

## Ecological education: Concrete efforts in applying the concept of ecological citizenship in Malang

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### ABSTRACT

The research aims to describe the role of schools in applying the concept of ecological citizenship at High Schools in Malang, analyze the implications of applying the concept of ecological citizenship to the environmental care character of students at High Schools in Malang, to find out the supporting and inhibiting factors in the application of the concept of ecological citizenship at SMP Negeri 10. Poor. This research method uses a qualitative type of research using a qualitative descriptive research design by managing research data in a descriptive form described in detail. The results of the study show: (1) the role of schools in implementing the concept of ecological citizenship in schools is quite good and is implemented through the vision and mission, school innovation programs, and school culture, then learning activities that are integrated into all subjects and extracurricular activities of eco generation, (2) The implications for student behavior are that students can apply their habits in school by having responsibility for their environment so that they can apply these habits outside of school in a sustainable manner, (3) factors that support and inhibit school success are the participation of all school members to commit together to protect the school environment. In addition, there is support from parents, school committees, related agencies, institutions, universities, and stakeholders who help develop school innovation programs and manage school infrastructure.

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## Introduction

The environment is the most important thing for a human to live, do activities, and do other. Therefore, humans must protect the environment for the sake of human survival in the future. However, the environmental situation is increasingly affected daily due to the rapid population growth in Indonesia, which is the primary source of environmental damage in Indonesia. In 2020, Indonesia will produce around 67 million tons of waste, which is predicted to increase as the population increases (Aditya, 2020). Most of the trash from domestic or household, food, and plastic waste. Reporting to the news on [kompas.com](https://www.kompas.com), waste from food scraps is 39.8% of the waste generated by Indonesians in 2020, accelerating global warming due to methane gas produced from food waste (Agmasari, 2021).

In the digital era, it is easier for people to access anything online, for example, online shopping (e-commerce). However, e-commerce has unknowingly led to the accumulation of plastic waste coming from online shopping packages, even bubble wrap, which is difficult to decipher (Corraliza & Collado, 2019; Wierzbinski et al., 2021). The National Plastic Action Partnership (NPAP) notes that

Indonesia produces around 4.8 million tons per year of plastic waste that needs to be managed correctly (Situmorang, 2021). It creates serious problems causing climate change and damaging ecosystems, especially in the sea. Even the World Economic Forum predicts that in 2050 plastic waste in Indonesia will dominate more than the fish population in the ocean (Alfiyah, 2021).

No matter how hard the government regulation about environmental sustainability, many still pollute the environment. Therefore, it requires awareness as a citizen of the environment. Therefore, Indonesian citizens need to apply the concept of ecological citizenship to increase awareness of Indonesian citizens for their rights to protect their environment. Research Wierzbiński et al. (2021), that the impact on food preferences (IFP) and ecological behavior (EB) give affect ecological awareness. Research (Mahaswa & Dharmayasa, 2021) shows that there needs to be a political will to shape ecological awareness.

According to Karatekin (2018), ecological citizenship is a type of citizenship that encourages individuals, communities, and organizations as citizens of the world to consider their rights and responsibilities towards the environment. Ecological citizenship requires a high commitment to form high morals and awareness to shape the character of citizens who care and have an environmental perspective. In instilling the concept of ecological citizenship, citizens' active participation in protecting the environment must begin by forming environmental ethics, which is a required part of implementing this ecological citizenship (Aulia et al., 2018).

The community can learn about forming environmentally caring characters through ecological citizenship or digital citizenship. However, the concept of digital citizenship through environmental ethics needs to be applied to children early to create a habit of caring for the environment future—one way to implement it is through education. Education is the most crucial part of building an ethical character. With education, humans also become more focused on thoughts, character, and behavior. Therefore, education is a continuous process and will never end so that it can produce sustainable quality, which is aimed at the embodiment of a human figure in the future and is rooted in the nation's cultural values and Pancasila (Kusdarini et al., 2020; Ruyadi & Dahliyana, 2022)

It is also reinforced by Law no. 20 of 2003 concerning the National Education System, that "Education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious, spiritual strength, self-control, personality, intelligence, noble character, and the skills needed himself, society, nation, and state. It proves that education is a suitable medium for forming environmental ethics.

