EXPLORING THE TEACHING OF NIGERIAN UNIVERSITY UNDERGRADUATES IN LARGE CLASSES: THE PERCEIVED EFFECTIVENESS OF CLOSED-CIRCUIT TELEVISION

By

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ABSTRACT

This study examined the perception of the university lecturers on the effectiveness of Closed-Circuit Television (CCTV) in teaching undergraduate students in large classes. One hundred lecturers randomly selected from University of Lagos, Nigeria constituted the sample for the study. The data generated through a self-designed questionnaire was analysed with the t-test and Analysis of Variance statistical procedures with significance fixed at 0.05. The results indicated among other things that sex, academic qualification, and years of experience had no influence on the perception of the lecturers about the effectiveness of C.C.T.V as technological tool for stimulating students' attention, and participation in large classes. On the basis of the findings, it was recommended that lecturers should be more interested in the utilization of the vast technological tools that can enhance effective teaching and learning in large classes. Universities' authorities should endeavour to provide technological devices, such as Closed-Circuit Television for all faculties for effective teaching in large classes.

INTRODUCTION

Teaching is a complex phenomenon that requires competence, proficiency, efficiency, and the correct application of appropriate teaching technique that suits the class size so as to achieve the stated objectives. Center for Excellence in Learning and Teaching (2002) noted that from ages, education has been characterized with mass instruction while lecture method has always remained the instructional technique at the various levels. Large classes are a reality in many countries and they often pose peculiar challenges. One of such challenges is, overcoming the students' anonymity and the communication gap that exists between the lecturer and the students. If students must have better performance in class they must not be anonymous audience and non-active recipients of information.

Large class, according to Desmet (1997) is outrageous increase in the number of students a tutor teaches. However, large class could be described as a situation whereby a tutor has to teach 100 or more students at a time. Large classes are unavoidable in most countries across the globe. In Nigeria for instance, the increasing student enrolment to higher education institutions is a major reason for large classes. In such large classes, educators often "talk and chalk" to a "sea of heads" of students, numbering three or four hundred or more clustering together in a small hall. Andrew (2000) observed that many students in such large classes are engaged in activities not related to the learning-activities, while some of the students pretended to participate in the instructional process. He further noted that many students in such a situation make use of the last row of the class or classroom corridor as a chatting and discussion arena with friends and colleagues. Corroborating this view, Kathleen (1997) affirmed that some students in large classes in view of limited spaces and sittings do not often have access to information and demonstrations going on in the class.

It is commonly believed that students in small classes achieve better, than those in large classes. Reduction in number of students in a class does not only improve the quality of instruction, but also offers an educational setting in which it is easier and more feasible for activities to occur (Schreyer Institute of Teaching Excellence, 2004). It is more likely that, in large classes where lecture method is the mode of instruction, meeting the varied needs of students becomes a challenge. Although, lectures presented to 20 students will probably not be much

different from that presented to 100 students, but the effectiveness and level of students' performance may be significantly affected.

Jessica (2003) emphasized the fact that teaching in itself doesn't improve education but the use of technology is a fundamental key to unlock the door to education liberation in the 21st century. That's why Inter-cultural Department Research Association (1995) encourages academic investors and stakeholders to explore the current realities of technology and access for all learners in schools. Institute of Teaching Excellence (ITE) (1992) declared that many teachers feel more comfortable with smaller classes even though they can perform better in large classes. Michael further expressed that teacher's effectiveness requires conscious efforts, planning and coordination, while ITE suggested that there is the need for a conscious awareness of instructional technique (use of visual aids) that will engender participation and discussion between the tutor and 50 / 100 or more students. One of such viable and reliable visual aids is the Closed-Circuit Television that does not only promote interest, but also reinforces the lesson.

Closed-Circuit Television (C.C.T.V.)

Closed-Circuit Television (C.C.T.V.) is an audio visual media used in instructional delivery. Ifegbo and Emenyonu (2006), and Ogunmilade (1991) described C.C.T.V. as a system with a number of viewing centers linked to a source of production, and transmitted through coaxial cable. C.C.T.V. does not require license for its operation because its programmes are mostly localized and peculiar to institutions. Ike, Chimezie and Iwu (2002), and Marc (2000) described the C.C.T.V. as a television broadcast that is received by selected set of viewers only, and is connected by air signal. Akude (2005) reported that C.C.T.V. has been in South Carolina since 1960s to link more than 100 schools in Charlestoh and Columbia areas for instructional purposes. Large number of students broken into groups of hundreds or more, seated in different classrooms or halls (serving as viewing centres) could have access to the instructional process going on in the main hall via the use of C.C.T.V. Just as the students in the main hall listen to and watch the lecturer, other students in annex halls simultaneously do the same on the screens as they are linked up to the transmission port through a coaxial cable. Nwachukwu (1998) noted that classroom presentations through C.C.T.V. can also be recorded and played back to the students in order to enhance good memory, understanding and better performance. The use of C.C.T.V. for instructional delivery in Nigerian institutions is no longer a new thing. For instance, Obafemi Awolowo University (then University of Ife) Ile-Ife, Osun State, Delta State University (then Alvan Ikoku College of Education), Abraka, Delta State, and Distance Learning Institute and College of Medicine, University of Lagos, Lagos-State, Nigeria and University of Nigeria, Nsuka use C.C.T.V. for instructional purposes in the classroom and laboratories.

