

## Students' Perspective on the Impact of Cleanliness of University Facilities on Academic Achievement: A Case of a Public University in Kenya

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### ABSTRACT

*Various studies in some universities and other educational institutions across the globe have shown that there is a direct link between students' academic performance or achievement and the cleanliness of their campus and halls of residence. This study was carried at University of Eldoret, Kenya with an aim of finding out the effect of cleanliness of campus facilities on students' academic achievement. The study employed a questionnaire survey of third year students (N=75) in one of the teaching departments at the University. This senior group was purposively selected because of its longer lived experience at the University. The questionnaire developed and self-administered, had both open and closed-ended questions. The questionnaire was organized into three thematic areas; background information, cleanliness of campus and halls of residence, and suggestions for improving cleanliness on campus. The data collection adopted convenient sampling for the students (n=58) who were readily available and agreed to participate in the study. Analysis of data adopted mixed methods. The study revealed that 88 % of students felt they would gain a better qualification if their campus and halls of residence were cleaner and 91 % said they would gain better qualification if the campus and halls of residence were more organized. Majority of students (92%) indicated that cleanliness of campus facilities was quite important, while 93 per cent said it was extremely important. The study further revealed that 74 % of the students indicated that campus environment was not kept clean, while 59 % stated that the lecture halls were not regularly cleaned. Majority of the students (54%) revealed that the cleaning of the campus and halls of residence was not done at an appropriate time. The standard of cleanliness at the University is mainly a management issue. We recommend that universities should develop consistently and sustainably high standard of cleanliness for all facilities, to allow students to experience a conducive learning environment.*

**Key words:** Cleanliness, University Facilities, Educational Institutions, Academic Achievement.

### INTRODUCTION

In October 2014, we carried out a study to establish the effect of cleanliness of campus facilities on students' academic performance. The study relied on students' perceived impact of the state of the cleanliness of campus facilities on their performance. Several studies, at different levels of education worldwide have shown that there exists a positive correlation between the cleanliness of school facilities and students' academic performance. According to a study by Campbell and Bigger (2008), 88 % of the 1481 students who were sampled in United States reported that lack of cleanliness is a distraction when there is casual inattention and insufficient cleanliness of the campus buildings. In the same study, 84 % of the students reported that they desired a clean learning environment – characterized by spotlessness and tidiness. A survey done by a UK support Services Company that was reported in Pan-European Magazine (2013) revealed that 44 % of the students who took part in the study felt that they would gain a better qualification if their halls of residence were cleaner and more organized. In the same study, 48 % of the students rated the cleanliness of campus facilities as quite important, while 41 % described it as extremely important. Based on these findings, institutions of higher learning have a key role to play in ensuring that their students are provided with the best environment for learning to be able to realize their full academic potential.

Nviro (2004) reports that the tidier a building is, the more it will be conducive for study and work. The study further observes that there is a link between a well-ventilated building, clean environment and productivity, which could be boosted by 11 %. This finding implies that similar performance improvement could be attained by students in a clean learning environment. A similar study by Edwards (1992), cited in Earthman and Lemasters (1996), found out that when a school moved from one category to another (from poor to fair, or from fair to excellent), the student achievement scores could be expected to increase by 5.5 %. Similarly, Edwards found out that a move of two categories from poor to excellent (substandard to above standard), would lead to an increase of 11% points in scores. These studies illustrate that there is very close relationship between the standard of cleanliness and how well the students can perform in their studies.

Turning to African experience, a study done in Nigeria by Ogbeba and Muluku (2013) reported that the performance of biology students from clean schools was higher than students from schools with poor sanitation. Similar earlier findings by Hills (2009) observed that poor performance in biology was attributed to poor state in which science is being taught, perhaps due to provision of substandard class sizes and dirt school environments. Udeozor (2004) maintains that the concept of school learning environment constitute various components which include ensuring that school environments are clean. Balogun (2001) also affirmed that school cleanliness should be mandatory in all school environments. Such a move would keep schools free from disease outbreaks.

