

Perception of Selected Stakeholders on Principals Contribution towards School Environment Management in Kenyan Secondary Schools

Patrick Odhiambo Odhier

PhD Student in Educational Administration & Management, Jaramogi Oginga Odinga University of Science & Technology, Bondo, Kenya

Abstract The present study investigated the perceptions of selected stakeholders on contribution of principals on school environment management in Rarieda Sub-County, Siaya County, Kenya. This study was anchored on Total Quality Management Theory. The study adopted concurrent triangulation within a mixed method approach. The target population was 176 respondents; 35 principals, 35 deputy principals, 35 boarding/senior masters, 35 Parents Association Chairpersons, 35 Board of Management Chairpersons and 1 Sub-County Quality Assurance and Standards Officer totaling to 176 respondents. Saturated sampling technique was used to sample 31 principals, 31 deputy principals, 31 Boarding/Senior Masters, 31 Parents Association Chairpersons, 31 Board of Management Chairpersons, and 1 Quality Assurance and Standards Officer totaling to 156. Data collection instruments were questionnaires and interview schedule. Face validity of the instruments was determined and ascertained by experts in the faculty of education, department of curriculum and education management while 4 schools from the sub-county were used for pilot study to determine reliability of the data collection instruments. Cronbach reliability test obtained a reliability coefficient of (0.87913). Quantitative data were analyzed using descriptive statistics such as frequency counts, percentages and means. Qualitative data was transcribed, put into various categories and reported in an on-going process as themes and sub-themes emerged. The findings indicated that the principals also ensure recruitment of appropriate and dedicated staff for proper management of the school environment; ensuring appropriate supervision of the school environment and development of environmental management programs and structures. It's recommended that the Ministry of Education in Kenya should enact regular in-service courses for School Board of Management Chairpersons on the management of school plant. This would make school Board of Management to be updated on best ways of management of school plant and utilization of machinery.

Keywords Perceptions, Selected stakeholders, Contribution of principals, School environment management, Rarieda Sub-County, Kenya

1. Introduction

The term school plant includes the site, the building and the equipment. It includes permanent and semi-permanent structure as well as items such as machines, laboratory equipment the blackboard/chalkboard the learner and teacher tools. Enaohwo and Eferakeya (1989) defined school plants as the entire physical infrastructural facilities provided in the school for the purpose of educating the child. Ojedele (1998) have a broader view of school plant as including the school site and all the structures that have been put in place to aid effective teaching and learning in the school system. Yusuf

(2008) defined school plant as the space interpretation of the school curriculum. The curriculum cannot be implemented if the physical facilities required for teaching and learning are not available. Without school plant, the school cannot exist to this end, it becomes necessary to ensure that school plant is properly planned and maintained to facilitate the effectiveness of the school system.

This study was guided by Total Quality Management (TQM) Theory. The origins of TQM are subject to debate but most research shows that Walter Shewhart came up with the management ideology in the 1920's. Total Quality Management Theory strives to maximize the competitiveness of an organization through the continual improvement of the quality of its products, services, people, processes, and environment. Quality requires a never ending pursuit of improvement and significant breakthroughs that are sustainable often require a lot of time, education, and effort along with difficult choices. According to Sallis (2002), quality control is an after the event process

* Corresponding author:

odhiambo85@yahoo.com (Patrick Odhiambo Odhier)

Published online at <http://journal.sapub.org/edu>

Copyright © 2019 The Author(s). Published by Scientific & Academic Publishing

This work is licensed under the Creative Commons Attribution International

License (CC BY). <http://creativecommons.org/licenses/by/4.0/>

concerned with detecting and rejecting defective item which is akin to inspection in schools. TQM incorporates quality assurance and is regarded as the process of integrating all activities, functions and processes within an organization to achieve continuous improvement and ensure total consumer satisfaction. Since there are several approaches to Total Quality Management (TQM), the present study adopted the Deming's Approach to TQM. This theory was important to this study because when schools use the concept of TQM theory, the school stakeholders such as students, teachers, support staff and BOM must be consulted to monitor their expectation and satisfaction. The culture of taking preventive measures as well as solving problems as they occur should be embraced. The principal should endeavor to be part of the team that monitors and evaluates the school provision, utilization and management of educational facilities. As TQM spirit permits, all members in school should feel obliged to prevent damage and vandalism of school property.

