



## Analyzing Teachers Effectiveness in Middle School Students' Character Development in Environmental Preservation (Case Study: Medan City)

Fatimah Azzahra\*, Derita Ramai Durubanua, Cindy Melissa Wijaya, Ridha Suyatmika Nainggolan, Ridho Amalan Saufi Sipahutar, Putri Rahmadani, Roy Eka Kurnia Telaumbanua, Suandro Mangihut Manik, Tumiar Sidaauruk

Universitas Negeri Medan, Indonesia

\*Email: [azzahraf028@gmail.com](mailto:azzahraf028@gmail.com)

### Articles Information

### Abstrak

#### Keywords:

Character education;  
Environmental  
maintenance;  
Teacher role;  
Junior High School;  
Medan City

Penelitian ini bertujuan untuk menganalisis keberhasilan guru dalam pengembangan karakter siswa SMP terkait dengan pemeliharaan lingkungan di Kota Medan. Penelitian dilakukan di empat sekolah, yaitu UPT SMP Negeri 27 Medan, UPT SMP Negeri 35 Medan, SMP Pahlawan Nasional, dan SMP Ummi Fatimah. Penelitian menggunakan metode deskriptif kualitatif dengan observasi langsung dan dokumentasi untuk mengukur perilaku siswa sebelum dan sesudah intervensi pendidikan karakter yang dilakukan oleh guru. Hasil penelitian menunjukkan adanya peningkatan signifikan dalam kesadaran siswa setelah diberikan edukasi tentang pemeliharaan lingkungan. Tingkat keberhasilan guru dalam pengembangan karakter meningkat dari 37% sebelum intervensi menjadi 76% sesudah intervensi. Temuan ini mengindikasikan bahwa peran guru dalam pendidikan karakter sangat berpengaruh terhadap perubahan perilaku siswa dalam menjaga kebersihan lingkungan. Rekomendasi untuk pengembangan lebih lanjut mencakup peningkatan integrasi pendidikan lingkungan ke dalam kurikulum dan pemanfaatan teknologi sebagai media edukasi.

#### Abstact

This study aims to analyze the success of teachers in developing junior high school students' characters related to environmental maintenance in Medan City. Case studies were conducted in four schools, namely UPT SMP Negeri 27 Medan, UPT SMP Negeri 35 Medan, SMP Pahlawan Nasional, and SMP Ummi Fatimah. The study used a qualitative descriptive method with direct observation and documentation to measure student behavior before and after character education interventions carried out by teachers. The results showed a significant increase in student awareness after being given education about environmental maintenance. The success rate of teachers in character development increased from 37% before the intervention to 76% after the intervention. These findings indicate that the role of teachers in character education greatly influences changes in student behavior in maintaining environmental cleanliness. Recommendations for further development include increasing the integration of environmental education into the curriculum and utilizing technology as an educational medium.



## INTRODUCTION

Education is an important process in the formation of a nation's character (Fischer et al., 2022). This is in accordance with the function and purpose of national education which aims to develop character education in Indonesia, as regulated in Law of the Republic of Indonesia Number 20 of 2003 concerning the National Education System (Sisdiknas) (Kemendikbud, 2003). Education in schools not only functions as a means of academic learning, but also becomes a place where students are formed into a young generation who are intelligent, have character, and are able to face future challenges (Khoerunisa, 2024). Character education is very important because it includes the development of morals, ethics, and good behavior. Good character will be formed from an environment that supports and provides positive examples (Desderius et al., 2024). Therefore, the school environment must play an active role in forming the character of students so that students can grow into individuals who care, are responsible, and have an awareness of the importance of protecting the environment (Dalmeri, 2020).

The phenomenon that occurred at SMP Negeri 27 Medan, UPT SMP Negeri 35 Medan, SMP Ummi Fatimah, and SMP Pahlawan Nasional showed that students' habits in maintaining the cleanliness of the school environment were still low, especially in terms of littering. Although various character education efforts have been implemented, the reality on the ground shows that students' awareness of the importance of maintaining a clean environment is not yet optimal. This problem of student behavior not only damages the beauty of the school environment, but also has a negative impact on environmental sustainability as a whole. This lack of awareness reflects that efforts to develop character education, especially related to concern for the environment, have not been fully successful in instilling the values that they should.

