

Students' Perception of Quality of Lecture Hall Resources Used in Teacher Education Programmes in the Universities in Nakuru County, Kenya.

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Abstract

Quality of Lecture Hall Resources used in teacher education programs is central to provision of quality education in the universities in Kenya and other world nations. This research study is informed by the claim that quality of lecture hall resources used in teacher education programmes is low in the universities in Nakuru County, Kenya. The objective of this research study was therefore to determine how students enrolled in teacher education programmes actually perceive quality of lecture hall resources in the universities in Nakuru County, Kenya. This study was premised on the Theory of Total Quality Management by Deming and Attributive Theory of Quality of Higher Education. The researcher adopted the cross-sectional survey research design. Data was collected from a study population of 310 obtained from a total of 6 universities (Private and Public Chartered Universities) offering teacher education programmes. Stratified, purposive and simple random sampling techniques were used. Sample size was 257 respondents. Using Test Retest method, the questionnaire scored 0.8 reliability coefficient. Instrument was validated and piloted. Data from students' questionnaires were analyzed using statistical tools in the Statistical Package for Social Sciences (SPSS). Descriptive statistics such as frequencies, percentages, means and standard deviations were calculated. One-way Analysis of Variance, Post Hoc Test, T-tests were carried out to measure significant differences between means of samples. The study found out that Private Y students (mean=3.26) perceived that quality attributes of Lecture Hall resources are frequently available. Public Q (mean=3.12), Private X (mean=3.09) and Public P (mean=2.58) also reports that quality attributes of Lecture Hall resources are frequently available. This means that Private Y and Public Q leads in the prevalence of quality attributes of Lecture Hall resources. Students' Perceived that Quality of Lecture Halls Resource was better in private universities ($M = 3.17$, $SD = 0.60$) than in public universities ($M = 2.79$, $SD = 0.73$). The results further indicate that the difference between the two means was statistically significant, $t(225) = 4.263$, $p < .05$. This is an indication that quality of lecture hall resources in private universities was higher than those of public universities. These findings could inform policy formulation on provision of quality Lecture Halls Resource in the universities offering teacher education programmes. The study recommends that universities should prioritize provision of quality lecture hall resources with a view to improving quality of teacher education programmes. All ethical concerns and procedures were observed.

Key words: Perception, Quality, Lecture Hall Resources.

1.1 BACKGROUND TO THE STUDY

A high percentage of students enrolled in the universities in Kenya tend to pursue teacher education programmes compared to other programmes, a situation which constrains supply of adequate instructional resources including in-service (Olembo, Wanga & Karagu (1992). Kalai, *et al.*, (2015) and Odebero (2005) concur that increase in enrolment in teacher education programmes overstretches available instructional resources which in turn dilute quality of learning outcomes related to knowledge, skills and attitude.

According to Kaimenyi (2015), teacher quality is the main driver that influences achievement of cognitive, affective and psychomotor learning outcomes and that teacher training curricular combine both subject content and pedagogy. The Cabinet Secretary further noted that quality of teacher preparation and inadequate supervision of instruction still remains a problem in

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Kenya. The Kenyan public and the Teachers Service Commission have also expressed grave concern about the quality of instructional resources used in teacher education programs in the universities in Kenya (Ramani, 2006). Similarly, Mondoh (2002) notes that since introduction of university fees in Kenya through the policy of cost sharing, quality of teaching and learning resources, among other things, have been compromised in public universities.

According to Kabarak University Bachelor of Education Arts Curriculum, Revised (2016), the goal of teacher education is to use quality instructional resources, among other things, to achieve prescribed expected learning outcomes which include acquisition of requisite attitude, knowledge and skills in two teaching subjects as well as pedagogical techniques needed to effectively transmit subject content. Teacher education programmes should be crafted in such a way that they impact on learners and humanity in general (Namunga and Otunga, 2012).

But one of the most important resources used for instructional activities in teacher education programmes in a university is the lecture hall and related resources. Reports are galore that many universities do not have quality lecture hall resources. Asiyai (2013) avers that universities in Nigeria must improve infrastructural facilities like lecture halls and auditorium in order to improve quality of teaching. Okebukola (2005), also reports that only 30% of Nigerian students have access to better facilities like lecture halls. Much earlier, Asiyai (2015) and Oyetunde (2004) noted that most students of institutions of higher learning in Nigeria study in dilapidated buildings which are poorly ventilated, furnished, illuminated and situated in environmentally depressing and disabling locations. This study did not look at how students enrolled in teacher education programmes perceive quality of lecture hall resources in the universities in Nakuru County, Kenya.