Odude (2013), in a study of thirteen (13) private secondary schools in Westlands Nairobi Kenya, observed that the physical facilities in terms of cleanliness and repairs had a positive impact on performance in Kenya Certificate of Secondary Education (KCSE). The author further emphasized that schools should strive to have good physical facilities as well as paying attention to maintenance. The study established that the state of cleanliness was an issue in average and below average schools. This study clearly demonstrates that the availability of well-maintained and clean facilities contribute to better academic performance. According to Gatsinzi, Jesse and Makewa (2014), in a study conducted in Rwanda, indicated that only variables such as aesthetic and cleanliness significantly correlated with teacher motivation. The study recommended that educators, through reflective practice, and in-service professional development, learn more about how to structure physical classroom setting to meet their instructional goals and activities, which would, as a result, motivate both the learner and the teacher. It is evident from this study that a well-motivated teacher will spend more productive time with the learner, which will yield better academic results in the long run.

Ngowo (2013) observed that students for primary school level in Tanzania are expected to arrive at school as early as 7.00 a.m. to conduct general school environment cleanliness and among other obligations. This is a very important step that ensures that the learning environment and its facilities are kept clean so as to enhance learner motivation and contribute to better academic results. Similar earlier findings in the United States by Campbell and Bigger (2008) confirmed that students had a key role in keeping the campus clean. Majority of the students in this study emphasized the need for students to be involved in keeping the campus buildings clean.

The reviewed literature has evidently illustrated that cleanliness is a very important aspect which cannot be wished away by any educational institution. In the case of Kenyan universities, student enrolment has been increasing annually and it is for this reason that the management of universities should focus on improving the learning environment and related facilities within the universities. According to Ajaja (2000), the desire for education has increased the problem of providing an effective and conducive environment for teaching and learning. This explains why the study focused on the cleanliness of the campus and halls of residence. University leadership in Kenya should enhance its efforts towards cleanliness of its facilities to maximize on learning. This explains why this study focused on the impact of the state of cleanliness of university facilities on students' academic achievement.

## **METHODS AND PROCEDURES**

A descriptive survey design was adopted in this study. Lodico Spaulding and Voegtle (2006) argued that this design uses a sample representative of a larger population to collect data in an attempt to generalize findings to a population. The study employed a questionnaire survey of third year students (N=75) in one of the departments at the University of Eldoret. This senior group was purposively selected because it had lived longer at the University by the time of the study. The respondents were assured of their confidentiality and encouraged to give honest responses on the questions given, which focused on the cleanliness of the university facilities.

The self-administered questionnaire had both open and closed-ended questions. The questionnaire was administered in a scheduled lecture session to discourage respondents from discussing their views and responses. The questionnaire was organized into three thematic areas/sections; background information, cleanliness of campus and halls of residence, and suggestions for improving cleanliness on campus. One of the sections was Likert scale type ranging from Strongly Agree (SA) to Strongly Disagree (SD).

Convenient sampling method was used and students (n=58) who were readily available and agreed to participate in the study were included as participants. The questionnaire return rate was 100 % and the analysis of data adopted mixed methods.

## RESULTS AND DISCUSSION

### Target Population and Sample Size

Seventy five (N=75) students who were expected to attend a scheduled lecture session were identified for the survey. This would have been 27 (36%) female and 48 (64%) male. However, only fifty eight (n=58, 77%) students were conveniently selected since they were readily available and agreed to participate in the study. The sample size comprised 40% female (23) and 60% male (35), with a variation of +4% and -4% respectively as compared to the target population.