In addition to student behavior, the condition of facilities in these schools is also a factor that influences student habits (Sakban & Sundawa, 2023). Many schools still lack adequate trash bins, good sanitation facilities, and other supporting facilities that are important for creating a clean environment (Hidayati et al., 2020). This makes it difficult for students to develop the habit of maintaining cleanliness. In fact, the provision of adequate facilities is very necessary so that positive behavioral habits can grow consistently (Mochammad Ircham Maulana, 2022). A clean and healthy environment will also support a more conducive learning atmosphere, so that it can maximize the teaching and learning process (Trisiana et al., 2020).

To overcome this problem, cooperation is needed from all school residents, including teachers, principals, and other staff. In the four schools, the involvement of all parties in maintaining a clean environment still needs to be improved (M. Sapriadi, 2020). Teachers, as primary educators, have an important role in providing examples of environmentally conscious behavior to students (Aningsih et al.,

2022). By seeing teachers and other school members applying environmental values in their daily lives, students will learn and apply them in their lives outside of school.

A clean and healthy school environment will have a positive impact on student development, both academically and in character (Hermino & Arifin, 2020). Therefore, character education that emphasizes the importance of protecting the environment needs to be continuously developed in SMP Negeri 27 Medan, UPT SMP Negeri 35 Medan, SMP Ummi Fatimah, and SMP Pahlawan Nasional. With good habits and adequate support facilities, it is hoped that students will have a higher awareness of the importance of maintaining cleanliness and environmental sustainability (Birhan et al., 2021).

Therefore, researchers are interested in researching the success of teachers in developing the character of junior high school students in environmental maintenance. This study aims to understand the extent of the role of teachers in shaping students' awareness of the environment, especially in the four schools that are the objects of the study. With the increasing problem of environmental damage due to careless behavior, such as littering, this analysis will reveal effective educational strategies in instilling environmental values.

## **METHOD**

The type of research in this study is a qualitative approach that is descriptive in nature. This approach is used to find out or describe the reality of the events being studied so that it is easier to obtain objective data. Population in this study were all junior high school students in four schools, namely SMP Negeri 27 Medan, UPT SMP Negeri 35 Medan, SMP Ummi Fatimah, and SMP Pahlawan Nasional. The sample of this research is students from the four schools. With the number of samples obtained, namely 38 students. The reason for using 38 students is because this number takes into account time and resource limitations, and allows researchers to conduct in-depth and comprehensive observations, so that the research results remain of high quality. The data collection techniques used in this study are data observation and documentation. The observation data collection technique is carried out through direct observation by the researcher to the object being studied at the place where the event occurred, either in the form of human behavior, phenomena, or change processes. Method used to obtain data and information in the form of books, archives, documents, written figures, and images in the form of reports and descriptions that can support research is documentation. With documentation, researchers can use existing sources to support the hypothesis to be studied, and also to gain a deeper understanding of the research subject without the need to collect data directly through observation or interview methods. Data analysis in this study uses the Miles and Huberman model as follows data collection, data reduction, data presentation (data display), and conclusions drawing.

## RESULT AND DISCUSSION

In measuring the level of teacher success in developing student character in environmental maintenance, a documentation study and direct observation were conducted in the field before and after the development of environmental maintenance character was given by teachers through social media, banners, or pamphlets. Based on the results of observations conducted through documentation studies, it shows that the success of teachers in forming student character, especially in environmental maintenance, varies in each school studied. This study involved several schools in Medan City, such as UPT SMP Negeri 27 Medan, UPT SMP Negeri 35 Medan, SMP Pahlawan Nasional, and SMP Ummi Fatimah.

