

Green Employee Behavior Model: Role of Green Attitude and Self-Efficacy

Fadhillah Adhariani¹, Muji Gunarto^{2*}

¹⁾ Universitas Bina Darma, Palembang, Indonesia

²⁾ Universitas Sriwijaya, Palembang, Indonesia

Corresponding author: mgunarto@hotmail.com*

Article Information:

Received: November 24, 2025 Accepted: December 12, 2025, Published: January 06, 2026

Abstract

This study analyzes the effect of self-efficacy on green employee behavior mediated by green employee engagement and green attitude. This study is a survey of private lecturers in Indonesia who practice environmentally friendly living. The sampling technique was purposive, with a sample of 123 respondents. Self-efficacy has a positive and significant influence on green employee behavior, mediated by green employer engagement and green attitude. This study highlights how environmentally friendly behavior, especially among lecturers, can be an essential step in addressing the problem of garbage. Teachers can serve as role models for students and staff and support sustainability initiatives on campus. Implementing Employee Green Behavior (EGB) practices within academic communities is essential to mitigate environmental impacts, as both individuals and institutions play crucial roles in sustainability. Based on this research, private colleges in Indonesia should consider implementing strategic measures to enhance faculty engagement in environmentally friendly practices. Second, green employee engagement should be improved through more structured sustainability initiatives to cultivate green attitudes, which significantly influence employees' green behavior. Third, universities need to implement environmental education programs, awareness campaigns, and incentives for environmentally friendly practices to develop pro-environmental attitudes that, in turn, encourage green employers' behavior.

Keywords: Green Employee Engagement, Green attitude, Green Employee Behavior, Self-Efficacy

1. Introduction

Indonesia faces significant environmental pollution challenges, particularly concerning plastic waste management. Based on the latest data, Indonesia's national waste volume has increased from about 28 million tons in 2019 to 36 million tons in 2022, showing a significant rise in recent years ([Anwar et al., 2025](#); [Apriadi et al., 2024](#); [Artha et al., 2023](#)). This increase is driven by the accumulation of plastic garbage that is difficult to break down, and that takes hundreds of years to degrade ([SIPSN KLHK, 2025](#)). Plastic garbage is generated significantly by day-to-day activities on campus, including food packaging and drink bottles. Several colleges have begun implementing policies to reduce the use of disposable plastics, but the effectiveness and impact of this policy have not yet been thoroughly evaluated ([He & Yu, 2023](#); [Silva et al., 2020](#)).

Published by:

This issue highlights the existence of important research gaps. Although there are indications that environmentally friendly behaviour in campus environments, those involving faculty and staff, can help reduce environmental impacts, research on how green attitudes and self-efficacy affect green behavior in higher education environments is still very limited. Previous research has shown that Employee Green Behavior (EGB) and employee involvement in environmental initiatives have a positive influence on individual environmentally friendly behaviors ([Ali et al., 2023](#); [Ali & Nisar, 2022](#); [Herlina et al., 2025](#); [Yusliza et al., 2020](#); [Zhang & Cao, 2025](#)). However, these studies have not fully explained how green attitudes and self-efficacy affect EGB in academic environments and how effective strategies can be implemented.

The research aims to fill the gap by studying the relationship between green attitudes, self-efficacy, and environmentally friendly behaviour on campus. With this approach, it is expected to find more effective green behavior models and implementation strategies that can be adapted in different colleges to tackle the problem of plastic garbage more effectively. Indonesia faces serious challenges related to environmental pollution, especially in terms of plastic waste management ([Alimehmeti et al., 2025](#)).

This issue highlights the existence of important research gaps. Although there are indications that environmentally friendly behaviour in campus environments, those involving faculty and staff, can help reduce environmental impacts, research on how green attitudes and self-efficacy affect green behavior in higher education environments is still very limited. Previous research has shown that Employee Green Behavior (EGB) and employee involvement in environmental initiatives have a positive influence on individual environmentally friendly behaviors ([Ababneh, 2021](#); [Purba & Tikurura, 2022](#)). However, these studies have not fully explained how green attitudes and self-efficacy affect EGB in academic environments and how effective strategies can be implemented ([Ahmad et al., 2022](#); [Ali et al., 2022](#); [Fawehinmi et al., 2020](#), 2023).

The research aims to fill the gap by studying the relationship between green attitudes, self-efficacy, and environmentally friendly behaviour on campus. With this approach, it is expected to find more effective green behavior models and implementation strategies that can be adapted in different colleges to tackle the problem of plastic garbage more effectively. While prior research has demonstrated the importance of Employee Green Behavior (EGB), little attention has been paid to understanding the mediating roles of green attitudes and employee engagement in fostering such behavior among university staff.

The concept of Green Human Resource Management (Green HRM) refers to the integration of sustainable and pro-environmental human resource management practices into organizational strategies and operations ([Ahmed et al., 2024](#); [Akbar et al., 2024](#); [O'Donohue, 2016](#)). Integration of the concept of green human resources management with green self-efficacy and the Theory of Planned Behavior (TPB) has a significant impact in promoting environmental behavior in the workplace ([Katz et al., 2022](#)). Green Self-Efficacy refers to an individual's belief in their ability to conduct pro-environmental behavior ([Burhan, 2019](#); [Gunarto et al., 2025](#); [Herlina et al., 2025](#); [Jiang et al., 2018](#); [Khan, 2024](#); [Lyons & Bandura, 2019](#); [Widiyanti & Rizal, 2022](#); [Yusriani et al., 2023](#); Zhang & Cao, 2025). By having a high level of Green Self-Efficacy, employees tend to be more motivated and confident in taking actions that support the desire of the environment ([Chen & Zhang, 2023](#); [Zhu et al., 2020](#)). Applying the concept of self-efficacy in promoting sustainable practice can help employees feel more able to contribute positively to the environment, thereby increasing Green Employee Engagement, that is, the level of employee engagement and commitment to sustainable practices in the workplace ([Katz et al., 2022](#)).

The Theory of Planned Behavior (TPB) is a theoretical framework that explains how an individual's intention to conduct behavior is influenced by attitudes, subjective norms, and perceived behavioral control ([Li et al., 2023](#); [Pan et al., 2023](#)). In the context of environmental desires, TPB can be used to understand the factors that influence Green Attitude and Green Employee Behaviour. By implementing the TPB, organizations can design interventions and programmes aimed at improving pro-environmental attitudes, subjective norms that support sustainable practices, and control of perceived behaviour in the workplace. This can help in encouraging a positive Green Attitude and Green Employee Behavior that is pro-environmental among employees ([Katz et al., 2022](#)).

