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Pupils Coping Techniques in Schools Located in Noisy Environment (A Case Study of Selected Schools in Bo City)

By Allieu, James & Munda Roberts

Abstract- The essence of the study is to examine pupils coping strategies in schools located in noisy environments in Bo City. The design of the study was descriptive survey. Schools were randomly selected for the study. The target population of the study was made up of 12 Administrative Staff, 18 Teachers and 90 Pupils drawn from the selected schools. The data collecting instruments used were structured questionnaires. The study came up with the finding below:

Noise is a serious problem in learning environments. 72% of pupils, 16.9% of teachers and 9% of administrative staff considered noise as a problem. 3.4% of the pupils do not considered noise as a major problem.

79.3% of the respondents also indicated that pupils preferred to do their private studies at night and 20.7% at day time.

The study also identified sources of noise which includes; classmates, moving vehicles, hawkers, lorry park, market, neighbourhood. All of them affect pupils' attention. 85% of the noise came from the pupils and 2% from class equipment.

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Abstract- The essence of the study is to examine pupils coping strategies in schools located in noisy environments in Bo City. The design of the study was descriptive survey. Schools were randomly selected for the study. The target population of the study was made up of 12 Administrative Staff, 18 Teachers and 90 Pupils drawn from the selected schools. The data collecting instruments used were structured questionnaires. The study came up with the finding below:

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The study also identified sources of noise which includes; classmates, moving vehicles, hawkers, lorry park, market, neighbourhood. All of them affect pupils' attention. 85% of the noise came from the pupils and 2% from class equipment.

The study also revealed that 87% of the pupils do their assignments and private studies at home and 12.9% in school.

79.3% of the respondents also indicated that pupils preferred to do their private studies at night and 20.7% at day time.

The study also identified fencing around the school compound, building school in isolated areas, noise regulation policy in school, ignoring the noise (tolerance) as some of the coping strategies for schools to establish in noisy environments.

I. INTRODUCTION

t has recently been observed that towns and cities in Sierra Leone expanding at a very high rate. This is due to rural-urban migration to upgrade their living standard and high birth rate especially with the introduction of Free-health care services for pregnant women and children under five years of age.

The end of the eleven years civil war in Sierra Leone (1991-2002) left most of our towns and cities over populated. Most of the displaced people who migrated from rural areas never returned but rather stayed in the cities for job opportunities and improved living standards.

The rural-urban migration has contributed greatly to population growth in towns and cities. Consequently, there is now a high demand for

education and schools (nursery, Primary, Junior and Senior Secondary Schools) are now established on daily basis to measure up to this growing demand.

Today, schools (Nursery, Primary, Junior and Senior secondary Schools) are located in every available space in our towns and cities (Freetown, Bo, Kenema, Makeni, Kailahun and Kono). Many structures that were not originally not designed for schools such as shops, stores, halls, court barry, open-space and dwelling houses have been converted into schools. It important to note that most of these schools are actually located in areas that appear to be noisy-especially those located near markets, busy road/streets, cinema halls, clubs, recording studios, mechanic workshops, industries, factories and airfield. Schools that were established long ago in quiet environments have today found themselves in noisy locations and residential area due to the expansion of cities. As a result, schools located in those environment experience difficulties in teaching and learning process. Furthermore, the teachers in those schools may be competing with element in the environments for pupils' attention.

II. AIM AND OBJECTIVES

a) The Aim

The general aim of the research work is to investigate the coping techniques pupils' adapt to enable them to learn effectively in schools located in noisy environment.

- b) Specific Objective
- i. To identify whether or not noisy is a barrier to effective teaching and learning.
- ii. To identify the sources of noise that hinder/disturbs pupils attention in their learning process.
- iii. To examine the techniques that pupils adopt to cope with their studies.

c) Theoretical Framework

Herman Von Helmholtz's place theory in D.G. Myers (2001) presumes that we hear different pitches because of different sound trigger activity at different places along the cochlea's basilar membrane. Thus the brain can determine a sounds pitch by recognizing the place on the membrane from which it receives neural signals.

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However, the frequency theory suggests an alternative explanation for how we detect pitch. The whole basilar membrane vibrates with the incoming sound wave, triggering neural impulses to the brain at the same rate as the sound wave. If the sound wave has a frequency of 100 waves per second, then 100 pulses per second travel up the auditory nerve. Thus, the brain can read pitch from the frequency of neural impulses.