### Before Character Development was Given by Teachers

The results of observations of the four schools before the development of environmental maintenance characters was given by teachers through social media, banners, or pamphlets are presented in the following table:

**Table 1. UPT SMP Negeri 27 Medan**

| No    | Student Name     | School                  | Dispose of garbage in its place |    |
|-------|------------------|-------------------------|---------------------------------|----|
|       |                  |                         | Yes                             | No |
| 1.    | Muhammad Rijal   | UPT SMP Negeri 27 Medan | ✓                               |    |
| 2.    | Rama Wahyu       | UPT SMP Negeri 27 Medan |                                 | ✓  |
| 3.    | Riski Simbolon   | UPT SMP Negeri 27 Medan |                                 | ✓  |
| 4.    | Muhammad Alvin   | UPT SMP Negeri 27 Medan |                                 | ✓  |
| 5.    | Raffi Akbar      | UPT SMP Negeri 27 Medan |                                 | ✓  |
| 6.    | Aryo Pamungkas   | UPT SMP Negeri 27 Medan |                                 | ✓  |
| 7.    | Dewi Radita      | UPT SMP Negeri 27 Medan |                                 | ✓  |
| 8.    | Roslina Sitorus  | UPT SMP Negeri 27 Medan |                                 | ✓  |
| 9.    | Franco Tamba     | UPT SMP Negeri 27 Medan |                                 | ✓  |
| 10.   | Muhammad Alqodri | UPT SMP Negeri 27 Medan |                                 | ✓  |
| 11.   | Risya Putri      | UPT SMP Negeri 27 Medan |                                 | ✓  |
| 12.   | Efraim Sianturi  | UPT SMP Negeri 27 Medan |                                 | ✓  |
| 13.   | Immanuel Nababan | UPT SMP Negeri 27 Medan |                                 | ✓  |
| Total |                  |                         | 1                               | 12 |

**Table 2. Siswa UPT SMP Negeri 35 Medan (Before )**

| No. | Student Name        | School                  | Dispose of garbage in its place |    |
|-----|---------------------|-------------------------|---------------------------------|----|
|     |                     |                         | Yes                             | No |
| 1.  | Muhammad Hafiz      | UPT SMP Negeri 35 Medan |                                 | ✓  |
| 2.  | Jonathan Manurung   | UPT SMP Negeri 35 Medan |                                 | ✓  |
| 3.  | Ruben Gopas         | UPT SMP Negeri 35 Medan |                                 | ✓  |
| 4.  | Aditya Nugroho      | UPT SMP Negeri 35 Medan |                                 | ✓  |
| 5.  | Devinadia Rahmawati | UPT SMP Negeri 35 Medan |                                 | ✓  |
| 6.  | Muhammad Adam       | UPT SMP Negeri 35 Medan |                                 | ✓  |
| 7.  | Muhammad Andra      | UPT SMP Negeri 35 Medan | ✓                               |    |
| 8.  | Tami                | UPT SMP Negeri 35 Medan | ✓                               |    |
| 9.  | Syarif              | UPT SMP Negeri 35 Medan |                                 | ✓  |
| 10. | Ayu Silvia          | UPT SMP Negeri 35 Medan | ✓                               |    |
| 11. | Reyhan              | UPT SMP Negeri 35 Medan |                                 | ✓  |

|       |   |    |
|-------|---|----|
| Total | 3 | 10 |
|-------|---|----|

**Table 3. SMP Pahlawan Nasional**

| No.   | Student Name           | School                | Dispose of garbage in its place |       |
|-------|------------------------|-----------------------|---------------------------------|-------|
|       |                        |                       | Ya                              | Tidak |
| 1.    | Oktavia Siahaan        | SMP Pahlawan Nasional |                                 | ✓     |
| 2.    | Rafi Bagus             | SMP Pahlawan Nasional |                                 | ✓     |
| 3.    | Diva Situmorang        | SMP Pahlawan Nasional | ✓                               |       |
| 4.    | Tesa Pebriani Sianturi | SMP Pahlawan Nasional | ✓                               |       |
| Total |                        |                       | 2                               | 2     |

