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A Study on Attitudes and Behavior of Students at Sekolah Kebangsaan Parit Raja Toward Recycling

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Abstract: The population growth has led to a notable increase in the generation of solid waste. The rapidly changing lifestyle is the factor that creates waste at an alarming rate. Therefore, recycling can be considered as one of the best alternatives to deal with the problem of waste disposal. The aim of this study is to determine the recycling awareness among fourth to sixth grade student in Sekolah Kebangsaan Parit Raja and identify student's behaviors and attitudes towards recycling and on how student manage their waste in their daily life. The study employs qualitative research approach in which the questionnaires are distributed among students through Google Form platform. In this study, randomly 40 respondents were involved. The respondents were students aged between 10 and 12 years old at Sekolah Kebangsaan Parit Raja. Students answered a series of questionnaires that were given to them. The data obtained was then analyzed by using descriptive analysis and Statistical Package for the Social Sciences (SPSS). At the conclusion, the data were tabulated and evaluated to address the principal question of what the attitudes and behaviors of primary school students relative to recycling. This study is an excellent starting point that will assist in developing a sense of responsibility in the student's efforts towards recycling. Future research is recommended to focus on reaching a bigger sample size and to measure actual recycling attitude and behavior by means of an observational study. Most of the respondents have basic awareness and good attitude towards recycling. This was identified by the correct answer to the questionnaire that respondents were asked to answer.

Keywords: Recycling, Awareness, Attitudes

1. Introduction

Recycling is very important for all generations today. People encourage recycling because we and our country can achieve many benefits. Recycling is the process of transforming it into a new product from the same source or material. These recyclable materials are essentially the handover of waste considered as recycled waste to local facilities in a waste container called "recycled" material, which is collected

and reused for a new product [1]. A recycled product is reused in its fresh form in which new products can be made. While limited natural resources can reduce waste, recycling efforts can also dramatically reduce additional waste that would harm the planet today and future generations. Our planet's natural resources are finite therefore, we must do more than protect, recycle, and reuse materials [1]. All generations must be part of this approach to recycling, because all people will throw away waste, even if it is handkerchief. Children's recycling awareness in primary schools is very important in decreasing the use of natural resources on our planet. Students mostly used paper, plastic and bottles [2]. All this material can be recycled and student should put them in a recycling bin. Unfortunately, the level of awareness among primary school students is still unknown, there is no evidence that awareness among primary school students about recycling is sufficient. It is a fact that recycling and reuse behavior has become a routine or tradition with an awareness of ecology and recycling. This includes the high participation and involvement of young people to ensure that the recycling process is as efficient and continuous as expected. However, without a high level of involvement, the earth is and will always be threatened by each waste that goes unrecycled [3].

The aim of this research is to determine the recycling awareness among fourth to sixth grade students in Sekolah Kebangsaan Parit Raja as well as to identify student's behaviors and attitudes towards recycling and on how student manage their waste in their daily life. The study was conducted based on observations and surveys of students. A questionnaire was distributed for students to answer and a data and findings were gathered and collected. This study was decided to focus on efforts to improve participation among particular age group. It proved that, there is a noticeable environmental participation in the primary school, as their enthusiasm is still at the peak. It is especially important to consider this age group as their behaviors and attitudes concerning environmental alertness have a clear and huge impact on the upcoming future of the society. To particularly address an age group that could have the biggest results in the near future, a study of fourth to sixth grade students at Sekolah Kebangsaan Parit Raja was conducted. The aim of the effort is to identify students' awareness as well as their behaviors and attitudes towards the recycling. This study was important because it contributed valuable information related to the level of knowledge, attitude and practice of society in Parit Raja, specifically the student in Sekolah Kebangsaan Parit Raja towards recycling activities. This research is focus on the level of recycling awareness among students. The study is to strengthen the role and duty of students in the society and to grow a sense of public responsibility between students. The result was obtained by analyzing the online survey using Descriptive Analysis and Statistical Package for Social Science (SPSS).

