

A Study of High School Students Awareness towards Recycling Activity and its Relationship with their Attitude and Behaviors related to Recycling Practices

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Abstract: In 1998, the Ministry of Education of Malaysia had included Environmental Education into the school curricula of Malaysia in order to provide environmental awareness, knowledge, attitude and behavior toward recycling activity among students. Although Environmental Education has successfully increased environmental awareness among students, it is not effective in changing the attitude and behavior of the students toward sustainable practice including recycling. The purpose of this study are to identify student awareness and factors that affects the attitude and behavior among high school students from Form 1 to Form 5 of Sekolah Menengah Kebangsaan Pendang toward recycling practice. A total of 121 respondents had participated in this study of which 72 respondents are female and 49 respondents are male. The data collected from the respondents analyzed by using the descriptive analysis method and reliability test was conducted to analyze the accuracy of the data collected. The overall finding of this study indicates that students have high awareness and good attitude towards recycling however student's behavior toward recycling practice is still not satisfying. Result from the survey shows that only 41.3% students are participating in waste recycling while the rest 58.7% not recycling their waste. It is expected these findings will be a beneficial guide for schools, government and private sectors in coming up with effective strategies in order to provide better environmental education for the students according to student preferable ways.

Keywords: Recycling, Awareness, Attitude, Behavior

1. Introduction

In Malaysia, the Ministry of Housing and Local Government (MHLG) has launched a recycling campaign in 1993 to increase awareness of publics toward recycling practices and to educate the public on the importance of waste separation. However, the rate of recycling among the Malaysian still not showing much improvement. Based on a statistic, this is happening because the level of awareness

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among Malaysian is still low and it is related to their recycling attitude and behavior (Chen & Tung, 2010). By that, public participation is one of the essential behaviors as an alternative to support the recycling programs (Sidique, 2008). In order to increase the rate of recycling among Malaysian a change in attitude and behavior of an individual is needed. Thus, it is vital to find the factors that will help to encourage more people to participate in waste recycling (Ittiravivongs, 2012).

Based on recent statistics, almost 90% of solid waste was reported being dumped to sanitary landfills, while only 10.5% was being recycled in Malaysia (Siew Ng & Eleni, 2020). Statistics show that the target that should be achieved by 2020 is still far from being achieved. Although many Malaysians are aware of the importance of this matter, their initiative in action is still not reaching the standard level. In order to solve these issues, we should find out the fundamental cause that contributes to this problem and try to fix it accordingly. The more participation among Malaysian in recycling will give a very huge contribution not only for the environment but also toward the government as the cost for handling the waste could be reduced. If the recycling rate among Malaysian is increase the fewer landfills will be needed to dump the waste generated which also helps to extend the landfill lifespan.

In August 2005, Malaysia's National Strategic Plan (NSP) for Solid Waste Management had set a target they needed to achieve which was to divert 40% of solid waste from landfill and increase recycling rates to 22%. However, the chief executive officer of Solid Waste Corporation (SWcorp) states that the recycling rate was only 10.5% in April 2015 which is very low and still very far to reach the target (TheSunDaily, 2015). He said early education is vital, so SWcorp had organized the national level school recycling competition and set up recycling clubs in 2,065 schools which means to educate students on the importance of waste management and impact of recycling toward the environment (TheSunDaily, 2015). Through this initiative it helps to educate students the importance of practicing waste recycling in their daily life to protect the environment.

The Environment Education curriculum at school is important in encouraging recycling awareness among students (Mahmud & Osman, 2010). Various subjects such as English, Malay, Geography and Science had been infused with Environmental Education however, the result showed most of them not translating their knowledge into behavior (Mahmud & Osman, 2010). The lack of Environmental Education programs in Malaysia is because there are no specific syllabus curriculum and also teachers giving little attention as there is no examination included (Noor Azlin *et al.*, 2006). A previous study revealed that the density of the syllabus and teachers being more focused on the student's performance are the reasons why this situation happens (Yakob *et al.*, 2012). Therefore, it is important to make sure that the syllabus provided is perfect for the student level and all teachers also need to be trained and encouraged so that they could give their best in providing the Environmental Education in preferable ways for their students.

