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Correlating School Discpline Climates on Students' Behavioural Problems in Secondary Schools Mathematics Classes

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Abstract:- There are many factors within the schools that contribute to students' behavioural problems in mathematics. The main ones are school discipline climate, teachers, parents and students participations in teaching-learning process. This study was set to find if there exists any relationship between school discipline climates and students behavioural problems in mathematics classes. The study was conducted in Lagos State Nigeria; two Local Government Educational Areas (LGEA} were randomly selected from the state. Forty junior secondary schools were sampled from the LGEA – twenty public and twenty private. Eighty mathematics teachers were used as subjects of the study (two mathematics teachers per school). Two hypotheses were postulated for the study; and questionnaire on schools disciplinary climate was the only instrument for the study. Analysis was done by using One Way ANOVA and Pearson Product Moment Correlation statistics. Result reveals that there is direct correlation between schools disciplinary styles and students misbehaviours in mathematics classes. Recommendations were given for future improvement in schools discipline with respect to teaching and learning of mathematics.

Keywords:- *Behavioural Problems; Discipline Climate; Students' Misbehaviours; Students' Participations.*

I. INTRODUCTION

Discipline in school, consists behavioural strategies and system of guidelines, rules, laws, and punishments set to regulate students' behaviours and to maintain orderliness in schools. School discipline climate is a discipline atmosphere that prevails at school. Disciplined school has disciplinary climate, or the degree to which noise and disorder are kept at distance to avoid harm; and learners listen to teachers presentation and act as directed. To maintain a learning environment such as school, discipline is very essential. A child that is not discipline will not be able to implement his plans in real life and this will cost him a lot in future. Students do everything they like in a school where there is no discipline, and bunk the classes (Morrison, 2018). Positive school climate makes students, teachers and other staff to feel safe at school and its immediate environment; work actively to maintain the facilities of the school, and parents feel happy to send their children to such school (Belle, 2018).

Creating conducive learning process, such that learning objective is achieved, require a well-planned action. According to Daroni, Solihat & Salim (2018), students' discipline administration need to be in schools by using human resources to gain the institutional goals. Moreover, the objective of the administration is to build acceptable and positive reputation for students, and this can be derived through the use of students' discipline activities and by making modern human resources becomes more stronger (Sun, 2015).

Simatwa (2012) noted that school management need to give orders that must drive students to become a discipline personality. Principals of schools need to support activities that build students to have discipline attitude in their social roles. They play a valuable guidance role in establishing discipline, through effective management and personal model. Principal needs to monitor that there is agreement among his teachers on enforcement of rules and regulation; because as principal is playing his role on this, teachers have to play their roles and make their students to be of good behaviour. A workable school discipline program tends to give confidence on acceptable behaviour and it provides all students with a satisfying school's experience as well as discouraging defiant behaviour (Muntua & Thinguri, 2014).

Students Classrooms' Misbehaviours

Many studies have linked the main cause of teachers stress and burn-out to students' misbehaviours in classroom. Many teachers spend much time on dealing with students defiant behavioural problems while the time to present their lessons and other academic activities suffers (Mutua & Thinguri, 2014; Schwab, Eckstein & Reusser, 2019). When problem from students' misbehaviour in a school is not solved; the academic activities of such school may be interrupted, content of the curriculum may not be covered,

learning opportunities may erode and teacher authority may be weaken (Sun, 2015; Wang & Eccles, 2012; Morrison, 2018; Denanet & Van Houtte, 2012). Making students to have good behaviour in classroom is important for two reasons. First, it prepares students to take their roles in society as responsible persons, because this is one of the primary aims to schooling (Isyami, 2016). Secondly, it makes teacher to achieve his stated objectives for his lesson (Aldrup et al., 2018). If some students in a class are misbehaving, it causes distraction to other students, teacher feels frustrated and a well-planned lesson leads to absurdity (Sheen & Luximon, 2015; Way, 2011).

