THE INFLUENCE OF DIGITAL AND ENVIRONMENTAL LITERACY ON GREENWASHING SKEPTICISM AND ESG REPORT CREDIBILITY AMONG GENERATION Z UNIVERSITY STUDENTS IN GREATER BANDUNG

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Abstract

This study aims to examines how digital literacy and environmental literacy influence greenwashing skepticism and perceptions of the credibility of ESG reports among Generation Z in the Greater Bandung area. This study applies a quantitative design using survey data from 267 respondents, which is examined through a Structural Equation Model-Partial Least Squares (SEM-PLS) approach. The results show that digital literacy and environmental literacy significantly increase skepticism towards greenwashing, but have a negative impact on the perceived credibility of ESG reports. In addition, skepticism towards greenwashing has a negative impact on report credibility and serves as a mediator in the relationship between the two variables of competence and report credibility. This model meets all criteria related to reliability, validity, and appropriateness. These findings highlights the importance of media literacy and environmental literacy competencies in building critical understanding of sustainability.

Keywords: Digital Literacy, Environmental Literacy, Greenwashing Skepticism, ESG Report Credibility, Generation Z

INTRODUCTION

In the face of increasing difficulties brought by worldwide climate change, the international financial markets are experiencing considerable transformations that favor investments focused on sustainability. By the year 2025, investments that prioritize Environmental, Social, and Governance (ESG) factors are projected to surpass US$500 trillion, representing over a third of all global assets being managed (Bloomberg Intellegence, 2021). Due to these developments, nearly every company listed in the S&P 500 has released sustainability reports, and in Indonesia, 94% of IDX companies have also put out sustainability reports for the year 2023 (IDX, 2025).

The growing number of ESG reports, however, does not necessarily correspond with higher public confidence in them. Research by Yulianti & Siregar (2023) shows that ESG disclosure in Indonesia has not had a significant impact on abnormal returns, indicating that the market still doubts the credibility of ESG reports. This phenomena is in line with the rise of greenwashing practices, which is the presentation of misleading information to make companies appear more sustainable than they actually are (Fella & Bausa, 2024). The European Commission (2021) found that 42% of companies' environmental claims are exaggerated or deceptive, while Fadilla et al. (2025) showed that 16% of companies in Indonesia have low ESG scores.

A survey conducted by the International Sustainability Engagement Program (ISEP) in 2025 reinforces skepticism about sustainability reports. The survey involved more than 6,500 adults from 13 different countries distributed accross North America, Europe, and the Asia-Pacific region. A total of 62% of respondents believed that companies were engaged in greenwashing practices, while only 16% felt they had adequate access to sustainability information (ISEP, 2025). In support of this, an earlier examination by the European Commission revealed that 53% of the environmental claims made by companies were umbiguous, and 40% of them were not supported by evidence (ISEP, 2025). This fact highlights a growing mismatch between sustainability reports and public perceptions.

This phenomenon cannot be separated from the role of Generation Z, who have a strong interest in social and environmental issues. As consumers and potential investors, Generation Z demands concrete evidence of companies' sustainability claims, not just symbolic narratives (Wijaya, 2024). APJII (2024) shows that Generation Z are the most frequent users of social media, and more than half of them seek sustainability information through digital platforms. This raises the question of how this group assesses sustainability information amid the prevalence of greenwashing practices.

This study argues that these capabilities are influenced by two key 21st-century competencies, namely digital literacy and environmental literacy. Although both are often studied separately, there is still small-scale research that examines the simultaneous role of both in the credibility of sustainability reports. Thus, this study provides a conceptual framework that considers both literacies as cognitive mechanisms in assessing the credibility of ESG reports and detecting greenwashing practices.

Theoretically, this research fills a gap by expanding the application of the Elaboration Likelihood Model Framework and Signaling Theory within the context of ESG. Practically, this research offers understanding into how digitally literate and environmentally conscious Generation Z assesses the authenticity of corporate sustainability reports, where the

credibility of reports is determined not only by reporting standards but also by the public's ability to evaluate the authenticity and transparency of the information presented.