The situation is not different in some universities Uganda. Bunoti (2010) noted that lecture rooms in some Ugandan universities are too small for the number of students. They have insufficient seats and so they lose a lot of time transferring seats from one room to another and occasionally attend lectures standing up with an overflow on the verandahs. Lecture rooms are not soundproof. So, lecturers are often interrupted by heavy rains and mowers. Some lecturers use dusty chalks on chalkboards causing health problems. There are no public address systems for large classes and occasionally Lectures are affected by frequent power-cuts in the halls. This study did not look at how students enrolled in teacher education programmes perceive quality of lecture hall resources in the universities in Nakuru County, Kenya.

Researchers reported that some public universities in Kenya do not have enough physical facilities for teaching and research and that in order to improve teaching in the university, they must use innovative ICT and collaborate with private universities (Gudo, Olol & Oanda, 2011). Mwangi & Udoto (2011) concurs that quality of learning facilities including online resources and lecture facilities as well as learning environment provided by Kenyan universities did not meet quality measure of adequacy. Ng'anga' (2010), posits that the Government of Kenya should pump more funds into higher education so that universities can expand infrastructure and hire tutors. Similarly, in his findings about quality of lecture hall resources in public and private universities in Kenya, Wanzala (2013) reported that some students attend lectures from outside lecture rooms in some universities in Kenya. The researcher further observes that lecture facilities are more available in private than in public universities. How then do students enrolled in teacher education programmes in the universities in Nakuru County actually perceive quality of lecture hall resources?

According to the Nakuru County Development Profile (2013), Nakuru town has witnessed establishment of university campuses to meet the high demand for university Education with an enrollment of 28,597 in the year 2009. The report further points out that the major challenge facing higher education sector in the County is improvement of quality of education given that her education institutions which have inadequate physical infrastructure. Given that some of the public and private universities in Nakuru County, Kenya, offer teacher education programmes, teacher training in these universities could be facing challenges in providing quality lecture hall resources.

1.2 Statement of the Problem

This research study seeks to address the problem of low quality of lecture hall resources used in teacher education programmes in the universities in Nakuru County, Kenya. The problem of quality of lecture halls has been underscored by many scholars (Wanzala, 2013; Ng'ang'a, 2010; Mwangi & Udoto, 2011; Gudo, Oel & Oanda, 2011). Given that majority of students joining public and private universities in Kenya enroll in teacher education programmes (Olembo, Wanga & Karagu, 1992), the problem of quality of lecture hall resources, it appears, largely affects student teachers. This problem is widespread in Kenya and global nations. The Task Force on Re-alignment of the Education Sector to the New Constitution (2010) in Kenya confirms that the high number of students in the universities in Kenya puts pressure on existing infrastructure, among other things. If this problem is not addressed, then, quality of teacher education programmes will be compromised in the universities in Nakuru County, Kenya, if not yet.

1.3 Research Objective

The objective of this research study was to determine how students enrolled in teacher education programmes perceive quality of lecture hall resources in the universities in Nakuru County, Kenya.

1.4 Research Question

How do students enrolled in teacher education programmes perceive quality of lecture hall resources in the universities in Nakuru County, Kenya?

1.5 Significance of the Study

Teachers are an important resource in the teaching and learning processes (Ministry of Education, Science and Technology, 2012). Their training and professional development is pivotal to achieving development aspirations of Kenyans. The study will underscore the need to improve quality of lecture hall resources used in teacher education programmes in the universities in Nakuru County, Kenya. Since universities are used by the government to produce knowledgeable and productive teaching staff for its own development this study underscores the need to construct and quality lecture hall resources with a view to producing high caliber graduate teachers for the development of Kenya.

1.6 Scope of the Study

The targeted respondents were student teachers enrolled only in chartered private and public offering to pursue Teacher Education Degree Programmes. The respondents were only

expected to report their perception of quality of lecture hall resources used in teacher education programmes in the universities in Nakuru County, Kenya.

2.0 LITERATURE REVIEW

2.1 Quality of Lecture Hall Resources in the Universities

One of the first areas that make a noticeable impact on student success is the physical environment of the classroom. This can pertain to a variety of details. It can be structure, resources or color. All of these can play a role in determining whether the classroom will be conducive for learning. Each may not have a large effect individually; however, together they work to strengthen a student's ability to teach (Ryan, 2013).