**Table 4. SMP Ummi Fatimah**

| No.   | Student Name    | School           | Dispose of garbage in its place |    |
|-------|-----------------|------------------|---------------------------------|----|
|       |                 |                  | Yes                             | No |
| 1.    | Aurelia Azzahra | SMP Ummi Fatimah | ✓                               |    |
| 2.    | Naura Ayu       | SMP Ummi Fatimah | ✓                               |    |
| 3.    | Ahmad Eko       | SMP Ummi Fatimah | ✓                               |    |
| 4.    | Irwansyah       | SMP Ummi Fatimah |                                 | ✓  |
| 5.    | Kansa           | SMP Ummi Fatimah | ✓                               |    |
| 6.    | Kirana          | SMP Ummi Fatimah | ✓                               |    |
| 7.    | Elisya          | SMP Ummi Fatimah | ✓                               |    |
| 8.    | Anifah          | SMP Ummi Fatimah |                                 | ✓  |
| 9.    | Jeni            | SMP Ummi Fatimah | ✓                               |    |
| 10.   | Adelia          | SMP Ummi Fatimah | ✓                               |    |
| Total |                 |                  | 8                               | 2  |

From the data observation of the four schools above, it shows that before the development of environmental maintenance character by the teacher, there were still many students who did not throw garbage in its place or did not care about the cleanliness of the surrounding environment. This can be seen from the fourth table above that many students of UPT SMP Negeri 27 Medan still do not throw garbage in its place, out of 13 students studied at the school, only 1 student was aware of environmental cleanliness. It can also be seen that many students of UPT SMP Negeri 35 Medan still do not care about environmental cleanliness, out of 5 students studied, none threw garbage in its place. From the data table in the two schools, it shows that there is a lack of student awareness of the cleanliness of the school environment and its surroundings.

However, in this case, the other two schools are the opposite, where students at Pahlawan Nasional Middle School have sufficient awareness of the importance of environmental cleanliness or maintaining the surrounding environment. The results of the study showed that out of 4 students studied, there were 2 students who threw garbage in its place, while 2 other students did not carry out the habit. Likewise, at Ummi Fatimah Middle School, the results showed that out of 3 students studied, all students carried out the habit of throwing garbage in its place. These data indicate a good awareness among students regarding the importance of maintaining environmental cleanliness.

To measure the level of teacher success before and after providing environmental maintenance character development to students, it can be calculated using the following simple formula:

$$TK = \frac{A}{B} \times 100\%$$

Information:

TK : Teacher success rate

A : Number of students throwing trash in its place

B : Total number of students

So, from the formula above, it can be seen that the level of teacher success before being given environmental maintenance character development to students is as follows:

Know : A = 14 students

B = 38 students

Asked : Teacher success rate?

Answer :

$$NA = \frac{A}{B} \times 100\%$$

$$= \frac{14}{38} \times 100\%$$

$$= \frac{1400}{38}$$

$$= 37\%$$

From the calculation results using the simple formula, it is known that the success rate of teachers before providing environmental maintenance character development to students, namely 37% who throw garbage in its place and 63% who throw garbage carelessly. This indicates that the success rate of teachers is categorized as low, therefore teachers need to provide education or understanding to students regarding the importance of environmental maintenance or maintaining environmental cleanliness.

### After Being Given Character Development by Teachers

The results of observations of the four schools after being given character development on environmental maintenance by teachers through social media, banners, or pamphlets are presented in the following table:

