Hall.
- Bowman, E. (2008). Seven Ways to Increase At-Risk Student Participation in Extra Curricular Activities. *National Forum of Teacher Education Journal*, 18.(3) 34-41
- Brown, D.M. *Education World 2000*. Retrieved from www.education-world.com

Darleen, D.B. (1997). *Understanding educational research: An introduction*. New York: St. Martin's Press.

Dixon, G. (2004). *Non-formal activities: Life outside the classroom*. Retrieved from www.career.usyd.edu.au.

Elmore, R. F. (1996). Getting to scale with good educational practice. *Harvard Educational Review*. 66(1), 1-26.

Fullan, M. (2001). *The New Meaning of Educational Change*. Columbia University: Teachers College Press.

Gall, D. M. (1996). *Educational Research*. New York: Longman.

Goetz, J.P., & Le Compte, M.D. (1984). *Ethnography and qualitative design in Educational research*. Orlando: Academic Press.

Guskey, T.R (2000). *Evaluating professional development*. Thousand Oaks. CA: Corwin Press Inc,

Hauser, J., & Lueptow, L.(2004). *Participation in Athletics and Academic Achievement : A Replication and extension* Retrieved from www.akron.org

Hill, G.(1988). Sports Specialization at High School: Coaches perceptions and Recommendations. *The Physical Educator*, 5(14) 58-62

Hill, G., & Hansen, G.(1987). Sports Specialization in High School: A complex issue. *The Physical Educator*, 4(44), 422-426.

Holland, A., & Thomas, A.(1995). Prestige ratings of High School Extra Curricular Activities. *High School Journal*. December 1994-Jan 1995. vol.78.

Hollrath, R.(2004). *Non formal activities*. Iowa State University. Retrieved from www.chpre.ecu.edu

Indoshi, F. C. (1999). *An Assessment of In-Service Education and Training needs of Primary school Agriculture teachers in Kenya*. Unpublished PhD Thesis. Maseno University. Kenya.

Jacobsen, L., & Chase,C.(1989). Student Perception and Attitudes towards high school Activities. *The High School Journal*. Dec 1994-Jan 1995. 78 (3)

- Kitula, S. (2008, March 1). Students Excel in both field and class. *Saturday Nation*.
- Lisella, L., & Serwatka, T. (2007). *Extracurricular activities and educational problems*. Retrieved from www.ribaulhigh.org
- Musvosvi, B. D. (1998). *Alternative Approach to Educational Administration in African Perspective*. Kendu Bay: AHPH.
- Oluoch, G. (1982). *Essentials of Curriculum Development*. Nairobi: Elimu Publishers.
- Ondiek, P. E. (1986). *Curriculum Development Alternative in Educational theory and practice*. Kisumu: Lake Publishers and Enterprises.
- Orodho, J. (2005). *Techniques of writing research proposals and reports in education and Social sciences*. Nairobi: Kanezja Enterprises.
- Payne, D. (2000). Teacher professional development-the principal's critical role. *NASSP Bulletin*, 84(618), 13-21
- Rubin, R., & Bommer, W. (2007). *Using non formal activity as an indicator of Interpersonal skills*. Retrieved from www.wikipedia.org
- Rust, J. & Colombok, S. (1989). *Modern psychometrics: The science of psychological Assessment*. London: Routledge.
- Sayllor, J., & William, M. (1974). *Planning curriculum for schools*. New York: Holt.
- Sinclair, P. (2005). *Using Nonformal activity as an indicator of interpersonal skills*. Retrieved from www.wikipedia.org
- Staffo, D. (1991). The Principal can help keep Athletics in proper perception. *The High School Journal*. April-May 1991. Vol 74.No.4
- Sutherland, M. (1997). *Theory of Education*. Edinburgh: Longman
- Tanner, D., & Tanner, L. (1975). *Curriculum Development Theory into Practice*. New York: Macmillan.
- Tapia, Y. (2008). *Technology Implementation in Schools: Key factors to consider*.

Research Centre for implementing technology in education.

Trump, J. D., & Miller, F. D.(1973). *Secondary School Curriculum improvement. Challenges, Humanisim, Accountability*. Boston: Allyn Bacon, Inc.

Yakubu, N.A. (2012). *The Effect of Social Factors on Students' Academic Performance In Nigerian Tertiary Institutions*. Dept of Computer Science. Federal Polytechnic, Auchi, Nigeria.

Zahid, B. (2012). The effectiveness of co-curricular activities on academic achievement of Secondary school students in District Abbottabad Pakistan
Journal of Education and Practice. 3(1 98-104)