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A STUDY ON NOISE LEVEL FOR SCHOOL AT SJRC SAMTET IPOH AND PUSAT TINGKATAN ENAM SERI IPOH

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Abstract:
Noise pollution around the educational area can negatively affect the performance of both teachers and students. The noise level should be around the range of 35 dBA in the school area. Little attention has been given by individuals or government concerning noise pollution in schools` surrounding. A study of this problem is presented in this paper by doing some measurement of the noise level at the school located near city at SJRC Samtet Ipoh and Pusat Tingkatan Enam Seri Ipoh has been conducted to measure noise level in its surrounding. The result of this study shows that the rate of noise level in SJRC Samtet Ipoh is high and not suitable for the school's environment.

Keywords: Noise pollution, Noise level School area

1.0 INTRODUCTION

Nowadays, many schools are located near busy places such as city, shop and residential area. This occurs because of limited places to build a school or the rapid development surrounding the schools.
The school must be located in a quiet environment. Noise pollution in a school environment disturbs the activities in school such as study, discussion and teaching session. The rate noise pollution in a school environment is very high in Malaysia. Acts and the regulations concerning noise pollution are limited and not strictly adopted.

2.0 LITERATURE REVIEW

There is a lot of literature about noise according to Dasarathy (2015) stated that unwanted sound or disrupt human hearing is called noise. When there is a lot of noise in an environment they turn to noise pollution. Sound become unpleasant when sound disturbs the normal human activities such as sleeping and during the conversation. According to Peters and Bratton (2016) Nowadays urbanization has been taken an apart in rapid growth over the past few decades. It has given the high impact as well in environmental noise and human health (Peters and Bratton, 2016). The noise pollution coming from road traffic, rail and airport traffic, industry, construction and all activities outdoors (Debnath et al., 2012). According to Debnath et al.,(2012) stated noise is unwanted sound that creates annoyance and interferes in conversation disturb sleep and teaching and learning process, it is also can effect person life, reduce work efficiency, causing stress and challenge to public health and it can be a silent killer if this problems keeps on happen. Almost all educational institutes mostly school are located too near busy places such as market area, busy road. This educational institutes suffers from noise most students are affected.

3.0 METHODOLOGY

The quantitative method was used in this research. The data was collected using questionnaire and using instrument which is containing of three sections. First for demographic, second section for questionnaire and third section for collective data from instrument. This section is needed for do analysis of the data. The questionnaire will be distributed to the selected person which is student from SJRC Samtet Ipoh and Pusat Tingkatan Enam Seri Ipoh. Below show the sample of questions asked in the questionnaire survey.

INSTRUCTION: Please complete the following questionnaire with specific regard to the above enquiry that you find most appropriate to your experiences by placing a tick in the appropriate circles.

1= Strongly Disagree 2= Disagree 3= Neither Agree Disagree 4= Agree 5= Strongly Agree

No.	Question	scale				
		1	2	3	4	5
1	Do you agree high level of sound is annoying you?	○	○	○	○	○
2	Do you agree that source of noise is coming from the vehicle?	○	○	○	○	○
3	Do you agree noise affect you physically or mentally?	○	○	○	○	○
4	Do you agree that learning in quiet is more acceptable?	○	○	○	○	○
5	Do you agree that noise can affect your interest in learning?	○	○	○	○	○

Figure 1: Sample of Questions

The respondents in this survey were students in SJRC Samtet Ipoh and Pusat Tingkatan Enam Seri Ipoh. A set of 102 questionnaires has been sent to the targeted which is 92 set of questionnaires to SJRC Samtet Ipoh and 10 to Pusat Tingkatan Enam Seri Ipoh. Sampling size method was used to determine the total of respondent needed. This method will give precise targeted questionnaire. The researcher using sampling size to determine the total of respondent needed in this method. The sample size is thus calculated using.Taro Yamene's formula. The taro Yamene method for sample size calculation was formulated by the statistician Tara Yamane in 1967 to determine the sample size from given population.

After the collecting data stage was completed, Data analysis was performed using two different computer packages: Statistical Package for the Social Sciences and Microsoft Excel Windows. The mean technique was used to calculate the average degree of defects in the buildings. The mean is the sum of values in a data set divided by the frequency. The degree of occurred of each of noise problem will be determined by the frequency of the respondents that agreed with each of the noise problem. For instance, where the mean score falls between 1.0 and 1.5 the defect will be considered as less occurred. This cut-off point is used because the lowest possible mean score is 1. However, it was understood that a natural scale should originate from 0, which in this case is not required. Missing data (that is where the respondent refused to tick where applicable or there are multiple entries), could impact negatively on the outcome of the findings; however, such an effect could be improved during data analysis by either replacing the missing data with the mode or mean of the data. However, in this article, the missing data will not be treated as such; instead, we would prefer to leave the data raw so that the outcomes will not in any way be influenced by the authors. This tends not to be a problem in the study as nearly all the questions were answered by the respondents.

Table 1: Average index evaluation metric

Scale Evaluation	
1.00 – 1.50	Less Occurred
1.51 – 2.50	Slightly Occurred
2.51 – 3.50	Occurred
3.51 – 4.50	Considerably Occurred
4.51 – 5.00	Mostly Occurred

4.0 ANALYSIS AND FINDINGS

In Section A, most of the respondents of SJRC Samtet Ipoh are totally male. This is because SJRC Samtet School is only for all boy primary school. The survey was dominated by male students. The average age student for SJRC Samtet is 10-12-year old because the questionnaire is only distributed to the class located nearest street. The survey also revealed that most of years studying at schools is 70% which is 5 to 6 years. Therefore, the reliability of the questionnaire response was accepted. Pusat Tingkatan Enam Seri Ipoh was dominated by female students which is 53% and male students only 47%. Pusat Tingkatan Enam Seri Ipoh schools only have 2 years. 2 classes for first year student and second year student also have 2 classes. However, the respondents of students were fair between age male and female with 50 percent. The years of studies also give a similar result, 50% year 1 and years 2. Therefore, the reliability of the questionnaire response was accepted. Table 2 and 3 shows the details demographic data.