**Table 5. UPT SMP Negeri 27 Medan**

| No.   | Student Name     | School                  | Dispose of garbage in its place |    |
|-------|------------------|-------------------------|---------------------------------|----|
|       |                  |                         | Yes                             | No |
| 1.    | Muhammad Rijal   | UPT SMP Negeri 27 Medan | ✓                               |    |
| 2.    | Rama Wahyu       | UPT SMP Negeri 27 Medan | ✓                               |    |
| 3.    | Riski Simbolon   | UPT SMP Negeri 27 Medan | ✓                               |    |
| 4.    | Muhammad Alvin   | UPT SMP Negeri 27 Medan | ✓                               |    |
| 5.    | Raffi Akbar      | UPT SMP Negeri 27 Medan | ✓                               |    |
| 6.    | Aryo Pamungkas   | UPT SMP Negeri 27 Medan |                                 | ✓  |
| 7.    | Dewi Radita      | UPT SMP Negeri 27 Medan | ✓                               |    |
| 8.    | Roslina Sitorus  | UPT SMP Negeri 27 Medan | ✓                               |    |
| 9.    | Franco Tamba     | UPT SMP Negeri 27 Medan |                                 | ✓  |
| 10.   | Muhammad Alqodri | UPT SMP Negeri 27 Medan |                                 | ✓  |
| 11.   | Risya Putri      | UPT SMP Negeri 27 Medan |                                 | ✓  |
| 12.   | Efraim Sianturi  | UPT SMP Negeri 27 Medan | ✓                               |    |
| 13.   | Immanuel Nababan | UPT SMP Negeri 27 Medan | ✓                               |    |
| Total |                  |                         | 9                               | 4  |

**Table 6. Siswa UPT SMP Negeri 35 Medan**

| No.   | Student Name        | School                  | Dispose of garbage in its place |    |
|-------|---------------------|-------------------------|---------------------------------|----|
|       |                     |                         | Yes                             | No |
| 1.    | Muhammad Hafiz      | UPT SMP Negeri 35 Medan |                                 | ✓  |
| 2.    | Jonathan Manurung   | UPT SMP Negeri 35 Medan |                                 | ✓  |
| 3.    | Ruben Gopas         | UPT SMP Negeri 35 Medan | ✓                               |    |
| 4.    | Aditya Nugroho      | UPT SMP Negeri 35 Medan | ✓                               |    |
| 5.    | Devinadia Rahmawati | UPT SMP Negeri 35 Medan |                                 | ✓  |
| 6.    | Muhammad Adam       | UPT SMP Negeri 35 Medan | ✓                               |    |
| 7.    | Muhammad Andra      |                         | ✓                               |    |
| 8.    | Tami                |                         | ✓                               |    |
| 9.    | Syarif              |                         |                                 | ✓  |
| 10.   | Ayu Silvia          |                         |                                 | ✓  |
| 11.   | Reyhan              |                         | ✓                               |    |
| Total |                     |                         | 6                               | 5  |

**Table 7. SMP Pahlawan Nasional**

| No.   | Student Name           | School                | Dispose of garbage in its place |    |
|-------|------------------------|-----------------------|---------------------------------|----|
|       |                        |                       | Yes                             | No |
| 1.    | Oktavia Siahaan        | SMP Pahlawan Nasional | ✓                               |    |
| 2.    | Rafi Pratama           | SMP Pahlawan Nasional | ✓                               |    |
| 3.    | Diva Situmorang        | SMP Pahlawan Nasional | ✓                               |    |
| 4.    | Tesa Pebriani Sianturi | SMP Pahlawan Nasional | ✓                               |    |
| Total |                        |                       | 4                               | 0  |

**Table 8. SMP Ummi Fatimah**

| No.   | Student Name    | School           | Dispose of garbage in its place |    |
|-------|-----------------|------------------|---------------------------------|----|
|       |                 |                  | Yes                             | No |
| 1.    | Aurelia Azzahra | SMP Ummi Fatimah | ✓                               |    |
| 2.    | Naura Ayu       | SMP Ummi Fatimah | ✓                               |    |
| 3.    | Ahmad Eko       | SMP Ummi Fatimah | ✓                               |    |
| 4.    | Irwansyah       | SMP Ummi Fatimah | ✓                               |    |
| 5.    | Kansa           | SMP Ummi Fatimah | ✓                               |    |
| 6.    | Kirana          | SMP Ummi Fatimah | ✓                               |    |
| 7.    | Elisya          | SMP Ummi Fatimah | ✓                               |    |
| 8.    | Anifah          | SMP Ummi Fatimah | ✓                               |    |
| 9.    | Jeni            | SMP Ummi Fatimah | ✓                               |    |
| 10.   | Adelia          | SMP Ummi Fatimah | ✓                               |    |
| Total |                 |                  | 10                              | 0  |