III. REVIEW OF RELATED LITERATURE

Modren life is noisy. Traffic roars, factory machines clatter. Jackhammers teer up pavement. To escape into more pleasant sounds, runners stride to the beat of intense music on their headsets. The intensity of all this noise causes a problem. Brief exposure to extremely intense sounds, such as gun fire near one's ear, and prolonged exposure to intense sounds such as amplified music, can damage receptor cells and auditory nerves (Backus, 1977; West and Evans, 1990).

Noise affects not only our hearing but also our behaviour. On tasks requiring alert performance, people in noisy surrounding work less efficiently and make more errors (Broadbent 1978). People who live with continual noise in factories, in homes near airports, and in apartments next to trains and highways suffer elevated rates of stress-related disorders: high blood pressure, anxiety, and feelings of helplessness are common (Evans & Others 1995). Throughout history man has been plagued by noise. Today, it is more severe and widespread than over before and it will continue to increase in magnitude and severity because of population growth, urbanization and improvement in technology (Dockerll and Shield performance; 9th international congress on noise as a Public Health problem (KBEN) 2008, Foxwoods, CT the effects of classroom and environmental noise on children's academic - page 12).

In schools, distractions from outside have been found to reduce students efficiency at learning Clarkesteward and Friendman (1987). Eggen and Kauchak (1990) also observed that distraction from the environment affects attention and concentration for both teachers and students. Such distractions they said may come from outside or movement of students in the classroom.

Rosen (1981) reported a research on the effect of noise among the Mabaan, a primitive tribe living in a relatively noise free environment in South-Eastern Sudan. The study found evidence of rapid constriction of blood vessels at loud unexpected noise than in people living in noisy environments, the same study found that coronary diseases and hypertension are unknown among Mabaans and at the age of 75, their hearing is still very acute.

The literature showed that noise is a problem and it affect both the physical and psychological well being of pupils in schools. The literature mainly concentrated on the effects of noise which we assume applies to us in Sierra Leone. However, available literature is silent on the techniques, devices or mechanisms adopted by pupils to cope with the problems especially in schools.

IV. Significance of the Study

The purpose of this study is to identify the coping techniques pupils adopt to enable them to learn in schools that are established in noisy environments. The research will be of benefit to pupils in schools and students in higher institutions who may wish to carryout similar research. It will also be beneficial to teachers, parents, school administrators, curriculum planners, education policy-makers and researchers.

- a) Research Questions
- i. Is noise a problem in schools located in noisy environments?
- ii. What are the sources of noise that disturb pupils' concentration in schools?
- iii. What venue pupils mostly use to do their study or assignment?
- iv. What time do pupils find most convention to do their private studies?
- v. What coping techniques do pupils adopt during their free periods?

V. Methodology

a) Study Area

This research was conducted in Bo City, the Provincial Headquarters of the Southern Province, the District Headquarter of Bo District and the Chiefdom Headquarters of Kakua Chiefdom. Bo is the second capital city of Sierra Leone. The Central Statistics Office report of 2004 puts the population of Bo at 165,114 people. The figure is expected to be higher in 2015 Population and Housing Census. The inhabitants of Bo come from all the ethnic groups of Sierra Leone.

The present size of the city could be estimated around 30 to 35 sq. Km. The growth in population has increase the need for more schools, transportations, electricity, recreational facilities, religious institutions, business and entertainment centres. A good number of the schools were established by Christian and Islamic Missionaries, Government and Private Organizations.

- a) *Research design-* The design of this research is a descriptive survey. Pupils in selected schools were randomly sample for their view on the status of noise and their coping techniques.
- b) *Population and Sample-* The target population of this study was made up of pupils, teachers and administrative staff of the selected schools located in noisy environment. The researchers randomly selected six schools for this study.

