

FACTORS INFLUENCING ACADEMIC ACHIEVEMENT IN PUBLIC SECONDARY SCHOOLS IN CENTRAL KENYA: AN EFFECTIVE SCHOOLS' PERSPECTIVE

Patrick Ogecha Nyagosia¹, Samuel N. Waweru², Felicita W. Njuguna³

¹ County Director, Teachers Service Commission (TSC), Nakuru, ²⁻³ Kenyatta University, KENYA.

¹ patnyagosia@yahoo.com, ² sawaweru2050@gmail.com, ³ wanjisjnu@gmail.com

ABSTRACT

This study determined the relationship between school effectiveness and academic performance of students in secondary schools of Central Kenya. The study examined how implementation of the following seven correlates of Effective Schools Model influenced students' academic performance: instructional leadership, focus on school mission, school safety and orderliness, expectations for success, home-school relations, monitoring of students' progress, and opportunity to learn. A survey design was used targeting all principals, heads of departments (HODs), teachers, and District Education Officers (DEOs) in charge of 501 provincial and district public secondary schools in Kiambu and Nyeri counties. Stratified sampling was used to select 40 schools, comprising 20 schools from the top performing category and 20 from the bottom performing category. Study participants comprised 40 principals, 120 HODs, 240 teachers and 17 DEOs. Data was collected using questionnaires and interviews. Data was analysed using Pearson correlation coefficient and the t-test. Results showed that, in comparison with bottom performing schools, top performing schools were putting more emphasis on six of the seven correlates, with only frequent monitoring of students progress returning no significant results. The study concludes that the seven correlates are good predictors of academic performance in Kenyan schools. It is noteworthy that the seven correlates require minimal financial inputs, meaning that even the financially constrained schools can still achieve school effectiveness by practising the correlates.

Keywords: School Effectiveness, Effective School Model, Academic Performance

INTRODUCTION

One question that has preoccupied researchers for decades is why some public schools consistently perform well in examinations while others consistently perform poorly. A number of researchers, including Edmonds (1981), Scheerens & Bosker (1997), Lezotte, Skaife & Holstead (2002), Kirk & Jones (2004), and Daggett (2005) have demonstrated that successful schools have unique characteristics and processes, which help all children to learn at high levels. Many studies have therefore been carried out to determine what accounts for improved academic outcomes. Academic performance is a key concern for educational researchers because failure in the national examinations spells doom for the students whose life becomes uncertain and full of despair. Academic performance determines whether the students will proceed to university or to other tertiary institutions. Therefore, a student's life is determined by academic performance in the national examinations. It is for this reason that secondary school administrators in Kenya are pressurized to improve the grades attained by students in the Kenya Certificate of Secondary Education (KCSE).

Public pressure on school administrators and teachers to improve academic performance has led to schools coming up with various performance improvement strategies including extra

supplementary tuition, reward and punishment systems for well performing and poor performing students, forced grade repetition among others. However, some of the strategies employed by schools to improve academic performance are not grounded on research evidence, while some like grade repetition and extra supplementary tuition have been shown to be counterproductive (Bray, 2007). In Nyeri and Kiambu Counties from Central Kenya, there are secondary schools that consistently perform well in KCSE, while others persistently perform poorly. The study sought to establish the factors accounting for such differential KCSE performance and school effectiveness in Nyeri and Kiambu Counties of Kenya.

THE SEVEN CORRELATES OF EFFECTIVE SCHOOLS

Research on effective schools has provided seven main characteristics which successful schools share. These seven characteristics are what have come to be known as the correlates of an effective school (Lezotte, 2010) or the Effective Schools Model. The model is seen as a means to achieving high levels of student-learning in which students are expected to learn essential skills, knowledge, and concepts needed to be successful. According to the model, the seven correlates of effective schools are: strong instructional leadership, clear and focused mission, safe and orderly schools, climate of high expectations for success, frequent monitoring of student progress, positive home-school relations, and opportunity to learn. Lezotte (2010) argues that these seven Correlates of Effective Schools are powerful indicators of successful places where all children learn, regardless of socioeconomic status or ethnicity. The seven correlates of effective schools are discussed in greater details next.

