



Influence of Classroom Management on Students' Academic Achievement in Science and Mathematics in Oju Local Government Area of Benue State

OMENKA, J.E. PhD & OTOR, E.E. PhD

Department of Curriculum and Teaching, Benue State University, Makurdi

Abstract

This study investigates the influence of classroom management on students' academic achievement in science and mathematics in Oju Local Government Area of Benue State. Two Research Questions and Two Null Hypotheses guided the study. The descriptive survey Design was adopted for the study. A structured four point scale questionnaire titled influence of classroom management on students' academic achievement in science and mathematics was constructed by the Researchers and used to collect data for the study. Data obtained were analyzed using descriptive and inferential statistics. Mean and standard deviation were used to answer the Research Questions while chisquare (X^2) was used to test the Null Hypotheses at 0.05 level of significance. The findings of the study revealed that classroom discipline and motivation significantly influence students' academic achievement in science and mathematics. Based on the findings, it was recommended that teachers should always maintain discipline in their classroom; Teachers should endeavour to introduce innovative ideas to motivate learning so that students' behavior and academic achievement can be positively influenced.

Introduction

Science and Mathematics are reorganized all over as indispensable tools for national development. The vision of every modern society for social change looks up to science and mathematics.

In other words any country that desire to bring about a new social order sees science and mathematics as instruments for such a change. To effect a desired change such a country must undertake modification of its curriculum as a first step followed by classroom instructions which is derived from the affected curriculum and implemented by the teacher in the classroom.

Classroom management according to Dooloard (2004) is the action a teacher takes to create an environment that supports and facilitates instructions, academic, social and emotional learning. It is the process of creating favourable conditions to facilitate instructions as well as that of regulating social behavior of students. Teachers in the classroom are by the nature of their profession, managers of classroom activities. The classroom teachers' job unlike that of other professionals is concerned with maintaining order, allocating resources, regulating the sequence of events and directing his own attention towards achieving educational goals.

Classroom management plays an important role in the teaching and learning process. It is veritable tool in the process of passing instructions from the teachers to the students. The success of any educational system is a function of the effectiveness of classroom management. Classroom teachers are managers and so ought to be in control from the beginning of the lesson to the end so as to ensure that the students benefit from the interactive business that transpires in the classroom situation. This, to a greater extent would enhance smooth coordination and responses on the part of both the teacher and the learner.

Today, classroom management according to Akpakwu (2003) is the most neglected area in our secondary schools, and the success or failure of any teaching and learning process depends to a large extent on the way classrooms are managed. Failure to effectively manage the classroom can have an overall negative influence on the entire school, most especially in terms of sound academic performance of the school. When educator talks about classroom management, one of the first things that come to mind is maintenance of discipline, control, motivational teaching methods, leadership styles, use of instructional materials and communication.

Ada (2004) sees classroom discipline as a function of the interaction between teacher and students that bring about self control and respect for authority. It entails creating and keeping books based on reciprocal understanding limits that must not be transgressed. Classroom motivation is another management variable that according to Fadipe (2000) is the process of influencing or stimulating a student to take action that will accomplish desired goals. A teacher can reward the learner in order to increase the probability of reporting the desired behavior.

Recent happening and occurrences at the level of secondary school, and even other levels of education have left many scholars in panic today and Oju Local government is not left out. The teachers find themselves in the classroom filled with students who are disposed to violence, not only to their fellow students but teachers also. In a bid to control this tendency toward violence, indiscipline and noise making, careful management of the classroom is therefore important.

Secondary school students' academic achievement according to Fadipe (2000) takes into cognizance both quality and quantity of the internal and external results achieved. It implies that it is not just the number of graduates of the system that matters but how relevant and competent the graduates are in meeting the societal needs and aspirations. It is on the basis of the above that the researchers are worried and decided to carry out this study to find out the influence of classroom management on students' academic achievement in science and mathematics in Oju local government area of Benue State.

