

School Leadership Factors and Green School Effectiveness in Model Schools of Islamabad: A Correlational Study

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ABSTRACT

The purpose of this study was to investigate the correlation between the school leadership factors and the impact of the green school in the model secondary schools in Islamabad. It specifically aims to identify the relationship between leadership competencies, financial resources, and teachers' collaboration, and their relationship to the effective implementation of green school practices. A quantitative correlational research design was used. The teachers and school heads from the Model Secondary Schools under the Federal Directorate of Education (FDE), Islamabad, participated in the study. 200 respondents were randomly selected. Structured questionnaires were used as a data collection tool. Items were adapted from the Multifactor Leadership Questionnaire (MLQ) developed by Bass, B. M., & Avolio, B. J. (2004) for the measurement of skills related to leadership, and 45 items were adapted from recent research on green schools and sustainable educational practices. IBM SPSS Statistics Version 27 was used to analyze the data. Descriptive statistics and Pearson correlation were used to answer the research objectives. The findings indicated a positive relationship between leadership skills, financial resources, and teacher cooperation and the effectiveness of the green school. Of these, leadership skills showed the highest relationship, teacher cooperation had a moderate positive relationship, and financial resources had a moderate positive relationship. The results indicate that good leadership, adequate funding, and good teamwork between teachers facilitate the successful implementation of environmental work in schools. The study offers valuable information for Model Schools leaders, teachers, and education policymakers to enhance environmental sustainability and green school practices.



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Introduction

The issues of climate change, pollution, waste management, and natural resources loss have emerged as significant environmental concerns globally. These challenges not only impact the environment, but also human health, economic development, and quality of life. Education is now being seen as an important means of raising environmental awareness and creating sustainable practices among future generations. Schools are a key element in supporting students' positive attitudes and responsible behaviors in relation to the environment. The UN (2015) links education as a tool for achieving sustainable development, while UNESCO (2021, 2024b) is dedicated to promoting education that aims for learners to realize and act responsibly to deal with environmental issues.

Schools are the core place for activities where the students' everyday practices, their attitudes and habits are shaped. A green school is more than a school with trees or gardens. It is a learning space that embodies values of the environment in teaching, school management and daily activities. Green schools promote practices like energy conservation, waste reduction, recycling, water conservation and participation in the environment. These activities allow students to be aware of the importance of sustainability and create habits that can have a positive impact in the future. UNESCO (2024) explains that effective green schools follow a whole-school approach that includes governance, facilities and operations, teaching and learning, and community engagement.

The Global Education Monitoring Report Team (2024) notes that shared leadership can create stronger school collaboration and improve school practices. Similarly, recent studies show that environmental education and green school culture can strengthen sustainable school leadership, teacher collaboration, and institutional support (Dağdeviren-Ertaş, 2024; Nilawati et al., 2025; Pirzada et al., 2023a, b; Yuan et al., 2024). There are several key factors that are crucial to the success of green school programs. School

leadership plays a key role in creating a green school environment. The leadership of the school establishes the vision for environmental programmes, inspires teachers, decides on programmes, and fosters teamwork. Teachers and students are more inclined to take part in green activities when school heads actively engage in environmental activities. Good leadership also facilitates addressing challenges and sustaining programmes of long-term activities.

In Pakistan, environmental education and eco-friendly school practices are gaining attention, but their implementation is still uneven. Some schools can organize environmental activities in a planned way, while others face challenges related to weak planning, limited funds, low teacher participation, and insufficient institutional support. Habib (2024) found that school-based activities supported eco-friendly practices in Pakistani schools can improve students' environmental awareness when they are supported through school-based activities. Urooj et al. (2024) also stated that the importance of green leadership is recognized by the leaders of Pakistani schools, but they still face challenges such as weak institutional backing and limited financial support.

In this context, Islamabad Model Schools, also working under the public policy of education, are considered good case study for the purpose of this research, as they have to follow public policies of education, academic standards, and work towards the provision of good education to the students at the school. They provide valuable research opportunities to explore the impact of public education, leadership, funding, and teacher collaboration on the success of "Green School" practices. These three factors: Leadership, financial resources, and teacher collaboration have been studied in greater detail previously in the context of the Islamabad model schools.

