



The role of digital media in educating Bangkok's youth on sustainable consumption and production

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Abstract

This study explores the impact of digital media on sustainable behaviors among 504 university students using Structural Equation Modeling (SEM). Data were collected through stratified random sampling, ensuring a representative cross-section of students from various faculties. The survey, administered online via Google Forms from May to October 2023, included comprehensive questions on digital media usage, sustainability awareness, and behavioral intentions. The SEM analysis was performed using AMOS software, with parameters set to identify digital media's direct and indirect effects on sustainable practices. Findings indicate that while digital media significantly enhances awareness and fosters favorable attitudes toward sustainability, there is a significant gap between these attitudes and actual behaviors. This highlights the urgent need for educational institutions to enhance curricular and extracurricular strategies that effectively translate increased awareness into real-world sustainability actions, aligning with global Sustainable Development Goals. The study's findings have practical implications for educational institutions, policymakers, and researchers, as they underscore the potential of digital media as an essential educational tool in promoting and achieving sustainability within academic settings.

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Introduction

The emergence of the digital age has significantly impacted several aspects of our lives, including our daily routines, work pursuits, and social interactions (Alzubi, 2023; Goi, 2017). Technology has significantly impacted sustainable consumption and production, particularly among young people living in metropolitan

areas such as Bangkok (Sumadevi, 2023; Wilska et al., 2023). Schneider (2019) asserts that the advent of digital solutions has significantly changed consumption and production patterns. However, it has also enabled the creation of innovative and long-lasting approaches to address pressing environmental and socioeconomic challenges (Rosário & Dias, 2022). In the present circumstances, it is crucial to examine how the digital

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age can be harnessed to promote sustainable consumption and production among the youth in Bangkok (Jatusripitak & Ricks, 2024; Vantamay, 2018). This study evaluates the technological capabilities that can accelerate progress toward a more ecologically sustainable future. According to the SDG Knowledge Hub (2019) report, the United Nations Environment Programme has underscored the essential role of the digital era in advancing Sustainable Consumption and Production (SCP). Digital technology has significantly accelerated the attainment of Sustainable Development Goals (SDGs) by mitigating resource consumption, waste generation, and emissions (Nguyen & Nguyen, 2020). Furthermore, research by the World Economic Forum highlights the significant impact of digital solutions in effectively tackling social and environmental issues, with a particular focus on metropolitan regions such as Bangkok. This inspiring potential of technology to address pressing issues should make us all feel hopeful and inspired (Shen et al., 2023). According to Anser et al. (2024), promoting a transition towards sustainable consumption and production (SCP) is essential but also promising and hopeful.

The primary objective of this study is to examine the complex correlation between the level of individual exposure to digital media and the amount of comprehension of sustainable consumption and production (SCP) among students at the University (Horrich et al., 2024). This study examines the intricate techniques via which digital media might improve comprehension and perception of SCP, perhaps resulting in a substantial shift in customer behavior. The research acknowledges that just possession of information is insufficient. Hence, this study investigates the relationship between a well-informed mindset and a tangible propensity to engage in SCP (Barth et al., 2014; Kircher, 2024). The primary purpose of this study is to investigate the degree to which these goals are manifested via tangible behaviors linked to sustainable consumption patterns (SCP), therefore offering valuable insights into the efficacy of digital media in advancing sustainability (Abdulghaffar & Bakr, 2024). Understanding the connections between these aspects is essential. Transitioning from traditional passive media intake to adopting sustainable habits involves complex cognitive and emotional processes, social influences, and practical considerations (Kanchanawongpaisan et al., 2024). This research aims to substantially improve digital media strategies by analyzing and understanding the interconnectedness among various factors. The techniques above have been developed to advance the Sustainable Development Goals (SDGs) as delineated by the United Nations Educational, Scientific and

Cultural Organization (UNESCO), 2015, particularly within Thailand's higher education landscape (Łobejko & Bartczak, 2021). According to Hügel and Davies (2024), the significance of the research goes beyond its capacity to influence individual behaviors. It also has the potential to provide insights into institutional policies and contribute to enduring societal changes. According to Ghobakhloo et al. (2024), the effective use of digital media in disseminating SCP principles has promise for a long-term impact on university students, who often take leadership positions and decision-making in the future. This can expedite shifting towards a more environmentally friendly future in Bangkok and other regions.

Therefore, this research examines students' perspectives on Sustainable Consumption and Production at the university. The study's primary aim is to use the gathered data to guide the establishment of educational frameworks and social initiatives that promote sustainable growth in the future. This research also aims to make a scholarly contribution toward cultivating a more sustainable and environmentally conscious society. This will be achieved by comprehensively understanding students' viewpoints and integrating them into academic and social endeavors.

Research Objectives

To investigate the impact of digital media on students' knowledge levels regarding sustainable practices at the university. It also studies the subsequent effect of this awareness on their attitudes towards sustainability. Additionally, it explores the elements that influence the connection between awareness and attitude and examines how these attitudes manifest as tangible, sustainable behaviors among the students.

Literature Review

TPB Stands for the Theory of Planned Behavior.