Statement of the Problem

It is observed that classroom management is being greatly neglected in the secondary schools. This is more so in public schools in Oju local government area of Benue state. The managerial demands on the classroom teachers are by no means high. The keeping of records and reports, requisition of self effort and provision of support and equipment as well as the necessary routine of classroom management, take much of the teacher's time. The teacher sometimes gets trained in different cultural backgrounds, and later finds himself faced with students from varied cultural and socio-economic background, different adjustment capabilities and social interaction abilities.

The problem today includes inequality of opportunity in the classroom, improper upliftment of rights of students, improper school ruler and inconsistency of the classroom teachers, and poor level of preparedness on the part of the teacher to adequately pass on instructions and so on.

Today, the situation in the secondary schools seem worst, if one walks into any of these schools during lesson periods. Many classes, if not all, may not be recognized, there may be no form of discipline in these classrooms, no form of motivation for these students to learn. There may be no teachers to monitor and control the activities of the students in the classes. Against this background, the major problem of this study put in question form is; How does classroom management influence students' academic achievement in science and mathematics in Oju Local Government Area of Benue state?

Purpose of the Study

The general purpose of this study is to find out the influence of classroom management on students' academic achievement in science and mathematics in Oju local Government Area of Benue State.

Specifically, the study sought to find out the influence of classroom discipline and motivation on students' academic achievement in science and mathematics in Oju local government area of Benue State.

Research Questions

The following research questions guided the study,

- (1) What is the influence of classroom discipline on students' academic achievement in science and mathematics?
- (2) What influence does classroom motivation have on students' academic achievement in science and mathematics?

Hypotheses

The following Null hypotheses formulated were tested at 0.05 level of significance.

Ho₁; classroom discipline does not significantly influence students' academic achievement in science and mathematics.

Ho₂; classroom motivation does not significantly influence students' academic achievement in science and mathematics.

Significance of the Study

This study is significant because of its possible benefits to the teachers, the educational administrators, the students and all stake holders in the educational sector. It may be beneficial because classroom management can be identified as an indispensable tool for teachers in Science and Mathematics in all secondary schools. Discipline and motivation could be used to induce behaviour change in the learner.

Theoretical Framework

This study is anchored on the theory of management that is considered relevant to this research. To this effect, the human relations theory was considered appropriate for this study. The proponents of human relations approach to administration and management share the view that developing and maintaining harmonious relations between employed and supervisors, teachers and students is quite fundamental to all organization. Follet, May, Owen (2003) in Akpakum (2008) were the early advocates of this theory and in their work, they emphasized the human side of the theory, which is that a satisfied student is an effective student. The theory therefore emphasized that an increase of employee or student classroom discipline, motivation, use of appropriate teaching methods and morals will increase their productivity or achievement. The human relations theory basically holds that financial remunerations through a significant motivator is not the driving force behind workers effectiveness or students effectiveness (Focho, 2001). Other non-economic factors such as the physical and psychological work or classroom atmosphere can be powerful motivators (Usman, 2005).

There are several definitions of classroom management, classroom management is defined as the different persons view it. Classroom management can be defined as the orderly control of the students, the class environment and teaching materials in order to obtain the desired learning objectives which can enhance the academic achievement of students. Mgbodile (2004) sees classroom management and administration as the process of creating favourable conditions to facilitate instructions as well as that of regulating social behavior of students. He viewed classroom management and organization as a function of proper knowledge, dedication, skill and training for which they are called. The behaviour and the reaction of students are much related to the degree of teachers' proper management of the classroom.

Akpakwu (2003) defines classroom management as the orderly control of the learners, teaching materials and teaching aids in order to obtain the desired learning objectives. Classroom management considering the above mentioned views, could be conceptualized as the planning, management and execution of the school programmes as it affect teaching and learning in the classroom. The teacher manages the physical as well as the psychological environment to create an atmosphere that is conducive for learning.