The importance of environmental education has increasingly been recognized in the last few years in governmental and educational circles both within and outside Europe. Various international organizations, including UNESCO, have been encouraging mainstreaming of sustainable

development both within the school curriculum and in school management. Pakistan has been moving towards integration in EE, but there is an imbalance in the application of 'Green School' in schools. This means that teacher involvement, allocation of resources, and leadership are all contributing factors to the effectiveness of these initiatives.

So, the study emphasizes the relationship between leadership skills, financial resources, teacher collaboration, and the effectiveness of the Green School in the model schools in Islamabad. School administration, teachers, and policy makers can obtain empirical evidence from this study to help them support and to enhance environmental practices in order to develop schools sustainably.

Objectives of the Study

1. To find out the levels of leadership skills, financial resources, teacher cooperation, and green school effectiveness in Model Schools of Islamabad.
2. To examine the relationship between leadership skills and green school effectiveness.
3. To examine the relationship between financial resources and green school effectiveness.
4. To examine the relationship between teacher cooperation and green school effectiveness.

Research Hypothesis

H01: There is no significant relationship between leadership skills and green school effectiveness.

H02: There is no significant relationship between financial resources and green school effectiveness.

H03: There is no significant relationship between teacher cooperation and green school effectiveness.

Significance of the Study

Sustainability in the environment is now an important aspect of education. Schools not only have a responsibility to the academic education of students, but also to equip them with the skills to live responsibly in a healthier and more sustainable world. Green schools can engage students in learning about environmental issues

in the classroom, in school activities, and in their daily lives. A whole-school approach, in which the heads of school, teachers, students and the community collaborate on improving the environment, is also supported by UNESCO (2024).

This research would be helpful for school leaders since it illuminates the role that leadership skills play in helping with a green school programme. A good school leader can design a plan for environmental activities, lead teachers, encourage students, and establish a school culture that allows for these activities to be continued in a meaningful way. Similarly, Perveen and Begum (2025) found that the principal's sustainable leadership has a positive impact on teachers' performance and school effectiveness.

The research can also be useful for teachers as they have a significant role in facilitating the school's environmental friendliness. They participate directly in teaching in the classroom, problem-solving, and practical activities of the school. The cooperation between green teachers and school heads is the key to making green school practices easier. School effectiveness as a result of collaboration between principals and teachers for the sake of sustainability was also quoted by Nilawati et al. (2025).

The result of this study could also be of benefit to the Federal Directorate of Education (FDE) and other policy makers. Awareness of the importance of leadership competencies, financial resources, and teacher collaboration can shape more effective teacher training programs, financial resources, and school-based environmental programs. Furthermore, Dağdeviren-Ertas (2024) emphasized the role of sustainable leadership in enhancing the effectiveness of schools and their environmental responsibility.

Research related to green school effectiveness is yet to be conducted to a small extent in Pakistan. For this reason, this study is significant as it is based on local evidence in the context of Model Schools Islamabad. Even though school leaders are aware of the merits of green leadership, they are grappling with issues of inadequate resources

and institutional support, as highlighted by Urooj et al. (2024).

This study may also be useful for future researchers. It can be used to inform a more detailed study of school leadership, EE and sustainable school development. It can also motivate researchers to research green practices in other regions of Pakistan.

Literature Review

Green Schools and Whole School Sustainability

Green schools are now considered an important part of sustainable education. A green school is not restricted to physical greenery or cleanliness; it represents a school culture where environmental responsibility is included in teaching, school leadership, daily routines, and school operations. UNESCO (2024a) describes green schools through a whole-school approach, where school governance, facilities, curriculum, teaching, and community engagement work together.

This whole-school idea is important because environmental education loses its impact when implemented as an isolated activity rather than a continuous educational process. It becomes stronger when students experience sustainability in classroom learning, school routines, and practical activities. UNESCO (2024b, 2024c) also emphasizes that learners should be climate-ready through curriculum, school practices, and community participation. Yuan et al. (2024) found that green school programmes can support education for sustainable development when they are linked with policy, school environment, and classroom practice.

School Leadership and Green School Effectiveness

School leadership is one of the Key factors in the success of green school practices. School heads provide strategic direction, motivate teachers, manage activities, and create a supportive climate for environmental work. Leithwood et al. (2020) argued that successful leadership influences school improvement through vision, support, and organizational conditions. Likewise, the Global Education Monitoring Report Team (2024)

highlights that shared leadership can strengthen collaboration and enhance school practices.