Literature on perceptions on principals' contributions towards school environmental management exists. For example, a study by Oblong (2010) in Nigeria on strategies of school environmental management revealed that most school environment in Nigeria is in deplorable state. Children are often said to be future leaders. It is however a concern that the school environment in which these young minds are trained have not been adequately managed. Anike and Tari (2011) focused on the provision and management of school facilities for the management of UBE programme. The study reported that School facilities are vital tools in the teaching and learning process, hence the justification for their adequate provision and management. Nwokike (2012) study revealed that principals played significant roles in the procurement, maintenance, safe guarding, as well as ensuring adequate utilization of school plant facilities. Egim (2003) in a study on the School Environment and Administrators' role performance in cross river secondary schools in Nigeria asserts that aesthetics of a school environment is another aspect of managing a school environment.

There has been tremendous growth in students' population without corresponding growth in number of facilities as a result of economic depression and corresponding rise in cost. This has put much pressure on the existing facilities, thus it appears school facilities have been overstretched and made obsolete while others allowed to decay (Mabeya, 2010). Despite the initial training received by principals on management of school plant, secondary schools still have serious dilapidation in roofs, cracked walls, poorly maintained machinery and compound. These also happen despite the fact that the government has allocated funds for free secondary education and the parents are also paying development funds towards construction and maintenance of school plant.

For learning to be effective, the school buildings, machinery and equipment, together with the school environment must be in good conditions, well maintained,

serviced and repaired. However, in Rarieda Sub-County, secondary schools have dilapidated buildings, cracked walls, poorly maintained machinery, poorly maintained compounds and fences, classrooms full of potholes on the floors, and lack of ceiling boards (Rarieda Sub-county directors office 2018). This situation is compromising the health as well as security of both the learners and the staff. When facilities are not well maintained they constitute health hazards to the users of the facilities. Teachers on the other hand would not perform effectively without facilities. The student's academic performance would be negatively affected. The tone of the school would be low and human and material resources would be wasted. It is in view of the importance of school plants to the attainment of educational objectives and to minimize wastages that this study sought to investigate the contributions of principals in the school plant management.

2. Research Methodology

The study used concurrent triangulation research design within the mixed methods approach. In this design the investigator collected both quantitative and qualitative data at the same time during the study and then integrated the information in the interpretation of results (Creswell, 2013). The design was found useful because it enabled the researcher to collect both quantitative and qualitative data at the same time. It therefore provides the most valid and accurate answers to research questions. Mixed method was chosen for this study because it gave the researcher opportunity to assess the management of school plant in Rarieda sub-county using both the quantitative and the qualitative methods of data collection. The target population was 176 respondents; 35 principals, 35 deputy principals, 35 boarding/senior masters, 35 Parents Association Chairpersons, 35 Board of Management Chairpersons and 1 Sub-County Quality Assurance and Standards Officer totaling to 176 respondents. Saturated sampling technique was used to sample 31 principals, 31 deputy principals, 31 Boarding/Senior Masters, 31 Parents Association Chairpersons, 31 Board of Management Chairpersons, and 1 Quality Assurance and Standards Officer totaling to 156. Data collection instruments were questionnaires and interview schedule. Face validity of the instruments was determined and ascertained by experts in the faculty of education, department of curriculum and education management while 4 schools from the sub-county were used for pilot study to determine reliability of the data collection instruments. Cronbach reliability test obtained a reliability coefficient of (0.87913). Quantitative data was collected using questionnaires from the stakeholders and interviews were also carried out. Quantitative data were analyzed using descriptive statistics such as frequency counts, percentages and means. Qualitative data was transcribed, put into various categories and reported in an on-going process as themes and sub-themes emerged.