According to University of Maryland (2000), a good lecture hall should be located within a building with ease access to students, isolated from noisy gathering places, and be concentrated on low floors of the building for convenient access by the disabled and support services. They should be far from mail rooms, reception areas, dining facilities, rest rooms, bicycle parking, load locks, mechanical equipment rooms and other noisy areas. The size of the lecture rooms should be designed to fit the expected number of occupants as well as provide for additional support space. The support space must take into consideration the set up of audio visual equipment and also enable access for the disabled and layout of the instructor's instructional material. The ceiling height should be higher than the standard eight feet. This should be so because the projection screen must be large enough to display adequate size images and also to display unobstructed sight lines.

More specifically, according to University of Maryland (2000), quality lecture halls should have generous access, white boards, comfortable seating, good lighting, articulate sound, appropriate scales, proper textures and colors contribute to a comfortable teaching space. Colors of the room must be carefully chosen to avoid glare on the white boards. Good ventilation is also required in lecture rooms. There should be available speed fans with regulated air volumes according to number of occupants. Sundry issues should be considered in lecture rooms. These include: clocks being installed in lecture halls, signage and graphics should follow university standards. Of what quality, then, are lecture hall resources in the universities in Nakuru County, Kenya?

With regard to the University of Lund in Sweden, Youssef, Bard, Mahmoud, & Esa (2014), noted that the Lecture halls had sound acoustics because they had high room absorption and sufficient masking of sound. These lecture halls had audio-visual fixtures making them suitable for teaching activities. The classroom is a central place for teacher training. Further, Bright (2016) noted that for many faculties, the classroom is a familiar and comforting environment. The researcher noted that readily available access to information means that the traditional classroom might lose its place of primacy as the central location where knowledge is acquired. This, in turn, may force educators to rethink the teacher-student relationship. These scholars however, did not delve into how students enrolled in teacher education programmes perceive quality attributes of lecture halls in the universities in Nakuru county, Kenya.

With regard to the University of Nairobi, Odundo (2015) found out that massification affected expansion of physical facilities and human resources. Owuor (2012) also confirmed that some public universities in Kenya lack physical facilities to effectively provide services to

students. KIPPRA (2013) further noted that lack of lecture halls may not be the issue in public universities. Rather, it is inefficiency in use of available resources and lack of monitoring of teaching and learning at the classroom level in the universities.

Wamalwa (2015) further observed that Lecturers in public universities attributed lack of adequate space to poor design of lecture halls. These studies concentrated on general quality of lecture hall space and not lecture hall resources like tables, lighting, comfortable chairs, and weatherproofing, soundproofing, audio visual and white board fixtures in these halls. In agreement with the view that lecture halls in some public universities are not equipped with teaching aids is Wamalwa (2015) who found out that some lecturers in public universities did not have adequate office space for consultation with students compared with their counterparts in private universities.

2.2 Theoretical Framework

This study was embedded on the theory of Total Quality Management (TQM) advanced by W.E Deming (Deming, 1986). Total Quality Management presupposes that organizational survival can only be ensured if there are high quality resources and services leading to customer satisfaction. According to Hashmi (2013), TQM is a culture, attitude and organization of a company that strives to provide customers with products and services that satisfies their needs.

On the other hand, American Society for Quality (ASQ) (2015), argues that TQM is a management approach for long term success through customer satisfaction. It is customer and process centered. It aims at improving processes, services and products. For the purpose of this study, students are seen as customers. Quality lecture hall resources are used for learning activities which then transform student teachers into qualified pedagogues and andragogues.

This study is also hinged on Attributive Theory of Higher Education propounded by Ashfar (1990). This theory postulates that quality only exists in relation to the phenomenon to which it is attributed. Quality can only be defined by its attributes and can be quantified by developing a system of numeric values for the attributes. To measure quality attributes of a phenomenon, an inter-subjective approach to data collection and analysis is required. It means that quality can only be measured by assessing quality attributes of lecture hall resources. In this case, attributes of the phenomenon of lecture hall resources must be measured by quality attributes that make them fit for use.

2.3 Conceptual Framework

This section contains a conceptual framework on which the study was based.