Recent empirical studies also support the role of sustainable leadership. Dağdeviren-Ertaş (2024) found that sustainable leadership contributes positively to school effectiveness by promoting learning, innovation, and responsibility. Perveen and Begum (2025) also reported that principals' sustainable leadership practices were linked with teacher performance and school effectiveness.

Financial Resources and Green School Practices

Sufficient funding to sustain "Green School" activities is essential. There is a need in many schools for financial resources to develop recycling facilities, to take care of the rubbish, to plant trees, to provide clean water, to educate and promote environmental consciousness, and to improve the use of energy. Schools will experience challenges implementing environmental programs if they do not have adequate financial resources.

But previous studies show that just investing money is not enough to get sustainable results. An effective use of resources needs to be complemented with leadership, instruction, school management and community involvement, as UNESCO (2024a) highlights. In addition, Husin et al. (2025) highlight the need for proper planning and institutional support for environmental education programmes. This means that funding is key to good implementation, but the implementation of those funds in turn is what it's all about.

In Pakistan, Urooj et al. (2024) revealed that a lack of financial support and institutionalization are the main challenges in developing green leadership in secondary schools. It is applicable in the present study because it implies that financial resources must be investigated along with the aspects of leadership and teacher collaboration and not in isolation.

Teacher Cooperation and Green School Culture

Another important element of an effective green school is teacher collaboration. Teachers are regularly engaged in classroom teaching to

support students' direction, environmental work, and school activities, etc., directly. Through collaborative effort and support to the students from their teachers and the school leadership, students are able to have more opportunities to develop their awareness of the environment through both classroom practice and a hands-on approach.

Afrikanov (2023) emphasized how teacher cooperation can contribute to increasing awareness about the environment and sustainable development. Khasawneh et al. (2023) also emphasized the significance of collaboration among teachers in the context of professional learning communities. Also, Nilawati et al. (2025) concluded that there is an interrelationship between the role of the principal, teachers, and school staff in promoting the green campus culture. Teacher collaboration is more directly connected to students' day-to-day learning experience, compared to leadership and resources. School leaders may define the objectives of green initiatives and financial aid may be available to help implement them, but it is the teachers who make them a part of classroom learning and school life. Thus, the link between school planning and the practices of a green campus is teacher cooperation.

Synthesis of Previous Studies and Research Gap

Many studies focus especially on school leadership, since leaders set the direction, organize staff, and manage change (Dağdeviren-Ertaş, 2024; Ghamrawi, 2023; Perveen & Begum, 2025). Similarly, other studies emphasize that leadership works better when teachers and staff are actively involved (Khasawneh et al., 2023; Nilawati et al., 2025).

Literature also shows some differences. Some studies regard leadership as the strongest factor, while other studies point out that without teacher collaboration, funding, and institutional support, leadership cannot bring about long-term change. Alkhamaiseh et al. (2025) also argue that sustainable leadership in education is related to systems thinking, shared responsibility, and long-term impact. This means that the effectiveness of

green schools should not be studied based on a single factor alone.

Most of the existing studies have been conducted outside of Pakistan, and research on the effectiveness of green schools within Pakistan remains relatively limited. Existing local studies mainly discussed environmental education, green leadership, or environmental practices (Habib, 2024; Urooj et al., 2024). Few studies explore how leadership skills, financial resources, and teacher collaboration work together in model schools in Islamabad. This study aims to fill this gap by examining the relationship between these three factors and the effectiveness of green schools.

Transformational Leadership Theory and Its Relevance

This study is based on transformational leadership theory, which was initially proposed by Bass (1985) and further expanded by Bass and Avolio (1994). The theory posits that leaders pursue the organization's common goals together with their followers through motivating, mobilizing, supporting, and guiding them. It is considered based on the four dimensions – idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration.