3. Findings & Discussions

The study investigated perceptions on the contribution of Principals in School Environment Management. Respondents were boarding masters, Deputy School Principals and Board of Management (BOM) members. They were asked to indicate their level of agreement with the following statements related to contribution of Principals in

School Environment Management. Their respondents were based on a five point Likert scale and the results were tabulated in Table 1, Table 2, and Table 3 respectively. School Boarding Masters were requested to give their response on contribution of Principals in School Environment Management.

Table 1. School boarding masters' views on Contribution of principals in school environment management (n=31)

Statement	SA	A	N	D	SD
The principal always visits sessions of meetings of the school environment club to inculcate positive attitude towards environment management among the students	16 (51.6%)	5 (16.1%)	6 (19.4%)	3 (9.6%)	1 (3.2%)
The principal has delegated the responsibility of general school environment management to a specific teacher which ensures commitment in school environment management	20 (64.5%)	5 (16.1%)	3 (9.6%)	2 (6.5%)	1 (3.2%)
The principal has developed a regular program for school environment cleaning and maintenance	24 (77.4%)	3 (9.7%)	2 (6.5%)	1 (3.2%)	1 (3.2%)
The principal has ensured recruitment of experienced gardeners to cultivate and maintain school gardens	17 (54.8%)	3 (9.7%)	5 (16.1%)	4 (12.9%)	2 (6.5%)
The principal has established proper waste disposal and recycling structures to ensure clean environment	16 (51.6%)	2 (6.5%)	6 (19.4%)	4 (12.9%)	3 (9.7%)

The findings presented in Table 1 shows that about half of the respondents (school boarding masters) at 51.6% strongly agreed that principal always visited sessions of meetings of the school environment club to inculcate positive attitude towards environment management among the students, 16.1% just agreed, 19.4% were neutral, while only 3.2% of the respondents strongly disagreed with the statement. Generally, over two thirds of the respondents at 67.7% supported the statement that school principals visited the school environment club to instill positive attitude towards environment management among the students. This finding agrees with Nwokike, (2012) that principals played significant roles in the procurement, maintenance, safe guarding, as well as ensuring adequate utilization of school plant facilities.

Similarly, during the interview with the school principals, it was found that school principals contributed immensely on the school environmental management. One of the themes that came up was development of environmental management programs and structures. It was found that school principals had the mandate of designing regular programs that promote cleaning of the school and proper waste disposal. When probed on this, one of the school principals said;

Our contribution to the school environmental management largely lies on the structures and framework that we put in place to promote proper environmental management. For instance, we come up with regular programs that address waste disposal, supervise general cleaning of the school compound, strengthen environment clubs and delegate specific teachers to oversee environmental operations in the

school [P8].

These sentiments were also echoed by one of the Deputy Principals and a senior teacher who also reiterated that;

School principals play a very important role in school environmental management, through designing environmental policies and programs for the school. These programs focus on waste and litter disposal management and beautification of school compounds through planting of flowers [DP 5].

Our school principal ensures that the school fence is properly maintained throughout the year so that there are no leaks at the fence. The principal has been keen on this aspect (Senior Teacher, 14)

From these statements by the school principals, deputy school principals, BOM representatives and SCQASO. It can be deduced that school principals contribute very much on School Environment Management through various channels and platforms such as designing regular environmental management programs for waste and litter disposal, trimming of flowers, clearing of grasses, proper disposal of refuse, sweeping and removing cob webs among others to provide a relaxed atmosphere for the molding of minds and making a school a place to live for good academic performance. This finding agrees with Nwokike, (2012) that principals played significant roles in the procurement, maintenance, safe guarding, as well as ensuring adequate utilization of school plant facilities.

When probed on whether the principal had delegated the responsibility of general school environment management to a specific teacher who ensures commitment in school environment management, over two thirds at 80.6% strongly

agreed with the statement, 9.6% remained neutral, while 6.5% disagreed and 3.2% strongly disagreed. In agreement, Anike and Tari, (2011) also added that for the successful implementation for school programme, all the school facilities must be adequately provided for and managed.