From the observation data of the four schools above, it shows that after being given character development of environmental maintenance by teachers through social media or banners and etc, there was an increase in several schools where students already understood and understood the importance of maintaining environmental cleanliness by throwing garbage in its place. However, there are still students who do not throw garbage in its place after being given education by the teacher about maintaining environmental cleanliness. This can be seen from the four tables above that students of UPT SMP Negeri 27 Medan, which initially only 1 out of 13 students cared about environmental cleanliness, changed to 9 out of 13 students who cared about the environment after being given education by the teacher. It can also be seen that students of UPT SMP Negeri 35 Medan experienced a slight increase from initially only 3 out of 11 students to 6 out of 11 students, so this proves that the education given by the teacher was quite successful.

The results of the study also showed that National Hero Junior High School experienced an increase, where before being given development by the teacher only 2 out of 4 students cared about environmental cleanliness, while after being given education by the teacher all students became aware of environmental cleanliness and were willing to throw garbage in its place. Likewise, at Ummi Fatimah Junior High School, the results showed that from the original only 8 out of 10 students to 10 out of 10 students, this proves that the teacher was successful in providing education or development to students about the importance of maintaining environmental cleanliness by throwing garbage in its place.

So, it can be seen that the level of teacher success after providing environmental maintenance character development to students using the following simple formula:

Know : A = 29 student

B = 38 student

Asked : Teacher success rate?

Answer :

$$\begin{aligned} \text{NA} &= \frac{A}{B} \times 100\% \\ &= \frac{29}{38} \times 100\% \\ &= \frac{2900}{38} \\ &= 76\% \end{aligned}$$

From the calculation results using the simple formula, it is known that the success rate of teachers after providing character development of environmental maintenance to students, namely 76% who throw garbage in its place and 24% who throw garbage carelessly. This indicates that the success rate of teachers is categorized as high. So, it is concluded that teachers are successful in providing character development about environmental maintenance to junior high school students.

**Table 9. Teachers' Success Levels in Developing Environmental Maintenance Character to Students**

| No. | Character Development | Success Rate                    |           |
|-----|-----------------------|---------------------------------|-----------|
|     |                       | Dispose of garbage in its place | Littering |
| 1   | Before                | 37%                             | 63%       |
| 2   | Aftre                 | 76%                             | 24%       |

Based on the table above, the overall teacher success rate can be calculated as follows:

$$\begin{aligned} \text{TK} &= \text{After- Before} \\ &= 76\% - 37\% \\ &= 39\% \end{aligned}$$

So, from the results of the calculation it can be concluded that the success of teachers after providing character development to students about the importance of maintaining environmental cleanliness has increased by 39%. In this case, teachers can be said to have succeeded in fostering students' sense of concern for the importance of maintaining environmental cleanliness through education, banners, pamphlets, and through technology such as social media in the form of educational videos about environmental maintenance.

### **Level of Success of Environmental Maintenance Character Development Carried Out by Teachers on Changes in Junior High School Students' Behavior**

The success of teachers in developing junior high school students' characters related to environmental maintenance shows that educational interventions by teachers have a significant influence on changes in student behavior. Before the intervention was carried out, the results of the study showed that many students were not yet aware of the importance of maintaining environmental cleanliness. At UPT

SMP Negeri 27 Medan, only one out of 13 students threw garbage in its place. This reflects that environmental awareness among students is still very low. The act of littering not only damages the cleanliness of the school environment, but also reflects a lack of understanding of students regarding the impact of this behavior on environmental sustainability.