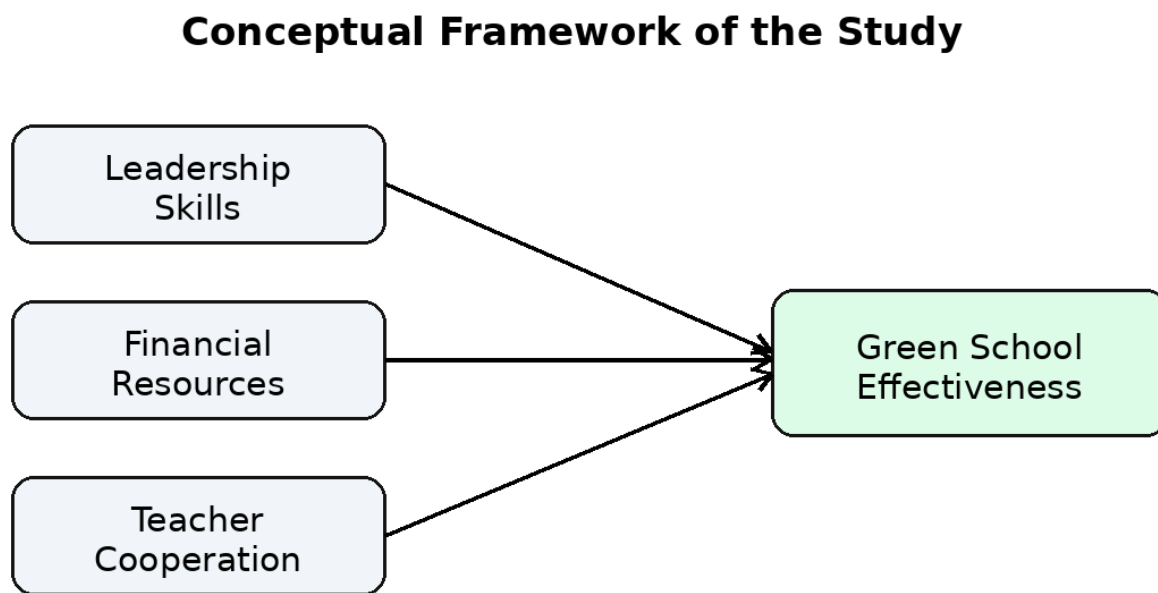
The choice of the theory of transformational leadership is more pertinent to this study as being a green school is not only about routine administration. A principal must be able to craft a vision together, inspire his or her staff, foster creative thinking and team work, and use resources wisely. Those leadership behaviours are linked to the variables studied in this study. Specifically, leadership skills are correlated with the theory's focus on vision and leadership; collaborative teachers are with aspects of teamwork and shared responsibility; and financial resources with the leaders' strategic planning and the ability to marshal resources for common institutional objectives.

Such a theory is more appropriate than a purely transactional or purely instructional perspective of leadership, as the Green School initiative needs constant commitment, trust, creativity, and

collective ownership. The former, transactional leadership, is more oriented towards getting things done and with rewards, and the latter, instructional leadership, is more oriented towards teaching and towards curriculum. However, the role of principals in inspiring teachers and establishing a school environment for environmental responsibility is more effectively explained by transformational leadership.

Conceptual Framework

Figure 1. *Conceptual Framework of the Study*



Transformational Leadership Theory guides the relations

Research Methodology

Research Design

A quantitative correlational research design was adopted for the present study, which aimed at studying the relationship between school leadership factors and green school effectiveness in Model Schools of Islamabad. Creswell and Creswell (2023) state that quantitative research is useful when researchers want to measure variables objectively and examine relationships through statistical procedures.

The correlational design was well-suited because the study focused on whether leadership skills, financial resources, and teacher cooperation were

The conceptual framework of the study shows that leadership skills, financial resources, and teacher cooperation are the independent variables, while green school effectiveness is the dependent variable. The framework assumes that higher levels of leadership skills, better availability and use of financial resources, and stronger teacher cooperation are positively related to green school effectiveness.

related to green school effectiveness. The design did not aim to prove cause and effect; rather, it examined the strength and direction of relationships among the variables.

Population of the Study

The respondents of the study were the school heads and teachers at the Model Schools under the Federal Directorate of Education (FDE) Islamabad. The respondents were chosen because they are actively involved in school leadership, management, teaching, and implementing environmental activities in schools directly. They were deemed to be significant in the study of the relationship between school leadership factors

and the effectiveness of green schools because of their experiences and perceptions.

Sampling Technique and Sample Size

Simple random sampling was used to select the respondents. This technique was appropriate because the accessible population was clearly defined, and each member of the population had a chance of being selected. Simple random sampling also reduces selection bias and improves the representativeness of the sample (Creswell & Creswell, 2023).

The accessible population included around 420 school heads and teachers from Model Schools under FDE, Islamabad. The Krejcie and Morgan (1970) sample size table was used to determine the sample size. The study comprised 200 respondents, including 105 men (52.5%) and 95 women (47.5%).