REVIEW OF LITERATURE

Avinç & Doğan (2024) state that digital literacy is a combination of technical, cognitive, and social skills that enable individuals to assess the truthfulness of digital information. In addition, digital literacy is important for assessing the credibility of online information and for distinguishing between truthful and deceptive claims (Pan et al., 2025). Putri et al. (2025) state that individuals with high digital literacy can cross-verify ESG information. In line with this, Pan et al. (2025) found that digital literacy encourages information processing through the central route as described in the Elaboration Likelihood Model (Petty & Cacioppo, 1986). This elaboration process helps individuals recognize inconsistencies in sustainability claims and detect greenwashing practices.

Environmental literacy refers to an individual's ability to understand scientific principles related to the environment, have awareness and attitudes that support sustainability, and demonstrate actions that support nature conservation (Yildirim et al., 2025). Fang (2020) asserts that individuals with environmental literacy will seek to find connections between objects and events in everyday life and choose actions that have the least negative impact on nature.

Signaling theory argues that companies convey sustainable signals to stakeholders through ESG reports to demonstrate their commitment to environmental responsibility. However, the effectiveness of these signals depends on the ability of signal recipients to assess the authenticity and consistency of the signals conveyed (Nurwidodo et al., 2020). Individuals with high environmental literacy tend to be more critical in assessing inconsistent signals and are better able to detect signs of greenwashing (Yildirim et al., 2025). Meanwhile, individuals with low literacy tend to accept sustainability claims passively without in-depth analysis (Fang, 2020).

Greenwashing is a communication practice carried out by companies to portray an inauthentic image of environmental friendliness (Khandai et al., 2025). Nemes et al. (2022) refer to greenwashing as a manipulative act that misleads the public through false claims about a company's environmental responsibility. Skepticism toward greenwashing shows people's tendency to doubt sustainability claims that aren't backed up by clear evidence (Spaniol et al., 2024). Skepticism is active because it involves critically assessing the credibility of information sources (Andreoli & Minciotti, 2023). When reading ESG reports, individuals with high levels of skepticism tend to be more cautious in accepting sustainability claims and demand greater transparency (Spaniol et al., 2024). This kind of skepticism can lower perceptions of ESG credibility if the disclosures provided by companies are considered inconsistent with reality (Andreoli & Minciotti, 2023).

ESG has three aspects, namely environmental, social, and governance. The social aspect highlights the company's treatment of individuals, including human rights, employee welfare, and work ethic standards (Jayanti et al., 2024). Meanwhile, the governance dimension relates to the company's management system, leadership integrity, and transparency in the decision-making process (Jayanti et al., 2024). These three aspects contribute to shaping public perceptions of a company's credibility and sustainability reputation (Haulah & Putra, 2025).

Perceptions of the credibility of ESG reports are influenced not only by the quality of the report's content, but also by the reader's ability to assess and understand the sustainability information provided (Vaihekoski & Yahya, 2025). A credible ESG report will strengthen the relationship between the company and its stakeholders by providing appropriate, consistent, and verifiable information (Haulah & Putra, 2025). However, perceptions of credibility may decline if the report fails to address public doubts about the veracity of sustainability claims (Vaihekoski & Yahya, 2025). Thus, the perceived credibility of ESG reports is influenced not only by concrete evidence, but also by readers' literacy, level of skepticism, and trust in sustainability reporting systems (Zou et al., 2025).

RESEARCH METHOD

This research employs a quantitative design with the use of a survey method to examine how digital literacy and environmental literacy influence the perception of ESG report credibility with greenwashing skepticism as a mediating variable. The research population consists of accounting students at universities in the Bandung Raya area who belong to Generation Z (born between 1997 and 2012). The sampling technique used was accidental sampling, namely respondents who met the research criteria and were easily accessible. The respondent criteria included active students aged 18-27 years, at least in their third semester, and who had known or read information related to ESG reports. The sample size was determined using the Lemeshow formula, with a 95% confidence level and a 6% margin of error, resulting in 267 respondents.