Table 2: Demographic (SJRC Samtet Ipoh)

Characteristic		**Percentage**
Gender	Male	100 %
	Female	0 %
Age	7-9	0%
	10-12	100%
How many years have been studying at this school	1-2	9%
	3-4	21%
	5-6	70%

Table 3: Demographic (Pusat Tingkatan Enam Seri Ipoh)

Characteristic		**Percentage**
Gender	Male	47 %
	Female	53 %
Age	18-19	50%
	19-20	50%
How many years have been studying at this school	1	50%
	2	50%

In Sectiom B, the outcomes for the degree of occurred of the different respondent on noise problem at SJRC Samtet Ipoh. In table 34below shows an overview the data collected. The level of occurred identified, mean scores and frequencies. The means score indicated the degree of occurred for each noise problem. Based on table 3 from analysis question 1, 2, 4, 5, 6, 7, 8, 9 and 10 noise problem are considerably occurred. While only question 3 noise problem is slightly occurred. Second schools which is at Pusat Tingkatan Enam Seri Ipoh mostly all question on noise problem is considerably occurred and only question 6 shows noise problem is occurred .

Table 4: Frequency of Respondent on noise problem at SJRC Samtet Ipoh.

No.	**Question**	**Frequency of Agreement**					**Mean**	**Average index evaluation metric**
		1	**2**	**3**	**4**	**5**		
1	Do you agree high level of sound is annoying you?	1	1	0	59	39	4.33	Considerably Occurred
2	Do you agree that source of noise is coming from the vehicle?	14	21	0	50	15	3.31	Considerably Occurred

3	Do you agree noise affect you physically or mentally?	5	5	0	67	23	2.01	Slightly Occurred
4	Do you agree that learning in quiet is more acceptable?	6	7	0	45	42	4.1	Considerably Occurred
5	Do you agree that noise can affect your interest in learning?	2	1	0	53	44	4.36	Considerably Occurred
6	Do you agree that noise giving uncomforted environment in school?	2	4	0	55	39	4.25	Considerably Occurred
7	Do you agree that because of noise make student less paying attention in the classroom?	2	3	0	48	47	3.99	Considerably Occurred
8	Do you agree that if a device that reduces noise and traffic annoying was created, would you think that is a good idea?	6	7	0	45	42	3.98	Considerably Occurred
9	Do you agree that any solution has to be done in the future to fix this problem?	0	0	4	65	31	4.27	Considerably Occurred
10	Do you agree that students hearing problem during classes?	2	3	0	48	47	3.93	Considerably Occurred

1= Strongly Disagree 2= Disagree 3= Neither Agree Disagree 4= Agree 5= Strongly Agree

Table 5: Frequency of Respondent on noise problem at Pusat Tingkatan Enam Seri Ipoh

No.	**Question**	**Frequency of Agreement**					**Mean**	**Average index evaluation metric**
		1	**2**	**3**	**4**	**5**		
1	Do you agree high level of sound is annoying you?	2	4	0	55	39	4.25	Considerably Occurred
2	Do you agree that source of noise is coming from the vehicle?	6	7	0	45	42	4.1	Considerably Occurred
3	Do you agree noise affect you physically or mentally?	0	0	20	65	15	3.95	Considerably Occurred
4	Do you agree that learning in quiet is more acceptable?	2	3	0	48	47	4.35	Considerably Occurred
5	Do you agree that noise can affect your interest in learning?	6	7	0	45	42	4.10	Considerably Occurred
6	Do you agree that noise giving uncomforted environment in school?	14	21	0	50	15	3.31	Occurred
7	Do you agree that because of noise make student less paying attention in the classroom?	5	5	0	67	23	3.98	Considerably Occurred

8	Do you agree that if a device that reduces noise and traffic annoying was created, would you think that is a good idea?	6	7	0	45	42	4.10	Considerably Occurred
9	Do you agree that any solution has to be done in the future to fix this problem?	2	1	0	53	44	4.35	Considerably Occurred
10	Do you agree that students hearing problem during classes?	2	4	0	53	41	4.27	Considerably Occurred

1= Strongly Disagree 2= Disagree 3= Neither Agree Disagree 4= Agree 5= Strongly Agree

Lastly, in Section C, the result from instrument data. It shows that noise problem does exist in SJRC Samtet Ipoh and Pusat Tingkatan Enam Seri Ipoh. The minimum of noise level is about 56 dB. This level of dBA is only suitable for outdoor activities in school. 35 dB to 45 dB is allowable noise in the classroom. The mod of noise is 68 dB it's not good and not suitable for school environment.

Table 6: Analysis of Noise Measurement

	SJR Samtet Ipoh	**Pusat Tingkatan Enam Seri Ipoh**
Noise level Range (dB)	56-77	53-72
Allowable Noise	77	72
Levele (dB)	68	62
(a) Classroom (b) Outdoor	35-45 Below 55	35-45 Below 55

5.0 CONCLUSION

This study proposes to know more clearly about the noise level and noise sources at the school that generally may arise noise pollution to the student. Student will face many of problem that was stated in literature review and finding. With these studies hopefully, it can help in future improvement. The data was shown that school need a calm situation and quiets environment during learning session.

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