Research Instrument

A structured questionnaire was used for data collection. The questionnaire was split into two sections: the first part was demographic, and the second part contained statements to measure leadership ability, financial resources, teacher collaboration, and effectiveness of the green school. All items were measured using a 5-point

Likert scale from (1) strongly disagree to (5) strongly agree.

There are 45 items (excluding the demographic section) in the questionnaire. There are 16 items on the leadership skills scale, adapted from the Multifactor Leadership Questionnaire (MLQ) created by Bass and Avolio (1995). These items measured the 4-dimensional scales of transformational leadership—idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration – and were adapted to the practices of school leaders within the framework of green school.

The financial resources scale contains 10 items addressing the availability and use of financial resources for environmental activities such as tree planting, recycling, waste management, energy saving, and raising awareness. There are 10 items in the teacher collaboration scale, for collaboration, joint planning, sharing ideas, and participation in environmental activities. The green school effectiveness scale has 9 items which measure the practice of environmental issues within school life. The options in these three scales were modified from recent studies related to sustainable leadership (Afrikanov, 2023), teacher collaboration (Husin et al., 2025; Nilawati et al., 2025), and green schools (UNESCO, 2024a).

Table 1: *Distribution of Questionnaire Items*

Scale	Number of Items	Main Focus
Leadership Skills	16	Vision, motivation, support, innovation, and individual guidance
Financial Resources	10	Availability and use of resources for green school activities
Teacher Cooperation	10	Collaboration, shared planning, and participation
Green School Effectiveness	9	Implementation of environmental practices in school
Total	45	Main study variables

Validity and Pilot Testing

The content of this questionnaire was examined for content validity by a panel of three educational

leadership and research methods experts. The experts studied the clarity, relevance, and suitability of the questions for the purposes of the study. Before the final data collection, their

suggestions were taken into consideration. Expert review is a useful method for improving the content validity of survey instruments (Taherdoost, 2016). The pilot study was carried out prior to the main data collection to determine if the questions on the questionnaire were consistent and reliable.

Reliability of the Instrument

The reliability of the questionnaire was checked by using Cronbach's Alpha. The internal consistency of the overall scale was good ($\alpha = .89$). This indicates the consistency of the measurement of the study variables in the questionnaire items. Taber (2018) stated that the acceptable Cronbach's Alpha in educational and social science research is 0.70. Hence, it was concluded that the questionnaire was reliable and appropriate to gather the data from the study participants.

Data Collection Procedure

The researcher personally went to the selected schools with permission from the relevant education officials and principals to gather information. The purpose of the study was clearly explained to the participants before giving the questionnaires. It was explained to the participants that their presence was voluntary and time was provided to complete the questionnaire. The questionnaires were returned on the same day, if possible, to obtain a high response rate. After collection, all questionnaires were checked carefully to make sure that the responses were complete. After that, data were analyzed using IBM SPSS Statistics Version 27.

Ethical Consideration

Proper research guidelines were followed in conducting the study. Before collecting data, permission was obtained from the concerned educational authorities. The participants were well informed about the purpose of the study. They were also told that they could drop out of the study at any time, without any repercussions. Confidentiality and anonymity were maintained during the study. In the data analysis and in the final report, no personal information of the respondents was used. The participants' rights were respected, and the process of the research was fair, respectful, and trustworthy through these ethical steps.

Data Analysis

IBM SPSS Statistics Version 27 was used to analyze the data collected. Demographic characteristics of the respondents and the level of each of the study variables were summarized using descriptive statistics such as frequency, percentage, mean, and standard deviation. Pearson Product-Moment Correlation analysis was employed to examine the relationship between the leadership attributes, financial support, and teacher cooperation with green school effectiveness. An independent-samples t-test was used to compare the perception of male and female respondents on the effectiveness of Green School. A p-value of $< .05$ was statistically significant and commonly accepted by educational researchers.

Results and Findings

Demographic Information of the Respondents

Table 2: *Gender Distribution of the Respondents (N = 200)*

Gender	Frequency	Percentage (%)
Male	105	52.5
Female	95	47.5
Total	200	100.0

Table 2 shows that the study included 200 respondents, comprising 105 (52.5%) male and 95 (47.5%) female participants, which represents

a balanced comparison of their perceptions regarding the effectiveness of a green school.