According to Grayson (2001). Students' academic achievement is simply what you get out of an activity for what you put in. Science and Mathematics Students' Academic achievement also takes into cognizance both quality and quantity of the results achieved. For student to be performing academically well, implies that it is not just number of

graduates of the system that matters, but how relevant and competent the graduates are in meeting the societal aspiration. (Fadipe, 2000)

The prerequisite of effective classroom management does not depend only on classroom motivation, leadership, organization and so on, by teachers. Chukwelu (1988) posited that apart from this variable in the classroom, classroom discipline is equally important. Classroom discipline shares respect for each other but also are given appropriate responsibilities.

Acquiring knowledge and skills are some of the basic things that the teachers must assist the learner to attain. It is also necessary to encourage students to achieve these objectives through motivations. Motivation is a very important factor promoting the goals and aspirations of any organization. Dugguh (2007) states that human motivation is a complex matter to understand. A person's motives may be clear to him but quite puzzling to others. On the other hand, a person under stress may well not understand his own motives even though these may be perfectly clear to a trained observer. It is important for people in management and supervisory positions to understand such motives and adjust their leadership styles accordingly.

Mallum and Haggai (2000) opined that motivation has greater influence on students' academic achievement in the classroom. They maintained that the work of the teacher is made easier when his students are motivated. Students are eager to learn willing to undertake learning activities and attend classroom regularly and punctually. A classroom teacher will be challenged to plan adequate learning activities to maintain the zeal of the class. They further stressed that in the classroom students are aroused either by inner interest and needs or external stimulus. There are for instance students who undertake learning task on their own and resist disturbance or interruption by other around them. There are those whose interests are aroused only by rewards and incentive and there are those who are spurred by showing of objectives, demonstration stories or the presence of a particular teacher or subject.

Methodology

The study adopted the descriptive survey design. The population of the study consisted of 34 Science and Mathematics teachers in 26 grant aided secondary schools in the study area. A sample of 15 teachers represent 44% of the total number of teachers and 10 grant aided secondary schools representing 15% of the total number of schools were randomly selected for the study. The simple random sampling method was used to select the sample size. This method was adopted since the target population is homogenous and the selection of this sample served as a representative of the total population.

The main instrument adopted for the collection of data was a 10 item structured questionnaire captioned influence of classroom management in science and mathematics students' academic achievement questionnaire. The questionnaire was validated by experts in Educational Management and Test and measurement of the faculty of Education, Benue State University, Makurdi. The questionnaire was trial tested using 10 teachers and yielded a reliability coefficient value of 0.80 using cronbach Alpha. The coefficient signified high internal consistency and reliability (Pallent, 2007). The data collected were analyzed using mean and standard deviation to answer the Research Questions while chisquare was used to test the Null Hypotheses at 0.05 level of significance.

Discussion of Findings

Research Question One: What is influence of classroom discipline on students' academic achievement in Science and Mathematics: The data for providing answers to this Research Questions are presented in Table 1.

Table 1: Mean Rating and Standard Deviation of Responses of Teachers on the Influence of Classroom Discipline in Science and Mathematics.

S/N	Questionnaire items	SA	A	D	SD	MEAN	S/D	Decision
1	A quiet, well behaved class creates a conducive environment for effective teaching and learning.	8	4	2	1	3.93	0.93	Accepted
2	Obeying the school rules and regulations significantly enhance student relationship	6	6	1	2	3.07	1.00	Accepted
3	Disciplined teachers have the ability to minimize disciplinary problems and control them for effective teaching and learning.	4	8	1	2	3.07	0.77	Accepted
4	Without classroom discipline it is doubtful for effective teaching and learning to take place	10	1	2	2	3.27	1.12	Accepted
5	The use of proper language and the personality of the teacher can positively influence the behavior of students	5	6	3	1	3.00	0.89	Accepted
	Cluster Mean					3.14	0.94	Accepted

Data presented on Table 1 in science and mathematics in Oju local government Area of Benue State shows that the mean ratings of the respondents with regard to how discipline influence students' academic achievement in science and

mathematics. The data indicates that the mean ratings of the respondents for items 1 to 5 are 3.27, 3.07, 3.27 and 3.00 with corresponding standard deviation of 0.93, 1.00, 0.77, 1.12 and 0.89.