In a previous study by Chung *et al.* (2019) indicated that a sum of 82% of respondents are aware about the government recycling programs and the result shows that percentage of awareness and knowledge toward recycling practice among Malaysian is high, however, the recycling rate in Malaysia is still low as they did not take part in the practices. This indicates that the success of recycling not only depends on the awareness only but comes together with the attitudes and behavior towards recycling practices. Attitude is defined as a set of emotion, feeling, intention, belief and behavior toward a specific person or object (Jerald & Robert, 2008). Recycling attitude is one of the factors that encourage the recycling intention which indicates that the more a person thinks they have positive attitudes toward recycling practice, the more possibilities that they will participate in recycling in future. Besides, it is crucial for us to understand the factors that stimulate people's behavior to participate in recycling activity (Ittiravivongs, 2012). This is because individual behavior can be affected by several factors for example intention, motivation and decision.

In order to understand the attitude and behavior of the students toward recycling, it is important to find out what are the main factors that contribute to that issue. Vicente & Reis (2008) had found that subjective norms act as one of the crucial parts and contribute to the increasing number of participants in recycling. A previous study mentioned that social norms could influence the behavior of students toward the environment (Kaplowitz *et al.*, 2009). Besides, one of the most productive methods to increase the recycling rate among students is to emphasize the benefits of recycling toward the

environment (Karen, 2008). Based on the previous study, most of the respondents agree that they would participate in recycling the waste if they had much more information about recycling (Kelly *et al.*, 2006). Next, most of them also agree that they know the correct way to recycle their waste” (Tonglet *et al.*, 2004) and lastly majority of them also agree that they would participate in recycling if they what is going to happen to the recyclable waste after they dispose of it (Kelly *et al.*, 2006). A previous study stated that inconvenience is also one of the factors that influences the recycling behavior of an individual as most of the respondents agree that they don’t have enough time to practice recycling and they felt recycling is inconvenient for them (Kelly *et al.*, 2006).

In light of the discussion above, the objectives of this study are to identify the level of awareness among the high school students and also to identify what are the factors that affect student attitude and behavior towards recycling practices. The reason is because the current lifestyle has created a serious waste problem in Malaysia, and therefore there is a need to analyze the current level of awareness among high school students towards recycling so that the government and NGOs can successfully implement environmental related projects and to strategize ways to attract students to engage with recycling programs.

2. Methodology

2.1 Research Methodology Process (Figure 1)

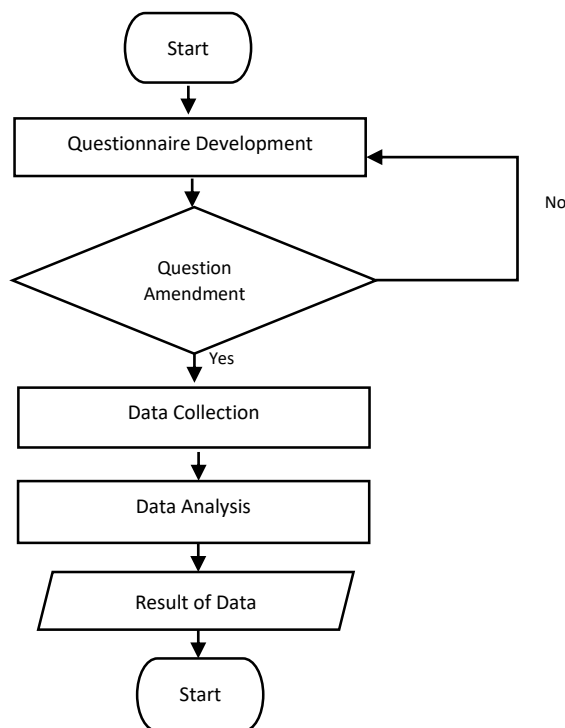


Figure 1: Flowchart of Research Methodology Process

2.2 Research Design

This research uses the quantitative method where structured questions provided will be distributed to the group of participants according to the objective of the study. This method is chosen for this research as it is very useful to describe or explain specific features in a very large group of participants and it is also one of the quickest ways to find out the detailed information needed for this research from the participants through the question provided. The data will be obtained at one point in the given time where it is known as a cross-sectional survey. This survey method is held in a descriptive

form which is set out to describe the attitude and the behavior of the respondents to satisfy the study needs.