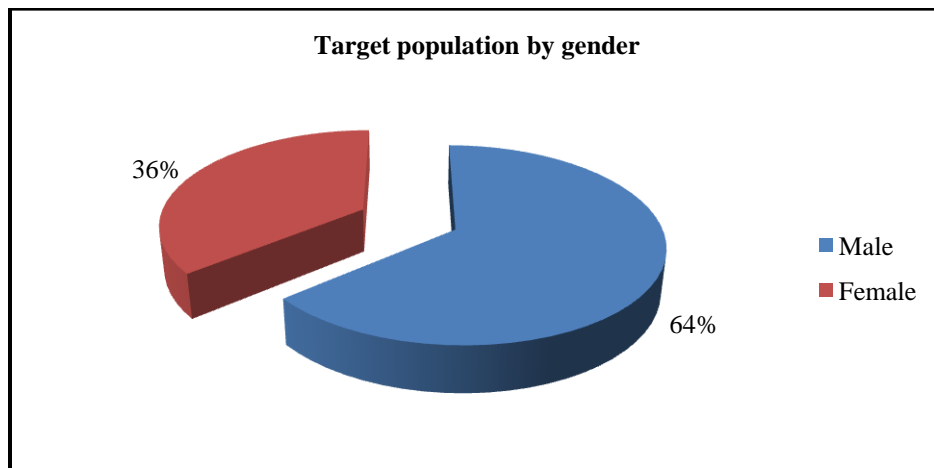


Figure 1: Target population by gender (N=75)

Figure 1 shows the total target population of 3<sup>rd</sup> year students in one of the teaching departments while Figure 2 indicates the total sample size, both based on gender.

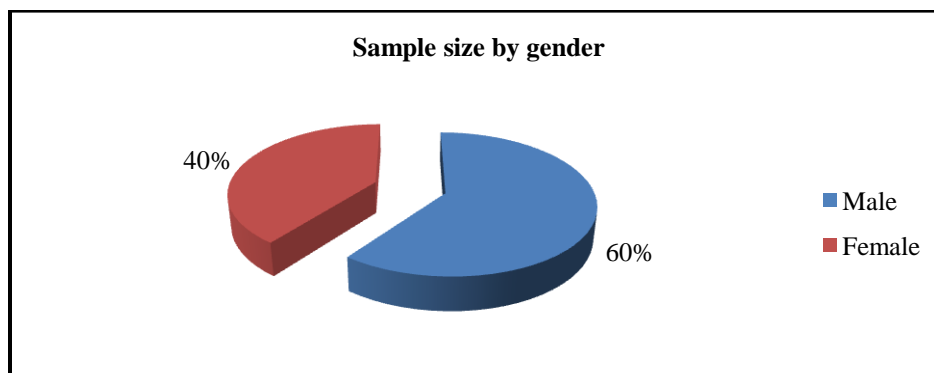


Figure 2: Sample size by gender (n=58)

The findings of the study categorised students responses into cleanliness of campus and halls of residence, and suggestions for improvement on cleanliness of campus facilities.

### Cleanliness of Campus and Halls of Residence

Table 1. Cleanliness of campus and halls of residence

Statement	Response					Frequency
	SA	A	U	D	SD	
1 I will gain a better qualification if the campus and halls of residence are cleaner	36(62%)	15(26%)	1(2%)	5(8%)	1(2%)	58(100%)
2 I will gain a better qualification if the campus and halls of residence are more organized	41(70%)	12(21%)	0(0%)	4(7%)	1(2%)	58(100%)
3 I consider the cleanliness of campus facilities quite important	41(71%)	12(21%)	1(2%)	2(3%)	2(3%)	58(100%)
4 I consider the cleanliness of campus facilities extremely important	44(76%)	10(17%)	0(0%)	4(7%)	0(0%)	58(100%)
5 Lack of cleanliness is a distraction to effective learning	42(72%)	13(22%)	1(2%)	1(2%)	1(2%)	58(100%)
6 I desire orderly spotlessness and tidiness to create good learning environment	43(74%)	14(24%)	1(2%)	0(0%)	0(0%)	58(100%)
7 The halls of residence are tidy, are regularly cleaned	8(14%)	6(10%)	11(19%)	17(29%)	16(28%)	58(100%)
8 The campus environment is regularly kept clean	6(10%)	7(12%)	2(4%)	30(52%)	13(22%)	58(100%)
9 The lecture halls are regularly cleaned	7(12%)	14(24%)	3(5%)	23(40%)	11(19%)	58(100%)
10 The cleaning of Campus and halls of residence are done at an appropriate time	10(17%)	7(12%)	4(7%)	17(29%)	20(35%)	58(100%)

Closed-ended statements in Table 1 adopted the Likert scale (Strongly Agree-SA, Agree-A, Undecided-U, Disagree-D and Strongly Disagree-SD), to measure the respondents' agreement or disagreement. Out of 58 respondents, majority 51 (88%) agreed while minority 6 (10%) disagreed that they will gain a better qualification if the campus and halls of residence were cleaner, and 1(2%) was undecided.