This is in line with the theory put forward by Lickona (1991), which states that character education consists of three main components, namely moral understanding, moral feelings, and moral actions. Teachers play a role in forming these three components by providing clear examples and directions to students. In the case of UPT SMP Negeri 27 Medan, the low level of student awareness before being given education shows that without intensive guidance from teachers, students tend not to fully understand the importance of maintaining cleanliness. Students only understand theoretically that throwing garbage in its place is the right action, but without moral feelings that are built through effective teaching, they do not have the motivation to apply it in real action.

After being given a character development program through various educational methods, including social media (videos about floods), banners, and pamphlets, there was a significant increase in student behavior. The success rate of teachers at UPT SMP Negeri 27 Medan increased from 37% to 76% after the intervention. This shows that with consistent education and socialization, students are able to internalize environmental care values and apply them in everyday actions. This finding is also with research by Saputri (2020), which found that environmental education that is carried out continuously and involves all components of the school can increase student participation in environmental conservation activities.

In addition, in SMP Pahlawan Nasional and SMP Umami Fatimah also strengthen this finding. In SMP Pahlawan Nasional, students' awareness of the importance of maintaining cleanliness increased after being given character development by the teacher. Of the four students observed, all students finally threw garbage in the right place after being given education. A similar thing happened in SMP Umami Fatimah, where 100% of students observed practiced the behavior of throwing garbage correctly after the intervention. These results show that when character education is implemented effectively using methods that are interesting and relevant to students, positive behavioral changes can occur quickly.

However, although the results in most schools show success, there are some challenges that need to be considered. In UPT SMP Negeri 35 Medan, although there was an increase in student awareness from 3 students who throw garbage in its place to 6 students, these results still show that more than half of the students are not fully involved in maintaining environmental cleanliness. This shows that character development programs need to be strengthened with a more personal and sustainable approach, such as providing real examples by teachers in everyday life and actively involving students in environmental maintenance activities.

Based on these findings, it is important to understand that behavioral changes related to environmental care cannot be achieved through a single intervention. A sustainable and systematic program is needed so that students can truly internalize these values. In line with the theory of habituation,

environmentally conscious behavior must become a habit formed from daily activities. For example, routine environmental cleaning activities, inter-class cleanliness competitions, and collaboration with local communities can be effective strategies in instilling environmental values deeply.

### **Alternative solutions that can be provided in developing the character of junior high school students regarding environmental maintenance**

In order to develop the character of junior high school students towards environmental maintenance in Medan City, various alternative solutions are needed that can be implemented sustainably. First, schools can integrate environmental education into the curriculum, not only in the form of theory, but also practice, such as recycling programs, tree planting, and routine cleaning of the school environment (Suciati et al., 2023). Thus, students not only gain a conceptual understanding of the importance of maintaining environmental cleanliness, but are also directly involved in activities that foster good habits.

Second, the use of technology can be utilized to socialize the importance of environmental preservation. Students can be invited to create creative content, such as videos or posters that promote environmentally friendly habits. The content can then be distributed on school social media or other platforms to reach a wider audience, so that the message of preserving the environment is not only limited to students, but can also influence the community in Medan Tembung District as a whole. The combination of this will have an impact on forming the character of students who are more concerned and responsible for the environment.

## **CONCLUSION**

The conclusion of this study shows that educational interventions carried out by teachers significantly increased the awareness and behavior of junior high school students in maintaining environmental cleanliness. Before being given a character development program, students' awareness of the importance of environmental maintenance was still low, as seen in several schools. However, after teachers implemented a character development program using technology, banners, and pamphlets, there was a clear improvement in student behavior with more students throwing trash in its place. Although the results varied from school to school, this intervention proved effective in forming better environmental awareness among students, indicating the importance of the role of teachers in environmental care character education.