2. Literature Review

Ministry of Housing and Local Government, MHLG (2003) has made progress in raising awareness among society towards waste reduction efforts and at the same time promoting 3Rs practices by developing several main strategic directions, including raising awareness of minimizing waste and strengthening partnership for 3R activities and institutional improvements to build up government policies on (partnership) and wastes reduction. These initiatives are designed to achieve this goal in line with the vision of a "community of things" [4]. However, participation in the community and among students in recycling program and solid waste separation remains low because of a lack of alertness and understanding of long-term benefits of recycling. The effectiveness of a recycling program depends primarily on a variety of factors, including cultural, local or demographic conditions [4]. [5] defines important environmental behavior as actions that primarily change environmental resources or affect ecosystem dynamics in general. In another definition, Stern combines the individual's desire to protect the environment with his behavior, this behavior is "behavior performed to change the environment". Waste recycling systems often rely on more or less voluntary work by consumers or end users, and this is especially true for recycling in residential areas [5]. For example, a significant amount of household waste must be collected at home before it is delivered to collection points or roadside delivery points. This sorting work is mainly done by individual family members. Sometimes people even have to travel a short or long distance to dispose of classified waste at suitable collection points. However, recycling also takes place in the workplace. For example, the construction industry accounts for a significant proportion of all waste generated in developed countries, and so sorting in the workplace is critical to

optimizing waste as a useful resource. Whether at home or at work, there are several factors to consider for successful recycling. These are aspects such as physical characteristics, behavioral patterns, knowledge levels, attitudes and perceptions and their complex relationships [6].

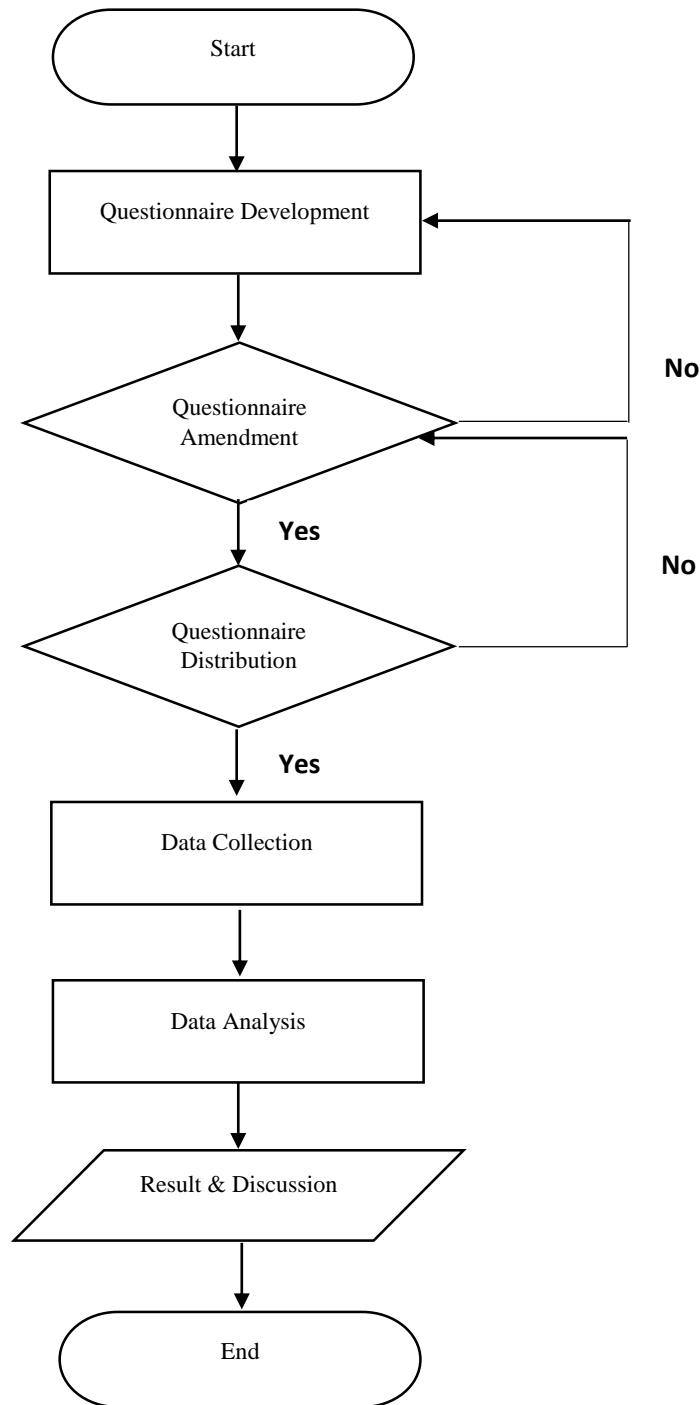## 3. Methodology

3.1 Research Methodology Process

Figure 1: Flowchart of Research Methodology Process

3.2 Research Design

This study uses qualitative method where structured questions were provided and distributed to the group of students to achieve the objective of the study. The data obtained is known as cross-sectional survey where it is obtained at one point in time. The survey method was carried in a descriptive form. This descriptive study uses a qualitative research approach where the questionnaire was distributed to fourth to sixth grade students in Sekolah Kebangsaan Parit Raja (SKPR) through the Google Form to facilitate the completion of the questionnaire by students, regardless of whether they are in school or not. There is a total of 40 respondents were participated in this study. They were randomly selected from fourth to sixth grade.