Several studies have shown that the use of audio-visual devices such as Television, Video-player and, Multimedia projector enhance better students' performance, (Jessica, 2003; Kathleen, 1997; Mills, 2003; Roger & Earnest 2000). The success or failure of a lecturer is an attitudinal matter. But there appears to be dearth of research efforts on the effectiveness of C.C.T.V. in teaching Nigerian tertiary institutions' large classes. The sophistication or the expensiveness of the media does not determine students' high level performance, and its effective use by the tutor, rather the disposition of the lecturer towards the utilization of the instructional-machine. This study therefore sets to find out the perceptions of university lecturers on the effectiveness of CCTV in teaching the Nigerian undergraduate students in large classes.

Hypotheses

The following hypotheses were generated for the purpose of the study:

- There will be no significant difference between the perceptions of less and highly experienced lecturers about the effectiveness of CCTV in teaching undergraduate students in large classes.
- There will be no significant difference between the perceptions of male and female lecturers about the effectiveness of CCTV in teaching undergraduate

students in large classes.

- There will be no significant difference between the perceptions of lecturers with different academic qualifications about the effectiveness of CCTV in teaching undergraduate students in large classes.

Methodology

Design

The research adopts a survey research design.

Sample of the study

The population for the study comprised the entire academic staff of university of Lagos, Nigeria of which a total of 100 respondents (24 females and 76 males) were randomly selected from 5 faculties of the university. Academic staffs with less than 10 years of experience were treated as less experienced, while those with 10 years and above were treated as highly experienced. The entire respondent had bachelor's degree. However, 8% (8) of the sample had first degree (Mean = 44.2500, SD =5.73730), while 24% (24) had masters' degree (Mean = 43.4167, SD = 4.60155), and 68% (68) were Ph.D holders (Mean = 43.5588, SD = 2.69895).

Instrumentation

A self-designed questionnaire "Lecturers' Perception on the Effectiveness of CCTV in Large Classes" (LPECLC) was used for data collection. The instrument had two sections.

		Perception of lecturers
N		100
Range		19.0
Minimum		36.0
Maximum		55.0
Mean		43.5800
Std		3.42315
Variance		11.718
Skewness	Statistic	.695
	Std error	.337
Kurtosis	Statistic	2.227
	Std error	.662

Table 1. Descriptive Statistics of Lecturers' Perception on the Effectiveness of CCTV in Large Classes

Section A contained the demographic data of the respondents, while section B contained 20 items that were rated using the Likert four-point scale of Strongly Agree (1), to Strongly Disagree (4). The instrument was given to two educational technologists and a psychometrician to ascertain its validity. Their comments were given consideration before the preparation of the final draft of the questionnaire. Initially, a total of 49 items were generated by the researcher which was later pruned down to 20 items that was used for data collection. The test- retest reliability coefficient of the instrument was 0.84.

Procedure

The instrument was personally administered and collected by the researcher. A total of 112 copies of the instruments were administered, while 100 copies were validly retrieved. The data obtained through the instrument were analyzed using t-test and Analysis of Variance statistical tools.

Results

Table 1

The results in Table 1 indicates that the distribution of the scores is positively skewed revealing that respondents more close to the kurtosis (2.227) are indicative that the distribution is leptokurtic. In effect, most of the respondents are scoring below the mean score with not more deviation between the scores.

Table 2

Hypothesis1: There will be no significant difference

Group	Highly experienced lecturers	Less experienced lecturers
N	28	72
Mean	43.4286	43.6389
D	3.43	3.46
df	98	
t-cal	.193	
t-cri	1.96	
P	>.05	
Remarks	Accepted	

Table.2 t-test comparison of perceptions of less and highly experienced lecturers on the effectiveness of CCTV in large classes.

between the perceptions of less and highly experienced lecturers about the effectiveness of CCTV in teaching undergraduate students in large classes.