Based on the data, the respondents' views are that well behaved class creates a conducive environment for teaching and learning of science and mathematics. To them, obeying the school rules and regulation and the use of correct and appropriate language significantly enhance good teacher/student classroom relationship. They further approved that disciplined teachers have the ability to minimize disciplinary problems and control of student for effective teaching and learning of science and mathematics. The cluster mean of 3.14 and standard deviation of 0.94 also were accepted as rated above 2.50 cut off point which shows that discipline influences students' academic achievement in science and mathematics.

Research Question Two:

What influences does classroom motivation have on students' academic achievement in science and mathematics? The data for providing answers to the Research Question are presented in Table 2.

Table 2. Mean Rating and Standard Deviation of Responses of Teachers in Classroom Motivation of Student in Science and Mathematics.

S/N	Questionnaire items	SA	A	D	SD	MEAN	S/D	Decision
6	Classroom motivation has greater influence on students' academic achievement	6	6	1	2	3.27	0.85	Accepted
7	Teachers who motivate students in the class achieve more during teaching and learning process	8	3	2	2	3.07	1.46	Accepted
8	Praise and recognition of students in the class enhance their academic achievement	5	6	2	2	2.93	1.00	Accepted
9	Motivated students are easy to control, organized, monitor and discipline in the classroom.	4	7	1	3	2.80	1.09	Accepted
10	Classroom well equipped motivate students to learn.	6	7	1	1	3.20	0.83	Accepted
	Cluster Mean					3.05	1.05	Accepted

The data presented on table 2 shows that the respondents rated all the items from 6 to 10 in the cluster well above the cutoff point. Their ratings of items 6 to 10 are 3.27, 3.07, 2.93, 2.80 and 3.20 with corresponding standard deviation of 0.85, 1.46, 1.00, 1.09 and 0.83.

Based on the cut off point of 2.50 teachers rated all the items as acceptable indicating that motivation significantly influence students' academic achievement in science and mathematics. According to the respondents, teachers who motivate their students in the class achieve more during teaching and learning of science and mathematics process. They also indicate that praise and recognition of students programme in the classroom enhance their academic achievement. Classroom well equipped motivate students to learn. This they said affect the performance of students. The cluster mean was 3.05 and standard deviation 1.05 which indicate that they share the views that classroom motivation influence students' academic achievement in Science and Mathematics.

Test of Hypotheses

Hypotheses One: classroom discipline does not significantly influence students' academic achievement in Science and Mathematics.

Table 3. Classroom Discipline and Academic Achievement

Opinion No	Observed frequency	Expected frequency	D.F	X ² cal	X ² cn't	Decision
Influence	3(20%)	7.5	4	27	9.49	Significant
Influence	12(80%)	7.5				
Total	15(100%)	15				

Values in parentheses are percentages.

On table 3, the inferential statistics of chisquare were computed to examine the influence of classroom discipline on secondary schools students' academic achievement. The result shows that 80% of the respondents agreed that classroom discipline has positive influence on students' academic achievement as against 20% respondents who disagreed.

The chisquare was used to test the hypotheses and the result showed a significant influence as the chisquare calculated is greater than the chisquare critical value of 9.49. $27 > 9.49$ of classroom discipline on students' academic performance. The null hypotheses which states that classroom discipline does not significantly influence students' academic achievement in science and mathematics was rejected.

Hypotheses Two: Classroom motivation does not significantly influence students' academic achievement in Science and Mathematics.