The operational definitions in this research include dependent variables, independent variables, and mediating variables. The dependent variable is the perception of ESG report credibility, while the independent variables are digital literacy and environmental literacy. The mediating variable is greenwashing skepticism. The data used is primary data acquired directly from respondents through an online questionnaire (Google Form). In addition, other data in the function of supporting literature such as journals, books, and previous research reports was used to strengthen the conceptual analysis. The main research instrument was a questionnaire using a 1-5 Likert scale, ranging from “strongly disagree” to “strongly agree.”

The method for analyzing data utilized in this study employed the Structural Equation Modeling-Partial Least Squares (SEM-PLS) with a tool-assisted approach from SmartPLS version 4.0 software. This method was selected due to ots capability to evaluate intricate connections between latent variables, both directly and indirectly, and is suitable for studies with a moderate sample size. The analysis was conducted in two main stages, namely the outer model and the inner model.

Research Hypothesis

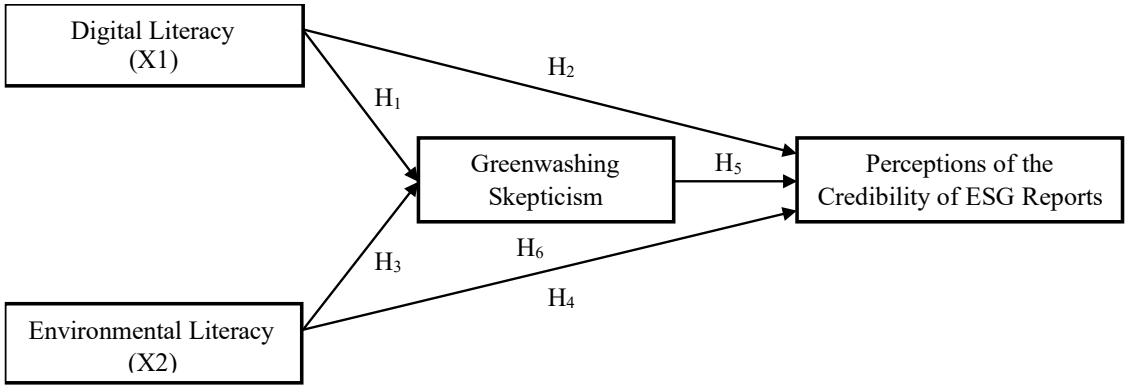
This study aims to analyze the influence of digital literacy and environmental literacy on greenwashing skepticism and the perceived credibility of ESG report. Based on the review of the literature and previous research, the hypothesis proposed in this study are as follows:

- H1: Digital literacy has a positive and significant effect on greenwashing skepticism.
- H2: Digital literacy has a negative and significant effect on the perceptions of the credibility of ESG reports
- H3: Environmental literacy has a positive and significant effect on greenwashing skepticism.

- H4: Environmental literacy has a negative and significant effect on perceptions of the credibility of ESG reports
- H5: Greenwashing skepticism has a negative and significant effect on the perceived credibility of ESG reports.
- H6: Greenwashing skepticism mediates the influence of digital literacy and environmental literacy on perceptions of the credibility of ESG reports.

Research Model

This research model describes the relationship between independent variables (digital literacy and environmental literacy) and dependent variables (perceptions of the credibility of ESG reports). This model can be illustrated as follows:



The model in the figure indicates that digital literacy and environmental literacy exert a direct influence on skepticism toward greenwashing, which in turn affects perceptions of ESG report credibility. Each relationship within the model was tested using Structural Equation Modeling-Path Dependent System (SEM-PLS) analysis to reveal direct and indirect effects among variables. The model indicates that higher levels of individual literacy foster more critical evaluations of sustainability claims. The resulting skepticism subsequently influences judgments regarding the credibility of ESG reporting. The research model predict that greater literacy will amplify skepticism, ultimately reducing perceptions of credibility for ESG reports lacking transparency.