Instructional Leadership

Schools require good leaders to organize the process of teaching and learning to ensure that the mission of the school is achieved (Lydia and Nasongo, 2009). The core role of the instructional leader is to ensure the achievement of the established mission through creating a good environment for the schools (Lezotte, 2001). A Kenyan study by Musungu and Nasongo (2008) on the instructional leadership role of secondary school headteachers revealed that they supervised teachers' work by inspecting records such as schemes of work, lesson books, records of work covered, class attendance records, and clock in/clock out book. This research established that headteachers' frequency of internal supervision contributed towards better performance. This involved proper tuition and revision, thorough supervision of teachers and pupils' work, proper testing policy, syllabus coverage, teacher induction courses and team building. Similar findings have emerged from various Kenyan studies, all which reveal that poor performance in secondary school examinations is a function of poor administration and leadership practices (Ackers & Hardman, 2001; Githua & Nyabwa, 2008). One of the goals of this research therefore was to compare the instructional leadership practices of well performing schools and poor performing ones.

School Vision and Mission

Lezotte (1991) proposed that in effective schools "there is a clearly articulated school mission through which the staff shares an understanding of and commitment to instructional goals, priorities, assessment procedures, and accountability" (p. 6). Studies conducted in Kenya (KEMACA, 2008; Ngware, Wamukuru & Odebero, 2006) have shown that schools perform poorly in setting missions. The study by Kenya Education Management Capacity Assessment (KEMACA, 2008) established that 27% of Kenyan schools did not engage in strategic planning at all. In addition, of those who claimed they did, only 49% were able to produce the strategic plans. KEMACA (2008) concluded that, mission and vision statements for Kenyan schools tend to be rather general and not sufficiently focused on outputs and outcomes. The other study by Ngware *et al.* (2006) also revealed that most schools did not have strategic

plans. The researchers noted that even schools with strategic plans are weak in systematic follow-up to ascertain the implementation of the plans. In addition there seemed to be no deliberate attempts to do a formal internal evaluation with a view to ascertain the extent to which qualitative and or quantitative targets have been met. To what extent then, have Kenyan secondary schools been focusing on school mission, and how has this impacted on academic performance? The research aimed at answering this research question.

Safety and Orderliness of the School Environment

According to Lezotte (2001), in an effective school there is an orderly, purposeful, business-like atmosphere, which is free from the threat of physical harm. In Kenya, a number of studies and publications (Ministry of Education, 2001) have pointed to the deteriorating nature of school safety. Indicators of this include rising cases of strikes, drug abuse, arson and other forms of student-perpetrated violence. Such violence has led to loss of life and destruction of school property. The question that arises therefore is: to what extent have Kenyan schools been promoting school safety and orderliness, and how has this impacted on academic performance of the students?

High Expectations for Success

Research by Lezotte (2001; 2010) revealed that in the effective school, there is a climate of high expectations in which the staff believes and demonstrates that all students can obtain mastery of the school's essential curriculum. In high performing schools, students are given challenging curricula and demanding tasks, and they are expected to succeed, and each child is considered to possess a unique gift to offer to society (Bauer, 1997). Unfortunately, the Kenyan system of education has been blamed on failing to fulfil this correlate (Lydia & Nasongo, 2009), the most serious of which has been on lack of support to talented students and those with special needs. While research on effective schools indicate a need to emphasis on academics, clear expectations and regulations, high levels of student participation, and alternative resources such as library facilities, vocational work opportunities, art, music, and extracurricular activities for exceptional performance, Kenya has overemphasized academics at the expense of the other factors. One goal of this study was to compare the extent to which top and bottom performing schools emphasise on communicating expectations for success to students and teachers.

Frequent Monitoring of Students' Progress

In the effective school, student progress on the essential objectives are measured frequently, monitored frequently, and the results of those assessments are used to improve the individual student behaviours and performances, as well as to improve the curriculum as a whole (Lezotte, 2001). Assessment in Kenyan schools is based on national examination that is expected to measure the achievement of students (Republic of Kenya, 1998). It has however been reported that these public examinations do not provide a systematic and intervention system to improve learner achievements (Oduol, 2006). In Kenya, it is even felt that the decline in candidates' performance in National Examinations is as a result of lack of monitoring of learning achievement system that could provide a basis for provision of intervention strategies to address the weaknesses portrayed by candidates before they take the national examinations. It is also noted that the country still uses standardized tests as the main assessment methods whose results are used for transition. These tests have been declared inadequate in measuring in effective schools. Consequently, this study sought to compare and contrast well performing and poor performing schools on the extent to which they put emphasis on this correlate.