Research Mariyani (2017) said that the formation of ecological citizenship could be a joint responsibility of citizens with the government and schools. Ecological citizenship functions to develop citizens' thoughts and ethics towards their environment; how to form ecological citizenship through schooling starts from increasing educators' understanding to be ecologically literate, the formation of ecological citizenship through learning, primarily through ecoliteracy-based Civic Education learning, and projects outside the classroom. Furthermore, Fahlevi et al. (2020), stated that the government has been trying to instill environmentally friendly schools through the Adiwiyata program. In its implementation, schools are expected to implement ecologically friendly school policies as stated in the school's vision, mission, and objectives, then in an environment-based curriculum as an effort to improve the active role of teachers and efforts to establish partnerships with environmental institutions and optimization with activities outside of learning.

In addition, research conducted by Usmi & Murdiono (2021), stated that the development of ecological citizenship in the Pancasila and Citizenship Education subjects includes several things. *First*, civic knowledge regarding the environment (ecological knowledge), in the form of citizenship and ecology concepts, ecological issues, goals of ecological citizenship, ecological policies, impacts of

environmental damage, environmental impact disputes, and environmental management programs; *second*, civic skills in environmental issues (ecological skills), in the form of critical thinking skills, communication, issues and technology, negotiation and compromise, conflict management, environmental care activities, and skills for shaping change; *third*, the character of citizenship towards the environment (ecological character), in the form of awareness and concern, commitment and responsibility, appreciation and empathy, respect for differences of opinion and willingness to implement environmentally friendly policies.

In the study conducted by Mariyani (2017) as well as Usmi and Murdiono (2021), the difference is that apart from the object and location of the research, the researcher wants to see that the efforts made in schools do not only focus on improvement through learning and the role of the Civic Education teachers but the role of the teacher as a whole as well. Necessary, researchers want to examine its implementation through environmentally friendly school policies as stated in the school's vision, mission, and goals, then in an environment-based curriculum as research conducted by Fahlevi et.al.(2020).

School is the right place to carry out these educational goals. Schools' ecological citizenship can be implemented through school culture, school learning, and the strategies of educators in schools to shape the character of students who care about the environment. In line with the explanation above, many schools implement environmentally friendly schools, including the middle school in Malang. Judging from the vision, mission, and goals of the Middle School in Malang, it is a school that has an environmental culture and strives for ecological preservation.

## Method

This research uses qualitative research to examine and interpret the role of schools in implementing the concept of ecological citizenship in Middle Schools in Malang by describing an object and phenomenon as outlined in a narrative description. This research was obtained from interviews, observation, and documentation. Then the data is processed through data reduction, presentation, and validation. Qualitative research is based on efforts to build a more detailed view of what will be studied and then formed with complex holistic words and images (Creswell & Poth, 2018; Maxwell, 2013; Mertens, 2014) Researchers want to use qualitative research because this research aims to understand a phenomenon that is described in the form of a description in a natural context and uses the approach contained therein.

The informants in this study were school principals, Pancasila and Citizenship Education Teachers, and students at Middle Schools in Malang who, according to the informants, felt it appropriate to provide information related to ecological education and ecological citizenship carried out by educational institutions. Researchers made observations by visiting directly and paying attention to all aspects that they do in the role of educational institutions to strengthen ecological education and ecological citizenship in Middle Schools in Malang. The Documentation Study was carried out by collecting various literature and supporting documents, such as learning tools that led to the implementation of educational institutions to strengthen ecological education and ecological citizenship in high schools in Malang.

After the Triangulation of Data Sources has been successfully collected, the next step is to reduce the data. The researcher simplifies, classifies, and removes unnecessary data so that it is the correct supporting data in providing meaning to the information to be presented. In the next stage, the researcher reports on research results, commonly referred to as data presentation. The last stage is to validate the data, which is an essential part of the research. The data that is generated is data that has good quality and is not troubling.