Previous research has proven that self-efficacy has a positive and significant impact on employee engagement. Self-efficacy or individual belief in their ability to complete certain tasks, can increase the level of employee involvement in their work ([Hadi, 2023](#)). When employees have a strong belief that they are capable of achieving goals and overcoming challenges in the workplace, they tend to be more motivated, enthusiastic, and committed to their role.

Self-efficacy not only improves employee engagement in general but also improves the quality of their interaction with colleagues and management ([Rubianto & Kembaren, 2023](#)). This study found that employees with high self-efficacy were more proactive in taking initiative and participating in team activities, which in turn strengthened social bonds and team cohesion in the workplace.

However, research on relationships in green concepts, such as Green Self-Efficacy and Green Employee Engagement, has not been done much. While self-efficacy in general has proven to improve employee engagement, the application of this concept in the context of environmental sustainability is still relatively new and requires more exploration. Existing research tends to focus on self-efficacy in traditional contexts and has not sufficiently explored how employee confidence in their ability to contribute to environmental sustainability efforts can affect their involvement and behaviour in the workplace.

H1: There is a positive self-efficacy effect on green employee engagement.

Research on the link between green employee engagement and green behavior has proved to have a significant influence on green behaviour ([Ababneh, 2021](#); [Katz et al., 2022](#)). When employees are actively engaged in green initiatives in the workplace, they tend to show behavior that is more supportive of environmental sustainability. This involvement includes participation in environmental programmes, energy saving, and waste reduction, all of which contribute to pro-environmental behaviour.

Green employee engagement, i.e., employee involvement in environmental activities at the workplace, influences green behavior through increased awareness and commitment to sustainable practices. When employees feel involved and have a role in the company's green initiatives, they are more likely to implement pro-environmental behaviour in their daily work. For example, employees involved in workplace garbage management programs tend to be more disciplined in separating garbage and supporting company recycling policies ([Ababneh, 2021](#)).

Green employee engagement not only improves pro-environmental behaviour in the workplace but also affects behavior outside the workplace. Employees involved in corporate sustainability programs often bring these values and pro-environmental practices into their personal lives. This means that green workplace initiatives have the potential to create a broader positive impact on communities and the environment beyond the organizational boundaries ([Katz et al., 2022](#)).

Green employee engagement is also linked to improved green behavior through an increased sense of ownership and responsibility for the environment ([Nasir Ansari & Irfan, 2023](#)). When employees feel that they have an important role to play in the success of a company's sustainability program, they are more motivated to participate actively and adopt pro-environmental behaviour. The study also highlights that management support and a clear policy on sustainability practices are essential to increasing employee engagement. From the explanation above then the hypothesis 2 in this study is:

H2: There is a positive influence of green employee engagement on green employees' behavior.

Earlier research supported the link between green engagement and green attitude. In previous studies, it was stated that green engagement has a positive influence on green attitudes ([Gustiah & Nurhayati, 2022](#)). Green engagement significantly affects green attitude. The results of this study show that when employees are actively involved in sustainability initiatives at the workplace, they tend to develop a more positive attitude towards pro-environmental practices. This can be explained by several psychological mechanisms, including personal experiences and social interactions in the workplace that reinforce a belief in the importance of environmental sustainability ([Gustiah & Nurhayati, 2022](#)).

More deeply, green engagement can catalyze changing individual attitudes toward the environment. When employees engage in activities such as energy saving, waste reduction, or participation in corporate sustainability programmes, they not only increase their understanding of environmental issues but also feel the positive impact of such actions. This sense of achievement and contribution can strengthen their commitment to sustainability values, which further encourages the adoption of a more consistent pro-environmental attitude in everyday behaviour. Based on the explanation above, Hypothesis 3 in this study is:

H3: There is a positive influence of green employee engagement on green attitude

Green attitudes have a positive effect on green employer behavior ([Priyashantha & Priyanga, 2022](#)). Green attitude refers to an individual's attitude or view of environmental sustainability, which reflects the extent to which one supports and adopts pro-environmental practices in their daily lives. Their findings suggest that individuals who have strong pro-environmental attitudes are more likely to show behavior that supports environmental sustainability. These can be concrete actions such as reducing energy consumption, recycling, minimizing waste, or choosing environmentally friendly products. Based on the above proposal, the fourth hypothesis of this study is:

H4: There is a positive influence of green attitude on green employee behavior.

Previous research confirmed the link between green engagement and green attitude. Green engagement positively affects green attitude ([Gustiah & Nurhayati, 2022](#)). Further, concluded that green attitudes also have a positive influence on green employee behavior ([Priyashantha & Priyanga, 2022](#)). From these two studies, it can be inferred that Green attitude acts as a mediator in the relationship between Green Employee Engagement and Green employer behaviour. Therefore, Hypothesis 5 in this study is:

H5: There is a positive impact of Green employee engagement on green employees' behaviors through a variable of green attitude mediation.

Based on both of these studies, it can be assumed that self-efficacy has a positive influence on green employee behavior through Green employee engagement ([Ababneh, 2021; Katz et al., 2022; Nasir Ansari & Irfan, 2023](#)). So, Hypothesis 6 in this study is:

H6 = There is a positive self-efficacy effect on green employees' behaviour with green employment engagement as a mediation variable.

Previous research showed that green engagement is positively linked to green attitude ([Gustiah & Nurhayati, 2022](#)). Green attitudes have a positive influence on green employee behavior ([Priyashantha & Priyanga, 2022](#)). In addition, previous research has also shown that self-efficacy has a positive and significant impact on employee engagement ([Rubianto & Kembaren, 2023](#)). From the three studies above, it can be assumed that green employee engagement and green attitude can mediate the relationship of self-efficacy to green employees' behavior, therefore, Hypothesis 7 of this study is as follows:

H7: There is a positive influence of self-effectiveness on green employee behavior through the mediation variables green employer engagement and green attitude

Previous research has proven that self-efficacy has a positive and significant influence on employee behavior. In the general context, self-efficacy has been shown to improve various aspects of employee behavior, such as personal initiative, participation in team activities, and adaptability to change. Employees with higher levels of self-efficacy are better able to cope with stress and work pressure, which in turn improves their performance and productivity. This research highlights the importance of self-efficacy in improving employee well-being and their contribution to organizational goals. However, research that specifically deals with the relationship between self-efficacy and green behavior, or pro-environmental behaviour, is still relatively limited. Green behavior covers actions that individuals take to support environmental sustainability, such as energy saving, recycling, and resource efficiency ([Hadi, 2023](#)). Although the concept of self-efficacy has been applied in various contexts of employee behaviour, its application in the context of green behavior requires further exploration ([Gunarto et al., 2025](#); [Yusriani et al., 2023](#)).