2.3 Sampling Design

The chosen sampling technique for this study is the convenient sampling under the non-probability sampling technique. Convenient sampling was chosen because this sampling technique tends to be favored by most students compared to other sampling techniques as it is an easy option and cost effective. Aside from that, a convenient sampling technique also always helps to overcome most of the limitations related to the research. High school students of Form 1 to Form 5 of Sekolah Menengah Kebangsaan Pendang are chosen as the target population for this study. A total of 121 students had participated in this study.

2.4 Research Questionnaire

The questionnaire is designed and distributed by using the Google Form platform. All the respondents were provided with the Google Form link so that they could access the survey. The risk of using online surveys is that it could lead to the wrong group of the target population. Therefore, at the top of the form it had been stressed out that this study was intended to be filled by students who study at Sekolah Menengah Kebangsaan Pendang only. Besides, the definition of recycling and waste is also provided as a guide for the student. In addition, it is also mentioned that there is no right or wrong answer to all the questions provided and the survey is anonymous. The questionnaire was divided into 4 parts as follows: Part A was the respondent detail, Part B was about awareness, attitude and behavior toward recycling, Part C was the factors that affect the attitude and behavior toward recycling and lastly Part D was about student preferences in studying environment education at school.

2.5 Data Analysis

The data that collected from the respondents are stored in Google Drive Data Storage. The data collected from the respondents analyzed by using the descriptive analysis method and reliability test was conducted to analyze the accuracy of the data collected. Descriptive analysis is the method of summing up the basic features of the data collected in a study. It provided simple summaries and analyzed all the data with simple graphic analysis for example by using the table or chart to present the result in a study. Reliability test was performed to confirm that all the collected data are accurate, static and consistent by using SPSS software. Results can be obtained via a data set. In this study, Cronbach's alpha was used to measure consistency among the variety items in the test. A bigger value represents higher reliability. The value >0.6 is considered to be an appropriate range and value more than 0.8 is considered to have strong reliability.

3. Results and Discussion

3.1 Analysis of Reliability Test

As shown in Table 1, the majority of the construct in this study shows a satisfying result of Cronbach's alpha as the values are close to 1. The construct for attitude ($\alpha=0.624$) resulted in a low value of Cronbach's alpha, therefore, this constructs need to be interpreted with extra caution.

Table 1: Reliability statistic Cronbach's alpha

Construct	Item	α
Awareness	5	0.709
Attitude	5	0.624
Behavior	5	0.868
Subjective norm	5	0.886
Knowledge	5	0.850
Inconvenient	5	0.968
Environment	5	0.821

Note. $\alpha = 5\%$

3.2 Background of Respondents

This section describes the background of the respondents from Form 1 to Form 5 of Sekolah Menengah Kebangsaan Pendang, SMKP with a total 121 respondents.

Table 2: Background of Respondent

Variables	Frequency	Percent (%)
Gender		
Male	49	40.5
Female	72	59.5
Age		
13	20	16.5
14	17	14.0
15	15	12.4
16	38	31.4
17	31	25.6
Ethnicity		
Malay	96	79.3
Chinese	11	9.1
Indian	0	0
Siamese	14	11.6

Table 2 showed that among the total respondents, gender distribution for male was 40.5% (49) and female was 59.5% (72). This shows that the majority of the respondents of this study are females. The age of respondents from 13 to 17 years old. Total respondents at age 13 were 16.5% (20), age 14 were 14.0% (17), age 15 were 12.4% (15), age 16 were 31.4% (38) and age 17 were 24.6% (31). This indicates that most of the respondents are 16 years old. For respondents' ethnicity, the distribution indicates 79.3% (96) are Malays, 9.1% (11) are Chinese, 11.6% (14) are Siamese and there are no participants from Indian ethnic. Results showed that the majority of the respondents are Malay ethnic.

