

Utilisation of Physical Environment in Student Character Building: Boarding School

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ABSTRACT

Purpose - The aims of this study are expected to provide an in-depth understanding of how the school's physical environment positively influences students' character development. In addition, this study is expected to inform school management in developing and expanding green spaces as a character education strategy that focuses not only on academics but also on students' moral and social development.

Methodology - The approach in this research is qualitative, supported by descriptive data, data collection using interview techniques, consisting of the principal, vice principal for facilities and infrastructure, and vice principal Maintenance environment. Data analysis techniques use the Miles and Huberman approach, namely data reduction, data display, and conclusion drawing.

Findings - This study collected 4 significant findings, namely 1) the school does not have documents that support the green environment management programme as a student character builder, but the school environment is good enough. 2) Students are motivated by the existence of a beautiful physical environment. 3) The school has not focused on character building. However, the field evidence shows that almost all environmental programmes have a positive influence on changes in student character. 4) A good physical environment can relieve student stress

Contribution - This research provides scientific facts on the utilisation of the physical environment for character building, based on data collected by researchers, to serve as a reference and consideration for policies aimed at both the development of school green land and student character education.

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INTRODUCTION

The influence of students on the grandeur of buildings and the beauty of the physical environment is a serious problem for character education activists in Indonesia. From Siregar's (2022) research, students are more concerned with external appearance and competition than with developing positive social attitudes. This also happens because the process of forming student character is not in line with the process of forming the physical school environment (Sondakh et al., 2021); besides that, the architectural form of school buildings, which has a role in creating a conducive school environment (Tanner, 2000), is not in accordance with the needs of students. Moreover, this is exacerbated by parents who prefer luxury schools that neglect character education, so that the school environment prioritises aesthetic beauty and fails to maximise it as a learning medium (Darsiharjo, 2013). This aligns with the study by Khofifah (2022), which found that character education must be consciously designed and managed so that, as the learning process unfolds, the character-building process also occurs. This proves that character education alone is not enough to build a good physical environment; it must also be consciously incorporated into design and management.

Support by the government for the physical learning environment has proven effective in instilling the character of environmental care through the Adiwiyata programme (Syahrial et al., 2020), (2020) In addition, the attention of the president of the Republic of Indonesia to the mental development of students is also high, it can be seen from the programme promoted by the government in 2016 through the minister of education called the National Movement for Mental Revolution (GNRM) programme, besides that in early 2025 there was a circular letter of 3 ministers regarding the focus of national education directed at strengthening character education so that various modules and training appeared, Schools have an important role in shaping student character through the school environment which contributes significantly to its formation (Rosyad, 2019). , 2021a) Strategies carried out by schools both inside and outside the classroom as well as adequate facilities are essential in shaping student character, including religious traits, discipline and environmental care (Shinta & AinAin, 2021a). . In addition, the government is obliged to allocate funds for the construction, renovation, and maintenance of school physical facilities and ensure safety standards and building quality (Wardhana, 2021). In addition, community initiatives in education have helped the government educate the nation's children, including through pesantren that diversify education in the economic sector, leading to various programmes that train students in independence, interpretation, and the sustainability of pesantren (Alhifni & Ahwarumi, 2018).

The study of student character building is fascinating. A lot of research has been done, so that the studies carried out are getting deeper, so that what new researchers do always continues the research relay. As reported by Nurhayati & Dewi (2017), the school environment influences student interest in learning by 10%, while research by Ardiyansyah H (2019) shows that the community's social environment affects student morale by 41%.

So this research is fundamental and necessary as a response to the trend of education that combines enclosed spaces and green open spaces into an inseparable part, beautiful environmental design, and at a cost that is not small, both manufacturing and maintenance, so schools must make the best use of this facility. Research shows that green open space (Setiowati & Koestoer, 2022) RTH can affect mental health, reduce stress, and encourage more physical activity. Many studies have focused on school green environments, but few discuss the impact of school artificial environments on social behaviour and student learning motivation. From there, the question arises: Does the school's physical environment, which is quite beautiful and aesthetically pleasing, benefit the development and formation of student character? With this question the researcher wants to deepen the use of the school's physical environment through a study entitled "Analysis of Environmental Utilisation in the Formation of student character at SMP Al-Hikmah Boarding School Batu" this research is expected to be able to provide deep insight related to the use of the school's physical environment and be able to answer the questions that the researcher raised at the beginning.

Based on the above background, the problem formulations in this study are: (1) How does the use of

the environment shape student character at school? (2) How is the impact of environmental utilisation on students?