RESULTS AND DISCUSSION

Respondent Description

The respondents in this study comprise of university students from various universities in Bandung Raya Area, representing Generation Z, a group highly engaged with digital platforms and environmental issues. This demographic was chosen because of their strong exposure to online information and their growing awareness of sustainability topics, making them a relevant population for examining digital and environmental literacy in the context of ESG reporting. Centering on this group allows the study to explore how digital habits and environmental awareness influence perceptions of greenwashing and the credibility of corporate sustainability reports.

Table 1.
Respondent Characteristics

Category	Sub-Category	Number of Responses	Percentage
Gender	Male	92	34%
	Female	175	66%
Total		267	100%
Age	< 20 years	3	1%
	20-25 years	264	99%
Total		267	100%
Experiencing Reading ESG Report	Often	134	50%
	Sometimes	133	50%
Total		267	100%
Average internet use	< 2 hours	22	8%
	2-4 hours	12	4%
	5-7 hours	107	40%
	>7 hours	126	47%
Total		267	100%
Frequency of following environmental issues	Very often	58	22%
	Frequently	71	27%
	Sometimes	76	28%
	Rarely	62	23%
Total		267	100%

Source: Data processed (2025)

This study involved 267 respondents, all of whom were students from various universities in Greater Bandung. Based on Table 1, most respondents were female (66%), while males accounted for 34%. This shows that female participation in sustainability and digital literacy issues is quite dominant. In terms of age, 99% of respondents were in the 20-25 age range, reflecting the characteristics of Generation Z, which is the main focus of this study.

In terms of experience, 50% of respondents frequently read sustainability (ESG) reports, while the remaining 50% occasionally read them, indicating a relatively balanced level of exposure to ESG information. Average internet usage is also relatively high, with 47% using the internet for more than 7 hours per day and 40% using it for 5-7 hours, reflecting a level of digital activity that is relevant to the variable of digital literacy. In addition, the frequency of following environmental issues shows that 27% of respondents often and 22% very often follow sustainability issues, while the rest (51%) are still at a moderate to low level. These findings confirm that the majority of Generation Z are concerned about environmental and sustainability issues, in line with the context of this study.

Outer Model Evaluation

Table 2.
Outer Loadings

Variable	Item	Outer Loadings	Information
Digital Literacy	DL1.1	0.853	Valid

Variable	Item	Outer Loadings	Information
	DL1.2	0.881	Valid
	DL1.3	0.895	Valid
	DL1.4	0.862	Valid
	DL1.5	0.879	Valid
Environmental Literacy	EL2.1	0.889	Valid
	EL2.2	0.842	Valid
	EL2.3	0.865	Valid
	EL2.4	0.848	Valid
	EL2.5	0.853	Valid
Greenwashing Skepticism	GS1.1	0.847	Valid
	GS1.2	0.861	Valid
	GS1.3	0.847	Valid
	GS1.4	0.819	Valid
	GS1.5	0.847	Valid
Perception of ESG Report Credibility	PRC1.1	0.858	Valid
	PRC1.2	0.873	Valid
	PRC1.3	0.830	Valid
	PRC1.4	0.877	Valid
	PRC1.5	0.855	Valid

Source: Data processed (2025)

The outer loadings test results show that all indicators in the Digital Literacy, Environmental Literacy, Greenwashing Skepticism, and Perception of ESG Report Credibility variables have loadings above 0.70, ranging from 0.819 to 0.895. Based on the criteria proposed by Hair et al. (2021), outer loading values greater than 0.70 indicate that each indicator is able to represent the construct being measured well.