H8: Self-efficacy has a positive direct effect on green employee behavior.

2. Methodology

This research was conducted through a survey of private university lecturers in Indonesia who have begun to adopt environmentally friendly lifestyles. The final sample comprised 123 respondents, selected purposively among lecturers at private universities in Indonesia practicing environmentally friendly lifestyles. This approach is taken to ensure that the data collected is sufficient for valid and reliable statistical analysis.

The sampling technique in this research is performed in a quantitative approach with the method of non-probability sampling, namely purposive sampling. The candidate selected was an Indonesian citizen, a lecturer at a private university in Indonesia, who has adopted an environmentally friendly lifestyle. A five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) was utilized to measure respondents' perceptions. More clearly, the variables studied, operational definitions, indicators, measurement scales, and reference sources can be found in Table 1.

Table 1. Variables and Indicators

Variables	Indicators
Self-Efficacy (SE)	1. Level
	2. Strength
	3. Generality

Green Employee Engagement (GEE)	1. Personal resource development 2. Development of employment resources 3. leadership training 4. Health Promotion
Green Attitude (GA)	1. beliefs (cognitive) 2. feelings (affective) 3. behaviors (behavioral)
Green Employee Behavior (GEB)	1. Comply with the green policy 2. Modify green work procedures 3. Waste reduction 4. Promote green activities

The research instrument, based on the indicators in Table 1, was pilot tested on a small sample, and its validity and reliability were subsequently assessed. Data analysis is done using SmartPLS (Partial Least Squares Structural Equation Modeling). First, the data set is checked to make sure it matches the measurement model. The initial step involves checking the indicator loadings. Validity of measurement model tested with Confirmatory Factor Analysis (CFA) ([Gunarto et al., 2024](#); [Lisnawati & Gunarto, 2021](#)). Next, PLS-SEM is applied to evaluate the proposed model. This method is effective for small sample sizes and complex models. PLS-SEM analysis is carried out in two stages: first, evaluating measurement models, then structural models, using SmartPLS 3.0 with 10,000 bootstrap samples to ensure accuracy.

4. Results dan Discussion

4.1. Characteristic Respondent

Based on gender, there were 57 male respondents (46.3%) and 66 female respondents (53.7%), so the total respondents was 123 people. In terms of age, 45 respondents (36.6%) were over 50 years old, 45 respondents (36.6%) were between 41-50 years old, 26 respondents (21.1%) were between 31-40 years old, and 7 respondents (5.7%) were aged between 23-30 years. Based on work experience, 11 respondents (8.9%) had less than 5 years of work, 23 respondents (18.7%) had 5-10 years of work, 21 respondents (17.1%) had 10-15 years of work, 37 respondents (30.1%) had a working period of 15-20 years, and 31 respondents (25.2%) had a working period of more than 20 years.

Frequency distribution and percentage of respondents based on province of origin. There were 5 respondents from Bali, which is equivalent to 4.1% of the total respondents. From Banten, there were 6 respondents, which was equivalent to 4.9% of the total respondents. DI Yogyakarta was represented by 7 respondents, or 5.7% of the total respondents. DKI Jakarta had 13 respondents, equivalent to 10.6% of the total respondents. West Java is the province with the largest number of respondents, namely 20 people or 16.3% of the total respondents. Central Java had 1 respondent, which is equivalent to 0.8% of the total respondents. East Java was represented by 4 respondents, equivalent to 3.3% of the total respondents. East Kalimantan and East Nusa Tenggara each had 1 respondent, representing 0.8% of the total respondents. There were 6 respondents from Papua (capital city of Jakarta), equivalent to 4.9% of the total respondents. South Sulawesi and North Sulawesi each had 7 respondents, which is equivalent to 5.7% of the total respondents. West Sumatra also had 6 respondents, equivalent to 4.9% of the total respondents. South Sumatra had 32 respondents, or 26.0% of the total respondents. North Sumatra was represented by 7 respondents, which is equivalent to 5.7% of the total respondents.

4.2. Measurement Model (Outer Model)

Published by:

The convergent validity of a measurement model with a reflective indicator can be assessed by examining the correlation between the indicator and its construct. The indicator is considered valid if its loading factor exceeds 0.70. The end value of the loading factor in this study is as shown in Figure 1 and Table 2.

In Table 2, all indicators in this study have outer loadings greater than 0.70. This means that all the indicators on all variables in this research have met the convergence validity criteria. Convergence validity indicates that these indicators are highly correlated with the measured constructs, and the convergent validity of this study has been good. With a good convergent validity, it is possible to conclude that the measurement model used in the study is valid and reliable.