## **REFERENCES**

- Aningsih, Zulela, M. S., Neolaka, A., Iasha, V., & Setiawan, B. (2022). How is the Education Character Implemented? The Case Study in Indonesian Elementary School. *Journal of Educational and Social Research*, 12(1), 371–380. <https://doi.org/10.36941/jesr-2022-0029>
- Birhan, W., Shiferaw, G., Amsalu, A., Tamiru, M., & Tiruye, H. (2021). Exploring the context of teaching character education to children in preprimary and primary schools. *Social Sciences and Humanities Open*, 4(1), 100171. <https://doi.org/10.1016/j.ssaho.2021.100171>

- Dalmeri, D. (2020). Pendidikan Untuk Pengembangan Karakter. *Journal of Chemical Information and Modeling*, 14(1), 269–288.
- Desderius, K., Arrinjani, M. S. B., Sa'adia, Z. F., & Lie, F. R. (2024). Analisis tingkat risiko bencana tanah longsor di wilayah Kabupaten Blitar, Jawa Timur. *Region : Jurnal Pembangunan Wilayah Dan Perencanaan Partisipatif*, 19(1), 200. <https://doi.org/10.20961/region.v19i1.58889>
- Fischer, D., King, J., Rieckmann, M., Barth, M., Büssing, A., Hemmer, I., & Lindau-Bank, D. (2022). Teacher Education for Sustainable Development: A Review of an Emerging Research Field. *Journal of Teacher Education*, 73(5), 509–524. <https://doi.org/10.1177/00224871221105784>
- Hermiono, A., & Arifin, I. (2020). Contextual character education for students in the senior high school. *European Journal of Educational Research*, 9(3), 1009–1023. <https://doi.org/10.12973/EU-JER.9.3.1009>
- Hidayati, N. A., Waluyo, H. J., Winarni, R., & Suyitno. (2020). Exploring the implementation of local wisdom-based character education among indonesian higher education students. *International Journal of Instruction*, 13(2), 179–198. <https://doi.org/10.29333/iji.2020.13213a>
- Khoerunisa, S. (2024). Karakter Peduli Lingkungan Peserta Didik Dalam Penerapan Eco Literacy Untuk Mendukung ESD Di Sekolah Dasar. *Jurnal Penelitian Pendidikan*, 24(1), 110–118.
- M. Sapriadi, dan S. H. (2020). STRATEGI GURU DALAM PEMBENTUKAN KARAKTER PEDULI LINGKUNGAN BAGI SISWA. 15(1), 54–65.
- Mochammad Ircham Maulana. (2022). Teachers' Enactments of Character Education: A Case Study from Indonesia. *Jurnal Pendidikan Karakter*, 13(2), 122–132.
- RI, U. (2003). UNDANG-UNDANG REPUBLIK INDONESIA NOMOR 20 TAHUN 2003 TENTANG SISTEM PENDIDIKAN NASIONAL DENGAN RAHMAT TUHAN YANGMAHA ESA PRESIDEN REPUBLIK INDONESIA. *Demographic Research*, 49(0), 1-33 : 29 pag texts + end notes, appendix, referen.
- Sakban, A., & Sundawa, D. (2023). Character Education : Direction and Priority for National Character Development in Indonesia. *Jurnal Kependidikan: Jurnal Hasil Penelitian Dan Kajian Kepustakaan Di Bidang Pendidikan, Pengajaran Dan Pembelajaran*, 9(3), 794. <https://doi.org/10.33394/jk.v9i3.7843>
- Saputri, R. A. (2019). Implementasi pendidikan karakter peduli lingkungan siswa SD Bakalan Kecamatan Sewon Kabupaten Bantul. *Jurnal Basic Education*, 8(15), 1424–1433. <https://journal.student.uny.ac.id/ojs/index.php/pgsd/article/view/15187>
- Suciati, I., Idrus, I., Hajerina, H., Taha, N., & Wahyuni, D. S. (2023). Character and moral education based learning in students' character development. *International Journal of Evaluation and Research in Education*, 12(3), 1185–1194. <https://doi.org/10.11591/ijere.v12i3.25122>
- Trisiana, A., Sutikno, A., & Wicaksono, A. G. (2020). Digital Media-based Character Education Model As A Learning Innovation in the Midst of A Corona Pandemic. *Webology*, 17(2), 103–117. <https://doi.org/10.14704/WEB/V17I2/WEB17019>