The results of this study are expected to provide an in-depth understanding of how the school's physical environment positively influences student character development. In addition, this research is expected to inform school management in developing and expanding green spaces as a character education strategy, and to help educators and policymakers develop curricula that focus not only on academics but also on students' moral and social development.

METHODOLOGY

Research Design

This study aims to determine the use of the physical environment of SMP XX Boarding School Batu on student character building both in a planned and natural way, by analyzing in depth the programs implemented based on policies made by the school, adjusted to the vision and mission as well as the characteristics of school culture, researched through interviews with the principal, vice principal both in the field of sarpras and in the environmental field. The approach to the object of research is qualitative, with data interpreted from descriptive field data collected by researchers. This research does not test hypotheses or variable relationships but focuses on collecting data through descriptions of field practices as they occur.

Participants

The research was conducted at SMP XX Boarding School Batu which is located in Batu City, East Java 65333, the researcher chose this school because at the age of the school which is still new but has been recommended to participate in the provincial Adiwiyata programme which has previously achieved Adiwiyata kabutan batu, besides that the green environment area is quite extensive with all activities that are very friendly to the environment and education with a family approach.

Source Data

The data obtained by researchers are grouped into two categories: primary and secondary. Primary data were obtained from interviews conducted by researchers with environmental managers, such as the deputy head of Sarpras and Environment, educators, and students of SMP XX Batu. Secondary data are obtained from the results of questionnaires administered to 26 grade 9 students.

Instrument and Data Collection

The researcher serves as the main instrument in the implementation of this research, starting with careful planning, collecting field data, analysing the data, and producing reports on the analysis results. The researcher conducted in-depth observations of all phenomena in the field and interpreted the research subject, using interview guidelines, questionnaire data, physical environment observations, and other instruments, including documentation and interview recording tools.

Researchers used data collection techniques, including in-depth interviews, starting with the principal, to gain an overview of both school programmes and policies. Next, interviewing teachers who meet the qualifications of research respondents, namely having worked for 5 years, there are a deputy head of facilities and infrastructure, and a deputy head of the environment. Interviews are conducted in an unstructured, casual manner to gather more information from field phenomena.

Data Analysis

In analysing data, researchers collect, process, and analyse data. The data is analysed descriptively, namely by collecting and describing it, to obtain a clear picture of the data source, both from interviews and document studies.

The educational institution SMP XX, where the Author conducted the research, has so far designed its facilities and environment to create a comfortable learning environment for students, and there has been no specific plan to use them for character formation. This was conveyed by the Vice Principal for Facilities and

Infrastructure, who explained that the uneven land was utilized as an aesthetic element of the school. The school management strives to maximize the use of existing land and buildings to support and facilitate students, ensuring they feel comfortable and at home within the school environment for 24 hours.

In analysing qualitative research data with the Miles and Huberman model, there are 3 stages, namely 1) data reduction, namely the researcher summarises the primary data from the findings in the field, both through interviews and environmental observations, and focuses on important things, ignoring discussions that have nothing to do directly with the research objectives. Researchers selected the data obtained solely to provide a detailed overview and to focus only on the research objectives. In this study, the authors used interview guidelines to collect data on the use of the environment and its impact on student character building. 2) The Author presents the data by interpreting the data in the form of narrative text and in the form of charts. This research uses codes, namely informant code, data collection technique code, data code, and dating code. 3) Researchers draw conclusions or verification, namely by looking for relationships between components found in the data by comparing until conclusions can be drawn. Researchers analyse interview results to draw conclusions and address the formulation of existing problems regarding the use of the environment and its impact on student character development.