Similarly, SCQASO and BOM Chair also reported that conducive school environment is a significant component of good academic performance of the learners. A representative qualitative statement from the SCQASO and results from open ended questions by BOM Chairperson were reported as;

The school principals are also charged with the responsibility of managing school environment and therefore, they develop effective strategies that efficiently help in managing the wastes (noise, water, and other effluents), drainage pattern. They also provides facilities for greening of the school environment, facilitate sanitation and planting of flowers, trees and maintaining lawns, well cleared grasses, to improve quality of life and study environment of the learners. [SCQASO]

Each year our principal apportions some budget for maintenance of school plant. This has really helped us to manage the school physical facilities appropriately (BOM Chair, 10)

From the interview results above, it can be concluded that most principals despite being aware of their duties of school plant management, have not effectively managed this role accurately within school.

Three quarters of the respondents at 75.0% also strongly agreed that the principal had developed a regular program for school environment cleaning and maintenance in their schools, 6.3% remained neutral, while another 6.3% strongly disagreed with the statement. Cumulatively, 84.4% of the respondents supported the statement that their school principals had come up with regular school environment management program, while only 9.4% refuted the statement. Moreover, slightly over a half of the respondents at 53.1% strongly agreed with the statement that their school

principals ensured recruitment of experienced gardeners to cultivate and maintain school gardens, 15.6% remained neutral, 12.5% agreed, while 9.4% strongly disagreed. This finding agreed with Griffin (2003) who reported that school managers need to consult technicians in order to acquire better equipment for the schools.

Generally, slightly over two thirds of the respondents at 62.5% supported the statement that their school principals engaged experienced gardeners, while only 21.9% of the respondents disputed the statement. This finding agrees with Nwokike, (2012) that principals played significant roles in the procurement, maintenance, safe guarding, as well as ensuring adequate utilization of school plant facilities. When probed on whether their schools had waste disposal and recycling programs, half of the respondents at (50.0%) strongly agreed with the statement, 18.8% remained neutral, 12.5% disagreed, while another 12.5% strongly disagreed. Generally, (56.3%; Mean=3.8) supported the statement, while only a quarter of the respondents at 25.0% refuted the statement. This finding is in agreement with Eden (2011) who reported that school facilities may be used for social activities and recreation.

Deputy school principals were also probed on contribution of Principals in School Environment Management. Out of the 32 respondents that were polled, Table 2 shows the results.

According to the study findings in Table 2, over two thirds of the respondents at 65.6% strongly supported the statement that the principal always visited sessions of meetings of the school environment club to instill positive attitude towards environment management among the students. Only 9.3% disagreed, while another 6.3% strongly disputed the statement, as 12.5% remained neutral. Generally, (71.9%; Mean=4.1) confirmed that their school principals were participating in school environment club meetings to promote positive attitude on environmental management among the students, while only 15.6% refuted the statement. This finding agrees with Kamau (2004) who reported that lack of facilities in schools affect performance of students.

Table 2. Deputy Principals views on Contribution of principals in school environment management (n=31)

Statement	SA	A	N	D	SD	Mean
The principal always visits sessions of meetings of the school environment club to inculcate positive attitude towards environment management among the students	20 (62.5%)	3 (9.4%)	4 (12.5%)	3 (9.3%)	2 (6.3%)	4.1
The principal has delegated the responsibility of general school environment management to a specific teacher which ensures commitment in school environment management	22 (68.7%)	4 (12.5%)	2 (6.3%)	3 (9.3%)	1 (3.2%)	4.3
The principal has developed a regular program for school environment cleaning and maintenance	21 (65.6%)	4 (12.5%)	3 (9.3%)	2 (6.3%)	2 (6.3%)	4.2
The principal has ensured recruitment of experienced gardeners to cultivate and maintain school gardens	16 (53.1%)	5 (15.6%)	2 (6.3%)	5 (15.6%)	3 (9.3%)	3.8
The principal has established proper waste disposal and recycling structures to ensure clean environment	19 (59.3%)	4 (12.5%)	4 (12.5%)	2 (6.3%)	3 (9.3%)	4.0

During interviews with principals, BOM Chairs and senior teachers, the study further established that principals were encouraging maintenance of the cleanliness and conservation of trees as well as flowers in their schools. One principal further explained thus;