Student's misbehaviours exist in many primary and secondary schools but most of them are managed within tolerable limits (Amoah et al., 2015). Since, poor disciplinary strategies of school causes more general breakdown of the school system, school needs to standardize her strategies (Simatwa, 2012). Onasanya & Oyedemi (2018) also noted that students' behavioural problems in mathematics classes cut across all levels both in primary and secondary schools. Nevertheless, this study would investigate the relationship between the school discipline climate and students misbehaviours in junior secondary schools mathematics classes.

Statement of the Problem

Watkins (1995) classified school disciplinary climates as four: controlled, autonomous, conflictual, and libertarian. The controlled is low misbehaviour to get severe punishment; autonomous is low misbehaviour getting light punishment; conflictual is high misbehaviour to have severe punishment; and libertarian is high misbehaviour having light punishment. Onasanya & Oyedemi (2018) asserted that there is a contrite school disciplinary climate; a situation where student is not punished for any misbehaviour (whether low or high). Hence, with these five climates we can get six disciplinary styles which a school discipline system must fall into one. The six styles are graded as:

Grade A: Null (full contrite, no punishment in any situation)
Grade B: Very-Light (contrite for low misbehaviour & libertarian)
Grade C: Light (autonomous & libertarian)
Grade D: Medium (contrite for low misbehaviour & conflictual)
Grade E: High (autonomous & libertarian)
Grade F: Harsh (controlled & conflictual)

Schools' managements are of not of the same principles and policies. Every one of them has the system of governing its school in term of discipline and punishing students; and teachers are well informed about the principles and policies but students are mostly informed indirectly by their teachers. Mathematics at junior secondary schools is a foundation for high schools mathematics and there are different types of misbehaviours that exist at this level. This research would try to find the correlation between schools discipline styles and students challenging behaviours in junior secondary schools mathematics classes and to find the type of schools' disciplinary style that reduces students' misbehaviour to the minimum in mathematics class.

Purpose of the Study

This study was set to examine the effect of school disciplinary styles on students' misbehaviours in mathematics class, and to find the type of relationship between the school disciplinary climates and misbehaviours of students in mathematics class.

Research Hypotheses:

This study would test the following (two) null hypotheses at significance level of 0.05:

Hypothesis 1: There is no significant difference among numbers of mathematics students' classrooms misbehaviours of secondary schools with difference disciplinary climates.

Hypothesis 2: Schools disciplinary climates have no significant relationship with students' classrooms misbehaviours in secondary school mathematics classes.

II. METHODOLOGY

(i) Design, Population, Subjects and Instrument:

A survey research design of an ex-post factor type was used for this study. It was conducted in two local government educational areas in Lagos State Nigeria. The population of the study was all mathematics teachers in both public and private junior secondary schools in the two local government educational areas. Ten public junior secondary schools and ten private junior secondary schools were randomly sampled from each of the educational area. This gives total twenty public schools and twenty private schools. Two mathematics teachers were used in each sampled school. So, total of eighty mathematics teachers were used as subjects for the study. The main instrument of this study is Schools Disciplinary Climate Questionnaire. The questionnaire has three sections: A, B and C. Section A is on informed concept, the respondent has to indicate his/her interest in participating in the study and not to reveal his/her identity. Section B is on background information of the respondent and his/her school disciplinary climate. Section C is record of misbehaviours for 3 consecutive periods of teaching mathematics to a particular class and the average number of the misbehaviours per period.

(ii) Procedure

Managements of the sampled schools were consulted before conducting the study. The instrument was administered to the participants by the researcher and retrieved it back after one week. The instrument was validated by some experts in educational management and mathematics education departments of Colleges of Education in Nigeria. Also to ensure that the instrument is reliable, a pilot study was conducted with 25 junior secondary schools mathematics

teachers selected from schools apart from the sampled schools in the population. A test-retest correlation coefficient of 0.815 was obtained, which indicates that the instrument is reliable. Eighty questionnaires distributed were filled and returned and analysis was carried on the data obtained from the returned questionnaires.

III. RESULTS

Age and gender of the respondents are in the table 1 below.