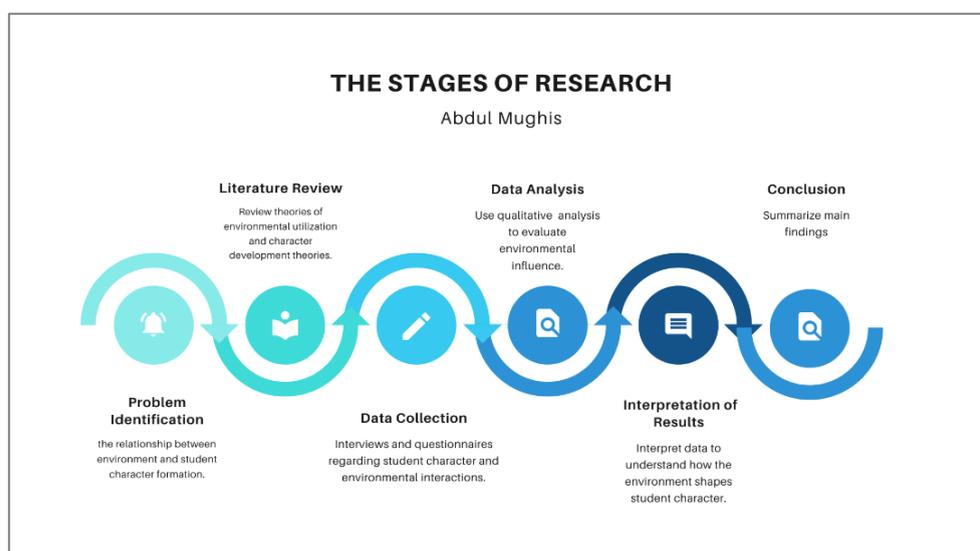


Figure 1. The Stages of Research

FINDINGS

During the observation stage, the researcher visited the school and distributed questionnaires to class IX students (26 students) regarding the school's green environment, their feelings about the environment, and its utilisation for learning and behaviour formation. The school looks beautiful, comfortable, and clean, and the air is very cool because it is located under Mount Arjuna. The school lane is neat and beautiful, and vehicles are parked in designated places. The school is also decorated with various colourful plants and flowers, including lavender and mint. In addition to plants planted on the ground, there is a vertical garden using recycled bottles to recycle waste, and the environment is complemented by an artificial waterfall sourced from a spring, surrounded by koi ponds. The school's environment provides a sense of relaxation, calm, and a cool, quiet atmosphere. The classrooms are also clean and well-organised. The school is equipped with adequate, colourful trash bins. The school also has a hydroponic garden, which is activated only during the summer to avoid pest attacks during the rainy season, and a variety of crops, such as vegetables, herbs, and polowijo. When it is harvest time, the students happily pick and take. The design of the school's environment can influence the ecosystem integrated into the classroom education curriculum, so that learning is maximised and enjoyable.

The comfort of the environment and the beauty of the natural surroundings, full of greenery and colourful flowers, affect student behaviour, enhance students' knowledge of the sustainable environment, and foster values of correct interaction between humans and nature.

"The philosophy of development is not just looking for a good impression, but we prioritise comfortable nuances, not destroying the existing natural ecosystem, so that the contours, topography of XX do not damage nature" (W/KS/A2/18022025).

The friendliness of teachers and education personnel adds to the peaceful atmosphere at school, serious maintenance and significant care for plants fosters an attitude of caring not only for plants but also for the people who care for them even though they are not from academia, but respect and politeness are always shown to them, plus the survival programme adds to the closeness of students to their tutors when they learn to repair the bicycles they use even though their tutors come from cleaning services or the sarpras section. Survival is a programme that trains students in repairing the things they use daily.

"As for the working environment, we feel quite comfortable, both the teacher's office, education staff, sorry, such as gardeners, parks and so on, almost all of them are mostly local people, we feel that they are happy with our presence and we are also happy with their warm welcome" (W/KS/A2/10022025).

The utilisation of the natural environment is at its maximum, with land that was previously less accessible due to its uneven contours now transformed into a beautiful, aesthetic landscape. XX aims to balance the school environment with the natural environment, fostering a natural ecosystem. Student involvement in maintaining a healthy ecosystem can increase environmental awareness.

"Cooperation with outside, such as the ndurek waste bank, and BSM (Bank Sampah Malang), we are trying to pyrolysis, plastic waste into fuel, but this is still negotiating with the foundation, because it needs equipment, and the equipment is quite expensive" (W/WL/A1/18022025).

The school is always working together to strengthen students' learning capacity and character through the example of direct environmental actors. XX will go to any lengths to create a balanced environment, where no waste is wasted, even non-organic waste is converted into something beneficial, namely, as fuel.

"For organic waste we provide, such as magot, chicken, catfish, and above, we provide pits for magot, compost, etc., so that the organic waste is finished" (W/WVS/A3/18022025).

"For the non-organic cases, we can re-sort, for the residue, before we hand it over to the waste bank, which we are currently exploring. Get Plastic will make a tool from non-organic waste, so that the residue can be used as fuel" (W/WVS/A2/18022025).

The green, open environment is not only a place of leisure and relaxation for students, but also a place of therapy for students with problems, whether psychological or academic.