3.3 Analysis of awareness, attitude, and behavior toward recycling practice

In this section where it was included as Part B in the survey was asked in order to identify the level of awareness, attitude and behavior of high school students toward recycling practice. This section was divided into 3 parts with 5 questions each.

3.3.1 Awareness toward Recycling

Table 3: Analysis of awareness toward recycling among students

Elements	(%)	
	Yes	No
Do you know the 3R concept?	85.1	14.9
Do you know what 3R stands for?	77.7	22.3
In your opinion, should we separate the waste before we dispose of it?	92.6	7.4
Do you recycle your waste?	41.3	58.7
Do you dispose of your waste into appropriate bins?	46.3	53.7

From Table 3 above, in the first statement, “Do you know the 3R concept?”, the majority of the respondents 85.1 % know while only 14.9 % don't know the 3R concept. Similarly, in the second statement, “Do you know what 3R stands for?”, the majority of the respondents 77.7% know while only 22.3% doesn't know what 3R stands for. The third statement, “In your opinion, should we separate the waste before we dispose of it?”, majority answering yes 92.6% while 7.4% answering no. From the first three questions, it can be concluded that the majority of the students have a high level of awareness regarding recycling. Result of previous study by Chung *et al.*, (2019) shows that most of the participants are aware about the recycling concept and initiative. For the next statement, “Do you recycle your waste?”, majority of respondents 58.7% do not recycle their waste while 41.3% recycle their waste. For the last question, “Do you dispose of your waste into appropriate bins?” majority of respondents 46.3% choosing yes while 53.7% choosing no for this statement. Although the level of awareness on recycling among the participants is high, however, result indicates that there are only about half of the participants that participate in recycling their waste. Similar to a previous study, the result shows that the success of recycling not only depends on awareness but it is also related to individual attitude (Ramayah, 2012).

3.3.2 Attitude toward Recycling

Table 4: Analysis of attitude toward recycling among students

Elements	Likert Scale (%)				
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Recycling waste is good.	5.0	8.3	5.8	42.1	38.8
Recycling waste is rewarding.	4.1	7.4	14.0	49.6	24.8
Recycling waste is responsible.	3.3	3.3	17.4	43.0	33.1
I am not interested in waste recycling activity.	33.1	43.8	11.6	6.6	5.0
I don't think recycling waste contributes to positive effects on the environment.	37.2	43.0	10.7	5.8	3.3

From Table 4 above, in the first question, “Recycling waste is good”, most of the respondents either agreed (42.1%) or strongly agreed (38.8%) to that statement. Similarly, for the question “Recycling waste is rewarding”, most of the respondents either agreed (49.6%) or strongly agreed (24.8%), and only some participants chose the other option. Regarding the statement, “Recycling waste is responsible”, namely 43.0% of the respondents agree with that statement, 33.1% strongly agree with the statement and 17.4% of the participants are neutral with the statement. From the outcome from the first to the third statement, most of the participants agree that recycling is good, rewarding and part of one's responsibility that needs to be carried out. Similar to a study by Yasmina (2015), the majority of the respondents also agree that recycling is good, recycling waste is useful and recycling is rewarding. The distribution of answers for the statement, “I am not interested in waste recycling activity” shows 43.8% of the participants disagree while 33.1% strongly disagree with that statement. The outcome shows that most of the participants agree that they have interest in recycling. And similarly for the last statement, “I don't think recycling waste contributes to positive effects on the environment” indicates

that most of the participants either disagree (43.0%) or strongly disagree (37.2%) with that statement. This indicates that most of the participants know that recycling practice could contribute a positive impact to the environment. According to Chen & Thung (2010), if one has a more positive attitude toward recycling, they will likely have recycling intentions.

