

The Role of Employee Green Behaviors in Green Teacher Performance in the Madrasah Environment in Medan City with an Organizational Ambidexterity and Green Self-Efficacy Approach

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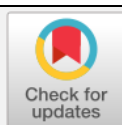
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ABSTRACT

This study examines the influence of employee green behavior on the performance of green instructors in the Madrasah context in Medan City, using the frameworks of organizational ambidexterity and green self-efficacy. Adopting a quantitative research methodology, the study utilized surveys as the primary data collection tool. The research population consisted of all Madrasah instructors in Medan City, totaling 229 individuals, who also served as the research sample. Data analysis was conducted using quantitative statistical methods, specifically path analysis. Primary data were collected through surveys, while secondary data were obtained from official Madrasah records. The findings reveal that instructors' green self-efficacy in Madrasahs in Medan City is significantly influenced by their green behavior. Moreover, environmentally sustainable practices positively impact organizational ambidexterity, which in turn affects teacher performance. However, organizational ambidexterity does not have a direct significant influence on green teacher performance. Conversely, employee green behavior indirectly enhances teacher performance through its effects on organizational ambidexterity and green self-efficacy.

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1. Introduction

Education is deeply intertwined with humanity, as it is a fundamental necessity for life (Z. Liu et al., 2022). In Indonesia, education is regarded as a cornerstone of societal development, with communities striving for its continual improvement. Education can be understood as a lifelong process designed to maximize human potential, enable individuals to navigate life effectively and promote literacy. This process nurtures individuals who can make meaningful contributions to their nation and society (Priyambodo & Hasanah, 2021). Moreover, education plays a critical role in shaping individual character and moral standards, aligning personal values with societal expectations. Recognizing its importance, the government prioritizes the education sector to ensure its growth and development. A strong education system equips the next generation with essential skills, adaptability, and the ability to contribute to society and the nation.

The effectiveness of education is largely determined by teacher performance, which includes planning lessons, delivering instruction, assessing student outcomes, and fulfilling professional responsibilities. Teacher performance is closely tied to the teaching and learning process, particularly the educator's ability to create a conducive environment for educational engagement with students. This involves fostering cognitive, affective, and psychomotor development (Saleem et al., 2024). The teacher's workflow typically progresses from planning to evaluation, followed by actions aimed at achieving educational objectives.

A study by Fahmi et al. highlights several indicators of suboptimal teacher performance in improving the quality of learning (Fahmi et al., 2022). Common issues include tardiness, failing to notify absences, inadequate preparation for lessons, and a lack of moral guidance provided to students. Furthermore, interactions between educators and Madrasah principals often revolve solely around administrative tasks, such as completing the Job Performance Assessment List (*Daftar Penilaian Pelaksanaan Pekerjaan*, DP3), preparing the Lesson Plan (*Rencana Pelaksanaan Pembelajaran*, RPP), developing syllabi, and managing other educational documentation. A lack of motivation among educators has been identified as a key factor contributing to diminished teacher performance, ultimately hindering the effectiveness of the learning process.

The Government of the Republic of Indonesia has made efforts to enhance teacher performance through Law Number 14 of 2005 concerning Teachers and Lecturers, which defines educators as professionals responsible for educating, teaching, directing, assessing, and evaluating students at various educational levels. Effective leadership from school or madrasah principals plays a critical role in motivating educators to fulfill their responsibilities with dedication, thereby improving overall educational outcomes. Moreover, organizational ambidexterity – defined as the ability to balance innovation and established practices – has been shown to significantly enhance institutional flexibility and performance (Aftab et al., 2022). Proficient transformative leadership can foster ambidexterity by creating an environment of psychological safety and encouraging collaboration and exploration among educators (Chen et al., 2022; F. Zhao et al., 2024).

Eco-friendly behaviors among staff are also essential for enhancing teacher effectiveness, particularly in the context of addressing pressing environmental challenges such as climate change and deforestation. Integrating environmental literacy and self-efficacy into teaching practices aligns with the Curriculum 2013 framework, which emphasizes the cognitive, emotional, and psychomotor domains as essential components of sustainability education. These competencies enable educators to incorporate environmental principles into their teaching, fostering student engagement and awareness of global sustainability issues.