Positive Home-School Relations

Henderson and Berla (2004) argue that the most accurate predictor of a student's achievement in school is not income or social status, but the extent to which that student's family is able to: create a home environment that encourages learning; express high (but not unrealistic) expectations for their children's achievement and future careers; and become involved in their children's education at school and in the community. Henderson and Berla (2004) argue that when parents are involved in their children's education at home they do better in school. A three-year study by Steinberg (2006) involving 12,000 students in nine high schools in the US revealed that community involvement draws parents into the schools physically and are most effective in improving academic achievement through attending school programs, extracurricular activities, conferences, and 'back to school' nights. Steinberg concluded that when parents come to school regularly, it reinforces the view in the child's mind that school and home are connected and that school is an integral part of the whole family's life. This research sought to find out how well performing and poor performing schools in Kenya differ on the extent to which they promote positive home-school relations.

Opportunity to Learn/Student Time on Task

Provision of adequate learning materials and time are necessary for effective instruction. Consideration should always be given between the instruction materials and the limited time for effective teaching (Lezotte, 1991). There is a need for purposeful teaching within institutions that demand efficient organization, clarity of purpose, structured lessons and adaptive practice (Republic of Kenya, 1988; Lezotte, 2010; Sifuna, 2000). In Kenya, schools in Central region have been implementing a concept referred to as "Operation Effective 40" (Ministry of Education, 2010). Operation Effective 40 emphasises on prudent time utilization and syllabus coverage, and this is expected to translate to improved academic performance. The concept aims at ensuring efficient and effective coordination of action-based teaching and learning activities within the 40 minutes lesson in secondary schools. This study aimed at establishing the impact this concept had on the emphasis put by schools on promoting opportunity to learn among students.

OBJECTIVES OF THE STUDY

The objective of this study was to determine the factors influencing academic achievement in public secondary schools in Central Kenya from an effective schools' perspective. The study examined how mean scores and grades obtained by schools in KCSE are influenced by the seven correlates of effective schools - instructional leadership, focus on mission and vision, school safety and orderliness, expectations for success, monitoring of student progress, home-school relations, and opportunity to learn/time on task.

METHODS

The study employed the survey design to obtain the research data. Survey research is designed to provide a snapshot of how things are at a specific time (*Denscombe, 2007*), and there is no attempt to control conditions or manipulate the variables under study (Kelley, Clark, Brown & Sitzia, 2003). In effective schools research, the choice and use of outcome measures has been open to debate. Studies of school effectiveness have two distinctive aims: firstly, to identify factors that are characteristic of effective schools, and secondly, to identify differences between educational outcomes in these schools (Sun, Creemers & de Jong, 2007). One of the touchstones of effective schools is the impact on learners' education outcomes (that is, test or examination results obtained during formal assessment). In this research

therefore, 20 schools that had been consistently performing well (those ranking top 40 in Central region for the period 2006 – 2010) and 20 that had been recording persistent low grades in KCSE (those ranked bottom 40) were identified. Table 1 shows the KCSE mean scores for the schools selected for the study for the period 2006 - 2010.