Table 3.
Cross Loadings

Item	DL	EL	GS	PRC	Information
DL1.1	**0.853**	0.573	0.619	-0.672	Valid
DL1.2	**0.881**	0.542	0.582	-0.686	Valid
DL1.3	**0.895**	0.558	0.582	-0.711	Valid
DL1.4	**0.862**	0.529	0.568	-0.655	Valid
DL1.5	**0.879**	0.517	0.573	-0.640	Valid
EL2.1	0.558	**0.889**	0.562	-0.681	Valid
EL2.2	0.504	**0.842**	0.547	-0.654	Valid
EL2.3	0.522	**0.865**	0.571	-0.635	Valid
EL2.4	0.561	**0.848**	0.572	-0.661	Valid
EL2.5	0.532	**0.853**	0.545	-0.642	Valid
GS1.1	0.559	0.563	**0.847**	-0.638	Valid
GS1.2	0.566	0.532	**0.861**	-0.660	Valid
GS1.3	0.547	0.542	**0847**	-0.626	Valid
GS1.4	0.607	0.584	**0.819**	-0.639	Valid

Item	DL	EL	GS	PRC	Information
GS1.5	0.544	0.526	**0.847**	-0.648	Valid
PRC1.1	-0653	-0.672	-0.633	**0.858**	Valid
PRC1.2	-0.646	-0.651	-0.638	**0.873**	Valid
PRC1.3	-0.632	-0.639	-0.643	**0.830**	Valid
PRC1.4	-0.665	-0.656	-0.650	**0.877**	Valid
PRC1.5	-0.709	-0.652	-0.701	**0.855**	Valid

Source: Data processed (2025)

The result of the cross-loading examination reveal that all indicators have the highest loading values in their respective constructs equated to other constructs. The cross-loading values for each indicator range from 0.819 to 0.895 in the constructs measured, while the correlation values with other constructs are relatively lower. This shows that each question item is able to distinguish well between different constructs. According to the criteria of Fornell & Larcker (1981), discriminant validity is considered good if the loading value on the original construct is greater than the correlation between other constructs.

Table 4.
Heteroit-Monotrait Ratio (HTMT)

Variable	GS	PRC	DL	EL
Greenwashing Skepticism				
Perception of ESG Report Credibility	0.840			
Digital Literacy	0.734	0.839		
Environmental Literacy	0.718	0.836	0.678	

Source: Data processed (2025)

Discriminant validity testing was also conducted using the Heterotrait-Monotrait Ratio (HTMT) approach. The calculation results showed that all HTMT values between variables were below the verge of 0.90, with values figures form 0.678 to 0.840. Based on the guidelines proposed by Henseler et al. (2015), HTMT values below 0.90 indicate that there is no multicollinearity between constructs, so that each variable in the model has conceptually different characteristics.

Table 5.
Average Variance Extracted (AVE)

Variable	AVE	Information
Digital Literacy	0.713	Valid
Environmental Literacy	0.737	Valid
Greenwashing Skepticism	0.764	Valid
Perception of ESG Report Credibility	0.739	Valid

Source: Data processed (2025)

Based on the Average Variance Extracted (AVE) test results, all constructs had values above 0.50, ranging from 0.713 to 0.764. This shows that each construct was able to describe more than 50% of the variance in its indicators, thus meeting the criteria for convergent validity. These findings confirm that the constructs of Digital Literacy, Environmental Literacy, Greenwashing Skepticism, and Perception of ESG Report Credibility have good internal consistency and are able to fully describe their theoretical concepts. These results are in line with the views of Fornell & Larcker (1981), who stated that an AVE value above 0.50

reflects the reliability of the measurement model in explaining the phenomenon being studied.

Table 6.
Composite Reliability & Cronbach's Alpha

Variable	Composite Reliability	Cronbach's Alpha	Information
Digital Literacy	0.925	0.899	Reliable
Environmental Literacy	0.934	0.911	Reliable
Greenwashing Skepticism	0.942	0.923	Reliable
Perception of ESG Report Credibility	0.934	0.912	Reliable

Source: Data processed (2025)

The outcome of the reliability test indicate that every constructs in this research possesses a Composite Reliability value between 0.925 and 0.942 and a Cronbach's Alpha value between 0.899 and 0.923. Based on Hair et al. (2021), a value exceeding 0.70 suggests that the research instrument possesses high reliability. Thus, it can be determined that the four variables show strong internal reliability. This means that each indicator in the construct is capable of providing stable and reliable measurement results.