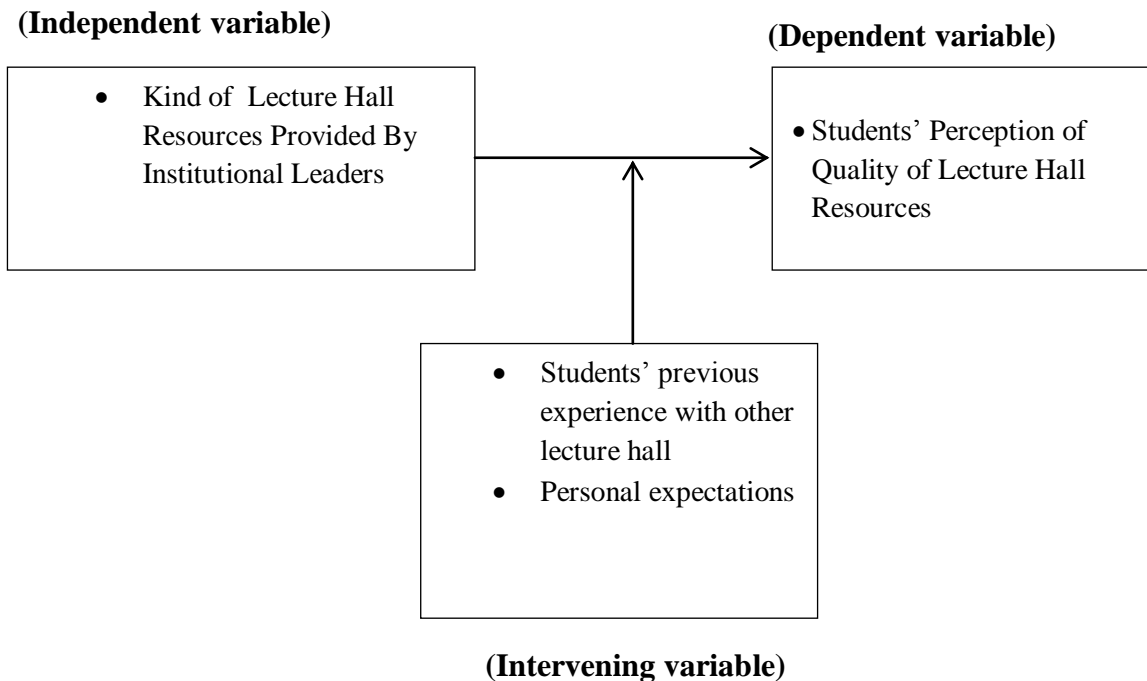


Figure 1: Conceptual Framework

The conceptual framework presented in Figure 1 shows that students' perception of quality of lecture hall resources depends on the lecture hall resources provided by the university managers or government. If quality of lecture hall resources provided is low, then, students are likely to perceive it as such. The converse is true.

3.0 RESEARCH METHODOLOGY AND DESIGN

3.1 Research Design

This study adopted across-sectional survey design. Mugenda and Mugenda (2008) observed that cross-sectional surveys help researchers to establish whether significant associations among variables exist at some point. Surveys gather data at a particular time with the intention of describing the nature of existing conditions, or identify standards against which conditions can be compared (Cohen & Manion, 2007; Trochim, 2006). This research study was intended to establish students' perception of the quality of lecture hall resources used in teacher education programmes in the universities in Nakuru County, Kenya.

3.2 Study Location

The study was conducted in chartered public and private universities in Nakuru County, Kenya. Nakuru County Development Profile (2013) documents that Nakuru County is one of the 47 Counties of the Republic of Kenya provided in the Constitution of Kenya, 2010. The County is situated within the Great Rift Valley and borders seven other counties namely; Kericho, Baringo, Laikipia, Nyandarua, Narok, Kajiado and Kiambu. The county covers an area of 7,495.1. The County headquarter is Nakuru Municipality.

3.3 Study Population

The study population consisted of fourth year Bachelor of Education (Arts) students enrolled in the regular programme. The census was as follows: Public P (110), Public Q (65), Private X (65), and Private Y (70), totaling 310 in the sampled universities.

3.4. Sampling Techniques

With a target population 310 students in 6 universities, the researcher used stratified random sampling technique to stratify the universities into public and private. There are four public universities with campuses in Nakuru Municipality. Purposive sampling was used to sample two universities which offer bachelor of education degrees. There are four private universities with campuses in Nakuru Municipality. To sample two private universities for this study, the researcher used simple random sampling technique. This led to selection of 2 private and 2 public university campuses offering education courses. To sample actual participants, the researcher used simple random sampling technique. As Kerlinger (1999) puts it, statistics calculated from large samples are more accurate, other things equal, than those calculated from small samples.