I do attend environmental club meetings occasionally to give the interest of the students and teachers on tree planting and maintenance. I also do support the club with funds as well as buy them seedlings. I do take my time to support this club because it is also helping in environmental management which in the end supports my efforts in school plant management (P 9)

The school has an environmental club whose patron is one of the teachers. Every year the principal provides support to the club for maintenance of school physical environment (Senior Teacher, 6)

Our school has a policy of school plant management and the principal is keen on tree planting every year in April and October. This has really helped us to keep the physical environment to be clean (BOM Chair, 2)

From the interview findings, some principals took keen interest in school environmental management. On delegation of duties for good environmental management, just like the school boarding masters, over two thirds of the respondents at 68.7% strongly agreed that their school principals had delegated the responsibility of general school environment management to a specific teacher which ensures commitment in school environment management, 6.3% remained neutral, 9.3% disagreed, while 3.2% strongly disagreed with the statement. Cumulatively, (81.2%; Mean=4.3) of the respondents supported the statement that their school principals could delegate duties for effective school environmental management, while only 12.5% disputed the statement. In agreement, Anike and Tari, (2011) reported that, School facilities are vital tools in the teaching and learning process, hence the justification for their adequate provision and management.

From the interviews, another theme on contribution to school environment management was to ensure the recruitment of appropriate and dedicated staff for proper management of the school environment. This would make the school environment to be very clean, neat and well maintained. Three respondents reported that:

Principals ensure that dedicated staff is recruited for proper management of the school environment (SCQASO)

In each school, there are appropriate staffs recruited for each work available. In our school, we have very committed staffs who always assist in school maintenance of environment (BOM Chair, 11)

Our school has well trained staff employed to manage the environment. Some keep the flower beds, others do regular painting works while others are contracted to do minor repairs (Senior teacher, 7)

This would make the school environment to look more presentable and a better place to be in. This finding agrees with Egim (2003) who reported that Regular painting and maintaining the quality of buildings, channeling of sewage, well planned landscape and trimming of flowers, clearing of grasses, proper disposal of refuse, sweeping and removing cob webs among others provides a relaxed atmosphere for the molding of minds and makes a school a place to live and not to leave.

Over two thirds 65.6% of the deputy school principals also strongly agreed that their school principals had designed regular programs for school environmental management, 6.3% disagreed, while another 6.3% strongly disagreed as 9.3% remained neutral on the statement. Generally, over three quarters (78.1%; Mean=4.2) supported the statement, while only 13.0% disputed the statement. Nwokieke, (2012) also agreed that, principals played significant roles in the procurement, maintenance, safe guarding, as well as ensuring adequate utilization of school plant facilities.

Slightly over half of the deputy school principals at 53.1%, polled in this study agreed that their principals recruited experienced, skilled gardeners to take care of school gardens, 15.6% disagreed, and 9.3% strongly disagreed while only 6.3% remained neutral. This shows that as part of principals' contribution of school environmental management, they also engaged skilled environmental workers such as gardeners. This finding agrees with Eden (2011) who reported that principals play a crucial role in school facilities management.

When probed on availability of proper waste disposal programs, 59.3% of the deputy school principals also strongly agreed that their school principals had also established proper waste disposal and recycling structures to ensure clean environment, 6.3% disagreed, 9.3% strongly disagreed, while 12.5% remained neutral. Generally, 71.8% of the respondents supported the statement that they had proper waste disposal structures, while only 15.6% disapproved the statement. This shows that as part of effective environmental management, school principals also designed environmental management structures to be followed for good environmental management. This finding agrees with Llyod *et al* (2000) who reiterated that good management of school plant enhances the students' academic achievement.

Representatives of Board of Management (BOM) were also probed on contribution of Principals in School Environment Management.

According to the study findings in Table 3, over half of the BOM representatives at 56.7% strongly agreed that their school principals could visit the school environmental clubs to promote good environmental promotion behaviours among the students, 6.7% disagreed, another 6.7% strongly disagreed, while 16.7% remained neutral. Generally, (70.0%; Mean=4.1) of the BOM representatives confirmed that their school principals could visit the school environment club as part of promoting the environmental management culture among the students, while only 13.4% indicated otherwise.