Multicolinearity Test

Table 7.
Collinearity Statistics (VIF)

Variable	Item	VIF
Digital Literacy	DL1.1	2.375
	DL1.2	2.512
	DL1.3	2.375
	DL1.4	2.055
	DL1.5	2.425
Environmental Literacy	EL2.1	2.545
	EL2.2	2.906
	EL2.3	2.238
	EL2.4	2.966
	EL2.5	2.428
Greenwashing Skepticism	GS1.1	2.414
	GS1.2	2.927
	GS1.3	3.204
	GS1.4	2.598
	GS1.5	2.930
Perception of ESG Report Credibility	PRC1.1	3.052
	PRC1.2	2.369
	PRC1.3	2.651
	PRC1.4	2.379
	PRC1.5	2.444

Source: Data processed (2025)

The Variance Inflation Factor (VIF) test was conducted to detect symptoms of multicollinearity between indicators in each construct. Based on the results in Table 6, the

VIF values for all indicators range from 2.055 to 3.204. According to Hair et al. (2021), a VIF value of less than 5 indicates that there is no serious multicollinearity among the indicators. Therefore, all indicators in the variables of digital literacy, environmental literacy, greenwashing skepticism, and perception of ESG report credibility do not show excessive linear relationships. This means that the measurement model is free from multicollinearity issues and is suitable for use in structural analysis in the next stage.

Inner Model Evaluation

Table 8.
Coefficient of Determination (R-square Adjusted)

Endogen Construct	R^2 Adjusted	t-statistics	p-value
Greenwashing Skepticism	0.534	7.371	0.000
Perception of ESG Report Credibility	0.762	14.223	0.000

Source: Data processed (2025)

Based on the results in Table 7, the Adjusted R^2 value for the greenwashing skepticism variable is 0.534, which means that digital literacy and environmental literacy can explain 53.4% of the variation in greenwashing skepticism, while the rest is clarified by additional influences outside the model. Furthermore, the adjusted R^2 value for the ESG report credibility perception variable is 0.762, indicating that digital literacy, environmental literacy, and greenwashing skepticism together explain 76.2% of the variation in perception of ESG report credibility. High t-statistics values and p-values < 0.05 indicate that the model has a strong level of validity and contribution in explaining the relationship between latent variables.

Table 9.
Effect Size (f-square)

Route	f^2	t-statistics	p-value	Informations
DL » GS	0.246	2.530	0.011	Moderate
DL » PRC	0.263	2.801	0.005	Medium-large
EL » GW	0.193	2.838	0.005	Moderate
EL » PRC	0.261	2.734	0.006	Medium-large
GS » PRC	0.174	2.166	0.030	Moderate

Source: Data processed (2025)

The effect size test results denote that all relationships between variables have f^2 values between 0.174 and 0.263, which is classified as moderate to medium-large. Digital literacy and environmental literacy each have a fairly strong influence on greenwashing skepticism and perceptions of ESG report credibility. In addition, greenwashing skepticism also has a moderate influence on perceptions of ESG report credibility. These findings indicate that all independent variables make a meaningful contribution to the research model and support the general validity of the structural model.

Table 10.
Out-of-Sample Predictive Power (PLSpredict - MV Summary)

Indicator	Q^2predict	RMSE (PLS)	RMSE (LM)	ΔRMSE (PLS–LM)
GS1.1	0.380	0.861	0.880	–0.019
GS1.2	0.364	0.849	0.871	–0.022

Indicator	Q²predict	RMSE (PLS)	RMSE (LM)	ΔRMSE (PLS–LM)
GS1.3	0.357	0.816	0.837	–0.021
GS1.4	0.429	0.838	0.862	–0.024
GS1.5	0.344	0.940	0.964	–0.024
PRC1.1	0.535	0.732	0.740	–0.008
PRC1.2	0.512	0.711	0.729	–0.018
PRC1.3	0.492	0.786	0.794	–0.008
PRC1.4	0.531	0.699	0.717	–0.018
PRC1.5	0.567	0.721	0.736	–0.015

Source: Data processed (2025)

The PLSpredict test results show that all indicators have positive Q²predict values (0.344-0.567) and negative ΔRMSE (PLS-LM) differences. This condition shows that the model can predict well and performs better than the linear model (LM). Thus, this research model not only has structural validity but is also predictively relevant for projecting relationships between variables outside the research sample.