The data was analyzed using Descriptive Analysis and Statistical Package for Social Sciences (SPSS). Descriptive statistics are used to describe the basic properties of the study data. The data obtained and collected through the questionnaire was analyzed using the Likert scale method since this survey questions include the indication of level of agreement from strongly agree to strongly disagree. In this study, data obtained from the questionnaires was exported to SPSS to get the result and fulfill the objective.

3.3 Research Questionnaire

A pilot study had previously been conducted to test the reliability of the questionnaires. The questionnaires were tested on 30 respondents, representing 10% of the total sample size. The pilot study was conducted to ensure that respondents understood the questionnaires. The questionnaire contains 3 parts which are demographic questions on part A, part B of awareness towards recycling and part C is about the attitudes and behaviors towards recycling.

4. Results and Discussion

4.1 Data Analysis

Data analysis is the data collected through the respondents involved. Methods of data analysis were performed using questionnaires. Each of the questions distributed consist of important elements in order to achieve the objectives of this study.

4.2 Demographics

Demographic data consisting of age, gender, ethnicity, and number of households were collected to compare and assess the representativeness of the sample. Besides, number of time student recycle their recyclables and how student typically spend their time after school were collected for possible consideration in relation to recycling attitudes and behaviors. Responses to these demographic questions allow us to segment various groups of respondents and also serve as a tool to ensure that the data is representative of fourth to sixth grade students at Sekolah Kebangsaan Parit Raja.

All respondents who participated in this study met the inclusion criteria, gave their written consent, and responded to the given question with the answer of their choice. Table 1 shows the demographic data of the respondents.

As illustrated in Table 1 below, the percentage of respondents are the same for both male and female which is 50% each. The age data is reported in three years increments. The largest portion of respondents (57.5%) fall in the 11 years old age. The remaining portion of respondents (22.5%) is in the 10 years old age and (20%) is in the 12 years old age. For the race/ethnicity distribution of the respondents, expectedly respondents reported Malay as their ethnicity (90%) while the remainder chose Others as their ethnicity implying that they are neither Malay, Indian nor Chinese covered 7.5% and only 2.5% of Indian student. Number of persons in the household are also presented in Table 1. Most

respondent's number of households are between 6-10 person which cover 50% and 3-5 persons which cover 47.5%. The remaining 2.5% has a number of households more than 10 persons.

Table 1: Demographic data of respondents (n=40)

Demographic Data	Frequency	Percentage (%)
Gender		
Male	20	50
Female	20	50
Age		
10 Years Old	9	22.5
11 Years Old	23	57.5
12 Years Old	8	20
Race		
Malay	36	90
Chinese	0	0
Indian	1	2.5
Others	3	7.5
Number of Household		
1-2 People	0	0
3-5 People	19	47.5
6-10 People	20	50
More Than 10 People	1	2.5

Figure 1 shows the number of times in a month do students recycle their recyclables. 30% of students chose none which implying that they do not involve in recycle followed by 22.5% of students who recycle only once a month, 20% of students recycle two times a month, 12.5% of students recycle 3 times a month and lastly 15% of students recycle more than three times a month.
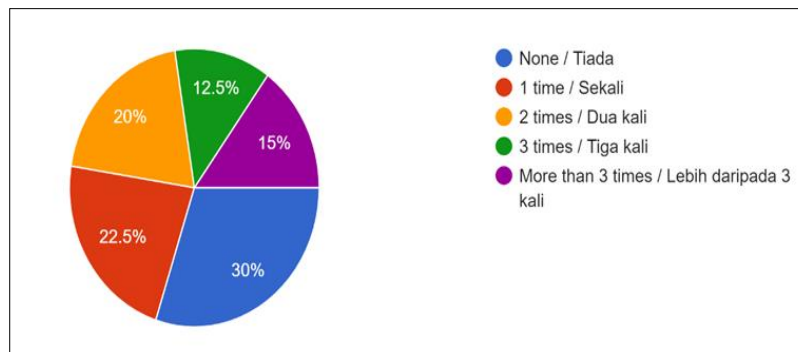