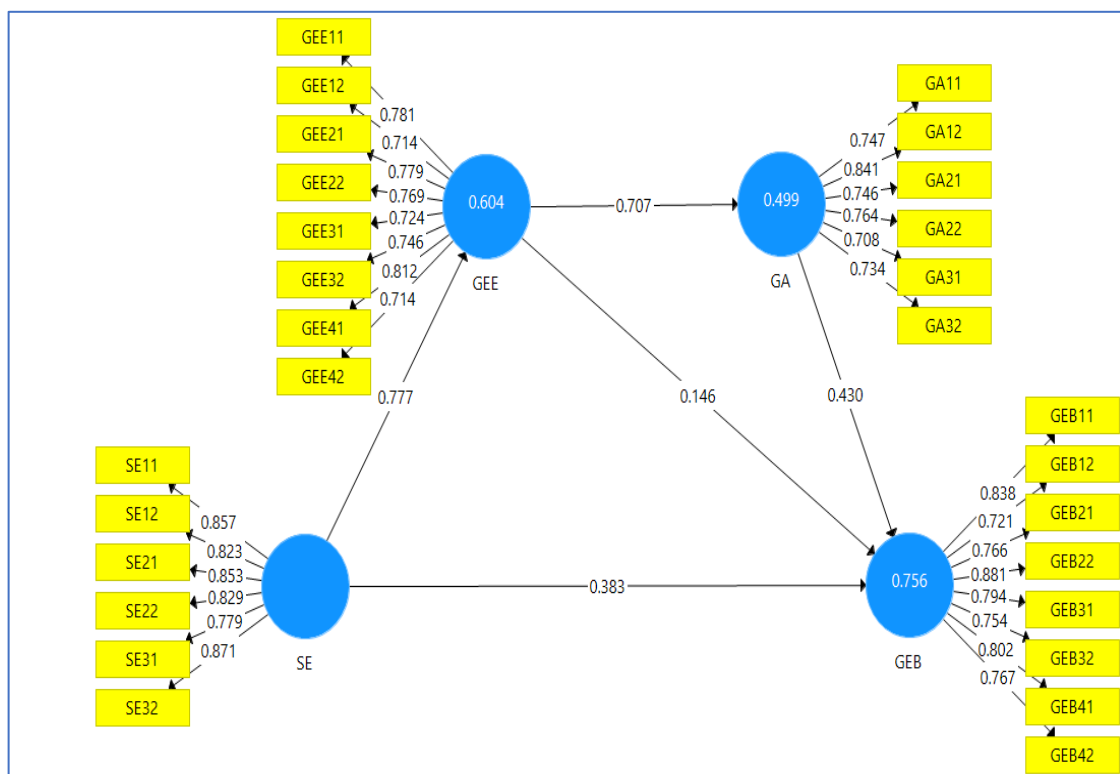


Figure 1. Measurement Model

Table 2. Loading Factors

Variables	Indicators	Outer loadings	Result
Self-Efficacy	SE11	0.857	Significant
	SE12	0.823	Significant
	SE21	0.853	Significant
	SE22	0.829	Significant
	SE31	0.779	Significant
	SE32	0.871	Significant
Green Employee Engagement	GEE11	0.781	Significant
	GEE12	0.714	Significant
	GEE21	0.779	Significant
	GEE22	0.769	Significant
	GEE31	0.724	Significant
	GEE32	0.746	Significant
	GEE41	0.812	Significant
	GEE42	0.714	Significant

	GEE42	0.714	Significant
Green Attitude	GA11	0.747	Significant
	GA12	0.841	Significant
	GA21	0.746	Significant
	GA22	0.764	Significant
	GA31	0.708	Significant
	GA32	0.734	Significant
Green Employee Behavior	GEB11	0.838	Significant
	GEB12	0.721	Significant
	GEB21	0.766	Significant
	GEB22	0.881	Significant
	GEB31	0.794	Significant
	GEB32	0.754	Significant
	GEB41	0.802	Significant
	GEB42	0.786	Significant

4.3. Discriminant Validity dan Reliabilitas

Discriminant validity is the degree of differentiation of an indicator in measuring the construction of an instrument. In testing, Discriminant validity can be done by looking at the square root value of average variance extracted (AVE). The AVE limit value for a good model is above 0.5.

Table 3. Validasi dan Reliabilitas

Variables	Cronbach's alpha	Composity reliability (CR)	AVE	Result
GA	0.851	0.890	0.574	Valid dan Reliabel
GEB	0.915	0.930	0.627	Valid dan Reliabel
GEE	0.893	0.914	0.571	Valid dan Reliabel
SE	0.913	0.933	0.698	Valid dan Reliabel

Table 3 shows that all variables in this study have an AVE value > 0.5 . This means that all indicators in the study have been reliable, so that it can be stated that each variable has a high discriminant validity. In addition, the composite reliability value of each variable in this trial is more than 0.7. This means all the variables have been valid and reliable.

Table 4. Cross Loading

Indicators	GA	GEB	GEE	SE
GA11	0.747	0.562	0.693	0.653
GA12	0.841	0.557	0.506	0.528
GA21	0.746	0.595	0.514	0.443
GA22	0.764	0.665	0.519	0.612
GA31	0.708	0.541	0.441	0.330
GA32	0.734	0.688	0.507	0.535
GEB11	0.752	0.838	0.711	0.749
GEB12	0.703	0.721	0.578	0.533
GEB21	0.696	0.766	0.551	0.568
GEB22	0.653	0.881	0.620	0.642
GEB31	0.640	0.794	0.597	0.755
GEB32	0.514	0.754	0.557	0.577
GEB41	0.521	0.802	0.589	0.569

GEB42	0.514	0.767	0.494	0.587
GEE11	0.583	0.728	0.781	0.759
GEE12	0.502	0.632	0.714	0.564
GEE21	0.342	0.512	0.779	0.598
GEE22	0.645	0.595	0.769	0.619
GEE31	0.436	0.568	0.724	0.616
GEE32	0.599	0.449	0.746	0.465
GEE41	0.557	0.523	0.812	0.511
GEE42	0.569	0.434	0.714	0.498
SE11	0.622	0.696	0.570	0.857
SE12	0.492	0.611	0.615	0.823
SE21	0.634	0.725	0.570	0.853
SE22	0.578	0.693	0.593	0.829
SE31	0.573	0.575	0.731	0.779
SE32	0.572	0.681	0.794	0.871

Table 4 provides information that seen from the results of cross-loading analysis. all indicators used to measure the four measurement models give value of factor load coefficients that are greater than cross-load values. It shows that six measurement models have sufficient discriminatory validity. Further, the validity of the study was followed by a validity test of discrimination through the Fornell Criteria test.

Table 5. Fornell-Larcker Criterion

Variables	GA	GEB	GEE	SE
GA	0.758			
GEB	0.798	0.792		
GEE	0.707	0.747	0.756	
SE	0.693	0.794	0.777	0.836

In Table 5 above, it is seen that according to the Fornell-Larcker criteria, four measurement models have a larger square AVE root value than the correlation coefficient between the measured structures and other structures.

4.4. Inner Model

The internal evaluation of the model is done to find out that the structural model is constructed accurately. The analysis steps taken to evaluate the structural model can be seen from several indicators as follows:

4.5. Model Fit

From the results obtained through data processing, the data model fit for this study is shown in Table 6.

Table 6. Model Fit

	Saturated model	Estimated model
SRMR	0.118	0.121
d_ ULS	5.618	5.908
d_ G	4.171	4.273
Chi-Square	2083.964	2089.048
NFI	0.491	0.490

Table 7. RMS THETA

rms Theta	0.242
-----------	-------

From Tables 6 and 7, it can be seen that the NFI value is $0.491 < 0.9$ and the RMS Theta or Root Mean Square Theta value is $0.242 > 0.102$, so that the model in this research is fit and can be continued with the structural model.

4.6. Koefisien Determinasi (R^2)

Based on the results of this study in the Smart PLS program, the R-squared values are as follows:

Table 8. R-square

Sub-Model	R-square adjusted
GA	0,499
GEB	0,756
GEE	0,604

From Table 8, it can be seen that the variables that influence green attitude in this study are 49.9%, which means the other 50.1% is explained by other variables not examined in this study. Meanwhile, the variables that influence the green employee behavior variable in the research are 75.6%, which means 24.4% is explained by other variables that have not been examined in this research. Then the variables that influence green employee engagement in this research are 60.4% and 39.6%.