Enhancing teacher effectiveness is critical for achieving improved learning outcomes. However, the implementation of new regulations and management strategies often faces challenges, such as resistance from educators who are accustomed to previous conditions and reluctant to adapt, even when their current practices show limited improvement in quality (Ji & Yoon, 2021). In response, madrasah-based institutions in Medan City have adopted an inclusive educational model that incorporates a nature-oriented curriculum tailored to students' abilities and interests. This approach emphasizes student autonomy while encouraging educators to develop multiple intelligences and diverse teaching capabilities. As a result, exemplary teacher performance becomes a cornerstone for unlocking student potential and elevating the quality of education in Madrasahs.

This research introduces an innovative perspective by exploring the relationship between staff green behaviors and green teacher performance through the lenses of organizational ambidexterity and green self-efficacy. Specifically, it examines how staff green behaviors influence green teacher performance in Madrasahs across Medan City, utilizing a comprehensive methodology that integrates these two pivotal concepts to assess their impact.

2. Literature Review

2.1. Employee Green Behavior

Green behavior refers to actions taken by individuals to protect and preserve the environment in their immediate surroundings (Akram et al., 2024). Such behaviors are essential for fostering environmental sustainability, particularly in the context of rising ecological challenges. Public awareness of eco-friendly practices is shaped significantly by community engagement and concern for the environment, highlighting the importance of collective responsibility in promoting sustainable habits (Yuan et al., 2024).

An intriguing aspect of green behavior lies in its connection to place identification and environmental consciousness, where individuals develop a sense of attachment and responsibility toward their surroundings (Kusmantini et al., 2021). This emotional connection not only encourages environmentally friendly practices but also reinforces their integration into daily life as a lifestyle choice. Adopting green behavior as a way of life can foster a harmonious balance between human activity and nature, enabling both to thrive (Luo et al., 2024).

2.2. Organizational Ambidexterity

Organizational ambidexterity empowers educators to balance the exploration of innovative teaching approaches with the application of established methodologies, enabling the effective integration of sustainability into education (F. Zhao et al., 2024). By granting teachers the autonomy to experiment, institutions can foster creative methods for addressing environmental and sustainability topics, thereby improving the quality of sustainability-oriented education (Jabeen et al., 2024; Úbeda-García et al., 2022).

This ambidextrous approach enhances educators' competencies in sustainability, equipping them with the skills to manage green technologies and incorporate natural resources into their

teaching practices (Tang et al., 2022). Furthermore, promoting sustainable practices within organizations can boost teachers' job satisfaction and motivation, encouraging innovation and fostering a sense of purpose (Altaee et al., 2024). These factors increase educators' commitment to their institutions and inspire them to embed sustainability principles into their pedagogical approaches (Chen et al., 2022).

Organizations that effectively adopt ambidexterity establish a balance between conventional teaching requirements and creative efforts to address environmental objectives. Such efforts include waste management, green project-based learning, and fostering environmental consciousness within educational institutions (W. Zhao et al., 2021). This balance not only supports teachers in meeting curricular demands but also contributes to broader sustainability goals.

2.3. Green Self-Efficacy

Green self-efficacy plays a crucial role in fostering environmentally responsible workplace practices and advancing sustainability in education. Educators with strong self-efficacy beliefs are better equipped to integrate sustainability principles into their teaching methodologies, enhancing their confidence in addressing environmental issues and developing innovative instructional approaches (Amjad et al., 2024; Song et al., 2024). Research shows that such educators are more proactive in implementing sustainability-oriented pedagogy, benefiting students by promoting not only academic success but also environmental awareness and character development (Haque et al., 2024; Shahbaz et al., 2024).

Green self-efficacy also supports educators in crafting comprehensive and relevant instructional materials, fostering classroom climates that engage students with global environmental concerns (Filimonau et al., 2024; Y. Liu et al., 2024). While logistical challenges, curriculum demands, and institutional constraints often inhibit creativity, educators with strong self-efficacy are more likely to overcome these barriers and adopt innovative teaching practices that enhance classroom management and the overall quality of education (Olorunsola et al., 2024).