Figure 1: The number of times in a month do students recycle their recyclables

An important part of understanding students' attitudes was looking at their daily life as a whole, including their activities outside of class. Therefore, respondents were asked how do they typically spend their time after school each day. The results in Figure 4.6 show that majority of respondents spend their time by doing school work (67.5%) and help around house (62.5%), this show the positive correlation to student attitude and behavior towards their responsibility. Students mostly spend their time doing school work and help around house as it is part of their responsibility prove that students have a good attitude and behavior.
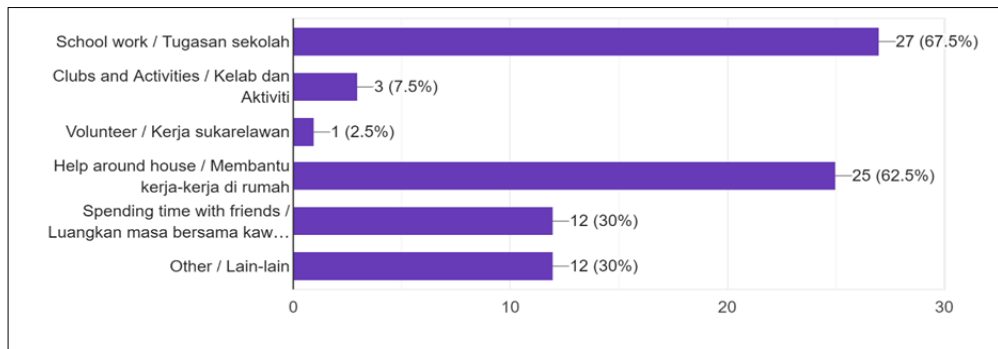
Figure 2: How students typically spend their time after school each day

There is a question which asked students to answer based on their observation, the number of times in a week is trash in their environment has been overflow. The results are shown below. Based on the results, it shows that the students' observations on the overflow of garbage bins 0-2 times a week were 57.5%, 3-5 times per week was 40% and 5-7 times per week was 2.5%. According to students' observation results show that at least 0-2 times a week garbage bins is overflow. Therefore, the measure to overcome this problem is to increase the number of bins in the place where there is always an overflow of garbage.
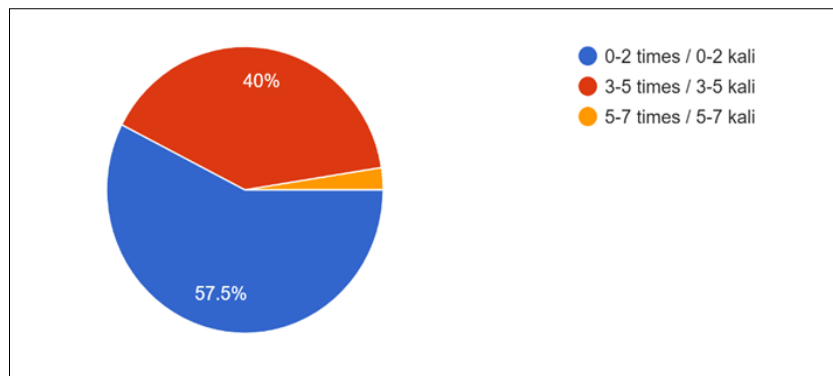

Figure 3: How many times in a week is trash in student's environment has been overflow in their observation

4.3 Analysis of awareness of respondents toward recycling.

This question used Likert Scale method with answers ranging on a 5-point scale from Strongly Agree to Strongly Disagree.

Table below show the results of the questions which cover the analysis of awareness of respondents toward recycling. Majority of the respondents which is 34 of them (85%) agreed with the statement which ask if they find recycling to be convenient, while 4 respondents (10%) moderately agreed and 2 respondents (5%) disagreed. For the question whether respondents believe that recycle is important, we can see that the majority of the respondents which is 36 respondents with a percentage of 90% agreed or strongly agreed with the statement, implying that they do believe that recycling is important. This is a good sign because it shows that they indeed have the awareness towards recycling. We can also see from the results that majority of respodents which 33 (82.5%) of them kow that waste materials can be recycled as well as the question which ask whether respondents believe that waste can become a resource, 31 respondents (77.5%) agreed which covered the majority of the respondents. Besides, majority of respondents are aware that recycling can help save the environment. The results also show that 26 of the respondents with a percentage of 65% are familiar with the recycling program in their city. However, 11 respondents (27.5%) chose that they are moderately agree and 3 respondents (7.5%) disagreed. This indicates that there are quite a large percentage of respondents who are not familiar with

432

the recycling program in their city. This may be because of the lack of programs that were held in the city. The results of the question whether the respondents agree that environmental education at school is important, we can see that majority of the respondents agreed with the statement which is 35 of them with a percentage of 87.5%. The results also show that there are 3 respondents (7.5%) do not agree that environmental education at school is important. Majority of respondents which is 34 respondents (85%) also indicate that they enjoy participating in recycling program at school based on the results above.