"Including when there are children with psychological problems, one of the therapies is art, including expressing their anger with drawings in the open space, including children who are difficult to focus, the therapy is also there, children who like to forget, coincidentally their children like to make replicas of planes from existing waste materials, so the therapy is to make them every day" (W/WVS/A7/A1/18022025).

With such extensive benefits for students, including sharpening their sensitivity to environmental issues, such as cleanliness and the sustainability of their environment, students can remain comfortable. Schools that are very friendly with their students give the broadest possible space to participate in shaping the conditions around them. Students are given the role of choosing the colour and type of curtains for their school, fostering an attitude of ownership.

In an effort to maximise environmental management, the school collaborates with various agencies to support the sustainability of this program, including through the government Adiwiyata program, which guides schools on achieving maximum results. Participating in the adiwiyata program not only helps students gain ecological awareness but also makes them proactive in responding to issues. In addition, organizers conduct assessments and award schools that have reached the adiwiyata category, which motivates schools to improve.

With the existence of adiwiyata activities supported by programs run by students, through environmental ambassadors, environmental pickets, socialisation of environmental care, and so on, this instills an understanding in students of the importance of protecting the environment so that the

environment remains clean and beautiful, when there are positive changes from students, it triggers enthusiasm and motivation for teachers to do more.

The results of research in the field, through artificial physical environment management activities at SMP Boarding School XX Batu, showed that many characters emerged from the formation of a green physical environment. However, among the many characters, the most dominant was the Calm character, which emerged from the use of natural diversity and colourful plants in the surrounding environment, with many plant types fostering mental calmness among students. Open spaces and sufficient lighting help the body and mind relax, and students feel calm enough to be comfortable in social interaction.

"Ornamental trees, timber trees, medicinal trees and (horticulture) category 4 if I am not mistaken" (W/WL/A2/18022025).

In calm, comfortable conditions, the soul is also calm. This really helps students manage emotions and stress, as was conveyed directly by MAH, as Waka Sarpras from the results of the interview:

"Including when there are children with psychological problems, one of the therapies is art, including expressing their anger with drawings in the open space, including children who are difficult to focus, the therapy is also there, children who like to forget, coincidentally their children like to make replicas of planes from existing waste materials, then the therapy is every day making it" (W/WVS/A7/A1/18022025).

This condition is not only felt by students but also felt by the teaching teacher, because it is a system used in the school as a whole, for example in dealing with student violations of existing regulations such as stealing offences, no punishment is given or consequences are applied to students, improvements are made through advice, assignments, observations, communication between homeroom teachers and student guardians, This calm attitude is also shown by the stakeholders in making decisions, even the calmness can be felt outside the school environment such as the surrounding community who are friendly and tolerant of school activities, when the village environment is enlivened with student guardians who are dropping off and picking up their children, the attitude shown by the community is very tolerant of this crowd.

So great are the benefits obtained from the use of the physical environment towards the formation of student character, starting from planning the layout of buildings, open spaces, play areas and sports to waste management by working with outside parties to get ideal physical environmental conditions, the beauty and comfort obtained can change the condition of students who previously felt bored and did not feel at home in the school environment to be comfortable and enjoy the environment, from stressful and tedious conditions so that various psychological problems and violations appear to turn into pleasant conditions.