3.5 Sample Size

According to the Krejcie and Morgan Table of Determination of sample size, $\sum N=310$ has a corresponding value of $s=257$. Using a sample size of 257, each university was apportioned the following samples on the basis of the ratio of the population of their students taking education Arts. The study sampled two public and two private universities, constituting 66 per cent of the target population of the universities under study. One private university was used for pilot study.

Table 1 Sample size of the study

University	Population Size(n)	Sample Size(s)
Egerton	110	87
Kenyatta	65	56
Kabarak	65	55
Mt.Kenya	70	59
Total	310	257

3.6 Research Instrument

The researcher used students' questionnaire to collect data on students' perception of the quality of accommodation resources. It contained close ended items of a four degree Likert scale. The scale has; Always, Frequently, Sometimes and Never to symbolize frequency or prevalence of quality attributes related to lecture hall resources. A 'never' response in the Likert scale meant that a particular quality attribute was lacking, implying poor quality. 'Always' response in the extreme end of the Likert scale implied that a quality attribute in question was manifest, symbolizing high quality. Responses had corresponding numerical values of 4, 3, 2 and 1 which were used to enter data related to perception of quality of lecture hall resources.

3.6.1 Validity of Research Instrument

Content validity refers to how accurately an assessment or measurement tool taps into the various aspects of specific construct in question, or the responses by the person answering the questions influencing other factors (Clause, 2015). After the development of the instrument, colleagues looked at each item with respect to relevance and conformity with research objectives.

3.6.2 Piloting of Research Instruments

A pilot study was carried out in one of the private universities in Nakuru to estimate the reliability of the students' questionnaires prior to actual data collection exercise. This is consistent with Johnson and Christensen (2012) who advocates for piloting of research instruments prior to actual administration. A sample of 30 students was involved in the piloting exercise. The pilot instrument was administered under conditions similar to the one of actual administration.

3.6.3 Reliability of Research Instruments.

Using Test Retest method, the questionnaire scored 0.8 reliability coefficient. In order to test internal reliability after collection of data, the Cronbach Alpha method was used to estimate the reliability. The method was selected because it is ideal for estimating internal reliability of a test tool that has been administered only once and is constructed using items that are of the multiple choice type (Cohen & Manion, 2007). The Cronbach test is regarded as a versatile means of measuring internal consistency of a research instrument (Mugenda, 2008). A reliability coefficient of .07 and above is acceptable as measure of dependability according to Johnson and Christensen (2012).. The tools were therefore deemed reliable given that the coefficients were above the 0.7 threshold recommended by Fraenkel and Wallen (2000).

3.7. Data Collection Procedures

The researcher obtained research permit from National Commission for Science, Technology and Innovation prior to engaging in data collection. Permission was sought from the University Administration of various universities. The researcher trained research assistants on how to collect data within. Data on quality of lecture hall resources were collected in the premises of respective universities. Research assistants were trained on matters involving data collection and how to handle respondents.

3.8 Data Analysis and Presentation

Data from the questionnaires were coded and entered for analysis using the IBM SPSS (version 20). Descriptive and Inferential statistical tools were used to analyze data collected by questionnaires. Descriptive statistics included percentages, means and frequencies. Inferential statistics were derived from ANOVA, post hoc test and T-tests. To confirm the existence of significant differences in perceptions of quality of lecture hall resources within and between private and public universities, the researcher used ANOVA and T-tests. Tables were used to present these results.

3.9 Ethical Considerations

The researcher adhered to ethical requirements for research in the Republic of Kenya. No respondent was coerced or threatened to divulge any information against their will. Information obtained from the respondents was used purely for the purpose of this research and nothing else. Respondents were assured of confidentiality in the treatment of their responses. Questionnaires were coded and did not require respondents to indicate their names. The universities were assigned the following pseudonyms for ethical considerations: Public Q, Public P, Private X and Private Y.

4. 0 RESULTS AND DISCUSSIONS

4.1. Students' Perception of Quality of Lecture Hall Resources

The objective of this study was to establish how students enrolled in teacher education programmes perceive quality of lecture hall resources in the universities in Nakuru, Kenya. The researcher computed descriptive statistics on students' perception of quality attributes of Lecture Hall Resources. Findings are presented in Table 1.