Table 1. KCSE mean scores (2006 – 2010) of the study schools

<i>Top Performing Schools</i>				<i>Bottom Performing Schools</i>			
<i>S/No.</i>	<i>2010 Mean</i>	<i>2006 Mean</i>	<i>KCSE deviation</i>	<i>S/No.</i>	<i>2010 Mean</i>	<i>2006 Mean</i>	<i>KCSE deviation</i>
1.	5.5672	4.6984	0.8688	21.	3.128	2.478	0.65
2.	8.0155	7.1562	0.8593	22.	3.4	2.8	0.6
3.	5.69	4.837	0.853	23.	4.109	3.594	0.515
4.	6.1	5.4	0.7	24.	2.6	2.22	0.38
5.	5.38	4.71	0.67	25.	2.6	2.391	0.209
6.	8.0352	7.5147	0.5205	26.	2.3	2.1	0.2
7.	7	6.6	0.4	27.	2.63	2.51	0.12
8.	6.23	5.89	0.34	28.	2.8	2.7	0.1
9.	6.03	5.69	0.34	29.	2.3	2.294	0.006
10.	8.8544	8.5251	0.3293	30.	2.18	New	-
11.	6.14	5.87	0.27	31.	2.82	2.82	0
12.	7	6.74	0.26	32.	2.5306	2.5517	-0.0211
13.	7	6.9	0.1	33.	2.7	2.75	-0.05
14.	7.841	7.772	0.069	34.	2.774	2.96	-0.186
15.	9.78	9.768	0.012	35.	2.921	3.233	-0.312
16.	6.634	6.75	-0.116	36.	2.095	2.67	-0.575
17.	5.569	5.785	-0.216	37.	3.149	4.04	-0.891
18.	5.8	6.081	-0.281	38.	2.386	3.342	-0.956
19.	8.4	9.087	-0.687	39.	2.926	3.963	-1.037
20.	6.944	8.102	-1.158	40.	3.0408	4.175	-1.1342

Using stratified random sampling, 40 principals (20 from top performing schools and 20 from bottom performing schools) and 360 teachers (120 HODs and 240 regular teachers) were

selected. All the 17 District Education Officers in Kiambu and Nyeri Counties were purposively selected for the study, giving a total of 417 respondents.

Methods of Data Collection and Analysis

Data in this study was derived, analysed and triangulated in three ways, namely, (i) questionnaires, (ii) interviews, and (iii) document analysis. Questionnaires were completed by teachers (n=226), heads of departments (HoDs) (n=120) and head teachers (n=39), while face-to-face interviews were conducted with district education officers (n=17). Questionnaires were designed using Likert-type questions that sought to determine the extent to which schools engaged in the seven correlates of effective schools. Response options were in a 4-point scale (Always [4], Sometimes [3], Rarely [2], Almost Never [1]). The final sample totalled 402 (226 teachers, 120 HoDs, 39 principals, and 17 DEOs) of the targeted 417 respondents, giving a questionnaire return rate of 96.4%. Document analysis was conducted to capture KCSE performance data of the sample schools for the period 2006 – 2010 using Central Province KCSE analysis reports.

In order to determine the relationship between the independent variables (the seven correlates of effective schools) and the dependent variable (KCSE mean scores), Pearson Product Moment correlation coefficient and the t-test were used at the 0.05 level of significance. Qualitative analysis considered the inferences that were made from the opinions of the DEOs during interviews and the responses on open-ended questions. The qualitative data was coded and the codes were then categorized typologically in order to identify themes and relationships emerging from the data (Denscombe, 2007). Based on identified themes, concepts were developed which helped us to arrive at generalized statements.

FINDINGS

The study established that most of the schools were emphasizing on all the seven correlates of effective schools, that is, instructional leadership, focus on mission and vision, school safety and orderliness, expectations for success, monitoring of student progress, home-school relations, and opportunity to learn/time on task. This is shown by the high mean scores obtained on the scales (compare the obtained mean scores with the scale mid-points in Table 2).

Table 2. Descriptive statistics for the seven correlates (n=385)

<i>Correlate</i>	<i>No. of items in Scale</i>	<i>Range of possible scores</i>			<i>Obtained Mean Score</i>	<i>Std. Dev.</i>
		<i>Lowest</i>	<i>Highest</i>	<i>Mid-point</i>		
Instructional leadership	8	8	32	20	27.8805	3.47405
School safety and orderliness	6	6	24	15	21.8338	2.62568
Clarification of mission	8	8	32	20	28.3169	4.04768
Expectation for success	5	5	20	12.5	17.8935	2.70061
Home-school relations	8	8	32	20	27.3636	4.03277
Monitoring of progress	5	5	20	12.5	17.3117	2.58733
Opportunity to learn	6	6	24	15	22.5558	2.10471

The results (Table 2) imply that most of the schools in Nyeri and Kiambu Counties were committed to improvement of academic performance. This could be attributed to the region's

clarion call of Operation Effective 40 concept, which emphasises on prudent time utilization and syllabus coverage.