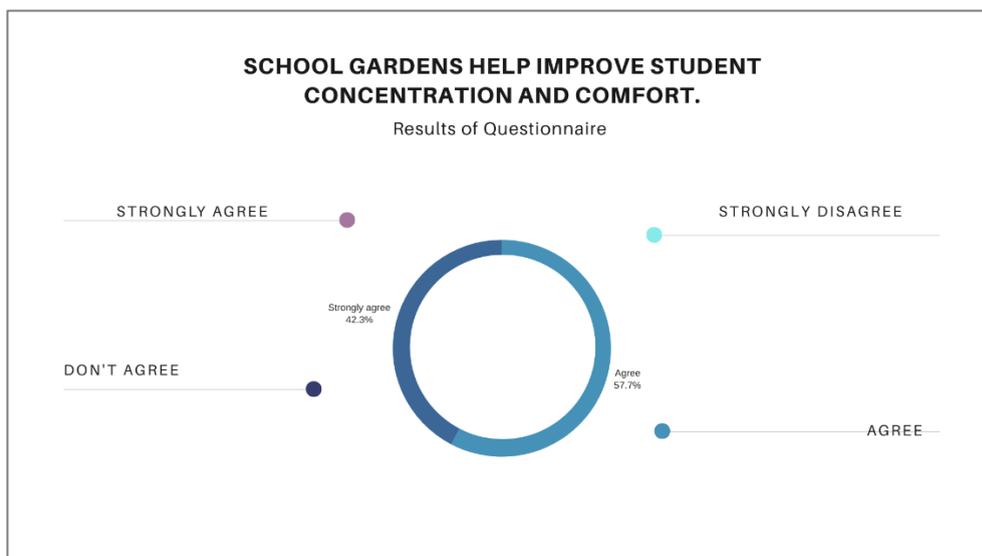


Figure 2. Questionnaire Results

The results of the questionnaires conducted provide a direct overview of the impact of the school's physical environment on students' character and attitudes, and on the development of their character and behaviour for the better.

DISCUSSION

This study collected 4 significant findings, namely 1) the school does not have documents that support the green environment management programme as a student character builder, 2) students are motivated by the beautiful physical environment, and 3) the school has not focused on character building. Students are motivated by the beautiful physical environment. 3) The school has not focused on character building. 4) A good physical environment can relieve student stress.

Structurally and organizationally, the researcher has not administratively found any formal implementation of character formation through building development. The grandeur of the buildings and the completeness of the facilities were not designed administratively to achieve the character formation intended by the researcher. However, many positive character traits have emerged from the buildings' neatness and grandeur, including a mindset that life should be orderly and clean. All activities are well organized according to the concepts established by management, which, indirectly and unconsciously, influence students' daily routines.

The results showed that the school lacked documents, but the school environment was good enough. This is contrary to the concept of GNRM (National Movement for Mental Revolution) and the circular letter of 3 ministers where there must be documents in the form of modules and training for educators which are used as instructions in the implementation of character building through the environment, besides that in the absence of documents in the implementation and management of character building programmes carried out by schools which are important factors for obtaining data for analysis and evaluation, this will hinder the formation of student character, including religious, disciplined and caring for the environment (Shinta & Ain, 2021b).

From the student perspective, motivation was found to be very high in a clean, neat, and beautiful environment (Yusdinar & Manik, 2023). This aligns with research showing that a good environment increases the desire to learn and a strong desire to achieve. Reinforced by the findings (Nurhayati & Dewi, 2017), the school environment accounts for 10% of student motivation.

The findings of this study are a perfect environment and character. However, the school does not yet have a programme that focuses on character building, so far it has focused more on environmental management and active participation in the Adiwiyata programme launched by the government, even so the facts in the field of environmental programmes run almost all have an influence on changes in student character, this is less in accordance with the findings of Khofifah, (2022b) which states that character building education must be consciously designed and well managed, so that character building occurs in line with the cognitive formation of students. So that this becomes additional data on character change, even though it is not well planned.

A good environment also plays a significant role in student psychology, namely by relieving stress. This is very much in line with the findings of Blake & Alexander (2024), who state that parks and green areas can reduce students' stress and anxiety and play a role in mental stabilisation and increased empathy.

The benefits and impacts of the school's physical environment have a very positive influence on student development both in terms of cognitive, psychological and mental but a green environment that is too large as in the XX Boarding School in its management cannot be reached by students as a whole so that several points are less maintained this affects the beauty and comfort of students, but with a good schedule arrangement can reduce the negative impact of this condition. In addition, areas that are too large incur higher costs because they require more human resources, which forces schools to limit the areas they can reach to the ideal number of human resources, utilising the surrounding community who work not *full-time* but according to school needs.

CONCLUSIONS

In general, the results of this study are sufficient to answer the formulation of existing problems. They can achieve the expectations of conducting this research, namely providing more and in-depth knowledge related to the use of the school's physical environment towards character building, providing scientific facts through the data collected by researchers so that it can be used as a reference and consideration for policies to be taken both for the development of school green land and for the development of student character education.

SMP XX Boarding School Batu has made good use of the environment, starting from structured and integrated planning, so that all elements of the school support the success of every policy and programme launched, it cannot be denied that no matter how good the institution must have shortcomings that can be improved even better, among which are schools can complete documents on green environmental management both for programs launched by internal schools and programs that collaborate with external institutions, the potential possessed by schools in the formation of student character through the physical environment can be carried out more planned and structured so that the results obtained are more perfect and measurable.

We admit that during this research period there are still very many phenomena that we have not been able to capture due to the limitations of researchers, we hope that researchers who want to conduct studies on the use of the environment in shaping character can conduct quantitative research on how much influence the boarding school physical environment has on the formation of student character, where students are 24 hours in the school environment.

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