4.7. Structural Model (Hypothesis Test)

The result of the t-value in this study is shown in Table 9, Variables are stated as statistically significant or positively influential if the t-value is greater than 1.96 and vice versa if the t-value is less than 1.96; then the variable is not significant or negatively influential.

Table 9. Direct Effect

	T statistics	P values	Result
H1 = SE -> GEE	19.648	0.000	Accepted
H2= GEE -> GEB	1.658	0.098	Rejected
H3= GEE -> GA	8.229	0.000	Accepted
H4 = GA -> GEB	5.224	0.000	Accepted
H8 = SE -> GEB	5.031	0.000	Accepted

Based on Table 9, it can be concluded as follows:

H1: Self-efficacy significantly affects green employee engagement because the t-value is > 1.96 and the P-value is $0.000 < 0.05$, so H1 is accepted.

H2: Green Employee Engagement has no significant effect on Green Employee Behavior because the t-value is < 1.96 and the P-value is $0.098 > 0.05$, so H2 is rejected.

H3: Green Employee Engagement has a significant effect on Green Attitude because the t-value is > 1.96 and the P-value is $0.000 < 0.05$, so H3 is accepted

H4: Green Attitude significantly influences Green Employee Behavior because the t-value is $5.224 > 1.96$ and the P-value is $0.000 < 0.05$, so H4 is accepted.

Published by:

H8: Self-Efficacy significantly affects Green Employee Behavior because the t-value is $5.031 > 1.96$ and the P-value is $0.000 < 0.05$ so H8 is accepted.

4.8. Mediation Testing

To further investigate the mediating roles of green employee engagement and green attitude in the relationship between self-efficacy and green employee behavior, a mediation analysis was conducted. The results of this analysis are summarized in Table 10.

Table 10. Indirect Effect

Hypothesis	T-statistics	P-values	Note
H5 = GEE -> GA -> GEB	4.734	0.000	Accepted
H6 = SE -> GEE -> GEB	1.654	0.099	Rejected
H7 = SE -> GEE -> GA -> GEB	4.247	0.000	Accepted

Table 10 displays the results of the mediation analysis, which examines the indirect effects of green employee engagement and green attitude on the relationship between self-efficacy and green employee behavior. The data reveal that green attitude serves as a significant mediator between green employee engagement and green employee behavior. Conversely, green employee engagement alone does not significantly mediate the relationship between self-efficacy and green employee behavior. Nevertheless, the sequential mediation effect of both green employee engagement and green attitude on the link between self-efficacy and green employee behavior is statistically significant, highlighting the complex pathways through which self-efficacy influences pro-environmental behavior in academic settings. Statistical Conclusion:

H5: Green attitude can mediate the influence of green employee engagement on green employee behavior with T-Value < 1.96 and P-Value $0.003 < 0.05$, so H5 is accepted.

H6: Green Employee Engagement was unable to mediate the influence of self-efficacy on green employee behavior with a T-Value < 1.96 , and a P-Value $0.119 > 0.05$, so H6 was rejected.

H7: Green Employee Engagement and Green Attitude can mediate the influence of self-efficacy on Green Employee Behavior, T-value < 1.96 and P-value = $0.005 < 0.05$, so H7 is accepted.

4.9 Discussion

The findings support previous research by demonstrating significant relationships between self-efficacy, green attitudes, and employee engagement; however, some results notably differ, warranting further investigation. Self-efficacy is proven to have a positive and significant influence on green employee engagement among private university lecturers, with a contribution of 77.7%. The t-value of 19.648 and p-value of 0.000 indicate the significance of this result, supporting H1. Self-efficacy, which reflects an individual's belief in their ability to complete assignments, encourages lecturers to be more active in environmentally friendly practices, such as resource reduction and participation in sustainability programs. This finding is in line with research that identified self-efficacy as a significant predictor of green employee engagement (Gunarto et al., 2025). Therefore, educational institutions can develop training programs to increase lecturers' self-efficacy regarding environmentally friendly practices to support sustainability efforts.

On the other hand, green employee engagement only shows an influence of 38.3% on green employee behavior, but the results are not statistically significant with a t-count of 1.658 and a p-value of 0.098, so H2 is rejected. This shows that the relationship between green

employee engagement and green employee behavior is not strong enough to be considered significant. This insignificance is due to high variability in individual behavior, external factors such as institutional policies and management support, as well as differences in levels of awareness and knowledge about environmentally friendly practices. In addition, the research methodology or instruments used may not be sensitive enough to capture the relationship between the two variables. The significant influence between green employee engagement and green employee behavior found in previous studies was not supported by the results of this study ([Ababneh, 2021](#); [Katz et al., 2022](#)). The insignificance of green employee engagement's impact on green employee behavior highlights the complexity of environmental behavior determinants. Potential reasons may include varying institutional support, personal motivations, or differing environmental awareness levels among lecturers.

On the other hand, green employee engagement was proven to have a significant influence on green attitude, with a t-value of 8.229 and p-value of 0.000, explaining 70.7% of the variation in green attitude, supporting H3. This finding is consistent with, who show that involvement in environmentally friendly activities increases pro-environmental attitudes ([Gustiah & Nurhayati, 2022](#)). To promote a green attitude, universities must implement structured green engagement programs such as training, awareness campaigns, and incentives.

Green attitude, in turn, was shown to have a significant effect on green employee behavior, with a t-value of 5.224 and p-value of 0.000, explaining 43.0% of the variation in environmentally friendly behavior, supporting H4. These findings indicate that pro-environmental attitudes play an important role in influencing environmentally friendly behavior ([Priyashantha & Priyanga, 2022](#)). Therefore, universities must focus on developing a green attitude through environmental education and creating a culture that supports sustainability.

Furthermore, green attitude functions as a significant mediator in the relationship between green employee engagement and green employee behavior, with a t-value of 4.734 and p-value of 0.000, explaining 30.3% of the influence of green employee engagement on green employee behavior, supporting H5. This mediation shows that involvement in environmentally friendly activities influences environmentally friendly behavior through positive attitudes towards the environment, consistent with the results of ([Gustiah & Nurhayati, 2022](#); [Priyashantha & Priyanga, 2022](#)). To improve green employee behavior, universities must focus on developing a green attitude through various programs and incentives.