3.3.3 Behavior toward Recycling

Table 5: Analysis of behavior toward recycling among students

Elements	Likert Scale (%)				
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I always recycle my waste at school.	9.9	44.6	25.6	14.9	5.0
I always recycle my waste at home.	5.8	46.3	19.8	20.7	7.4
I make a great effort to recycle as much as I can.	5.0	27.3	38.8	19.8	9.1
It makes me feel happy and satisfied if I recycle my waste.	1.7	5.0	24.8	52.1	16.5
I recycle books, shoes, clothes and other recyclable materials.	0.8	11.6	34.7	35.5	17.4

From Table 5 above, in the first statement, “I always recycle my waste at school” almost half of the participants 44.6% answered disagree while 25.6% being neutral and 14.9% with that statement. Result of the previous study also shows that the participants that recycle their waste in school is rather low and only a few of them participate in recycling their waste at school (Yasmina, 2015). For the second statement 46.3% students disagree while 20.7% agree and 19.8% being neutral with the statement that they always recycle their waste at home. Differently to the result of the previous study, where most of the respondents frequently and very frequently recycle their waste at home (Yasmina, 2015). The finding indicates that there is still low participation among the students in recycling practice. For the third statement, “I make a great effort to recycle as much as I can”, the majority are neutral (38.8%) while some disagree (27.8%) and agree (19.8%) with that statement. More than half of the participants 52.1% agree that when they recycle they feel happy and satisfied while 24.8% being neutral with that statement. Similar to a previous study, the result shows that the majority of the respondents that their feelings toward recycling are favorable (Yasmina, 2015). Moreover, most of the participants agree (35.5%) that they recycle their books, shoes, clothes and other recyclable materials while 34.7% being neutral and some 17.4% strongly agree with the statement.

3.4 Analysis of Factors Affecting High School Students Attitude and Behavior toward Recycling

In this section where it was included as Part C in the survey was asked in order to identify the factors that affect student attitude and behavior toward recycling practice. This section was divided into 3 parts with 5 questions each which comprise subjective norm, knowledge and inconvenient.

3.4.1 Subjective Norm

Table 6: Analysis on how subjective norms affect recycling attitude and behavior among students

Elements	Likert Scale (%)				
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Most of my close contacts think I should recycle my waste.	2.5	6.6	20.7	45.5	24.8
Most of my close contacts would approve of me recycling my waste.	1.7	5.0	20.7	47.9	24.0
Most of my close contacts want me to participate in recycling.	2.5	4.1	18.2	47.9	28.1
Most of my family members think that recycling is a good thing to practice.	2.5	1.7	11.6	49.6	34.7
If more people participate in recycling, I would also recycle my waste.	1.7	2.5	10.7	36.4	48.8

From Table 3.6 above, the result shows that most of the participants' answers are more on the positive side of the scale for each statement in this section. For the first statement, "Most of my close contacts think I should recycle my waste" most of the participants agree with 45.5 %, strongly agree with 24.8% and 20.7% are neutral with this statement. Similarly, in the second statement "Most of my close contacts would approve of me recycling my waste" most of the respondents answered either agree (47.9%) or strongly agree (24.0%), and some participants are neutral (20.7%) with that statement. The same responses are found for the statement, "Most of my close contacts want me to participate in recycling". Namely 47.9% of the respondents agree with that statement, 28.1% strongly agree with the statement and 18.2% of the participants are neutral with that statement. The distribution of answers for the statement, "Most of my family members think that recycling is a good thing to practice" shows 49.6% of the participants agree, 34.7% strongly agree and 11.6% are neutral with that statement. Interestingly for the last statement, more half of the participants strongly agree (48.8%), agree (36.4%) and only some of the participants are neutral (10.7%) with the statement that if more people participated in recycling they also would do the same. A result from a study also shows that most of the participants agree that most of their close contact would approve them if they participate in recycling activity (Tonglet *et al.*, 2004). According to a survey by Knussen & Yule (2006), the majority of the participants also agree that most of their close contacts want them to participate in recycling and their family also believe that recycling waste is a good thing to practice. From the outcome, it can be concluded that the subjective norm is one of the factors that could affect the attitude and behavior of students toward recycling.