2.4. Green Teacher Performance

Green teacher performance equips educators with the knowledge, skills, and competencies necessary to effectively integrate environmental sustainability into their teaching practices (Bahmani et al., 2023). Educators who prioritize sustainable practices advocate for principles such as ecological awareness, resource conservation, and sustainable living. These efforts not only enhance students' understanding of environmental issues but also promote critical and creative thinking skills, preparing them for global challenges (Kuo et al., 2022; Q. Liu & Wang, 2022).

Incorporating sustainability principles into education has broader institutional benefits. Schools that emphasize environmentally conscious practices can strengthen their reputation as advocates for planetary welfare, attracting students and stakeholders who share similar values (Landa & Donaldson, 2022; Ratnamiasih et al., 2022). Furthermore, educators who adopt eco-friendly technologies and reduce resource consumption contribute to operational efficiency while modeling sustainable behaviors for their students (Makhloufi et al., 2024).

Effective green teacher performance often extends beyond the classroom. Educators engage students, parents, and the community in initiatives that emphasize environmental awareness, fostering a collective sense of responsibility and belonging (Muhammad Ali & Nisar, 2023;

Zheng et al., 2022). This approach not only strengthens support for institutional efforts but also reinforces the role of education in driving sustainable change.

2.5. Conceptual Framework

The conceptual framework of this study illustrates the interconnected relationships between green behaviors, organizational ambidexterity, green self-efficacy, and green teacher performance. Specifically, green behaviors are proposed to directly influence organizational ambidexterity and positively impact green self-efficacy. These environmentally friendly practices also have an indirect effect on green teacher performance through their influence on organizational ambidexterity and green self-efficacy.

Furthermore, organizational ambidexterity plays a crucial role in enhancing green teacher performance by fostering flexibility and adaptability in teaching approaches. Similarly, green self-efficacy directly contributes to the effectiveness of green educators by boosting their confidence in integrating sustainability principles into their instructional practices. Collectively, staff green behaviors, organizational ambidexterity, and green self-efficacy form a comprehensive pathway that supports the advancement of green teacher performance.

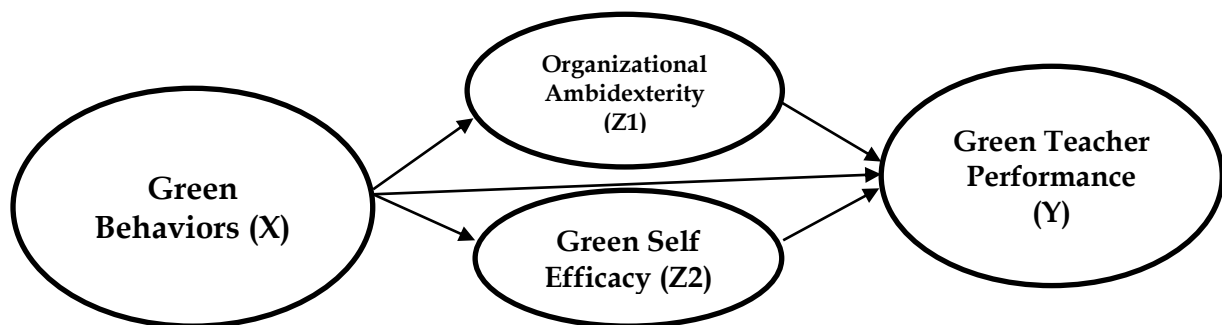


Figure 1. Conceptual Research

3. Research Methodology

This study adopts a quantitative methodology, incorporating both quantitative and qualitative elements throughout the research process. This approach integrates the formulation of research questions, data collection, analysis, and the development of actionable recommendations. Quantitative methods, specifically surveys, were used as the primary data collection tool.

The study's population and sample consisted of 229 educators from Islamic educational institutions (madrasahs) in Medan City, Indonesia. These madrasahs were divided into three levels:

- 1) Madrasah Ibtidaiyah (MI): Equivalent to elementary schools, with 97 teachers.
- 2) Madrasah Tsanawiyah (MTs): Equivalent to junior high schools, with 95 teachers.
- 3) Madrasah Aliyah (MA): Equivalent to senior high schools, with 37 teachers.