However, green employee engagement does not mediate the influence of self-efficacy on green employee behavior, with a t-value of 1.654 and p-value of 0.099, explaining only 11.3% of the influence of self-efficacy, so H6 is rejected. This research contradicts the results of research, who found that Green Employee Engagement should mediate the relationship between self-efficacy and Green Employee Behavior ([Ababneh, 2021](#); [Hadi, 2023](#); [Katz et al., 2022](#); [Nasir Ansari & Irfan, 2023](#); [Rubianto & Kembaren, 2023](#)). These differences may be due to factors such as differences in research context, methodology, or sample characteristics. For example, the specific context of each study, such as industry type, organizational culture, or employee characteristics, may influence mediation outcomes.

Lecturers' involvement in environmentally friendly initiatives should serve as a bridge connecting their self-confidence with environmentally friendly actions. However, in this research, there may be other variables that influence the relationship between self-efficacy and Green Employee Behavior directly, without requiring mediation from Green Employee Engagement. Such variables may include individual factors such as intrinsic motivation, social support, or specific working conditions. To understand these results further, additional research

is needed that explores factors that may influence this mediation. Researchers can consider additional variables that play a role, as well as use different methodological approaches to get a clearer picture of the dynamics between self-efficacy, Green Employee Engagement, and Green Employee Behavior.

The research results show that green engagement and green attitude are able to mediate the relationship between self-efficacy and green employee behavior by 23.6%. The t-value is 4.247, which is greater than the critical value of 1.96, and the p-value is 0.000, which is smaller than 0.05, indicating that self-efficacy has a positive and significant effect on green employee behavior through the mediation of green employee engagement and green attitude. The Theory of Planned Behavior (TPB), developed by Icek Ajzen, helps explain this relationship through three main components: attitude, subjective norms, and perceived behavioral control. In the context of this research, self-efficacy reflects perceived behavioral control, which increases lecturers' confidence that they can implement environmentally friendly practices, increase their green attitude, and green employee engagement. Green attitude, which refers to the lecturer's positive attitude towards environmentally friendly practices, is influenced by self-efficacy and increases the intention to behave in an environmentally friendly manner. Green employee engagement, which involves lecturers' involvement and commitment to environmentally friendly initiatives in the workplace, reflects subjective norms and is driven by self-efficacy. This involvement increases lecturers' environmentally friendly intentions and behavior. Thus, this research shows that increasing the self-efficacy of private lecturers in implementing an environmentally friendly lifestyle can increase green employee behavior through increasing green employee engagement and green attitude, in accordance with the TPB framework. This finding is consistent with previous research, which also found a similar relationship between self-efficacy, engagement, attitudes and behavior. environmentally friendly ([Gustiah & Nurhayati, 2022](#); [Hadi, 2023](#); [Priyashantha & Priyanga, 2022](#); [Rubianto & Kembaren, 2023](#)).

Finally, self-efficacy shows a significant influence on green employee behavior, with a t-value of 5.031 and a p-value of 0.000, explaining 38.3% of the variation in environmentally friendly behavior, supporting H8. These findings underline the importance of individual beliefs in influencing their actions towards sustainability, in line with research by ([Gunarto et al., 2025](#); [Hadi, 2023](#); [Yusriani et al., 2023](#)). To improve green employee behavior, strengthening self-efficacy through training and support can be an effective strategy. The present findings extend prior literature by highlighting self-efficacy's direct and mediated influence on green employee behavior through engagement and attitude. However, recent studies underline the role of environmental identification as a psychological mechanism that strengthens employees' intrinsic motivation to adopt green behaviors. When employees internalize environmental values as part of their identity, they are more likely to exhibit consistent pro-environmental behaviors beyond workplace requirements.

Moreover, green leadership plays a substantial role in shaping organizational culture and norms that support sustainability. Leaders who demonstrate strong environmental commitment can foster a supportive climate, increase perceived organizational support for green initiatives, and enhance employees' confidence in their ability to contribute. This interplay between leadership and employee psychology suggests a dynamic model where leadership behaviors bolster self-efficacy and environmental identification, ultimately enhancing green behavior outcomes. In light of these insights, organizations and academic institutions should consider adopting leadership development programs focused on sustainability competencies. Such programs could complement existing training efforts aimed at enhancing green self-efficacy and engagement, thereby creating a holistic approach to cultivating environmentally responsible workplaces.

Published by:

5. Conclusion

This research confirms that self-efficacy significantly influences green employee engagement and directly affects green employee behavior among private university lecturers in Indonesia. Although green employee engagement alone does not exhibit a significant direct impact on green behavior, it effectively fosters green attitudes, which subsequently mediate and significantly enhance environmentally responsible behavior. Additionally, the study highlights that both green employee engagement and green attitudes serve as significant mediators in the relationship between self-efficacy and green employee behavior, aligning with the Theory of Planned Behavior (TPB). These findings underline the critical role of enhancing self-efficacy and promoting positive green attitudes through structured engagement programs to encourage sustainable environmental behaviors within academic institutions.

The findings of this study provide valuable insights for private universities in Indonesia to strategically enhance environmentally responsible behavior among faculty members. Firstly, institutions should prioritize developing structured sustainability programs aimed at strengthening lecturers' self-efficacy through targeted training and practical workshops on sustainable practices. Secondly, universities must actively promote green employee engagement by implementing systematic environmental campaigns, offering recognition and incentives for active participation in sustainability initiatives, thus fostering positive green attitudes among employees. Lastly, to reinforce these efforts, educational institutions are advised to integrate comprehensive environmental education into their curricula and organizational culture, thereby embedding pro-environmental values that effectively drive sustainable behavioral change among lecturers and the wider academic community.

It is recommended that universities implement focused sustainability training and workshop programs designed to enhance green self-efficacy. These programs should aim to build practical competencies, deepen environmental awareness, and strengthen individuals' confidence in performing pro-environmental behaviors. Through experiential learning and continuous support, such interventions can effectively empower faculty members to engage actively and lead sustainability initiatives within their institutions.

This research contributes significantly to the theoretical advancement in the field of Green Human Resource Management (Green HRM) and environmental behavior studies by empirically validating the integrative role of Self-Efficacy and the Theory of Planned Behavior (TPB) in predicting Green Employee Behavior (GEB) within higher education contexts. Specifically, the study extends existing knowledge by demonstrating how self-efficacy influences green employee behavior both directly and indirectly through the mediating roles of green employee engagement and green attitudes. By highlighting the pivotal function of green attitude as a critical mediator linking employee engagement and sustainable behaviors, this research enriches the TPB literature by clarifying the interaction of psychological constructs in fostering pro-environmental behaviors. Thus, the findings underline the importance of incorporating psychological and behavioral frameworks such as self-efficacy and TPB into human resource strategies to effectively encourage sustainable practices within academic and organizational settings.