3.4.2 Knowledge

Table 7: Analysis on how knowledge affects recycling attitude and behavior among students

Elements	Likert Scale (%)				
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I know how to recycle my waste.	4.1	25.6	32.2	22.3	15.7
I could differentiate what materials are recyclable and non-recyclable.	5.0	22.3	37.2	19.0	16.5
I could differentiate materials that are acceptable in each color of the recycle bins.	4.1	19.8	43.0	22.3	10.7
I would recycle more if I had more information on recycling.	1.7	2.5	14.9	47.9	33.1
I would recycle more if I knew what is happening to the recyclable waste after disposal.	0.8	4.1	14.0	38.8	42.1

From Table 7 above, in the first statement, “I know how to recycle my waste” most of the respondents answered neutral (32.2%) while disagree (25.6%), agree (22.3%) and strongly agree (15.7%) with that statement. Similarly, for the second statement “I could differentiate what materials are recyclable and non-recyclable” most of the respondents are neutral (37.2%) with that statement while others disagree (22.3%), agree (19.0%) and strongly agree (16.5%). The first 3 statements show that some of the participants now have knowledge on recycling and some of them lack knowledge about recycling. Similarly, for the statement, “I could differentiate materials that are acceptable in each color of the recycle bins”. Namely 43.0% of the respondents are neutral with that statement, 22.3% agree, 19.8% disagree and 10.7% strongly agree with that statement. Based on the result, it can be concluded that there are still more students that still have low knowledge on recycling and similarly the result of a study shows that the majority of the participants who indicated that non-recyclables were actually recyclable (Karen, 2008). The distribution of answers for the statement, “I would recycle more if I have more information on recycling” shows that 47.9 % of the participants agree while 33.1% strongly agree with that statement. Lastly, “I would recycle more if I knew what is happening to the recyclable waste after disposal” majority of the participants answered strongly (42.1%) and (38.8%) with that statement. Similar to a study by Kelly *et al.* (2006), most of the respondents also agree that they would participate in recycling the waste if they had more information about recycling. Majority of them also agree that they would participate in recycling if they know the correct way to recycle their waste (Kelly *et al.*, 2006). Result shows that most of the participants could have intention to recycle if they have more information on recycling and its benefits. This is because, one of the most productive methods to increase the recycling rate among students is to emphasize the benefit of recycling toward the environment (Karen, 2008).

3.4.3 Inconvenient

Table 8: Analysis on inconvenient affect recycling attitude and behavior among students

Elements	Likert Scale (%)				
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I don't have time to recycle my waste.	13.2	17.4	15.7	33.1	20.7
Recycling is inconvenient.	14.9	19.8	16.5	28.9	19.8
Recycling is too complicated.	16.5	15.7	19.0	30.6	18.2
Recycling is too much trouble.	19.0	22.3	9.1	29.8	19.8
Recycling takes too much space at home.	15.7	16.5	9.9	31.4	26.4

From Table 8, the first statement, “I don't have time to recycle my waste” most of the respondents answered agree (33.1%) and strongly agree (20.7%) while there also some participant that disagree (17.4%), neutral (15.7%) and strongly disagree (13.2%) with that statement. Similarly, for the second statement “Recycling is inconvenient” most of the respondents answered agree (28.9%) and strongly agree (19.8%) while there also some participant that disagree (19.8%), neutral (16.5%) and strongly disagree (14.9%) with that statement. The outcome for the third statement, “Recycling is too complicated”, namely 30.6% of the respondents agree and 18.2% strongly agree with that statement. For the statement, “Recycling is too much trouble” shows 29.8% of the participants agree and 19.8% strongly agree while there also many participants disagree, strongly disagree and neutral with that statement. Result shows that most of the respondents think recycling is an activity that is very inconvenient for them. Similar to previous study, most of the participants agree that they don't have enough time to practice recycling (Kelly *et al.*, 2006), they felt recycling is inconvenient for them (Kelly *et al.*, 2006), recycling is cumbersome for them (Tonglet *et al.*, 2004) and lastly recycling is too troublesome for them (Mc Carty & Shrum, 1994). Therefore, the best way to increase the participation rate among students is to come up with a simpler and convenient process to recycle waste. Moreover, more than half of the participants agree (38.8%) and strongly agree (26.4%) with the statement that recycling takes too much space at home.