Extent of Emphasis on the Seven Correlates and School Performance

The study sought to establish how top performing schools and bottom performing schools differed on the emphasis placed on the seven correlates of effective schools. To accomplish this, t- test was conducted to find out whether the top performing schools and the bottom performing schools differed significantly on the seven correlates (Table 3). The results revealed that there were significant differences, at $p < 0.05$, between the top performing schools and bottom performing schools in the extent to which they emphasized on the following correlates: instructional leadership, focus on school mission, safety and orderliness of schools, expectations for success, home-school relations, and opportunity to learn for students. The only correlate that did not return a significant difference for the two groups (top performing and bottom performing schools) was monitoring of students' progress. For all the other six correlates, top performing schools obtained higher mean scores than the bottom performing schools, meaning that top performing schools were putting more emphasis on the correlates than the bottom performing schools.

Table 3. T-test results for scores obtained on the seven correlates

<i>Effective schools' correlate</i>	<i>School Rank</i>	<i>N</i>	<i>Mean</i>	<i>Std. Deviation</i>	<i>t</i>	<i>df</i>	<i>Sig.</i>
Instructional leadership	Top	194	28.5567	2.99384	3.920	383	0.000*
	Bottom	191	27.1937	3.78768			
School safety and orderliness	Top	194	22.6031	1.87213	6.057	383	0.000*
	Bottom	191	21.0524	3.02575			
Clarification of vision and mission	Top	194	29.1392	3.77834	4.099	383	0.000*
	Bottom	191	27.4817	4.14963			
Expectation for success	Top	194	18.3402	2.53631	3.313	383	0.001*
	Bottom	191	17.4398	2.79196			
Home-school relations	Top	194	28.5722	3.31232	6.209	383	0.000*
	Bottom	191	26.1361	4.32646			
Monitoring of progress	Top	194	17.5361	2.36144	1.719	383	0.086
	Bottom	191	17.0838	2.78592			
Opportunity to learn	Top	194	22.9536	1.75520	3.802	383	0.000*
	Bottom	191	22.1518	2.34476			

*Significant at $p < 0.05$ level.

The results in Table 3 confirm the effective schools model by Lezotte (2010). Other researchers such as Rutter *et al.* (1979) and Wekesa (1993) have noted that to improve

students' performance, school leaders are required first to improve the management of the schools. This can be done by setting a clear vision for the schools and communicate this vision to students, support its achievement by giving instructional leadership, and provision of resources (Ayot and Briggs, 1992). Such environment is expected to be firm, purposive and participatory in nature. The reason why the top performing schools and bottom performing schools did not differ on the extent to which they monitor academic progress of students could be explained by the fact that all schools are expected to give a minimum number of tests in form of continuous assessments. In addition, secondary schools in Central region have been implementing a concept referred to as "Operation Effective 40" (Ministry of Education, 2010). The concept ensures efficient and effective coordination of action-based teaching and learning activities within the 40 minutes lesson in secondary schools.

Relationship between School Effectiveness and KCSE Performance

The study sought to examine the relationship between school effectiveness and overall school performance in KCSE. To accomplish this, a correlation analysis was conducted to determine whether there was a significant correlation between the KCSE mean score deviations for the period 2006 to 2010 and the scores obtained on the seven correlates. The results (Table 4) revealed that there were significant correlations, at $p < 0.05$, between the KCSE mean deviations (2006 – 2010) and the following correlates: instructional leadership, school safety and orderliness, clarification of vision and mission, expectation for success, home-school relations, and opportunity to learn. The correlation coefficients for the six correlates were positive, meaning that high scores on these factors correlated with high mean score deviations.

Table 4. Correlation coefficients of KCSE deviations across the correlates

<i>Correlate</i>	<i>Correlation with KCSE mean Deviation (2006-2010)</i>		
	<i>Correlation co-efficient (r)</i>	<i>Sig.</i>	<i>N</i>
Instructional leadership	0.227	0.000*	375
School safety and orderliness	0.247	0.000*	375
Clarification of vision and mission	0.156	0.002*	375
Expectation for success	0.261	0.000*	375
Home-school relations	0.112	0.029*	375
Monitoring of progress	0.052	0.312	375
Opportunity to learn	0.168	0.001*	375

*Significant at $p < 0.05$

The findings in Table 4 imply that schools putting more emphasis on these correlates recorded more improved KCSE mean scores than those putting less emphasis on the correlates. Again this confirmed that effective schools were characterized by strong instructional leadership, clear and focused mission, safe and orderly schools, climate of high expectations for success, frequent monitoring of student progress, positive home-school relations, and opportunity to learn (Lezotte, 2010). It should be noted however that the

correlation coefficients, r , were low, meaning that although significant, the relationships were weak.