The data analysis employed quantitative analytical techniques, utilizing statistical tools as outlined by Ghazali. Primary data were gathered through responses to structured questionnaires, while secondary data were sourced from official institutional records (Ghozali, 2013). For deeper insights, the study applied path analysis, a statistical approach used to assess the relationships between variables and evaluate their direct and indirect effects.

4. Results

4.1. Respondent Demographics

The demographic profile of the respondents provides an essential understanding of the study's participants, including their gender, age, educational background, and madrasah affiliation. The details are summarized in **Table 1** below:

Table 1. Respondent Demographics

Variable	Measurement	N	Percentage (%)
Gender	Male	92	40%
	Female	137	60%
Age	20–25 Years	34	15%
	26–30 Years	68	30%
	31–35 Years	48	21%
	36–40 Years	79	35%
Last Education	Undergraduate (S1)	169	74%
	Graduate (S2)	59	26%
Madrasah Origin	Madrasah Ibtidaiyah	97	43%
	Madrasah Tsanawiyah	95	42%
	Madrasah Aliyah	37	15%
Total Respondents		229	100%

Source: Data processed by the author, 2024

The demographic data presented in **Table 1** provides a comprehensive overview of the study's respondents. In terms of gender, female participants dominated the sample, comprising 137 individuals (60%), while male participants accounted for 92 individuals (40%). This highlights a higher representation of female educators in the study.

The age distribution indicates that the largest group of respondents, making up 35% of the sample, were aged 36–40 years. This was followed by the 26–30 years age group (30%), the 31–35 years age group (21%), and the 20–25 years age group, which had the smallest representation at 15%. These figures reflect the predominance of middle-aged educators in the sample.

Regarding educational attainment, the majority of respondents held an undergraduate degree (S1), with 169 individuals (74%). Meanwhile, 59 respondents (26%) had completed graduate education (S2). This suggests that most educators in the study had foundational qualifications, with a smaller proportion pursuing advanced education.

Participants were also categorized based on their madrasah affiliation. The largest group, comprising 97 educators (43%), came from Madrasah Ibtidaiyah (equivalent to elementary schools). Educators from Madrasah Tsanawiyah (MTs) (junior high schools) accounted for 95 individuals (42%), while Madrasah Aliyah (senior high schools) had the smallest representation, with 37 respondents (15%). This distribution demonstrates the significant involvement of elementary-level educators compared to those at higher levels.

4.2. Outer Model Results

The outer model evaluates the measurement constructs, ensuring that the data satisfies reliability and validity requirements. Validity is assessed through factor loadings and Average

Variance Extracted (AVE), while reliability is measured using Cronbach's alpha and composite reliability. These metrics confirm the adequacy of the measurement model for further structural analysis.

The results of the outer model analysis are summarized in **Table 2**, which provides the factor loadings, Cronbach's alpha, composite reliability, and AVE for each construct. All constructs meet the threshold values, indicating that the indicators reliably measure their respective latent variables.

Table 2. Convergent Validity

Variable	Code	Outer Loading	Cronbach's Alpha	Composite Reliability	AVE
Green Behaviors (X)	X.1	0.771	0.788	0.845	0.652
	X.2	0.754			
	X.3	0.736			
	X.4	0.816			
	X.5	0.759			
	X.6	0.734			
	X.7	0.797			
Organizational Ambidexterity (Z1)	Z1.1	0.833	0.834	0.879	0.548
	Z1.2	0.723			
	Z1.3	0.731			
	Z1.4	0.706			
	Z1.5	0.704			
	Z1.6	0.737			
Green Self-Efficacy (Z2)	Z2.1	0.828	0.934	0.946	0.716
	Z2.2	0.844			
	Z2.3	0.885			
	Z2.4	0.879			
	Z2.5	0.879			
	Z2.6	0.847			
	Z2.7	0.756			
Green Teacher Performance (Y)	Y.1	0.793	0.947	0.954	0.633
	Y.2	0.828			
	Y.3	0.861			
	Y.4	0.841			
	Y.5	0.779			
	Y.6	0.845			
	Y.7	0.831			
	Y.8	0.775			

All constructs have composite reliability values exceeding 0.7, demonstrating stable and consistent measurement outcomes. Additionally, Cronbach's alpha values above 0.6 confirm the internal consistency of the indicators. The AVE values for each construct are above the minimum threshold of 0.5, further validating the model's convergent validity.