Table 1: Age and Gender of the Respondents

Age Group	Male	Female	Total
Below 26 years	4	6	10
26 – 35 years	9	8	17
36 – 45 years	13	10	23
46 – 55 years	5	7	12
Above 55 years	6	12	18
Total	37	43	80

Participants' years of teaching experience are in table 2 below.

Table 2: Years of Teaching Experiences of the Participants

Years of Teaching	Male	Female	Total
1 – 5	12	8	20
6 – 10	8	9	17
11 – 15	6	10	16
16 – 20	4	12	16
Above 20	7	4	11
Total	37	43	80

The above table 2 shows that majority of the teachers had more than 10 years teaching experience; because those that had 11 years and above teaching experience were 43 which is 53.75%.

Hypothesis 1 is tested by using one way ANOVA to find if there is any difference in the number of misbehaviours in mathematics classes of the category graded schools. The respondents indicated the type of disciplinary climates which were in their schools and the average numbers of misbehaviours observed in teaching mathematics for a period. The result of the analysis is in the table 3 below:

Table 3: One Way ANOVA of Numbers of Students Misbehaviors in Mathematics Classes of Graded Schools

Misbehaviour

Source of Variation	SS	Df	MS	F	Sig.
Between Groups	518.348	5	103.670	49.007	0.000
Within Groups	156.540	74	2.115		
Total	674.888	79			

From Table 3, P= 0.0000 (P less than 0.05) means that the result is significant. Therefore, there is significant difference among the numbers of misbehaviours in the graded schools. So, the first null hypothesis is rejected. To be able to get the graded schools with low misbehaviours the descriptive information on the data is on table 4 below.

Table 4: Descriptive Information on the Graded Schools

Graded Schools	A NULL	B VERY LIGHT	C LIGHT	D MEDIUM	E HIGH	F HARSH
Mean	1.3571	2.4000	0.9167	3.3571	5.1857	7.8125
Median	1.0000	2.5000	1.0000	3.5000	6.0000	8.0000
Variance	0.863	1.156	0.629	2.093	4.027	3.229
Standard						

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Deviation	0.92878	1.07497	0.79296	1.44686	2.0068	1.79699
Standard Error	0.24823	0.33993	0.22891	0.38669	0.53635	0.44925

Table 4 shows that the lowest mean is 0.9167 which is for Light graded schools and the highest mean is 7.8125 for Harsh graded school. This implies that Light disciplinary style is the best and the worst is harsh style.

The second null hypothesis was tested with Pearson Product Moment Correlation statistics. To find the relationship between graded disciplinary schools and number of students' misbehaviours in mathematics classes; 1, 2, 3, 4, 5, and 6 were assigned to grade A, B, C, D, E and F schools respectively. The result is in table 5 below.

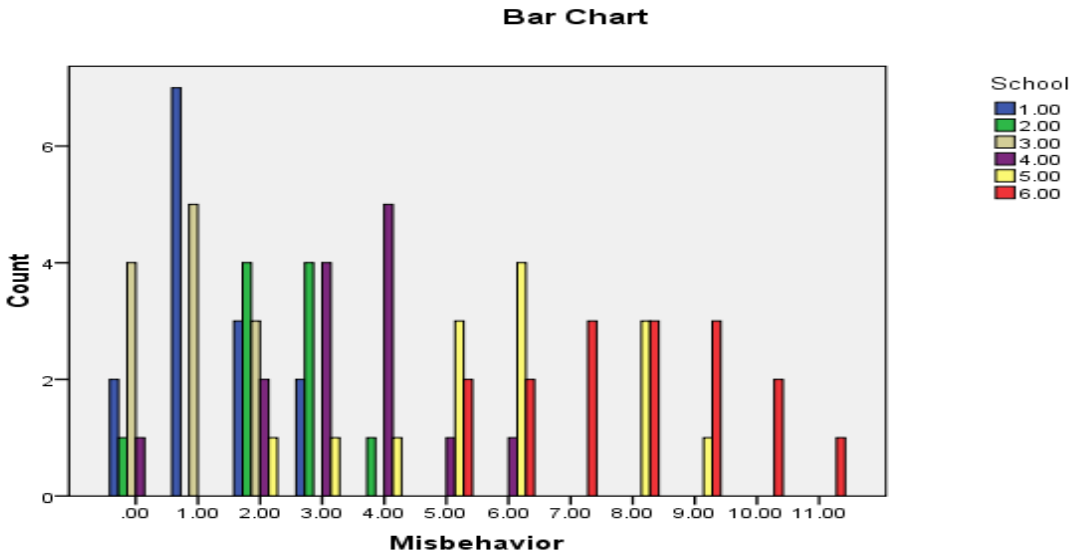
Table 5: Correlation Analysis of Graded Schools and Mathematics Students' Misbehaviour.