Table 2 Frequencies of Students' Perception on Lecture Halls Resource

Statement	N	Always	Frequently	Sometimes	Never
University lecture halls are spacious to accommodate all students attending lectures in education courses.	226	56.2	10.6	20.8	12.4
University lecture halls have comfortable chairs	223	52.9	13.5	18.8	14.8
University lecture halls have good lighting	223	69.5	10.8	14.3	5.4
University lecture halls are weather proof against cold and hot temperatures	220	44.5	16.8	19.5	19.1
The University lecture halls have well maintained White boards	221	55.7	17.6	19.0	7.7
The University lecture halls are quiet after lecture hours in the evening	223	54.3	18.8	17.5	9.4
Lecture halls in the Universities experience power interruptions	225	16.9	6.2	58.2	18.7

According to Table 2, respondents reported that lecture halls are always (56.2%) or frequently (10.6%) spacious to accommodate all attending lectures. These respondents suggest that students on teacher education programmes always or frequently attend lectures

because the lecture halls in the universities under study. However, 33.2% noted that lecture rooms are sometimes or never spacious for teacher education programmes. This is confirmed by Gudo, Olel & Oanda (2011) who observed that public universities in Kenya do not have enough physical facilities for teaching and research and that in order to improve teaching in the university, they must use innovative ICT and collaborate with private universities. Mwangi & Udoto (2011) further confirms that quality of learning facilities and learning environment provided by Kenyan universities did not meet quality measure of adequacy. This includes online resources and lecture facilities.

This finding is further corroborated by Asiyai (2015) and Oyetunde (2004) when they reported that most students of institutions of higher learning in Nigeria study in dilapidated buildings. Wanzala (2013) confirms that some students attend lectures from outside lecture rooms in some universities in Kenya.

According to the results, 52.9% reported that tables and chairs are always available for use by students while a total of 33.6%, asserted that chairs and tables are sometimes (18.8%) or never enough (14.8%). It implies that some students in teacher education programme do not get seats to be used during lectures in the universities within Nakuru County. Lack of seats may discourage them from attending lectures which missing class could deny them opportunity to acquire knowledge and skills stipulated in the curriculum. Bunoti (2010) reported similar findings that lecture rooms in some Ugandan universities have insufficient seats and that some students lose a lot of time transferring seats from one room to another and occasionally attend lectures standing up with an overflow on the verandahs. Given that lecture halls are used for teaching and learning,

Good lighting is necessary for effective teaching and learning and especially in an inclusive situation where we have different students with varied visual capabilities. Accordingly, 69.5% of the respondents of this study perceived that lecture halls in their universities always had good lighting. It implies that students on teacher education programmes in universities within Nakuru County are able to concentrate on learning activities as long as possible due to availability of good lighting. This seems to be in line with the recommendation of University of Maryland (2000) that good lecture halls should have generous access, white boards, comfortable seating, good lighting, articulate sound, appropriate scales, proper textures and that colors contribute to a comfortable teaching space.

Nevertheless, in this study, 5.4% opined that they never have good lighting in their lecture halls. Poor lighting could inhibit student teachers from perceiving visual materials being presented by the lecturer. Similarly, Asiyai (2015) and Oyetunde (2004) reported that lecture halls in some institutions of higher learning in Nigeria are poorly ventilated, furnished, illuminated and are situated in environmentally depressing and disabling locations.

With regards to weatherproofing of lecture halls 44.4% agree that lecture halls are always weatherproof. Asiyai (2015) suggested that good ventilation is required in a good lecture room. Respondents (19.1%) reported that some lecture halls in some universities under study are never weatherproofed. This is consistent with Bunoti (2010) findings that some lecture rooms in some universities in Uganda are not sound proof and therefore, lecturers are interrupted by heavy rains and mowers. This indicates that some of these lecture halls are not weatherproofed. This could have effect on learning and health of students in teacher education programmes in the universities within Nakuru County.

According to 55.7%, lecture halls are fitted with white boards. It implies that lecturers in teacher education programmes in the universities within Nakuru County find it convenient to teach in such lecture halls. A small group of respondents (7.7%) reporting that their lecture halls did not have white boards expressed the same view as Bunoti (2010) who asserted that lecturers in some universities in Uganda use dusty chalks on chalkboards which is a health hazard.

According to the 54.3% of the respondents, lecture halls are always quiet after official teaching hours. Some respondents (9.4%) reported that their lecture halls are never quiet. Another 17.5% averred that lecture halls are sometimes quiet. It can be inferred that some lecture halls used for teacher education programmes in some universities in Nakuru County are not always quiet which could interfere with students' attention during lectures. This is likely to affect learning activities conducted in the lecture halls such as private studies or group discussion. This finding is consistent with Wamalwa (2015) who noted that some lecture facilities are poorly designed in some Kenyan universities.