The students were asked to respond to the statement which assessed whether they will gain a better qualification if the campus and halls of residence were more organized. As indicated in Table 1, majority of the respondents 53 (91%) agreed, while only 5 (9%) disagreed with the statement. Similar findings were reported in Pan-European Magazine (2013) where 44 % of the students felt that they would gain a better qualification if their campus and halls of residence were cleaner and organized. In the same report, 48 % of the students rated the cleanliness of campus facilities as quite important while 41 % said it was extremely important as shown in the next line on the current study.

To establish whether the students considered cleanliness of campus facilities quite important, majority of them 53 (92%) agreed while 4 (6%) disagreed and 1 (2%) of them was undecided.

The findings further revealed that majority of the respondents 54 (93%) agreed with the statement that cleanliness of campus facilities was extremely important while 4 (7%) disagreed, and none was undecided. On the statement, "Lack of cleanliness is a distraction to effective learning", a greater number of respondents 55 (94%) agreed with the statement while 2 (4%) disagreed, and 1 (2%) was undecided. These findings correlate with similar research conducted by Campbell and Bigger (2008) which showed that lack of cleanliness becomes a distraction to students'

learning ability when building tidiness is ranked at level three (Casual inattention), four (moderate dinginess) or five (unkempt neglect). The same study further reported that 84 % of the students desired orderly spotlessness and tidiness to create a good learning environment.

The present study further assessed whether the students desired orderly spotlessness and tidiness to create good learning environment. Majority (57, 98%) of them agreed with the statement while only 1(2%) was neutral. The study also established whether the halls of residence were tidy and regularly cleaned. Fewer (14, 24%) respondents agreed with the statement while majority (33, 57%) disagreed, and 11 (19%) took a neutral stand.

The respondents were also asked whether the campus environment was regularly kept clean. Minority 13 (22%) agreed while 43 (74%) disagreed with the statement and 2 (4%) were undecided. The study assessed whether the lecture halls were regularly cleaned at the university. Majority of the respondents 34 (59%) disagreed while 21 (36%) agreed and only 2 (4%) were undecided on the statement. Finally, the study established whether cleaning of campus and halls of residence was done at an appropriate time. Majority (37, 64%) of the respondents disagreed while 17 (29%) agreed, and 4 (7%) were undecided.