Subjects	Total Number			
Administrative Staff	12			
Teachers	18			
Pupils	90			
Total	120			

Table 2: Institutions Selected for the Study

S/N	Schools	Location	No. of Teachers	No. of Pupils	No. of Admin. Staff
1.	Bo District Education Committee Primary School (BDEC)	Sewa Road	3	15	2
2.	Roman Catholic Primary School (RC)	New Gerihun Road	3	15	2
3.	Holy Rosary Primary School	MaheiBoima Road	3	15	2
4.	Methodist High School	Mission Road	3	15	2
5.	Kakua Junior Government School	Agriculture Compound	3	15	2
6.	Bo Commercial Secondary School	Dambala	3	15	2
	Total =	-	18	90	12

Table 1: Subjects Selected for the Study

Table 3: Questionnaire Administered

Respondents	Number Administered	Number Returned	Not Returned	% Returned
Admin. Staff	10	10	0	100
Teachers	20	19	1	95
Pupils	90	87	3	96.7
Total	120	116	4	96.7

VI. INSTRUMENTATION AND DATA Collection

The data colleting instruments used for the study were structured questionnaires. The questionnaires were designed in line with the demands of the objectives and the research questions. Participants' observation was also carried out to get relevant information from the respondents. The questionnaires were distributed to the selected schools. Total of 120 questionnaires were administered, 116 were returned.

To determine the content validity of the instrument used, a pilot study was undertaken to confirm the validity and reliability of the instrument. The pilot study was also used to test the research questions. The data collected was analyzed using percentages.

a) Results/Findings

The following questions were tested

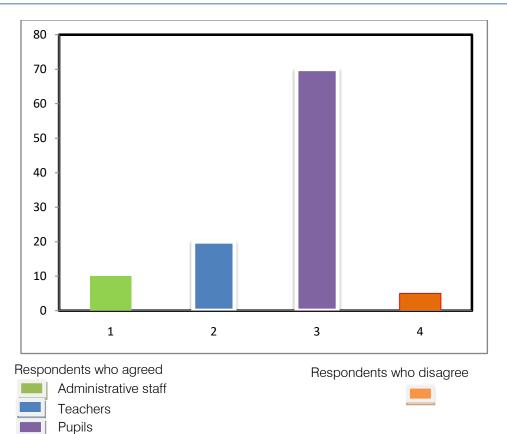
Research Question 1

Is noise a problem in schools located in noisy environment?

Table 4: Data Indicating the Number of 116 Respondents who Agreed and those who Disagreed that Noise is a Problem to Learning Process.

Respondents	Yes	%	No.	%
Administrative staff	10	9	0	-
Teachers	19	16.4	0	-
Pupils	83	72	4	3.4

10 administrative staff, about 9% indicated that noise is a problem in learning process. 19 teachers, about 16.4% also agreed that noise is a problem in learning environment. 83 pupils, about 72% also indicated that noise is a major problem in schools. However, 4 pupils, about 3.4% indicated that noise is not a problem in learning process.



Research Question 2

What are the sources of noise that disturb pupils' concentration in class?

Table 5: Table indicating the sources of noise rated by 116 respondents

S/N	Source of Noise	No. of respondents	Percentage %
1	Moving vehicles	48	41.4
2	Moving motor bikes	80	69
3	Market	30	26
4	Power generator	34	29.3
5	Football players	10	9
6	Classmates	98	85
7	Classroom equipment	2	2
8	Entertainment Centre's	25	22
9	Church	15	13
10	Mechanic workshop	5	4.3
11	Passer by	49	42.2
12	Barking dogs	6	5.2
13	Neighborhood	30	26
14	Mosque	10	9
15	Lorry park	27	32.3
16	Hawkers	52	45

Table 5 reveals that the highest noise always comes from the classmates, about 85% representing 98 respondents. It is clear from the table that the least noise is from classroom equipment, about 2%.

Research Question 3

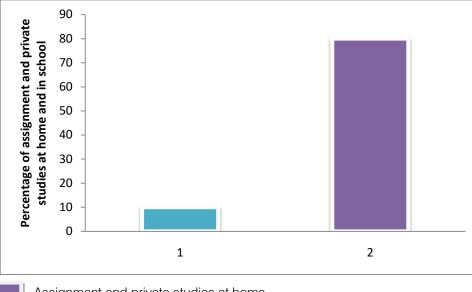
What venue pupils normally use to do their study or assignment?

Table 6: Table Illustrating venue for assignments and private studies

No. at Home	% at Home	No. at School	% at School
101	87.1	15	12.9

Table 6 shows that a total of 101 respondents, about 87% agreed that assignments and private studies are done at home. However, 15 respondents, about

12.9% indicated that assignment and private studies are done in school.