Figure 2 visually represents the outer model, illustrating the relationships between latent variables and their observed indicators, as well as the factor loadings for each path.

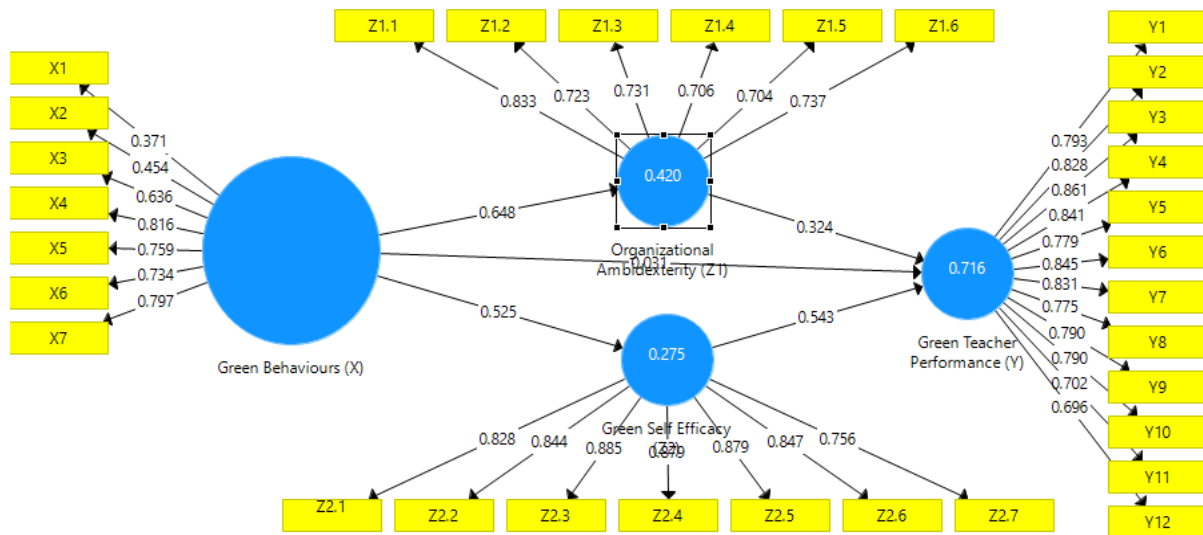


Figure 2. Measurement Model

4.3. Inner Model Results (Structural Model)

The inner model evaluates the hypothesized relationships between latent variables and their direct and indirect effects. This includes examining path coefficients, T-statistics, and P-values derived from the bootstrapping technique. The results of hypothesis testing are summarized in **Table 3**.

Table 3. Hypothesis Testing

Path	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Green Behaviors (X) → Green Self-Efficacy (Z2)	0.525	0.558	0.107	4.882	0.000
Green Behaviors (X) → Organizational Ambidexterity (Z1)	0.648	0.667	0.088	7.338	0.000
Green Behaviors (X) → Green Teacher Performance (Y)	0.324	0.345	0.138	2.338	0.020
Organizational Ambidexterity (Z1) → Green Teacher Performance (Y)	0.031	0.013	0.102	0.307	0.031
Green Self-Efficacy (Z2) → Green Teacher Performance (Y)	0.543	0.539	0.132	4.096	0.000
Green Behaviors (X) → Organizational Ambidexterity (Z1) → Green Teacher Performance (Y)	0.510	0.575	0.224	3.196	0.001
Green Behaviors (X) → Green Self-Efficacy (Z2) → Green Teacher Performance (Y)	0.382	0.435	0.219	1.524	0.328

The hypothesis testing results indicate the following:

1) Significant Direct Effects

- Green Behaviors (X) significantly influence Green Self-Efficacy (Z2) and Organizational Ambidexterity (Z1), as indicated by T-statistics greater than 1.96 and P-values below 0.05.
- Green Self-Efficacy (Z2) significantly impacts Green Teacher Performance (Y).

2) Partial Significance of Indirect Effects

- The mediating effect of Organizational Ambidexterity (Z1) on the relationship between Green Behaviors (X) and Green Teacher Performance (Y) is significant.
- However, the mediating effect of Green Self-Efficacy (Z2) on the same relationship does not achieve statistical significance ($P = 0.328$).