Descriptive Statistics

Table 3: *Descriptive Statistics of the Study Variables*

Variable	M	SD	Interpretation
Leadership Skills	4.13	0.59	High
Financial Resources	3.70	0.67	High
Teacher Cooperation	4.09	0.56	High
Green School Effectiveness	4.18	0.53	High

Table 3 presents the descriptive statistics of the variables in this study. The results show that green school effectiveness had the highest average score ($M = 4.18$, $SD = 0.53$), indicating that respondents generally believed that the practices of green schools were effectively implemented in their schools. Leadership ability also received a relatively high average score ($M = 4.13$, $SD = 0.59$), showing that principals were perceived to demonstrate effective leadership practices. Teacher collaboration similarly recorded a high average score ($M = 4.09$, $SD = 0.56$), reflecting good cooperation among teachers in supporting

environment-related activities. Although financial resources had the lowest average score among the four variables ($M = 3.70$, $SD = 0.67$), it still reflected general agreement among respondents.

Hypothesis Testing

Objective 4: To examine the relationship between leadership skills, financial resources, teacher cooperation, and green school effectiveness.

H₀1: There is no significant relationship between leadership skills, financial resources, teacher cooperation and green school effectiveness

Table 4: *Pearson Correlation Matrix for the Study Variables (N = 200)*

Variables	1	2	3	4
1. Leadership Skills	—			
2. Financial Resources	.49**	—		
3. Teacher Cooperation	.57**	.45**	—	
4. Green School Effectiveness	.73**	.54**	.68**	—

$p < .01$ (2-tailed).

Table 4 shows the correlation between the study variables. The results indicate that leadership skills were positively related to green school effectiveness with a strong correlation ($r = .73$, $p < .01$). This indicates that the more effective the leadership skills, the greater the chances of successfully implementing green school practice.

The results also showed a moderate positive correlation between financial resources and green school effectiveness ($r = .54$, $p < .01$). This implies that financial support is provided to schools for the arrangement of environment-related activities and facilities. But without good use of the funds,

with planning and leadership, they are not sufficient.

In the same way, the involvement of teachers was significantly and positively correlated with green school effectiveness ($r = .68$, $p < .01$). The results revealed that collaboration and involvement of teachers with environmental activities make green school programmes more effective.

The overall results indicate that there was a positive and significant relationship between all three factors, leadership skills, financial resources, and teacher cooperation, and the success of green schools. Leadership skills had the highest

correlation, followed by teacher cooperation, and financial resources had a moderate correlation. So, the null hypothesis was rejected.

Discussion

This study examined the relationship between leadership skills, financial resources, teacher cooperation, and green school effectiveness in Model Schools of Islamabad. The findings showed that all three factors were positively and significantly related to green school effectiveness. In other words, a school with good transformational leadership and with inter-teacher cooperation which makes the best use of its available resources is more likely to have successfully introduced green school practices.

Leadership ability is most highly correlated with the effectiveness of the green school ($r = .73$). That finding indicates that principals are a key part of the process of green schools. Principals have authority to define the direction, inspire teachers, arrange environment-related activities, and determine the utilization of available resources. The result is congruent with the results of Perveen and Begum (2025) and Dağdeviren-Ertaş (2024), who stated that Sustainable leadership contributes to effectiveness in schools. It also supports Ghamrawi's (2023) view that school leadership is crucial for achieving education improvements related to sustainable development.

As the principal coordinates, this is another reason that there is a strong correlation between the effectiveness of green schools and the relationship between the principal and leadership. Even if a school has financial resources and teacher collaboration, it is still necessary to have school leadership to make it action oriented. This indicates that leadership could not be one of the several elements; it can be an element that can make resources operate better. In this study, however, since the data have been collected using a correlational method, causation cannot be proven. Future studies may be done using mediation or path analysis to test the concept.

Another important aspect of green schools that is closely related is the cooperation between

teachers ($r = .68$). This is similar to the result of Nilawati et al. (2025) that building green school culture requires collaboration between principals, teachers, and the school community in general. In the same vein, Khasawneh et al. (2023) noted that collaboration is an essential component of school improvement and effectiveness. Schools are green when teachers, as the main players of the show, do their utmost to incorporate the concept of the environment into their classroom and extracurricular activities. Thus, teamwork of teachers enables daily implementation of environmental practices, which are integrated into the school routines as an essential tool.