Table 11.
Model Fit Indices

Index	Model	Original Value (O)	Sample Mean (M)	95% CI	Informations
SRMR	Saturated	0.040	0.034	[0.040 – 0.042]	Good fit (< 0.08)
	Estimated	0.040	0.034	[0.040 – 0.042]	Good fit
d_ULS	Saturated	0.336	0.244	[0.333 – 0.376]	Decent Model
	Estimated	0.336	0.244	[0.333 – 0.376]	Decent Model
d_G	Saturated	0.200	0.191	[0.224 – 0.238]	Decent Model
	Estimated	0.200	0.191	[0.224 – 0.238]	Decent Model

Source: Data processed (2025)

The GoF test results point out that the SRMR value of 0.040 (< 0.08) indicates that the model has a good fit between the actual data and the estimated model. The d_ULS (0.336) and d_G (0.200) values are also within the acceptable confidence interval range, confirming that the structural model is practicable to use and does not experience data suitability issues. Thus, this model can be said to be fit and valid to expound the connection between variables in the study.

Hypothesis Test

Table 12.
Direct Effect - Path Coefficients (Bootstrapping 5,000 Resamples)

Route	Coefficient (β)	Mean (M)	STDEV	t-statistics	p-value	Information
DL » GS	0.431	0.432	0.060	7.219	0.000	Positive, significant

DL » PRC	-0.355	-0.356	0.039	9.173	0.000	Negative, significant
EL » GS	0.382	0.381	0.053	7.180	0.000	Positive, significant
EL » PRC	-0.347	-0.347	0.045	7.644	0.000	Negative, significant
GS » PRC	-0.297	-0.297	0.047	6.388	0.000	Negative, significant

Source: Data processed (2025)

Based on the analysis results, all paths have t-statistic values > 1.96 and p-values < 0.05, which means that all hypotheses are significantly accepted. Digital literacy (X1) has a positive effect on greenwashing skepticism (M) (β = 0.431; p = 0.000) and a negative effect on the perceived credibility of ESG reports (Y) (β = -0.355; p = 0.000). Environmental literacy (X2) also shows a positive effect on greenwashing skepticism (β = 0.382; p = 0.000) and a negative effect on the perceived credibility of ESG reports (β = -0.347; p = 0.000). Meanwhile, greenwashing skepticism (M) has a significant negative effect on the perceived credibility of ESG reports (β = -0.297; p = 0.000).

Table 13.
Indirect Effect

Route	Coefficient (β)	Mean (M)	STDEV	t-statistics	p-value
DL » PRC	-0.128	-0.128	0.028	4.556	0.000
EL » PRC	-0.114	-0.113	0.021	5.427	0.000

Source: Data processed (2025)

The indirect effect test shows that digital literacy (X1) and environmental literacy (X2) have a significant negative effect on the perception of ESG report credibility (Y) through greenwashing skepticism (M). The estimation results show that the coefficient value of X1 → Y is -0.128 with t = 4.556 and p = 0.000, and X2 → Y is -0.114 with t = 5.427 and p = 0.000, all of which are significant at the 5% level.

The Effect of Digital Literacy on Greenwashing Skepticism

The test outcomes show that digital literacy has a positive effect on greenwashing skepticism. This means the more advanced an individual's capacity to search for, appraise, and verify digital information, the greater their tendency to be skeptical of inconsistent sustainability claims. This finding supports the Elaboration Likelihood Model theory (Petty & Cacioppo, 1986), which explains that individuals with high digital literacy process information through the central route, making them more critical in assessing the truth of a message. These results are also in line with the research by Pan et al. (2025) and Zou et al. (2025), which confirms that digital literacy plays an important role in identifying potential manipulation of ESG information in online media.