This finding agrees with Egim (2003) who reported that Regular painting and maintaining the quality of buildings, channeling of sewage, well planned landscape and trimming of flowers, clearing of grasses, proper disposal of refuse,

sweeping and removing cob webs among others provides a relaxed atmosphere for the molding of minds and makes a school a place to live and not to leave.

Table 3. BOM's views on Contribution of principals in school environment management (n=30)

Statement	SA	A	N	D	SD	Mean
The principal always visits sessions of meetings of the school environment club to inculcate positive attitude towards environment management among the students	17 (56.7%)	4 (13.3%)	5 (16.7%)	2 (6.7%)	2 (6.7%)	4.1
The principal has delegated the responsibility of general school environment management to a specific teacher which ensures commitment in school environment management	22 (73.3%)	5 (16.7%)	1 (3.3%)	2 (6.7%)	0 (0.0%)	4.6
The principal has developed a regular program for school environment cleaning and maintenance	21 (70.0%)	6 (20.0%)	1 (3.3%)	0 (0.0%)	2 (6.7%)	4.5
The principal has ensured recruitment of experienced gardeners to cultivate and maintain school gardens	19 (63.3%)	3 (10.0%)	3 (10.0%)	2 (6.7%)	3 (10.0%)	4.1
The principal has established proper waste disposal and recycling structures to ensure clean environment	21 (70.0%)	3 (10.0%)	4 (13.3%)	1 (3.3%)	1 (3.3%)	4.4

The study also found that almost three quarters of the BOM representatives at 73.3%, strongly agreed that as part of contribution of principals in school environmental management, the principals also delegated the environmental duties to specific teachers. Only 6.7% disputed the statement, while 3.3 remained neutral. Another 70.0% strongly agreed that the schools had well-structured school environment cleaning and maintenance programs, 6.7% refuted the statement, while 3.3% neither disagreed nor agreed. Generally, (90.0%; Mean=4.5) overwhelmingly agreed that their schools had well structured environment cleaning and maintenance programs courtesy of their school principals. In agreement, Egim (2003) reiterated that how a school environment is managed in aesthetics, recreation, waste, drainage pattern, and other physical outlook of the environment has telling effect in the quality of learning environment of children.

Another theme on contribution to school environment management is by ensuring appropriate supervision of the school environment. This would ensure that school workers are doing all that they are meant to do in environment maintenance. Two respondents reported that:

By ensuring that all sections in the compound are well maintained and supervised on daily basis for efficiency and cleanliness of the environment (SCQASO)

We do supervise the school environment as assigned by the school principal. Each senior teacher has a role which they play in school. Myself am concerned with supervision and administration (Senior teacher, 12)

This implies that principals maintain school environment by doing supervision on a daily basis. This finding agrees with Nwokike, (2012) that principals played significant roles in the procurement, maintenance, safe guarding, as well as ensuring adequate utilization of school plant facilities.

Similarly, Anike and Tari, (2011) reported that School facilities are vital tools in the teaching and learning process, hence the justification for their adequate provision and management.

The study also established that over two thirds at 63.3% of the BOM representatives strongly supported the statement that their school principals could recruit experienced gardeners to cultivate and maintain school gardens. However, 16.7% cumulatively disputed the statement while 10.0% remained neutral on the statement. Besides, (80.0%; Mean=4.4) of the respondents reacted positively to the statement that their school principals had established proper waste disposal and recycling structures to ensure clean environment, while 6.6% cumulatively disagreed as 13.3% remained neutral. This shows the school principals also contributed to the school environmental management through designing effective waste disposal programs and structures. Generally, quantitative findings from the school boarding masters, deputy head teachers and BOM representatives, it can be deduced that school principals contributed immensely in school environmental management through various fronts such as taking part in school environment clubs, delegating environmental duties to specific teachers, designing regular program for school environment cleaning and maintenance, designing effective waste disposal programs in the schools and recruiting experienced gardeners to cultivate and maintain school gardens. This finding agrees with Nwokike (2012) who reported that principals play a significant role in maintenance of school plant facilities.