Table 4: Classroom Motivation and Academic Achievement

Opinion No	Observed frequency	Expected frequency	D.F	X²cal	X²cn't	Decision
influence	4(26.7%)	7.5	4	21.67	9.49	Significant
Influence	11(73.3%)	7.5				
Total	15(100%)	15				

Values in parentheses are percentages

On table 4 the inferential statistics of chisquare were computed to examine the influence of classroom motivation on students' academic achievement in Science and Mathematics. The results indicate that 73.3% of the respondents agreed that classroom motivation has positively influence on students' academic achievement as against 26.7% of the respondents who disagreed. The chisquare was used to test the hypotheses and the results showed a significant influence ($X^2_{cal} > X^2_{critical}$) of classroom motivation on students' academic performance. The Null Hypotheses which states that classroom motivation does not significantly influence students' academic achievement in Science and Mathematics was therefore rejected.

Discussion of Findings

The first findings of this study evaded that most teachers in Oju Local Government Area of Benue State believed that classroom discipline significantly influence students' academic achievement. The findings is in line with Ada (2004) who reported that classroom discipline is a function of direction between teachers and students that bring about self control and respect for authority.

The second findings of this result reveals that classroom motivation significantly influence students' academic achievement. The results showed that 73.3% of the respondents agreed that classroom motivation has significant influence on students' academic achievement while only 26.7% had a different view. The result agreed with Mallum and Haggai (2000) who opined that with motivation the work of the teacher is made easier, that motivated students are eager to learn, willing to undertake learning activities and attend lesson regularly and punctually.

Conclusion

Based on the results of t his study, it has been established that, classroom discipline and motivation by teachers significantly influence students' academic performance in Science and Mathematics in Oju Local Government Area of Benue State.

Recommendations

Based on the findings of the study, the following recommendations are made

1. Teachers should always maintain discipline in their classrooms.
2. Teachers should endeavour to introduce motive ideas to motivate learning like frequent involvement in debates, quizzes competition.
3. Teachers should identify and use appropriate motivation as a key factor influencing students' behavior and achievement by transmitting the required knowledge and skills to inspire their students to greater height in academics.

References

- Ada, N.A. (2004). Strategies for Effective Classroom Organization and Management. In the Practice of Teaching Perspective and Strategies. *A Resource Manual for Today's Teachers*.
- Akpakwu, S . O. (2004). Management of Classroom towards a successful Universal Basic Science Education Scheme. In the Nigerian Academic Forum. *A multi disciplinary Journal* 4(2) 16 – 20.
- Akpakwu, S. O. (2008). *Essentials of Educational Management*. Makurdi, Jalim Press Nigeria Ltd.
- Akpakwu, S.O. (2004). Classroom Organization and Management. A paper presented at a workshop organized by Ministry of Education Benue State. April 18th, 2004.
- Dugguh, S.I. (2007). *Human Resource Management*. Makurdi: Oracle Business Ltd.
- Fadipe, J.O. (2000). *Education and Productivity on Nigeria: An Overview* in E.O Fagbaniye and D.O Duro Saro (Eds) Education and Productivity in Nigeria. Illorin: Hartee Press and Publishing Ltd.
- Gayson, P.A. (2000). *Concept of Productivity*, London, Macmillan.
- Horton, C.D. (1972). *Humanization of the Learning Environment, Air Lington V.A* (ERIC Document Production Service No ED066929)
- Mallun, J. & Haggai, M. (2000). *Educational Psychology Classroom Practice*. Jos, Deka Publications Nigeria Ltd.
- Maxwell, C. (1993). *Fundamentals in Educational Administration and Planning*, Enugu, Magnet Business Enterprises.
- Okon, E.E. (2002). Improvised Apparatus for Effective Classroom Teaching. Illustrated with Ripple Tank. *Akankpa Journal of Education*, College of Education Akankpa (1) 33-46.
- Onwuegbu, O. I. (1989). *Discover Teaching*, Enugu, Fourth Dimension Publishing co. Ltd.
- Pallant, J (2001). *SP.SS Survival Manual: A Step by Step Guide to Data Analysis using SP.SS*, UK, Open University Press.
- Usman, A. (2005). Relationship between Teacher Satisfaction and Job Programme in Borno State Secondary School. Unpublished M.E Dissertation Faculty of Education in University of Maiduguri.