Respondents (16.9%) supposed that lecture halls always have power interruptions. This situation does not facilitate effective use of lecture halls for learning activities. In addition, 58.2% and 6.2% reported that power interruptions are sometimes or frequently experienced respectively in the universities in Nakuru County. Both cases do not auger well for academic excellence in teacher education programmes in the universities in the county. A good report that power interruptions never occur in the lecture halls was only reported by a paltry 18.7% of the respondents.

4.2 Analysis of Students' Perception of Quality of Lecture Hall Resources

The study carried out a descriptive analysis on how students perceive quality of Lecture Hall Resources. The results are presented in Table 3

Table 3 Descriptives for Students' Perception of Quality of Lecture Hall Resources

Statement	N	Mean	SD
University lecture halls are spacious to accommodate all students attending education lectures	226	3.11	1.12
University lecture halls have comfortable chairs	223	3.04	1.15
University lecture halls have good lighting	223	3.44	0.93
University lecture halls are weather proof against cold and hot temperatures	220	2.87	1.18
The University lecture halls have well maintained White boards	221	3.21	1.01
The University lecture halls are quiet after lecture hours in the evening	223	3.18	1.03

Lecture halls in the Universities experience power interruptions	225	2.21	0.94
Students' perception of quality of Lecture halls resources index	227	2.96	0.70

Table 3 shows students' perception of Quality of Lecture Hall Resources. Lecture halls are frequently spacious, have enough chairs, good lighting, are weatherproofed, have white board, and are quiet after lecture hours. However, power interruptions sometimes exist. The overall perception of quality of lecture halls resources is represented by an index of a composite mean of 2.96 which implies that quality attributes of lecture hall resources frequently exist. It implies that as a whole, students on teacher education programmes in the universities within Nakuru County frequently utilize quality attributes of lecture hall resources. However, this may not be the case when universities are compared by category or individually.

4.3 Differences in Students' Perception of Quality of Lecture Hall Resources by University

The researcher computed means of students' Perception of Quality of Lecture Hall Resources by University. The results are presented in Table 4.

Table 4 Students' Perception of Quality of Lecture Hall Resources: Mean Scores and their Standard Deviations by University

University	N	Mean	SD
Private X	52	3.09	0.49
Public P	79	2.58	0.76
Public Q	48	3.12	0.53
Private Y	48	3.26	0.70

Data presented in Table 4 indicates that Private Y students (mean=3.26) reported that quality attributes of Lecture Hall resources are frequently available. Public Q (mean=3.12), Private X (mean=3.09) and Public P (mean=2.58) also reports that quality attributes of Lecture Hall resources are frequently available. This means that Private Y and Public Q leads in the prevalence of quality attributes of Lecture Hall resources. It implies that students pursuing teacher education programmes in Private Y and Public Q utilize lecture hall resources more effectively for learning activities. With the universities reporting inadequate lecture hall resources, Ng'anga' (2010) agrees that Government of Kenya should pump more funds into higher education so that universities can expand infrastructure and hire tutors. According to Odundo (2015), massification affected expansion of physical facilities and human resources in the University of Nairobi.

4.4 Analysis of Students' Perception of Quality of Lecture Hall Resources by University

An analysis was conducted to establish whether there were differences in the students' perceptions of Lecture Hall Resources by university using the ANOVA. The results of the analysis are given in Table 5.

Table 5 Comparison of Students' Perception on Quality of Lecture Hall Resources by University

Scale	Sum of Squares	df	Mean Square	F-ratio	p-value
Between Groups	17.704	3	5.901	14.096	.000*
Within Groups	93.365	223	.419		
Total	111.07	226			

*Significant at 0.05 level

The results of the ANOVA test reveal that the difference in students' perception of quality of lecture hall resources is statistically significant at the 0.05 level, $F(3, 223) = 14.096$, ($p = 0.000$) or ($p < .05$). It means that there exists a significant difference in how students perceive quality attributes of lecture hall resources within and between public and private universities. Lecture hall resources used for teacher education programs have different quality attributes in the universities under study. Owuor (2012) also confirmed that some public universities in Kenya lack physical facilities to effectively provide services to students.