Assignment and private studies at home Assignment and private studies in school

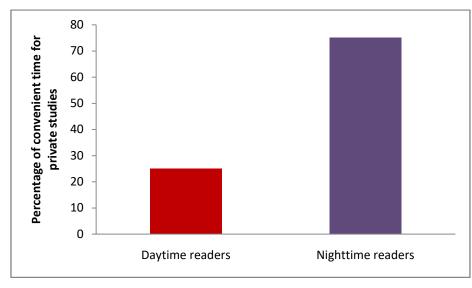
Research Question 4

What time do pupils find most convenient to do their private studies.

Table 7: Table	indicating co	nvenient time fo	r private studies

Day Time Readers		Night Time Readers	
No. of Respondents	1% of Respondents	No. of respondents	% of Respondents
24	20.7	92	79.3

The table shows that about 79.3% of private studies at night. But 20.7% also indicated that respondents indicated that pupils preferred to do their pupils preferred to do their studies at day time.



Research Question 5

What are the coping strategies in schools that are located in noisy environment?

No	Coping Strategy	Number of Respondents	% Of Respondents
1	Fencing the school compound	50	43.1
2	Building schools in isolated areas	30	25.9
3	Noise regulations policy in school	16	13.8
4	Amplifying the teacher's lessons	8	6.9
5	Teachers pausing during lessons	5	4.3
6	Teachers pausing during lessons to allow noise to fade out.	3	2.6
7	Relocating classes to quiet areas	2	1.7
8	Spacious classroom	2	1.7

Table 8: Showing coping strategies in schools located in noisy environments

The result in Table 7 shows that 50 respondents, about 43.1% agreed that fencing is one of the coping strategies in schools located in noisy environments. 30 respondents, about 25.9% accepted the view that school should be built in isolated areas.

13.8% also agreed on noise regulation policy in school. It is clear from the table that 1.7% of the respondents indicated that relocating classes to quiet areas and specious classroom are coping strategies in schools located in noisy environment.

VII. Discussion

In table 4, the result of the shows that noise is a problem especially schools located in noisy environments. The Administrative staff (9%), Teachers (16.4%) and pupils (72%) all of them considered noise as a problem in schools. However, it is interested to note that 4 pupils, about 3.4% did not consider noise as a problem in learning. From the finding, schools located in noisy environments suffer greatly from learning process.

In Table 5 the findings of this study shows that noise from classmates ranked as the highest source of noise that create learning difficulties. 98 respondents about 85% indicated that most of the noise is from the classmates. The study also reveals that many schools in the city are located near busy roads, football fields, entertainment centres, markets, lorry parks, generating plants, and so no, which are all potential sources of noise.

The result also shows that most pupils normally engage in playing, discussions or arguments. Most of them argued about international soccer players, clubs musicians or politics.

However, few respondents ascertain that despite noise in their schools, they learn effectively without barriers.

In table 6, the study also shows that most of the pupils used to do their assignments or private studies at home to avoid noise in schools. However, 15 respondents, about 12.9% agreed that assignment and private studies are done in schools. According to them,

noise from other sources do not disturb their learning process.

In Table 7, the study shows that pupils read mostly at night. At the period, the environment is always quiet for academic exercise. About 79.3% of the respondents do night reading. However, 20.7% of the respondents agreed to read at day time.

Finally, the study further discovered noise coping strategies that pupils and teachers adopt to enhance effective teaching and learning in classroom. The study reveals that fencing the school, building school in isolated areas, noise regulation policy in schools, amplifying the teacher's voice, teachers pausing during lessons, relocating classes to quiet areas and spacious classroom to avoid overcrowding are noise coping strategies.

VIII. Conclusion

Noise is actually a barrier to effective teaching and learning in educational system. The study also identified the most common sources of noise in school environment since the schools are often noisy, pupils resort to do their assignments and private reading at home. The study also found some coping strategies to be adopted by pupils and teachers for effective teaching and learning.

IX. Recommendations

- 1. That the government of Sierra Leone should enact noise regulation policy throughout the country.
- 2. That schools should be built in isolated areas.
- 3. That classroom should be spacious and horse shoe formation sitting arrangement encouraged in schools.
- 4. That the school authority should adopt the policy of fencing the school compound.
- 5. The Ministry of Education Science and technology should design and map out school location in the country. Defaulters should be punished.
- 6. The inspectorate units should embark on effective monitoring and supervision.

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