DISCUSSION AND CONCLUSION

This study concluded that the seven correlates of effective schools by Lezotte (2010) were good predictors of academic achievement in secondary schools. The study concluded that, in comparison to low performing schools, top performing schools were putting more emphasis on six of the correlates of effective schools, namely: instructional leadership, focus on school mission and vision, safety and orderliness of schools, expectations for success, home-school relations, and opportunity to learn for students. Top performing schools were characterised by teachers keeping updated professional documents, a climate conducive to teaching and learning, keeping students focused on their core business in school, giving students a high expectation for high performance, involving parents in students' discipline, and teacher commitment characterised by regular attendance and punctuality.

From the findings of t-test and Pearson Correlation Coefficient analysis, it can be concluded that, in comparison with bottom performing schools, top performing schools were putting more emphasis on six of the seven correlates, with only frequent monitoring of students progress returning no significant results. Schools' KCSE performance trends for the period 2006 – 2010 significantly differed across six of the seven correlates, apart from frequent monitoring of students' progress. The findings confirm that the effective schools model is applicable in Kenyan schools, which is in line with other studies in sub-Saharan Africa (see for example Verspoor, 2006; ADEA, 2006; Yu, 2007). The results revealed that indeed the seven correlates of effective schools do account for improvements in academic achievement in Kenyan secondary schools.

RECOMMENDATIONS

Based on the findings of the study, it is recommended that secondary school administrators and teachers should put emphasis on the seven correlates of effective schools that were identified to influence academic performance. These include: instructional leadership, focus on school mission, safety and orderliness of schools, expectations for success, home-school relations, and opportunity to learn for students. The school administrators should improve on instructional leadership especially visiting teachers in class to supervise teaching and holding staff appraisal meetings to discuss strengths, weaknesses and opportunities for academic improvement. More studies should be conducted to find other factors that influence academic performance in Kenya.

ACKNOWLEDGEMENTS

This paper is based on a research project carried out by Patrick O. Nyagosia under the supervision and guidance of Dr. Samuel N. Waweru and Dr. Felicita W. Njuguna. The research project was submitted to the school of education, Kenyatta University, in partial fulfilment of the requirements for the degree of Master of Education.