### Students' Suggestions to Improve Campus and Halls of Residence Cleanliness

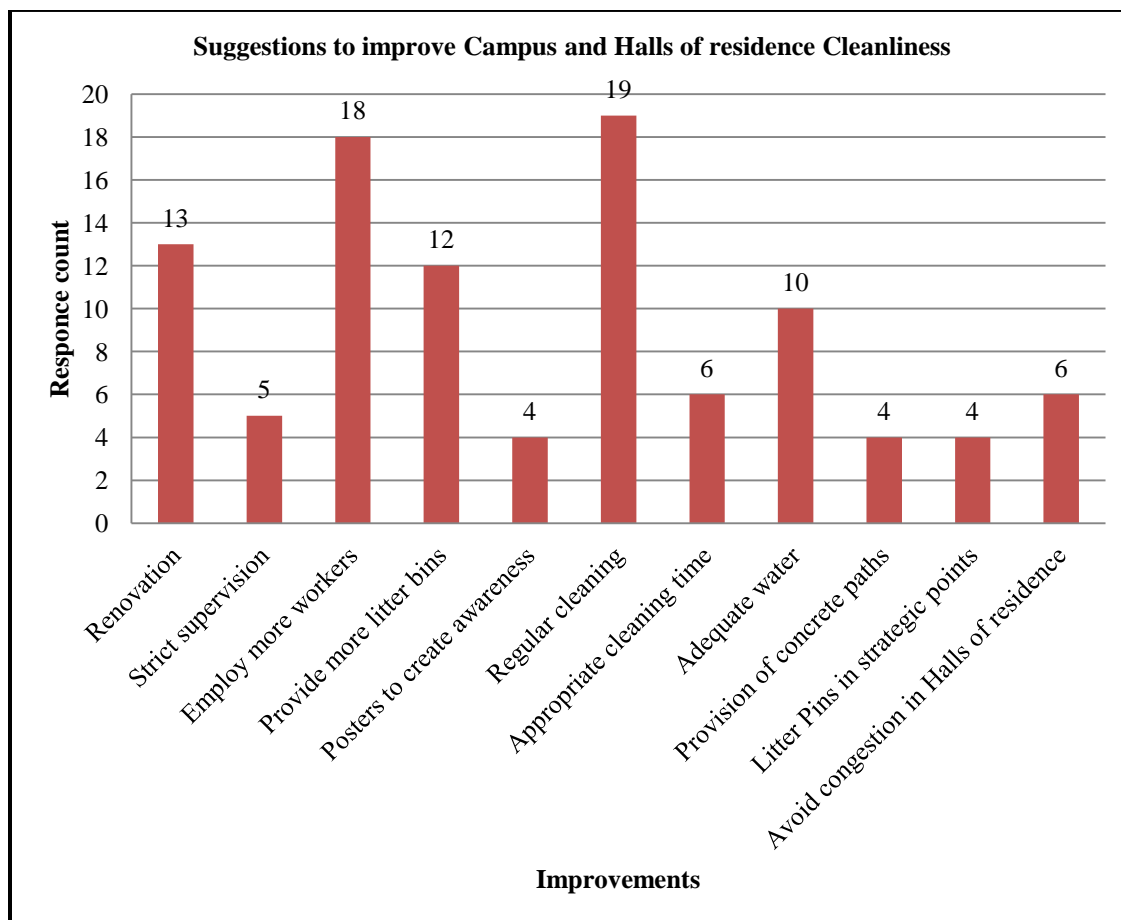


Figure 3. Suggestions to improve campus and halls of residence cleanliness

In the open-ended item on the questionnaire, we sought to establish suggested ways in which the respondents would like cleanliness at the university improved. As shown in Figure 3, most of the responses focused on what the university leadership should spearhead. The responses were: ensuring regular cleaning of facilities (19), employing more workers (18), renovating worn-out facilities (13), providing more litter bins (12), having adequate water for cleaning (10), scheduling cleaning of facilities at an appropriate time (6) and avoiding congestion in the halls of

residence (6), among others. In slightly different findings on improvement of campus cleanliness, Campbell and Bigger (2008) argued that there is need for adequate custodial/worker service and involvement of students in keeping campus building clean. Based on the findings of the current study, it is important for the university to continuously enhance resources towards cleanliness of campus facilities. Berry (2002) observed that making cuts in routine cleaning and maintenance, repairs, and restoration is commonly considered less devastating than cutting academic programmes by those in charge of educational institutions. The author further argued that this limited thinking is very short-sighted, and, in the long run, ends up adding to the cost of education.

## CONCLUSION AND RECOMMENDATIONS

This study has established that there is need to improve the state of the cleanliness of campus facilities. Majority of the respondents observed that the halls of residence, lecture halls and campus environment were not regularly cleaned and cleaning of lecture halls and halls of residence were not done at an appropriate time. The university should consider the cleanliness of its facilities because it is a factor that influences students' academic achievement. The respondents in this study agreed that there is a relationship between levels of cleanliness and academic achievement. The need for improvement of campus facilities is in agreement with that of Ugwuoke (2008) who maintained that there is a relationship between physical characteristics of school buildings and educational outcomes. Upcraft and Schuh (1996) observed that environmental assessment determines and evaluates how various elements and conditions of the college campus environment affect student learning and growth. Similar findings were later reported by Marshall (2012) who argued that assessing and utilizing study environments will help to eliminate problematic construction and improve student learning. Therefore, there may be need for educational institutions to conduct regular environmental assessments with an aim of ensuring that students feel comfortable in their learning environment.