## Result and Discussion

### The role of schools in implementing the concept of ecological citizenship

Schools have obtained independent Adiwiyata, which is above the Adiwiyata at the national level. Independent Adiwiyata can be proposed to participate in the selection of receiving awards at the ASEAN level following the attachment IV to the Regulation of the Minister of Environment of the Republic of Indonesia Number 5 of 2013 concerning Guidelines for the Implementation of the Adiwiyata Program. In 2019, middle schools in Malang won the ASEAN Eco School Award.

Following Kartiko et al. (2022), policy is a series of actions and activities in the form of suggestions from a person, group, and government in an environment where there are difficulties and opportunities for the implementation of proposed policies in achieving something. From the explanation above, policies can also be implemented in schools. Therefore, it influences middle schools in Malang to have various school policies under environmentally sound schools.

The concept of ecological citizenship in middle schools in Malang is applied through school policy. Through the vision and mission, the school wants to implement a culture of a healthy environment (Feriandi et al., 2022; Park & Kim, 2020). Therefore, it is stated in the Regulation of the Minister of Environment of the Republic of Indonesia Number 05 of 2013 concerning Guidelines for the Implementation of the Adiwiyata Program, namely the formulation of the vision, mission, and objectives regarding the school's efforts to preserve the environment and prevent environmental pollution and damage.

The school's vision and mission contain many things, including the school's goals and desires to achieve something. The middle school in Malang believes the vision and mission to achieve a target, which is to excellent in science and technology, faith and piety, and excellent as a school that has a culture of a healthy, safe and comfortable environment (Park & Kim, 2020). It proves that the school is competent in implementing the concept of ecological citizenship with an environmental perspective and has been able to strive for the implementation of the inculcation of an environmentally caring character (Idrissi, 2020), under the Adiwiyata program policy (Feriandi et al., 2022).

School programs include "golden wallet", faith and piety, and other objectives. It is to realize the function of the school in terms of increasing children's knowledge and abilities, the school program functions as an effort to improve the quality of education, which is designed to become an actual activity and is systematically an implementation of the vision and mission school (Domitrovich et al., 2008). The school innovation program also aims to provide learning support facilities and infrastructure, such as water treatment, waste bunkers, compost processing sites, infiltration wells, greenhouses, healthy canteens, and others at high schools in Malang. It is supported by the Adiwiyata school policy in procuring infrastructure that supports learning and overcomes school environmental problems (Saputro & Widodo, 2018).

Furthermore, in addition to the school innovation program, there are activities of habituation of school members in caring for and managing the school environment through a diverse school culture, such as implementing schools without plastic, clean Fridays, pickets, and other school cultures. Pramana & Trihantoyo (2021), states that a good school culture must encourage students to be more positive. The application of school culture will be the best way because school culture and habits slowly begin to control student behavior and attitudes, which can positively impact student character (Ion & Sirvent, 2022; Muzakkir et al., 2022; Wagner & Ruch, 2022). Moreover, an excellent environmental culture influences students' positive character.

Ecological citizenship can be implemented through the subject of Environmental Education. However, once again, schools need to implement it specifically in the curriculum, and there are no

subjects on ecology. However, students' environmental care character can be formed through Civics Education subject. Ecological citizenship in Civics subjects and lectures still needs more specific discussion on clear ecological citizenship. It was stated by Usmi & Murdiono (2021), that ecological citizenship in PPKn teaching materials at the junior high school level and equivalent only starts from essential and core competencies. If it has relevance, many ecological citizenship materials will be presented. It is regrettable because PPKn is the proper subject in shaping the character of citizens who care and have environmental ethics, as well as overcome the digital age with a technology that makes it easier for people in their daily lives, which may have an impact on the natural environment, especially in Indonesia with a population that pretty much.

The learning activities in Junior High School 10 Malang (SMP 10 Malang) that are implemented and integrated into each subject are pretty good because the existing curriculum in Indonesia does not contain much about ecological citizenship or is specifically related to environmental conservation efforts. However, mainly as a teacher can also show behavior that is in line with the vision and mission so that students can imitate the actions of the teacher's father and mother so that students can gain knowledge not only from the words of the teacher but also through the actions and behavior of the teacher.