4. Conclusions & Recommendations

It can be concluded that, school principals could participate in school environment club meetings to promote

positive attitude on environmental management among the students. Over two thirds of the deputy school principals also strongly agreed that their school principals had designed regular programs for school environmental management. Principals also ensure recruitment of appropriate and dedicated staff for proper management of the school environment; ensuring appropriate supervision of the school environment and development of environmental management programs and structures. It's recommended that the Ministry of Education in Kenya should enact regular in-service courses for School Board of Management Chairpersons on the management of school plant. This would make school Board of Management to be updated on best ways of management of school plant and utilization of machinery.

REFERENCES

- [1] Anike, L.O. & Tari, G.N. (2011). Provision and Management of School Facilities for the Implementation of UBE Programme. *Journal of Educational and Social Research* Vol. 1 (4), 47-57.
- [2] Creswell, W. (2013). *Research Design; Qualitative, Quantitative, and Mixed Methods Approaches* (4th edition). Sage publication. New York.
- [3] Deming, P. (1986). 14 Points for Management: Framework for Success. *Journal of the Royal Statistical Society. Series D (The Statistician)*, Vol. 36, No. 5, Special Issue: Industry, Quality and Statistics (1987), pp. 561-570.
- [4] Denzin, N. & Lincoln, Y. (2000). *Collecting and interpreting Quantitative materials*. London: sage publications.
- [5] de Vaus, D. A. (2002). *Surveys in Social Research, 5th edition*, Allen & Unwin, Crows Nest, Australia, 379 pp., 2002.
- [6] Durosaro, D.O. (1998). *School Plant Management practice in Nigeria: Trends Issues and Problems*. In A.A. Olagboye, J.O. Fadipe (Eds). *Management of Nigerian Education: Project Monitoring and School Plant Maintenance*, Ondo: NEPA.
- [7] Duwiejua, M. & Newman, E (2014). *Funding of higher education for innovative funding of higher Education in Africa, the case in Ghana*. Retrieved from slideplayer.com/slide/4061169/.
- [8] Enaohwo, J. O., & Eferakeya, O. A. (1989). *Educational Administration*: Ibadan. Paperback Publishers.
- [9] Mabeya, T. (2010). *Role of church sponsor in management of secondary schools: impact on Academic performance and conflict concerns in Kenya* (online) downloaded on 13th December 12th from <http://www.academicjournals.org/jeaps/-----mabey%20et%20>.
- [10] Egim, S. (2003). *School Environment and Administrators role performance in cross River state Secondary schools*. An unpublished doctoral thesis, University of Calabar Nigeria.
- [11] Maree J. (2012). Career counseling in the 21st century. Merging quantitative approach to facilitate Best practices. *Journal of Education Science* Vol 7(1)1-4.
- [12] Mbipom, G., (2002). *The impact of school physical environment*. Unpublished Phd Dissertation, University of Calabar Press.
- [13] McGowan, R. (2007). *The impact of school facilities on student achievement, attendance, behavior, completion rate, and teacher turnover rate in selected Texas high schools*: PhD dissertation, Texas A and M university, United States.
- [14] McNeill, P. & Chapman, S. (2005). *Research methods*. Routledge – London.
- [15] Nwokike, S.C. (2012). *Management of School Plant by Principals in Nsukka Education Zone of Enugu State*. PhD In Educational Administration And Planning, University Of Nigeria, Nsukka.
- [16] Ojelede, P. K. (1998). Maintenance school plant for educational effectiveness and efficiency in a depressed economy. In Olagboye, A. A., & Fadipe, J. O. (Eds). *Management of Nigeria Education, Ondo: Project Monitoring & school plant maintenance*. Ondo: NIEPA.
- [17] Sallis, E. (2002). *Total Quality Management in Education* (3rd edition). London Kogan Page.
- [18] Yusuf, M. A. (2008). *School Plant Planning and Secondary School Students " Learning Outcome in South West Nigeria*. PhD dissertation. University of Ado Ekiti.