Figure 3 provides a comprehensive visualization of the structural model, illustrating the hypothesized relationships between constructs, path coefficients, and T-statistics. This figure complements the numerical results by offering a visual representation of the model's pathways and their statistical significance.

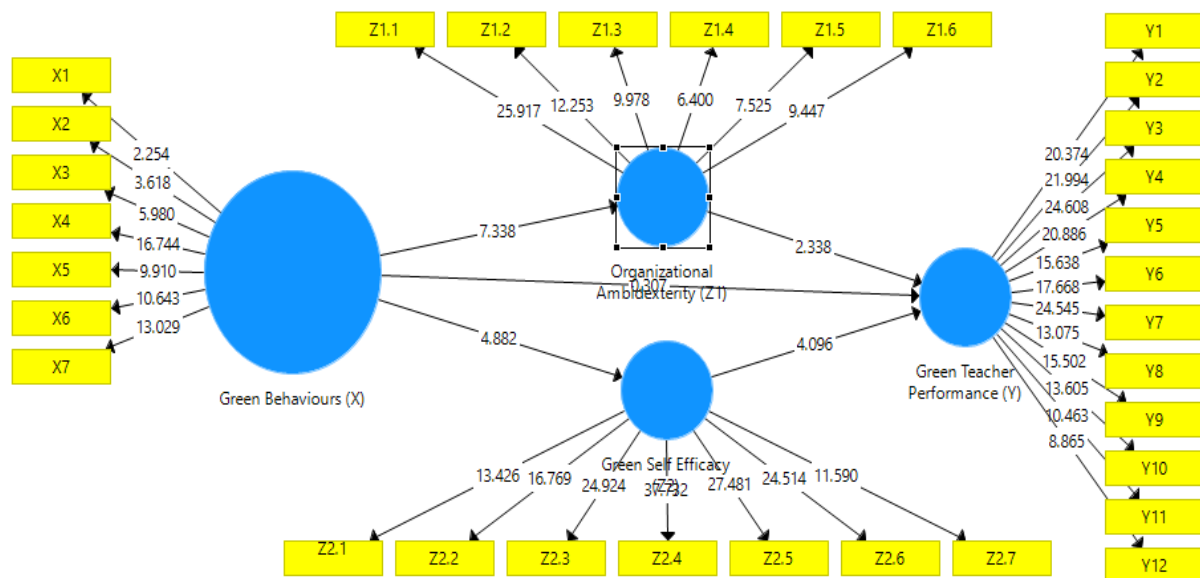


Figure 3. Structural Model with Path Coefficients and T-Statistics

5. Discussion

5.1. The Effect of Green Behaviors on Organizational Ambidexterity

This research found that environmentally sustainable practices have a direct and significant impact on the organizational ambidexterity of educators in madrasahs located in Medan City. The findings suggest that promoting eco-friendly behaviors among educators can foster a culture that is both innovative and attuned to environmental, social, and economic concerns. Madrasahs adopting sustainable practices can create an atmosphere conducive to the exploration of new ideas while simultaneously optimizing existing methodologies for greater efficiency.

The results align with previous studies, demonstrating that green behaviors directly influence organizational ambidexterity by enhancing collaborative efforts and fostering innovation (Lyu et al., 2022; Yuan et al., 2024). Madrasahs that prioritize both educational excellence and environmental sustainability are better positioned to gain the trust of parents

and the broader community, improving their reputation and ability to attract students (Mandal & Pal, 2024). Moreover, the implementation of green practices within madrasahs not only strengthens individual contributions but also enhances teamwork among educators, enabling the development of a sustainable curriculum and innovative teaching strategies (Luo et al., 2024).

5.2. The Influence of Green Behavior on Green Self-Efficacy

This study found that green behaviors significantly influence the green self-efficacy of teachers in the Madrasah environment in Medan City. The findings highlight the successful integration of environmentally sustainable practices, such as cultivating greenery around the institution, preserving trees to support water retention, and utilizing natural daylight to mitigate global warming. These actions reflect educators' ethical responsibility and their commitment to promoting environmental sustainability within their professional roles.