Middle Schools in Malang have a variety of extracurricular activities that are fostered by qualified educators so that they can make various achievements and have students with extraordinary abilities. Besides, the Middle School in Malang also has extracurricular activities which refer to environmental activities through cadre, namely eco generation. In addition to forming the character of caring for the environment, this extracurricular accommodates students interested in environmental preservation. Students here are given guidance on an ongoing basis so that they can play a role and take part in environmental preservation and management activities.

Activities routinely carried out twice a week include coordination, programming, and work program preparation meetings. The cadres also help coordinate each class when there are school activities. For example, during the one million trees activity, the cadres coordinate and collect funds from each class and then distribute the plants. In addition to carrying out routine activities according to the work program, members can learn together about processing and classifying organic and inorganic waste. Then they can socialize, make compost, plant, and carry out activities related to the environmental day. Extracurricular activities must develop interests and talents and foster students; the activities carried out in this extracurricular are as expected.

The above statement is supported by the goals of extracurriculars, namely activities aimed at deepening and broadening students' knowledge, recognizing the connections of various subjects to channel talents, and fostering complete human beings (Ministry of Religion of the Republic of Indonesia, 2004). Furthermore, it not only shapes students' character to preserve the environment but also deepens students' knowledge about environmental management through a series of routine eco-generation extracurricular activities and aims to foster students to become someone with environmental character in the future.

### **Implications of applying the concept of ecological citizenship to the behavior of students who care about the environment**

High Schools in Malang, through programs and school culture, were able to attract students to continue their education at Middle Schools in Malang. Judging from the beautiful and shady school environment, some students mentioned that this was one of the reasons why they chose Middle Schools in Malang.

Then the school's strategy in instilling the character of caring for the environment in students is to start with an introduction, habituation, to further involve students in efforts to preserve the environment. Schools accustom students to being plastic-free, not using single-use plastics in the school environment, which they then apply to their families and communities.

The application of the concept of ecological citizenship at schools with an environmental perspective which aims to shape the character of students who care about the environment is expected through schools and education to bring out the responsibility of citizens in protecting the surrounding environment because the character of caring for the environment of students is manifested from a person's mental attitude which is reflected in behavior so that it is not an inherent trait of the individual from birth but is the result of the educational process in a broad sense (Hamzah, 2013).

In addition to characters, students are given an understanding of new knowledge in managing the environment, such as water treatment, the impact of plastic waste, waste management, grouping, composting, and so on. Furthermore, in implementing ecological citizenship, ethical procedures and morals are needed for citizens in their responsibility to protect the environment. Therefore, besides the character that is grown, it is necessary to improve students' skills through the above activities. Simmon (in Aulia et al., 2018) explains that seven things influence someone to care about their environment. They are (1) morals towards the environment, (2) communication and implementing ecology, (3) strategies in making people aware of influencing the environment, (4) knowledge of issues related to the environment, (5) ability to create, evaluate and realize activities related to environmental preservation, (6) encourage environmentally friendly activities and policies, (7) able to make a change.

Almost all of the above have been implemented in Middle Schools in Malang, in shaping morale and others requiring a teacher who is capable of preserving the environment through communication in learning activities and constantly reminding students not to damage the environment and the teacher's behavior which is in the spotlight and imitated by students so that teachers hold essential things in the application of students' ecological citizenship.

### **Supporting and Inhibiting Factors in the Implementation of the Ecological Citizenship Concept**

In implementing the concept of citizenship, schools with an environmental perspective in Middle Schools in Malang have implemented well according to the school's vision and mission. However, several factors consistently support schools in implementing them, namely the full support of members committed to protecting the school environment so that its vision and mission are sustainable. However, every school member's commitment minimizes obstacles in its implementation.

According to Qaralleh (2021), there are various roles for the school community, (1) the role of the principal is through policies regarding the environment, the primary source of ideas, being a role model for other school members, (2) the role of the teacher is the person in charge of conveying values, skills, and knowledge about the environment, maintain the behavior of environmentally cultured students, encourage students to carry out environmentally cultured activities (3) the role of education staff, namely in helping manage facilities and infrastructure, supporting success in terms of administration (4) the role of students, namely as implementers of regulations and policies.