Based on the findings of this study, we recommend the following:

- i. University management should hire more workers to offer custodial services as result of increased admissions. Decreased staffing will lead to decreased levels of cleanliness which will negatively affect the students' academic performance
- ii. University should:
  - a) Initiate programs that involve students in cleaning the campus under work study for example so as to create a consistently clean environment that motivates learning for better performance.
  - b) Provide students with an opportunity to propose how to improve campus facilities and initiate appropriate actions to address their concerns.
  - c) Develop a unit that deals with attributes of building facilities, that is, cosmetic and structural. Cosmetic items are those that deal with appearance of the building facilities, such as frequency of mopping and sweeping, and colour of painting. Structural includes items such as air conditioning and type of lighting.
  - d) Regularly conduct assessment of students' learning and living environments. This will assist the university to initiate strategies that will enhance both academic and social well-being of the students
- iii. Given that students spend most of their time in lecture halls and their halls of residence, there is need for the university management to regularly renovate campus facilities
- iv. Cleaning of campus facilities such as halls of residence and lecture halls ought to be done at an appropriate time to avoid any interference on the students' academic work and their social well-being.
- v. The institutions of higher learning need to continually develop levels of cleanliness that contribute to a good learning environment.

## REFERENCES

- Ajaja, O.P. (2000). Assessment of biology study support environments in our schools. *43rd Annual Conference Proceedings of Science Teachers Association of Nigeria*, (pp215-218). Jos: HEBN Publishers Plc.
- Balogun, S. (2001). Sensory reactions to sick buildings. *Environmental interactional*, 12, 147-159.
- Berry, M. A. (2002). *Healthy school environment and enhanced educational performance: The case of Charles Young elementary school, Washington, DC*. The Carpet and Rug Institute, Dalton, Georgia.
- Campbell, J. L., and Bigger, A. S. (2008). "Cleanliness & learning in higher education" *Facilities Manager*, 24 (4) p. 28-36.
- Earthman, G. I., and Lemasters, L. K. (1996). *Review of research on the relationship between school buildings, student achievement, and student behavior*. Paper presented at the annual meeting of the Council of Educational Facility Planners, International, Tarpon Springs, Florida.
- Gatsinzi, P., Jesse, P. and Makewa, L. N (2014). Work and School Related Variables in Teacher Motivation in Gasano District, Rwanda. *Journal of Education and Training*, 1 (2), ISSN 2330-9709 2014

- Hills, C.J. (2009). *The Causes of the decline in performance of students in West African School Certificate in biology for the past four years 1998-2001*. B.Sc (Ed.) Project Lagos: Report, University of Lagos.
- Lodico, M., Spaulding, D., and Voegtle, K. (2006). *Methods in educational research: From theory to practice*. San Francisco: Jossey – Bass
- Marshall, M. (2012). Environmental Conditions and their Influence on Academic Advising Offices. *The mentor: an academic advising journal*.
- Nviro (2014). *The Importance of Cleanliness in the Learning Environment*. England
- Ngowo, A. A. (2013). Relationship between time management and academic performance for primary schools: A case of Morogoro Municipality. Published MSc Dissertation. Nzumbe University, Morogoro
- Odude, J. A. W (2013). *Factors Influencing Academic Performance in Kenya Certificate of Secondary Education Examination in Private Schools in Westlands Division in Nairobi, Kenya*. Published MA thesis, University of Nairobi, Nairobi.
- Ogbeba, J. A. and Muluku, I. A (2013). Influence of Clean School Environment and Standard Classroom size facilities on Students' Achievement in Biology in Gwagwalada Area Council of Fct-Abuja. *Case Studies Journal*. ISSN (2305-509X) (21-26)
- Pan-European Magazine (2013). Importance of Cleanliness in Universities. *European Cleaning Journal*. 25<sup>th</sup> April, 2013.
- Udeozor, R.K. (2004). *Educational administration: perspectives and practical implications*. Imo: Rex Charles and Patrick Ltd.
- Ugwuoke, A. O. (2008). *The school environment and its effect on students' performance*. unpublished PGDE thesis; Abuja: University of Abuja.
- Uprcraft, M. L. and Schuh, J. H. (1996). Assessing campus environments. In M. L. Uprcraft & J. H. Schuh (Eds.), *Assessment in student affairs (166-188)*. San Francisco, CA: Jossey-Bass.