	Variable	School	Misbehaviour
School	Pearson Correlation	1	0.787**
	Sig. (2-tailed)		0.000
	N	79	79
Misbehaviour	Pearson Correlation	0.787**	1
	Sig. (2-tailed)	0.000	
	N	79	80

**. Correlation is significant at the 0.01 level (2-tailed).

The correlation coefficient in table 5 is 0.787 (positive high correlation), significant at 0.01 ($P < 0.05$) and also significant at 0.05; this indicates that there is significant relationship between the graded schools and numbers of students misbehaviours in mathematics. Hence, the second null hypothesis is rejected and the alternative one accepted. This implies that as level of punishment increases in secondary schools the misbehaviour increases in mathematics classes.

Figure 1: The Bar Chart of the Trend of Numbers of Misbehaviours in the Graded Schools



Key: (With respect to the colours of the chart) School 1.00 = Null Graded Schools; School 2.00 = Very Light Graded Schools; School 3.00 = Light Graded Schools; School 4.00 = Medium Graded Schools; School 5.00 = High Graded Schools; School 6.00 = Harsh Graded Schools

In the figure 1, harsh school had up to 11 misbehaviours in a period of teaching with lowest number of 4 misbehaviours, while null schools had maximum of 3 misbehaviours and minimum of none. The bar chart shows it clearly that as punitive policy of a school is high the more are students misbehaviours that the mathematics teachers in the school should be expecting in their classes.

IV. SUMMARY

The summary of this findings are:
1. There is significant difference among the numbers of mathematics students' misbehaviours in the different category of graded disciplinary schools. The few schools under null disciplinary style are private ones. The best disciplinary style is light (Light punishment for any misbehaviour).
2. There is positive high relationship between disciplinary climate of schools and number of misbehaviours in mathematics class. The more a school is increasing her punishment for students the more misbehaviours attitude increases in mathematics class.

V. DISCUSSION

The result shows that numbers of students' misbehaviours in a mathematics class are not the same across all the schools with different disciplinary measure. Number of students' misbehaviours in school with light punishment was found to be the least; this is in support with Onasanya (2020), Wang & Degol (2016), Dicke et al., (2015), Sun (2015) and Thapa et al., (2013) that punishment does not make student to behave to standard accepted normal behaviour.

The finding also shows that there is positive high correlation between school's disciplinary styles and students' misbehaviours. This means that there is significant relationship between them. This is in line with Skiba & Losen, (2016), Hopson & Lee (2015) and Morrison, (2018) that misbehaviour increases at any institution that has strict school coercive measures.

VI. CONCLUSION

Punishment is necessary to make students to be discipline and obey the rules and regulations of schools, communities and the nation in general. But the punishment must be light such that it may bring out good result. If it is high it may be disastrous to the learning environment and if it is none, it can lead to anarchy in classroom; and we may not be able to achieve the peaceful learning environment that we are expecting.

RECOMMENDATIONS

The following recommendations are hereby given for future improvement.

1. School management should try to set rules for rewarding abnormal behaviours of students with light punishment.
2. School management should monitor how teachers are enforcing rules for light punishment for students.
3. Mathematics teacher should be friendly and not be biased when apply the necessary light punishment in class to students that misbehaved.

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