The results in Table 2 shows that there exists no significant difference in the perceptions of the less and highly experienced lecturers on the effectiveness of CCTV in teaching undergraduate students in large classes. This is because the t- calculated value of .193 was less than the table value of 1.96 at 0.05 level of significance. Hypothesis 1 was therefore accepted. The implication of the finding is that lecturers' perception on the effectiveness of CCTV in teaching large classes is not based on their years of experience in teaching.

Table 3

Hypothesis2: There will be no significant difference between the perceptions of male and female lecturers about the effectiveness of CCTV in teaching undergraduate students in large classes.

The results in Table 3 revealed that there is no significant difference between the perceptions of male and female lecturers about the effectiveness of CCTV in teaching the undergraduate students in large classes in Nigeria. The calculated value of 1.37 is less than the table value of 1.96., thus hypothesis two was upheld. This implies that the perception of lecturers on the effectiveness of CCTV in teaching large classes is not gender specific.

Table 4

Hypothesis3: There will be no significant difference between the perceptions of lecturers with different academic qualifications about the effectiveness of CCTV in teaching undergraduate students in large classes.

Group	N	Mean	d	df	t-cal	t-cri	P	Remarks
Female	24	44.75	4.13	98	1.37	1.96	>.05	Accepted
Male	76	43.21	3.13					

Table 3. T-test statistical difference of perception of male and female lecturers of the effectiveness of C.C.T.V in large

	Sum of squares	df	Mean square	F	Sig
Between groups	2.131	2	1.065	.088	.916
Within groups	572.049	97	12.171		
Total	574.180	99			

Table 4. Analysis of Variance of lecturers perception about the effectiveness of C.C.T.V based on academic qualification.

The results in Table 4 reveal that there was no significant difference in the perceptions of lecturers on the effectiveness of CCTV in large classes based on their highest academic qualification because the F-ratio of .088 was found significantly lower than the critical value of 3.00 at 0.05 level. Therefore hypothesis 3 can be accepted.

Discussion

The study shows that almost all the lecturers were positively inclined towards the use of Closed-Circuit Television in teaching undergraduate students in large classes. The majority of the lecturers, irrespective of gender, qualification and experience acknowledged the effectiveness of CCTV for instructional purpose in large class. To them, CCTV is a viable instructional tool that enhances students' understanding and good performance in the classroom. This finding is consistent with the findings of many recent studies (Jessica, 2003; Nathaniel, 1998; Spanos, 2000). They confirmed that students exhibit a high level of enthusiasm whenever CCTV was used in the classroom by lecturers, without preference for their cadre in academics.

Lecturers, ranging from graduate assistant to senior academic staff, had quite similar opinion about the effectiveness of CCTV in large class, so as to promote academic quality. This outcome could have been borne out of the fact that lecturers, irrespective of their academic qualification might have had relief from psychological trauma they experience in large classes when students hang on themselves whilst a larger percentage of them do not gain much academically. The finding is not different from the results of some similar studies (Casimir, 1995; Kathlean, 1997). In the same vein Ifegbo and Emenyonu (2006) reported that CCTV has been a preferred instructional device by lecturers (irrespective of their highest academic qualification) in improving the academic performance of students in large class.

Female and male lecturers were equivocally supportive

of the use of Closed-Circuit Television in facilitating students' active participation, and sustaining their attention in large classes. To them, the use of CCTV in large classes promote good students-lecturer relationship. And, since teaching takes place when students must have learnt, it appears that what seems to be the major concern of the lecturers, irrespective of their sex was not mere presence of students during lectures, but environment that promotes effective teaching and learning in large classes. Such enabling environment provided by CCTV is believed to accelerate students' academic acumen. This finding lends support to the finding of Susan (1998) who affirmed that effective use of technology for instructional purpose is more of commitment than being a gender issue.

Conclusion and Recommendations

These findings by implication have thrown more light into the fact that large classes can be successfully taught if they are technologically-driven. Based on that, lecturers who had phobia for such classes now have the privilege of effective teaching with less or no stress.

In view of these findings, lecturers should be encouraged to take up students, irrespective of their number. Universities' authorities must ensure whether physical structure (buildings) or lecture rooms are adequately available as viewing centers in order to facilitate effective use of CCTV in large classes. Authorities of various higher institutions should make CCTV gadgets available to every faculty. Workshops, seminars and trainings should be organized for lecturers on how to operate and utilize CCTV and other technological instructional devices for effective teaching and learning in various institutions of higher learning. And now that the potentiality of the perceived effectiveness of Close-Circuit Television in large classes has been proved, therefore there is a need to sensitize lecturers handling such large class to fashion their teaching towards using CCTV in order to achieve maximum-positive performance that will improve the quality of education in higher education institutions.

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