The relationship between the financial resources and effectiveness of green schools is moderately positive ($r = .54$); it means that finances can be a very important facilitating factor, but that on its own, financing is not enough to secure successful implementation of green school practices. There should be sufficient funds for programmes like tree planting, waste collection and management, recycling, environmental awareness-raising and energy saving. But their performance is subject to the efficiency of planning, allocation and management of the resources. The result aligns with the study of Urooj et al. (2024), who reported that financial difficulties are one of the greatest challenges in the implementation of green leadership practices at schools in Pakistan. Coincidentally, findings of this study indicate that a high level of transformational leadership and effective teacher collaboration can positively influence the effective utilization of existing financial resources, leading to good overall effectiveness.

The results of this study support the transformational leadership theory, empirically (Bass, 1985; Bass & Avolio, 1994). According to this theory, good leaders can energize, inspire, and empower people to work together towards the objectives of the organization. In line with this theoretical lens, schools with strong transformational leadership, more teacher collaboration, and more effective use of educational resources have high green school effectiveness. These results indicate that

transformational leadership fosters the positive atmosphere that builds shared buy-in and helps to create successful implementation of environmental programs. Also, leadership practices are used for development of twenty-first century skills and teacher development (Afzal et al., 2026; Haram et al., 2026; Jamil et al., 2024). The results, however, also show that it can only partially explain the effectiveness of green schools based on transformational leadership theory. Other balancing factors, including institutional policies, monitoring and evaluation systems, organizational atmosphere, and administrative assistance, can also contribute to the success or failure in the implementation of green school practices besides leadership. This is according to Kandemir (2024), who considers that conditions in an organization have an impact on the extent to which transformational leadership can produce the desired results in the educational system.

The research results indicate that school leaders should start the improvement process of the school by planning clearly, involving teachers within the school, and appropriately using and consuming the resources. For the teachers, the results indicate that cooperation is not an additional activity, but part of sustainability work. The results indicate that leadership training, resource monitoring and school-level environmental planning should be enhanced in Model Schools from the perspectives of policymakers and FDE.

Conclusions

The conclusions of this study are that leadership, teacher collaboration and financial resources are positively related to the effectiveness of schools' green practices in the Islamabad Model Schools. Of these factors, leadership demonstrates the most positive correlation, followed by teacher collaboration and financial resources. The results of this research indicate that the practices seen in a green school are largely dependent on the process led by the principals, the collaboration between teachers, and the resources at hand. While financial support plays a role, it is more significant when coupled with robust leadership

as well as teacher action. This research provides some evidence in the local context, with the few studies done in Pakistan on 'green schools'. It also illustrates a leadership theory that has been experienced in schools and provides evidence for the theory that vision leadership, leadership by motivation, support, and cooperation can enable schools to better implement environmental practices.

Recommendations

With the results of the study, the following recommendations are made:

- The Federal Department of Education (FDE) can carry out regular professional development courses for principals emphasizing sustainable leadership, environmental planning, and effective resource coordination.
- Annual action plans for school greening should be produced, and action should be taken by principals, with well-stated targets for tree planting, waste minimization, recycling, water saving and energy saving actions.
- Schools can set up environmental committees to encourage teacher collaboration through teachers from various disciplines to coordinate planning and implementation of environmental programmes, given the tight linkage between teacher collaboration and the success of green schools.
- Closed loop for green school activities, with formal planning and coordination instead of informal collaboration between teachers, to ensure involvement.
- Financial resources are moderately associated with the application of green schools; schools should create separate provision budgetary items, and schools should keep records on the allocation and use of funds in a transparent manner regarding green aspects.
- Simple monitoring and evaluation should be implemented in the Federal Department of Education (FDE) for the Green School Program, where checklists will be created

every semester for purposes of evaluating the amount of tree planting, school cleanliness, recycling, environmental awareness and energy saving.

- Schools should report a short-term report on the Green School progress at the end of each year to the FDE to find out what works best for experiencing progress and what further need for improvement exists.
- Environmental education should be integrated into all school education curricula and activities as well as into the morning

assembly and school development plan in a systematic way, incorporating the development of students' environmental consciousness and implementing green lifestyles.

- Schools can incorporate the expertise and resources of the surrounding community and/or organizations into school-based green projects, highlighting the need for other partners to support the planning, teaching, and enhancing green schools.

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