Additionally, green leadership has emerged as a pivotal factor in promoting sustainable workplace practices by inspiring and modeling environmentally responsible behavior. Leadership styles that prioritize environmental sustainability can enhance employees' green self-efficacy and engagement, thereby reinforcing organizational commitment to ecological goals. This study's findings align with such perspectives, suggesting that future research should incorporate green leadership constructs to comprehensively capture the multifaceted nature of sustainable behavior promotion.

This research has several limitations that should be addressed in future studies. First, the study's scope is limited to lecturers from private universities who already practice environmentally friendly behaviors, potentially restricting the generalizability of findings to other populations and organizational contexts. Therefore, future research should extend the sample to include diverse respondents from various institutional backgrounds and geographic locations across Indonesia to capture broader cultural and behavioral variations. Second, the current cross-sectional survey design limits the ability to establish causal relationships between variables. Future studies are recommended to utilize longitudinal or experimental research methods to better examine the causal dynamics among self-efficacy, green employee engagement, and green behavior over time. Additionally, given that green employee engagement alone did not significantly influence green behavior in this study, further research should explore other potential mediators or moderators, such as intrinsic motivation, organizational culture, leadership style, or institutional policies, to comprehensively understand factors influencing sustainable employee behaviors.

References

- Ababneh, O. M. A. (2021). How do green HRM practices affect employees' green behaviors? The role of employee engagement and personality attributes. *Journal of Environmental Planning and Management*, 64(7), 1204–1226. <https://doi.org/10.1080/09640568.2020.1814708>
- Ahmad, F. S., Rosli, N. T., & Quoquab, F. (2022). Environmental quality awareness, green trust, green self-efficacy and environmental attitude in influencing green purchase behaviour. *International Journal of Ethics and Systems*, 38(1), 68–90. <https://doi.org/10.1108/ijoes-05-2020-0072>
- Ahmed, Z., Khosa, M., Nguyen, N. T., Faqera, A. F. O., & Rehman, S. (2024). Green HRM fostering followers' green creativity: Unfolding the role of environmental concern and employee engagement with eco-initiatives as a serial mediation. *Creativity and Innovation Management*, 33(4), 742–765. <https://doi.org/10.1111/caim.12614>
- Akbar, A., Ahmad, S., Khalid, M., Aslam, M. F., & Bhatti, M. A. A. (2024). Analyzing the Effect of Green HRM on Organizational Performance. *Bulletin of Business and Economics (BBE)*, 13(2), 864–869. <https://doi.org/10.61506/01.00402>
- Ali, M. S., Ammer, M. A., & Elshaer, I. (2023). Born to Be Green: Antecedents of Green Entrepreneurship Intentions among Higher Education Students. *Sustainability*, 15(8), 6668. <https://doi.org/10.3390/su15086668>
- Ali, Q. M., & Nisar, Q. (2022). Nexus between green human resource management and environmental performance: a green approach for higher education institutes. *Kybernetes*, 52, 5706–5729. <https://doi.org/10.1108/k-01-2022-0023>

- Ali, Q., Nisar, Q., Abidin, R. Z. U., Qammar, R., & Abbass, K. (2022). Greening the workforce in higher educational institutions: The pursuance of environmental performance. *Environmental Science and Pollution Research*, 30, 124474–124487. <https://doi.org/10.1007/s11356-022-19888-3>
- Alimehmeti, G., Ndoka, E., & Paletta, A. (2025). Cultivating green pioneers: examining the antecedents of sustainable entrepreneurial intent in higher education. *International Journal of Sustainability in Higher Education*, 36(1). <https://doi.org/10.1108/ijshe-03-2024-0206>
- Anwar, M., Suprihatin, S., Sasongko, N., Najib, M., Pranoto, B., Firmansyah, I., & Soekotjo, E. S. (2025). Sustainable Waste Management Strategies for Multilayer Plastic in Indonesia. *Cleaner and Responsible Consumption*, 16. <https://doi.org/10.1016/j.clrc.2025.100254>
- Apriadi, B. F., Setiawan, R., & Firmansyah, I. (2024). Policy scenario of plastic waste mitigation in Indonesia using system dynamics. *Waste Management & Research*, 42, 1008–1018. <https://doi.org/10.1177/0734242X241231396>
- Artha, A. D., Nurasa, H., & Candradewini, C. (2023). Recognizing and Detecting the Effectiveness of Policy Implementation Waste Management in Indonesia. *Jurnal Public Policy*, 9(3), 201. <https://doi.org/10.35308/jpp.v9i3.7656>
- Burhan, U. (2019). Self efficacy, self actualization, job satisfaction, organization citizenship behavior (OCB), effect on employee performance. *Ekulilibrium: Jurnal Ilmiah Bidang Ilmu Ekonomi*, 14(1), 45–57.
- Chen, W., & Zhang, J. H. (2023). Does shared leadership always work? A state-of-the-art review and future prospects. *Journal of Work-Applied Management*, 15(1), 51–66. <https://doi.org/10.1108/JWAM-09-2022-0063>
- Fawehinmi, O., Yusliza, M., Mohamad, Z., Faezah, J. N., & Muhammad, Z. (2020). Assessing the green behaviour of academics. *International Journal of Manpower*, 41, 879–900. <https://doi.org/10.1108/ijm-07-2019-0347>
- Fawehinmi, O., Yusliza, M., Tanveer, M., & Abdullahi, M. S. (2023). Influence of green human resource management on employee green behavior: The sequential mediating effect of perceived behavioral control and attitude toward corporate environmental policy. *Corporate Social Responsibility and Environmental Management*, 31(3), 2514–2536. <https://doi.org/10.1002/csr.2707>
- Gunarto, M., Cahyawati, D., & Yanti, P. (2025). The impact of self-efficacy on service quality in private universities: The mediating role of organizational citizenship behavior. *International Journal of ADVANCED AND APPLIED SCIENCES*, 12(1), 19–29. <https://doi.org/10.21833/ijaas.2025.01.003>
- Gunarto, M., Wandu, M. H. E., & Patiro, S. P. S. (2024). Analyzing the Impact of COVID-19 Pandemic on the Performance of Property Companies. *International Journal of Sustainable Development and Planning*, 19(6), 2177–2185. <https://doi.org/10.18280/ijstdp.190617>
- Gustiah, I. P., & Nurhayati, M. (2022). The effect of green transformational leadership on green employee performance through green work engagement. *Sch. J. Econ. Bus. Manag*, 9, 159–168.
- Hadi, P. (2023). The influence of self-efficacy on employee performance mediated by work motivation and work engagement. *International Journal of Research in Business & Social Science*, 12(2). <https://doi.org/https://doi.org/10.20525/ijrbs.v12i2.2465>