4.5 Multiple Comparison of Students' Perception of Quality of Lecture Hall Resources by University

An analysis was conducted to establish whether there were significant differences in the students' perceptions of quality of Lecture Hall resources between paired universities using a post-hoc test. The results of the analysis are given in Table 6

Table 6 Multiple Comparison of Students' Perception of Quality of Lecture Hall Resource by University

Paired Group	Mean Difference	p-value
Private X - Public P	0.51	.000*
Private X–Public Q	-0.03	.996
Private X – Private Y	-0.17	.640
Public P - Public Q	-0.54	.000*
Public P – Private Y	-0.68	.000*

Public Q – Private Y	-0.14	.783
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*Significant at 0.05 level

The results of the post-hoc test in table 6 reveal that the mean difference in students' perception of quality of Lecture Hall resources was statistically significant at the 0.05 level for Private X - Public P ($p = 0.000$ or $p < 0.05$) in favor of Private X; Public P-Public Q ($p = 0.000$ or $p < 0.05$) in favor of Public Q and Public P-Private Y ($p = 0.000$ or $p < 0.05$) in favor of Private Y. These universities are located within Nakuru County and in close proximity to each other yet differences in how students perceive quality of their respective lecture hall resources are statistically significant.

The difference in perception of quality of lecture hall resources was not statistically significant between private universities. However, the difference in perception of quality of lecture hall resources was statistically significant between public universities. It implies that students on teacher education programmes in the public universities in Nakuru County utilize lecture hall resources with varying qualities while those in private universities utilize lecture hall resources with similar qualities.

4.6. Differences in Students' Perception of Quality of Lecture Halls Resources by University Category

The study also sought to find out whether there was difference in students' perception on quality of lecture hall resources by university category. The t-test was used to conduct the comparison as shown in Table 7.

Table 7 Comparison of the Students' Perception of Quality of Lecture Halls Resource by university

Category	N	Mean	SD	df	t-value	p-value
Public	127	2.79	0.73	225	4.263	.000*
Private	100	3.17	0.60			

*Significant at 0.05 level

The results posted in Table 7 indicate that Students' Perception of Quality of Lecture Halls Resource in private universities ($M = 3.17$, $SD = 0.60$) was higher than that of public universities ($M = 2.79$, $SD = 0.73$). The results further indicate that the difference between the two means was statistically significant, $t(225) = 4.263$, $p < 0.05$. This is an indication that quality of lecture hall resources in private universities was higher than those of public universities. It implies that students pursuing teacher education programme utilize superior quality of lecture hall resources. In agreement with the view that lecture halls in some public universities are not equipped with teaching aids, Wamalwa (2015) also found out that some lecturers in public universities did not have adequate office space for consultation with students compared with their counterparts in private universities.

4.7 Students' Perception of Quality Levels of Lecture Hall Resources by University

Students' perception of quality of Lecture Hall Resources index of each university was determined. These statistics were then transformed into quality levels using the scale Low: 1.00 to 2.00; Average: 2.01 to 3.00; High: 3.01 to 4.00. This conversion generated ratings of quality level of Lecture Hall Resources as perceived by students of each university. Table 8 presents the findings.

Table 8 Quality Levels of Lecture Hall Resources as Perceived by Students per University

University	Quality Level Percentage		
	High	Average	Low
Private X n = 52	53.8	42.3	3.8
Public P n = 77	26.0	51.9	22.1
Public Q n = 48	60.4	37.5	2.1
Private Y n = 48	72.9	20.8	6.3
Overall n = 225	49.8	40.0	10.2

Table 8 contains the percentage ratings of quality levels of lecture hall resources given by respondents of each university. Private Y leads in student numbers rating quality of lecture hall resources as high (72.9%). Nonetheless, 53.8% of Private X respondents rated quality of her Lecture Hall Resources as high. Public Q recorded the highest percentage of respondents rating quality of her lecture hall resources as average (51.9%). Public P (22.1%) leads in the number of respondents rating the quality of her lecture hall as low.

The overall index of 49.8 % for high and 40% for average rating of quality of lecture hall resources in all universities reveal that the quality of lecture resources still pose a challenge to both public and private universities in Nakuru County. Since many teaching activities in teacher education programmes take place within Lecture halls, it implies that quality of lecture hall resources is not always high. KIPPRA (2013) on the other hand, suggests that lecture halls may not be the issue. Rather, it is inefficiency in use of available resources and lack of monitoring of teaching and learning at the classroom level in the universities.

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