The Effect of Digital Literacy on the Perception of ESG Report Credibility

Based on the analysis conducted, it has been proven that digital literacy has a negative effect on the perception of ESG report credibility. This shows that individuals with high digital literacy tend to be more cautious and less trusting of sustainability reports that are not fully transparent. This finding indicates a tendency toward critical trust, where digital capabilities actually reduce trust in information that is considered unverifiable. These results are consistent with studies by Fella & Bausa (2024) and Fadilla et al. (2025), which state that

increased digital literacy causes the public to be more skeptical of sustainability reports that are not accompanied by strong evidence.

The Influence of Environmental Literacy on Greenwashing Skepticism

Environmental literacy has a positive influence on greenwashing skepticism. This means that individuals with a good understanding of the environment are able to distinguish between authentic and symbolic sustainability practices. This is in line with Signal Theory (Spence, 1973), which states that the ability of the signal receiver determines the effectiveness of the sustainability message conveyed by the company. This finding reinforces the research of Fang (2020) and Yildirim et al. (2025) which states that environmental literacy encourages individuals to assess sustainability claims based on scientific evidence and ecological ethics.

The Effect of Environmental Literacy on the Perception of ESG Report Credibility

The test results indicate that environmental literacy has a negative effect on the perception of ESG report credibility. These findings indicate that individuals with high levels of environmental literacy are more sensitive to inconsistencies in sustainability reports. This explains why groups with high ecological awareness are more critical and have lower perceptions of credibility toward ESG reports that lack transparency. These results are consistent with the findings of Nurwidodo et al. (2020) and Amaliah et al. (2023), which show that high environmental awareness is often accompanied by a cautious attitude toward manipulative sustainability claims.

The Effect of Greenwashing Skepticism on the Perception of ESG Report Credibility

In this study, greenwashing skepticism has a negative effect on the perception of ESG report credibility. This means that the higher the level of skepticism towards greenwashing practices, the lower the public's perception of ESG report credibility. These results are in line with the research by Andreoli & Minciotti (2023) and Spaniol et al. (2024) which found that skepticism plays a key role in shaping perceptions of the reliability of sustainability reports. This skeptical attitude arises because the public demands transparency and concrete evidence of companies' environmental claims.

The Influence of Digital Literacy and Environmental Literacy on the Perception of ESG Report Credibility Mediated by Greenwashing Skepticism

This study shows that greenwashing skepticism mediates the influence of digital literacy and environmental literacy on the perception of ESG report credibility. This mediation result explains that literacy, both digital and environmental, does not directly influence trust in ESG reports, but through the mechanism of skepticism towards sustainability claims. In other words, the ability to understand digital information and awareness of environmental issues shape critical attitudes that ultimately determine how individuals assess the credibility of ESG reports. These findings are consistent with the conceptual model proposed by Haulah & Putra (2025) and Jayanti et al. (2024), which emphasizes that the credibility of ESG reports is not only determined by the content of the report, but also by the cognitive capacity and skeptical attitudes of its readers.

CONCLUSION

Based on the results of this study, digital literacy and environmental literacy significantly influence skepticism toward greenwashing, which in turn reduces the perceived credibility of ESG reports. These results indicate that individuals with high literacy skills are

more critical in assessing the authenticity of corporate sustainability claims. Greenwashing skepticism proved to be a mediating variable linking literacy to perceptions of credibility, confirming that trust in ESG reports is determined not only by the content of the report, but also by the reader's ability to process and evaluate information in depth. Theoretically, this study reinforces the relevance of Signaling Theory and the Elaboration Likelihood Model (ELM) in explaining the cognitive mechanisms of perception formation towards sustainability reports. Practically, these results encourage companies to be more transparent and consistent in conveying ESG information, especially amid a public that is increasingly digitally literate and environmentally conscious. The limitations of this study lie in its focus on Generation Z respondents in the Greater Bandung area. Therefore, future research should involve a more diverse population and consider additional factors such as institutional trust and intensity of digital media use to broaden the understanding of the dynamics of ESG report credibility.

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