The results align with prior research showing that environmentally friendly practices can enhance individuals' confidence in addressing environmental concerns and developing new capabilities (Ramadhan et al., 2023; Zhang et al., 2021). Green self-efficacy is further supported by social structures that encourage environmental action, fostering motivation and persistence in sustainable behaviors (Farooq et al., 2021; Wood et al., 2021). Support from professional networks, families, or peer groups sharing similar environmental values reinforces teachers' belief in the significance of their efforts and strengthens their self-efficacy (Al-Swidi et al., 2021).

5.3. The Influence of Green Behaviors on Green Teacher Performance

This study highlights a significant relationship between environmentally sustainable practices and the effectiveness of green educators in the Madrasah environment of Medan City. Educators who engage in eco-friendly behaviors are more effective in teaching students about environmental issues and fostering eco-conscious attitudes. Madrasahs can enhance educators' roles in environmental education by encouraging active participation in sustainability initiatives, enabling them to instill environmental values and practices in their students.

The findings are consistent with previous research emphasizing the importance of eco-friendly behaviors in improving teacher performance (Ansari et al., 2021; Yantu et al., 2023). Educators who prioritize sustainability contribute to enhancing the quality of education and fostering an innovative school climate that is responsive to environmental challenges (Al-Swidi et al., 2021). Additionally, institutions that promote environmentally friendly practices often enjoy a competitive edge in sustainability and greater community appreciation (Unsworth et al., 2021).

Madrasahs that support green teacher performance can cultivate a stronger reputation within their communities, attracting parents who seek institutions that combine academic excellence with environmental stewardship (Akram et al., 2024; Mandal & Pal, 2024). This enhanced reputation can increase student enrollment and create opportunities for collaboration with organizations focused on sustainability (Noor Faezah et al., 2024).

5.4. The Influence of Organizational Ambidexterity on Green Teacher Performance

This study found that organizational ambidexterity does not directly influence green teacher performance within the Madrasah context in Medan City. This suggests that while organizational ambidexterity may enhance overall institutional performance, its impact on green teacher performance is limited. Instead, prioritizing opportunities for sustainable teaching innovation, such as integrating green technology and project-based learning, may be

more effective in fostering environmentally conscious pedagogical practices. Madrasahs can support educators by encouraging the development of creative, sustainable curricula and teaching methodologies that promote environmental awareness.

This finding contrasts with previous research that identified a significant impact of organizational ambidexterity on teacher effectiveness (Aftab et al., 2022; Hossain, Ong, et al., 2024). However, organizational policies that promote sustainability—such as waste minimization, energy efficiency, and the integration of eco-friendly practices into school operations—still provide a strong framework for educators to teach sustainability-related topics (Hafeez et al., 2024). These policies create an environment that motivates educators to embody environmentally conscious behaviors and incorporate sustainability into their teaching methods (F. Zhao et al., 2024).

Infrastructure that supports sustainability can enhance green teacher performance by equipping educators with the tools and resources needed to teach effectively while fostering student engagement in sustainability-oriented learning (Jabeen et al., 2024). By aligning institutional support with educators' goals, Madrasahs can strengthen their commitment to environmental education and improve their overall contribution to sustainability.

5.5. The Influence of Green Self-Efficacy on Green Teacher Performance

The hypothesis testing results indicate that green self-efficacy significantly influences green teacher performance in the Madrasah environment in Medan City. Leadership that prioritizes sustainability plays a crucial role in enhancing teachers' green self-efficacy. Leaders who actively model and promote sustainable practices inspire educators to integrate sustainability principles into their teaching methodologies. By fostering an organizational culture centered on sustainability, school leaders can boost educators' confidence in adopting environmentally-focused pedagogical approaches. Additionally, policies that promote efficient resource utilization, waste management, and energy conservation provide tangible support, further reinforcing educators' environmental self-efficacy. When teachers perceive their environment as sustainable, they feel more motivated and secure in employing sustainable teaching strategies.

These findings align with prior research highlighting the strong relationship between green self-efficacy and teacher performance in sustainability education (Habibullah & Akram, 2024; Rafique et al., 2024). Educators with higher green self-efficacy demonstrate greater confidence in teaching environmental topics and employing sustainability-centered pedagogical methods (Filimonau et al., 2024). Furthermore, initiatives aimed at improving teachers' green self-efficacy, such as targeted training and support programs, are essential for elevating teaching performance and improving overall learning outcomes (Özgül & Demir, 2024; Sachdeva & Singh, 2024). These efforts equip educators with the technical skills and confidence needed to effectively impart sustainability-related knowledge to students, fostering a more environmentally conscious generation.