The collaboration of tri-center education implements the character of caring for the environment and other characteristics instilled by the school run as it should. Following the three-center linkages of education, namely parents who have total obligations in educating children, in educating children it is the limitations of parents that ultimately, the education process is assisted by



schools, and the community acts as a facilitator for children in expressing their skills (Wiyani & Barnawi, 2012).

There are related parties that support the school program's success, namely parents of students, related institutions and agencies, universities, and stakeholders. Their role is needed in building and developing school programs and innovations and school facilities and infrastructure because schools have yet to be able to stand alone in building school policies. So that collaborating with various parties can be a solution for schools when they encounter these obstacles

Facilities and infrastructure also support school members who have the character to care for the environment. Facilities and infrastructure can be used for learning outside the classroom. Besides that, it can also foster a sense of caring for students in maintaining and caring for school facilities and infrastructure. The facilities and infrastructure available at Middle Schools in Malang are learning rooms, greenhouses, all plants and trees, and others. The extent of the land and the many school infrastructure facilities require the cooperation of all school members to take care of it.

The obstacles experienced by schools in implementing the concept of ecological citizenship of schools with an environmental perspective are diverse. One of them is that several students have yet to be able to comply with the rule of school, as well as new students who are still adapting to their environment. The solution taken by the school in overcoming this problem is through habituation; because most school members are committed to protecting the school environment, fellow school members can remind one another. Habituation is done in several ways, for example, socialization at the mosque through faith and piety activities, learning activities, and slogans throughout the school environment. If students are used to it, their role will be involved in managing the school environment and will continue to be improved.

It is supported by the opinion of Subianto (2013), that efforts to build character in schools are through socialization and getting used to it by animating and upholding the teacher as a model or role model, the second is explaining and clarifying, the third is implementing based on a character through education in each subject.

Another obstacle expressed by the principal was the lack of funding to implement school programs, so schools had to collaborate with various institutions, government agencies, universities, school committees, parents and guardians of students, and alumni who were expected to be able to support school programs and help maintain the infrastructure in the school.

The next obstacle is the need for parental attention to children. Applying environmental care characteristics will only work with parental intervention in a child's primary education. Schools only help parents educate children. What children do outside of school is not monitored by the school. Therefore, to deal with the different characters of children internally and externally, parents need to intervene and be involved in educating children, especially in shaping children's character because most students bring their problems from outside school and then apply them to school but not vice versa, because the family environment is the first environment that is very influential in the development of student character and personality (Sandrawati, 2016).

## Conclusion

The role of the school in implementing the concept of ecological citizenship through school policies that are integrated through the school's vision and mission aims to create a healthy, safe, and comfortable school environment culture which is then developed into a school program then implemented repeatedly into school culture while also implementing integrated learning activities. All subjects and extracurricular activities play a role in realizing the school's vision and mission, especially the eco-generation extracurricular, which intensively accommodates students' interests in

managing the environment. The school's real goal in implementing ecological citizenship with an environmental perspective is to educate students and cultivate character so that students can apply it outside the school environment sustainably. The implications of using the concept of ecological citizenship to students start with a continuous introduction, following Standard Operational Procedure and school culture, then being involved in efforts to preserve the school's nature. Some of the cultural habits at school lead to changes in a better direction for students so that they begin to be implemented outside the school environment. This behavior change is said to be successful and is expected to be carried out on an ongoing basis. The inhibiting factor in implementing the concept of ecological citizenship is that some children have different characteristics, so there are still some who still need to implement it optimally, then new students who are still in the process of adaptation. The solution is through guidance and habituation carried out by the teacher and assisted by other students to raise their awareness, and if necessary, counseling is carried out. Then the lack of parental participation in instilling and growing student character so that the character of caring for the environment and other characters is difficult to form. Another obstacle comes from the need for more funding for schools to implement innovative programs and manage various facilities and infrastructure. At the same time, the driving factor in implementing ecological citizenship is the strong will and commitment of school members to realize the school's vision and mission so that activities are consistently carried out. There is support from various parties, such as parents, school committees, related agencies and institutions, universities, and stakeholders in developing school innovation programs and managing school infrastructure. The driving factor can also act as a solution to the inhibiting factors in implementing the concept of ecological citizenship in high schools in Malang.

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