REFERENCES

- [1] Ackers, J. & Hardman, F. (2001). Classroom interaction in Kenyan primary schools. *British Association for International and Comparative Education*, 31(2), 245-261.
- [2] ADEA (2006). *Effective schools for sub-Saharan Africa*; Libreville, Gabon: Association for the Development of Education in Africa.
- [3] Ayot, H. O. & Briggs, H. (1992). *Economics of education*. Nairobi: Educational Research and Publications.
- [4] Bray, M. (2007). The shadow education system: Private tutoring and its implications for planners. Paris: IIEP, UNESCO. Available online at: <http://unesdoc.unesco.org/images/0011/001184/118486e.pdf>
- [5] Daggett, W. R. (2005). Successful schools: from research to action plans. Paper presented at June 2005 Model Schools Conference. Available online at: http://www.daggett.com/white_papers.html
- [6] Denscombe, M. (2007). *The good research guide for small-scale social research projects* (3rd Edition). New York: Open University Press.
- [7] Edmonds, R. R. (1981). *Search for effective schools*. NIE, East Lansing, MI. The Institute for Research on Teaching, College of Education, Michigan State University.
- [8] Githua, B. N. & Nyabwa, R. A. (2008). Effects of advance organizer strategy during instruction on secondary school students' mathematics achievement in Kenya's Nakuru district. *International Journal of Science and Mathematics Education*, 6(3), 439-457.
- [9] Henderson, A. T. & Berla, N. (2004). *A new generation of evidence: the family is critical to student achievement*. Washington DC: National Committee for Citizens in Education.
- [10] Kelley, K., Clark, B., Brown, V. & Sitzia, J. (2003). Good practice in the conduct and reporting of survey research. *International Journal for Quality in Health Care*, 15(3), 261-266.
- [11] KEMACA (2008). *Education management capacity assessment: a pilot in Kenya*. Nairobi: Kenya Education Management Capacity Assessment.
- [12] Kirk, D. J. & Jones, T. L. (2004). *Effective schools assessment report*. San Antonio, TX: Pearson Education.
- [13] Lezotte, L. (1991). *Correlates of effective schools: the first and second generation*. Okemos, MI: Effective Schools Products, Ltd.
- [14] Lezotte, L. (2001). *Revolutionary and evolutionary: the effective schools movement*. Okemos, MI: Effective Schools Products, Ltd.
- [15] Lezotte, L. W. (2010). *What effective schools do: re-envisioning the correlates*. Indianapolis, IN: Solution Tree.
- [16] Lezotte, L. W., Skaife, R. D. & Holstead, M. D. (2002). *Effective schools – only you can make a difference*. Phoenix, AZ: All Star Publishing.
- [17] Lydiah, L. M. & Nasongo, J. W. (2009). Role of the headteacher in academic achievement in secondary schools in Vihiga District, Kenya. *Current Research Journal of Social Sciences* 1(3), 84-92, Available online at [http://maxwellsci.com/print/crjss/\(3\)84-92.pdf](http://maxwellsci.com/print/crjss/(3)84-92.pdf)

- [18] Ministry of Education (2001). *Report of the task force on student discipline and unrest in secondary schools*. Nairobi: Ministry of Education.
- [19] Ministry of Education (2010). *Central Province KCSE-2010 examination results analysis*. Nairobi: Ministry of Education.
- [20] Musungu, L. L. & Nasongo, J. W. (2008). The head-teacher's instructional role in academic achievement in secondary schools in Vihiga district, Kenya. *Educational Research and Review*, 3(10), 316-323, Available online at <http://www.academicjournals.org/ERR>
- [21] Ngware, M. W., Wamukuru, D. K. & Odebero, S. O. (2006). Total quality management in secondary schools in Kenya: Extent of practice, *Quality Assurance in Education*, 14(4), 339-362.
- [22] Oduol, T. (2006). Towards the making of education policy in Kenya: Conclusions and implications. *International Education Journal*, 7(4), 466-479. Available online at <http://iej.com.au>
- [23] Republic of Kenya, (1988). *Report of the education administration conference*. Nairobi: Jomo Kenyatta Foundation.
- [24] Republic of Kenya, (1998). *Master plan on education and training 1997-2010*. Nairobi: Government Printer.
- [25] Rutter, M., B. Maugham, P. Mortimer & A. Smith, (1979). *Fifteen thousand hours in secondary schools and their effects on children*. Cambridge: Harvard University Press.
- [26] Scheerens, J. & Bosker, R. (1997). *The foundations of educational effectiveness*. New York: Elsevier.
- [27] Sifuna, D. N. (2000). Education for democracy and human rights in African schools: the Kenyan experience. *Journal of African Development*, 25(1 & 2).
- [28] Steinberg, L., (2006). Parenting adolescents. In M. H. Bornstein (Ed.), *Handbook of parenting: Vol. 1. Children and parenting* (2nd ed., pp. 103–133). Mahwah, NJ: Erlbaum.
- [29] Sun, H., Creemers B. P. M. & De Jong, R. (2007). Contextual factors and effective school improvement. *School Effectiveness and School Improvement*, 18, 93-122.
- [30] Verspoor, A. (2006). Conditions and factors of effective schools in Africa. Paper presented at the *ADEA Biennale on Education in Africa, Libreville, Gabon*, March 27-31, 2006.
- [31] Wekesa, G. W. (1993). *The impacts of headteachers' instructional leadership on student academic achievement in Kenya*. Unpublished Ph.D. Dissertation, Teachers college, Columbia, Columbia University.
- [32] Yu, G. (2007). *Research evidence of school effectiveness in sub-Saharan Africa*. EdQual Working Paper No. 7, Department for International Development, DFID.