5.6. The Influence of Green Behaviors on Green Teacher Performance through Organizational Ambidexterity

The hypothesis testing results indicate that organizational ambidexterity significantly mediates the relationship between green behaviors and green teacher performance within the Madrasah environment in Medan City. The findings highlight the importance of establishing an organizational culture that fosters ambidexterity while promoting environmentally sustainable practices. Madrasahs can adopt a balanced strategy that preserves existing sustainability regulations while fostering innovation through new initiatives. Such efforts may include

environmental enhancement programs, waste management systems, and the integration of sustainable technologies, all while maintaining effective existing processes. This dual approach encourages members of the organization, including educators, to engage in environmentally friendly behaviors by demonstrating the institution's commitment to both stability and innovation in addressing environmental concerns.

These findings align with prior studies showing that green behaviors significantly influence green teacher performance through organizational ambidexterity (Hossain, Ong, et al., 2024; Jabeen et al., 2024). Organizational ambidexterity, characterized by the ability to balance resource optimization (exploitative innovations) and new growth opportunities (exploratory innovations), enhances the alignment between sustainability goals and their practical implementation (Hossain, Teh, et al., 2024). Institutions that combine the maintenance of existing sustainability practices with the exploration of innovative strategies can effectively strengthen green behavioral intentions among teachers and staff, fostering a culture of environmental consciousness (Altaee et al., 2024).

5.7. The Influence of Green Behaviors on Green Teacher Performance through Green Self-Efficacy

The hypothesis testing results reveal that green self-efficacy does not significantly mediate the relationship between green behaviors and green teacher performance in the Madrasah environment in Medan City. This finding highlights the need for more systematic strategies to regulate the educational environment. Institutions should implement explicit and measurable policies, such as promoting renewable energy usage, minimizing waste, and effectively managing natural resources, to encourage environmental behaviors among teachers, students, and staff. Training programs emphasizing hands-on activities, such as waste management, environmental enhancement, and conservation practices, may be more effective than initiatives focused solely on boosting self-confidence. These experiential learning approaches can foster deeper engagement and a stronger intent to act sustainably.

This study's findings challenge earlier research suggesting that green behaviors significantly impact teacher performance via green self-efficacy (Filimonau et al., 2024; Rafique et al., 2024). Educators engaged in eco-friendly initiatives often exhibit greater confidence in their ability to teach sustainability principles and incorporate them into their classrooms. This self-efficacy forms the foundation for enhancing their overall teaching performance in advancing sustainability-related topics (Akhtar et al., 2021; Hussain et al., 2021). Moreover, teachers with strong self-assurance in their capacity to engage in sustainable practices are more likely to inspire and educate students on the importance of environmental conservation (Iftikar et al., 2022).

6. Conclusion

The findings of this study highlight the significant influence of staff green behaviors on green teacher performance in the Madrasah context in Medan City. Environmentally sustainable actions among educators enhance green self-efficacy and contribute to organizational ambidexterity. Although organizational ambidexterity does not directly impact green teacher performance, the results indicate that staff green behaviors indirectly affect teacher performance through their influence on organizational ambidexterity and green self-efficacy. Thus, both organizational ambidexterity and green self-efficacy act as critical mediators linking employee green behaviors to green teacher performance.

These findings suggest that Madrasahs in Medan City should prioritize cultivating staff green behaviors as a foundational step toward improving green teacher performance. Implementing comprehensive strategies that include targeted training programs and policies promoting sustainable practices is essential. Such initiatives should focus on enhancing green self-efficacy and fostering organizational ambidexterity to create an environment supportive of innovation and sustainability. By strengthening institutional support and embedding eco-friendly practices into all aspects of school operations, Madrasahs can significantly improve the ecological performance of educators and promote sustainability across their communities.

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8. Declaration of Conflicting Interests

The authors have declared no potential conflicts of interest concerning this article's research, authorship, and/or publication.

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