- He, G., & Yu, T. (2023). Evaluating the Benefits and Potential of “Plastic Reduction”: A Case Study of College Students in Western China. *Sustainability*, 15(24). <https://doi.org/10.3390/su152416807>
- Herlina, M. G., Iskandar, K., & Dewi, D. (2025). From Values to Climate Action: The Impact of Green Self-Efficacy on Pro-Environmental Behaviour in Greater Jakarta’s Higher Education Zillennials (SDG 13 View). *E3S Web of Conferences*, 601(0039). <https://doi.org/10.1051/e3sconf/202560100039>
- Jiang, Z., Hu, X., & Wang, Z. (2018). Career adaptability and plateaus: The moderating effects of tenure and job self-efficacy. *Journal of Vocational Behavior*, 104, 59–71.
- Katz, I., Rauvola, R., Rudolph, C., & Zacher, H. (2022). Employee green behavior: A meta-analysis. *Corporate Social Responsibility and Environmental Management*, 29(5), 1146–1157. <https://doi.org/10.1002/csr.2260>
- Khan, A. N. (2024). Elucidating the effects of environmental consciousness and environmental attitude on green travel behavior: Moderating role of green self-efficacy. *Sustainable Development*, 32(3), 2223–2232. <https://doi.org/10.1002/sd.2771>
- Li, X., Dai, J., Zhu, X., Li, J., He, J., Huang, Y., Liu, X., & Shen, Q. (2023). Mechanism of attitude, subjective norms, and perceived behavioral control influence the green development behavior of construction enterprises. *Humanities and Social Sciences Communications*, 10(1), 1–13. <https://doi.org/https://doi.org/10.1057/s41599-023-01724-9>
- Lisnawati, & Gunarto, M. (2021). The influence of uniqueness of resources on competitive advantage in private higher education. *Proc. Int. Conf. Ind. Eng. Oper. Manag.*, 5615–5621.
- Lyons, P., & Bandura, R. (2019). Self-efficacy: core of employee success. *Development and Learning in Organizations*, 33(3), 9–12. <https://doi.org/10.1108/DLO-04-2018-0045>
- Nasir Ansari, J. A., & Irfan, S. (2023). Corporate social responsibility and employee engagement: the mediating role of personal environmental norms and employee green behavior. *Social Responsibility Journal*, 19(9), 1728–1748. <https://doi.org/https://doi.org/10.1108/SRJ-03-2022-0153>
- O’Donohue, W. (2016). The moderating effect of ‘Green’ HRM on the association between proactive environmental management and financial performance in small firms. *International Journal of Human Resource Management*, 27(2), 239–261. <https://doi.org/10.1080/09585192.2015.1063078>
- Pan, L., Zhang, X., Wang, S., Zhao, N., Zhao, R., Ding, B., Li, Y., Miao, W., & Fan, H. (2023). Determinants associated with self-management behavior among type 2 diabetes patients in China: a structural equation model based on the theory of planned behavior. *International Journal of Clinical and Health Psychology*, 23(1), 100332. <https://doi.org/https://doi.org/10.1016/j.ijchp.2022.100332>
- Priyashantha, K. G., & Priyangaa, Y. (2022). Impact of green human resource management on employee green behavior: the mediating role of green attitude. *Indonesian Journal of Sustainability Accounting and Management*, 6(2), 378–389. <https://doi.org/https://doi.org/10.28992/ijssam.v6i2.674>
- Purba, S. D., & Tikurura, R. (2022). Effect Mediation of Green Behaviors on Green Employee Involvement in Improving Job Satisfaction in Pusat Sistem Informasi dan Teknologi Keuangan (PUSINTEK). *Kinerja*, 26(1), 151–166. <https://doi.org/10.24002/kinerja.v26i1.5566>

Rubianto, L., & Kembaren, E. M. (2023). Occupational self-efficacy as a predictor of work engagement employees working telecommuting during the covid-19 pandemic. *Jurnal Ilmiah Psikologi Terapan*, 11(1), 13–18.

Silva, A. P., Prata, J., Walker, T., Campos, D., Duarte, A., Soares, A., Barceló, D., & Rocha-Santos, T. (2020). Rethinking and optimising plastic waste management under COVID-19 pandemic: Policy solutions based on redesign and reduction of single-use plastics and personal protective equipment. *The Science of the Total Environment*, 742, 140565. <https://doi.org/10.1016/j.scitotenv.2020.140565>

SIPSN KLHK. (2025). *Capaian Kinerja Pengelolaan Sampah*. Direktorat Penanganan Sampah. <https://sipsn.menlhk.go.id/sipsn/>

Widiyanti, F., & Rizal, A. (2022). Organizational Citizenship Behavior (OCB) : Pengaruh Quality Of Work Life Dan Self-Efficacy (Studi Pada Karyawan PT Suzuki Sejahtera Sunindo Trada Kota Semarang). *Jesya*, 5(2), 1131–1138. <https://doi.org/10.36778/jesya.v5i2.659>

Yusliza, M., Amirudin, A., Rahadi, R., Athirah, N. A. N. S., Ramayah, T., Muhammad, Z., Mas, D., Massaro, M., Saputra, J., & Mokhlis, S. (2020). An Investigation of Pro-Environmental Behaviour and Sustainable Development in Malaysia. *Sustainability*, 12, 7083. <https://doi.org/10.3390/su12177083>

Yusriani, S., Prambudi, I. S., Gunarto, M., Nurbaeti, N., Lusiati, M., & Suhendro, S. (2023). Influence of Self-Efficacy and Peer Support on Learning Enthusiasm and Digital Competence in Online Distance Learning: A Cross-National Study on Workers and MM Program Postgraduate Students. *Proceedings International Conference on Business, Economics & Management*, 1, 410–427.

Zhang, J., & Cao, A. (2025). The Psychological Mechanisms of Education for Sustainable Development: Environmental Attitudes, Self-Efficacy, and Social Norms as Mediators of Pro-Environmental Behavior Among University Students. *Sustainability*, 17(3). <https://doi.org/10.3390/su17030933>

Zhu, X., Xia, M., Hu, Y., Zhang, L., Lu, Y., Zhang, Y., & Guo, X. (2020). Mental status and psychological needs of Chinese police officers in a highly impacted city during the COVID-19 pandemic. *International Journal of Mental Health Promotion*, 22(3), 149–157. <https://doi.org/10.32604/IJMHP.2020.011097>

Copyrights

Copyright for this article is retained by Nini Anggraini¹, Mukran Roni² with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license. (<http://creativecommons.org/licenses/by/4.0/>)