3.5 Analysis on Student Preference in Learning Environmental Education

In this section where it was included as Part D in the survey was asked in order to identify student preference to learn more in Environmental Education especially at school.

Table 9: Analysis on student preference for Environmental Education

Elements	Likert Scale (%)				
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I love to learn about the environment.	3.3	1.7	9.9	57.9	27.3
There are many environmental programs held at school.	1.7	23.1	43.8	18.2	13.2
I enjoyed participating in environmental programs at school.	1.7	5.8	23.1	50.4	19.0
I hope more environment programs will involve hands-on activity.	2.5	2.5	8.3	50.4	36.4
I could be more focused in the class if it is conducted in a fun and attractive way.	2.5	2.5	10.7	38.8	45.5

From Table 9 above, the first statement, the majority of students answered that they love to learn about the environment where about 57.9% agree and 27.3% strongly agree while only some of them chose other options. Relevant subjects such as English, Malay, Geography and Science had infused with environmental education as an alternative to attract students to learn about the environment in more detail (Mahmud & Osman, 2010). The distribution of answers from the second question, “there are many environmental programs held at school” is quite unexpected as most of the students 43.8% answered neutral and 23.1% disagreed. From the outcome, it can be concluded that there are not many environmental programs being held at school. Although there are not many environmental programs held at school, most of the students agree (50.4%) and strongly agree (19.0%) that they enjoyed participating in all those programs. Interestingly, more than half of the participants agree (50.4%) and strongly agree (36.4%) with the statement that they are hoping that there will be more environment programs that will be held that involve hand-on activity. Based on a study carried out in the City of Cincinnati, they found out that actual hand-on experience during a visit to a landfill site caused more changes in pre-recycling attitude and behavior rather than just learning the theory in the classroom. This shows that students find that it is more interesting to learn more about the environment through hands-on experience. Similarly, for the last statement, “I could be more focused in the class if it is conducted in a fun and attractive way”. According to a study, a high positive environmental learning impact could be experienced by the students where dedicated teachers champion the process (Azlin et al., 2014). Namely 45.4% of the respondents strongly agree 38.8% agree while only 10.7% of the participants are neutral with that statement. This finding indicates that students tend to be more focused if the class is conducted in a more attractive way in order to avoid them from feeling bored during class.

4. Conclusion and Recommendation

Through the survey it could be conclude that majority of high school students have high awareness toward recycling practice. However, unfortunately the result from the survey shows that the percentage of students that participate in recycling their waste is rather low where not even half of them participate in recycling their waste. This indicates that high awareness and a good attitude only doesn't really give impact to one's behavior toward recycling as the result from the survey shows that the majority of the students have a good attitude toward recycling practice however they didn't translate it into action. It is clear that there are many factors that could affect recycling attitude and behavior among the students.

Subjective norms played a big role in encouraging students to participate in recycling as the majority of the students agree that they believe their close contact will approve them if they participate in recycling. For knowledge construction, the result was divided into which some of them have high knowledge and some of them have low level in knowledge on recycling. Most students also agree that

recycling is inconvenient, complicated, too much trouble and time consuming as they need to collect and separate the waste according to recyclable and non-recyclable material. Besides, a proper Environmental Education at school also could help in increasing the rate of participation among students in recycling activity as majority of the students enjoy participating in environmental programs and they also hope that more activities that involve hand-on experience could be held at their school. They also agree that they could be more focused in class if it is conducted in a fun and attractive way.

For future research, it is recommended to try reaching a wider population of students participating in answering the survey. Besides, it is also good to interview students face to face so that we could freely ask them questions related to recycling activity in more detail. It also might be more interesting if future study scope could widen its context not focusing only among students but also distributing surveys for the schoolteachers because they are the ones that know the student attitude and behavior better than anyone else. Lastly, the questionnaire for the survey also should be more specific and easier to understand so that the objective of the study could properly verify accordingly.

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