Table 2: Awareness of respondents toward recycling (n=40)

No.	Question	*SD	*D	*MA	*A	*SA
1.	I find recycling convenient	2	0	4	23	11
2.	I believe that recycle is important	1	1	2	16	20
3.	I know that waste materials can be recycled	2	2	3	22	11
4.	I believe that waste can become a resource	0	3	6	22	9
5.	I'm aware that recycle can help saving the environment	2	0	2	13	23
6.	I'm familiar with the recycling program in my city	1	1	11	19	8
7.	I think environmental education at school is important	2	1	2	15	20
8.	I enjoy participating in recycling program at school	2	1	3	18	16
	*SD-Strongly Disagree; D-Disagree; M-Moderately Agree; A-Agree; SA-Strongly Agree					

4.4 Analysis of attitudes and behaviors of respondents toward recycling.

This question used Likert Scale method with answers ranging on a 5-point scale from Strongly Agree to Strongly Disagree.

Table below show the results of the questions which cover the analysis of attitudes and behaviors of respondents toward recycling. When the students were asked about their recycling habits, only 14 respondents (35%) agreed and 3 respondents strongly agreed (7.5%) that they recycle as much as possible. The other 21 respondents (52.5%) were moderately agreed and 2 respondents disagreed. In a similar fashion, 31 respondents (77.5%) agreed that they recycle because it is a socially responsible thing to do while 2 respondents (5%) do not agree that recycle is a socially responsible thing to do. Furthermore, from the results, we can see that 25 of the respondents (62.5%) which is more than half response that they usually involve in recycling activity at their school while 5 respondents (12.5%) response with strongly agreed. This indicate that most of the respondents have good attitudes and behaviors toward recycling. The results also show 33 of students (82.5%) agreed that recycle can help to save landfill space. However, there are 2 students (5%) disagreed with the statement which indicated that they do not think that recycling can save landfill space. From the results, we can see 24 respondents (60%) have either agreed or strongly agreed that they recycle because they usually recycled at home which shows that their households do practice recycle. Besides, 28 respondents (70%) response with agree to the question asked whether they feel personally responsible for the consequences of not recycling. This proved that respondent have a good sense of responsibility towards environment thus shows a good attitude. Lastly, majority of respondents consider themselves to be diligent about recycling which shows a positive correlation with the attitudes and behaviors.

Table 3: Attitudes & Behaviors of respondents toward recycling (n=40)

No.	Question	*SD	*D	*MA	*A	*SA
1.	I recycle as much as possible	2	0	21	14	3
2.	I recycle because it is the socially responsible thing to do	2	0	7	22	9
3.	I usually involve in recycling activity at my school	5	0	10	16	9
4.	I don't see the point of recycling	24	11	0	3	2
5.	I recycle to save landfill space	1	1	5	15	17
6.	I recycle because we recycled at home	1	2	13	16	8
7.	I feel personally responsible for the consequences of not recycling	0	5	7	14	14
8.	I consider myself to be diligent about recycling	1	2	8	18	11

*SD-Strongly Disagree; D-Disagree; M-Moderately Agree; A-Agree; SA-Strongly Agree

5. Conclusion

This study focused on students' awareness, attitudes and behaviors toward waste recycling. Most of the respondents have basic awareness about recycling. This was identified by the correct answer to the questionnaire that respondents were asked to answer. The results show that student's attitudes and behaviors towards recycling is depending on the level of awareness and knowledge of the importance of recycling. In other words, when students personally feel that recycling is the right thing to do, when they have previous experience with recycling in school, and when recycling is right for them, they are more likely to develop an intention towards recycling. From the results of the survey, we can see that the level of awareness towards recycling as well as the attitudes and behaviors of fourth to sixth grade students at Sekolah Kebangsaan Parit Raja is relatively high. This is because majority of the students chose that they agreed with the statement indicating that they are aware about recycling. Majority of the students believe that recycling is important while there are students who do not think that. Fortunately, it is just a minority. However, this shows that there is still lack of awareness among a few students maybe because of the lack of knowledge on what is recycling. The students must have not been exposed to the recycling program in the city. This may also be because of the lack of influences from the family and institution. In conclusion, it has been shown that students are more likely to recycle when they are surrounded by an environment where people around them practice recycling.

Acknowledgement

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