The primary idea of Sustainable Consumption and Production, grounded in the theory of planned behavior by Ajzen (1985), has enhanced the understanding of consumer behavior related to sustainability (Qin & Song, 2022). According to Meet et al. (2024), the probability that an individual engages in a specific behavior, such as purchasing environmentally friendly products or adopting sustainable practices, is influenced by three key factors: attitude towards the behavior, subjective norms, and

perceived behavioral control. According to Abdulghaffar and Bakr (2024), attitude may be characterized as an individual's evaluation of their inclination to participate in a particular conduct. Individuals' subjective norms refer to their perceptions of the social pressures that motivate them to participate in or refrain from a specific action. According to Zhang (2024), perceived behavioral control refers to an individual's assessment of the ease or difficulty of a particular task. The Theory of Planned Behavior (TPB) is significant in sustainable consumption and production (SCP). According to Ajzen and Fishbein (2004), the paradigm, as mentioned earlier, is a valuable perspective for examining the influence of consumers' environmental beliefs, social norms, and perceived control on their intentions and behaviors related to sustainability. Scholars often enhance the Theory of Planned Behavior (TPB) by adding additional components, such as environmental awareness, knowledge, and ethical responsibility, to better understand the complex dynamics of sustainable consumption.

The application of the Theory of Planned Behavior (TPB) to Sustainable Consumption and Production (SCP) research emphasizes understanding the psychological and social determinants that influence people's decisions and behaviors regarding sustainability (Nickell & Hinsz, 2023). Through a comprehensive analysis of these variables, scholars and professionals can develop more effective approaches to foster sustainable consumption and production practices (Gansser & Reich, 2023).

Social Cognitive Theory (SCT)

Social Cognitive Theory (Bandura, 1986) examines the intricate dynamics among human beliefs, environmental legislation, and observable actions in managing single-use plastic waste (Fischbach & Yauney, 2023). Their approach illuminates the crucial impact of educational interventions and enforcing prohibitions or incentive schemes in shaping consumer behavior (Gan et al., 2024). Their study provides a comprehensive perspective on how behavioral changes can be strategically implemented to promote more sustainable consumer behaviors by applying Social Cognitive Theory to the context of Sustainable Consumption behaviors (SCP). The results are significant, indicating that well-designed policies and targeted educational initiatives can effectively advance global Sustainable Consumption and Production (SCP) objectives. This research highlights the effectiveness of SCT as a robust framework for creating practical solutions to urgent environmental problems (Abbas et al., 2023). It demonstrates its usefulness in policy-making

and program design aimed at reducing disposables and promoting environmentally aware decision-making (Chou et al., 2024).

The Theory of the Information-Motivation-Behavioral

Fisher and Fisher (1992) developed Information-Motivation-Behavioral Skills, and this concept has been used in many health-related activities (Park & Jang, 2024; Prakot et al., 2024). It suggests that behavior is primarily influenced by knowledge, motivation, and behavioral abilities (Fisher et al., 1999). The IMB model may provide valuable insights into sustainable practices. Information pertains to acquiring knowledge about conduct and its associated consequences. In the context of sustainability, this entails comprehending the effects of consumption and production on the natural environment (Mohamed et al., 2024). Motivation is a construct that covers an individual's views towards certain conduct and their perception of social support. It is influenced by the individual's value system and the normative effects of their community or peers. Behavioral skills include an individual's subjective assessment of their capacity to engage in a particular activity, which may be shaped by previous experiences, perceived obstacles, and the accessibility of resources for engaging in that action (Shi et al., 2024).

Within sustainable consumption patterns (SCP) and the impact of digital media, the Information Management Behavior (IMB) model can be employed to understand how informational content from digital media can augment knowledge and motivation for sustainable practices (Matharu et al., 2020). Consequently, this process facilitates the acquisition of requisite skills essential (Stucky et al., 2024) for engaging in SCP behaviors. Moreover, this study aims to examine the potential of digital media platforms in facilitating the dissemination of SCP-related information, fostering motivation via community involvement and social norms, and offering avenues for developing and enhancing SCP-related abilities (Anser et al., 2024).

The use of the IMB model in sustainability research may include investigating interventions that leverage digital media to disseminate specific information, cultivate motivating messages through influencers, and facilitate skill development through activities such as sustainability challenges or interactive learning modules. These observations can inform the development of educational initiatives and public awareness campaigns to foster sustainable practices across diverse groups, including university students, as illustrated in [Figure 1](#).

Conceptual Framework

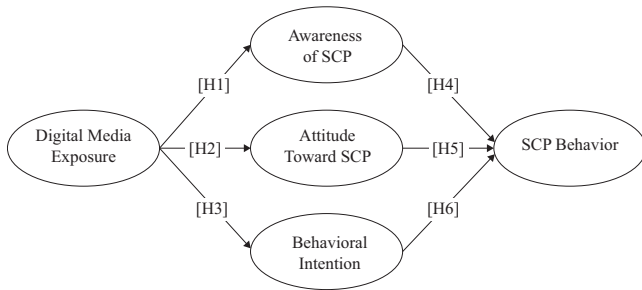


Figure 1 The conceptual framework

Research Hypotheses

H₁: Digital Media Exposure has a direct positive association with Awareness of SCP

H₂: Digital Media Exposure has a direct positive association with Attitudes toward SCP

H₃: Digital Media Exposure has a direct positive association with Behavioral Intention

H₄: Awareness of SCP has a direct positive association with SCP behavior

H₅: Attitudes toward SCP have a direct positive association with SCP behavior

H₆: Behavioral Intention has a direct positive association with SCP behavior

H₇: Digital Media Exposure has an indirect positive association with SCP behavior

Methodology

Sampling and Survey Administration

The population in this research consists of students from the university, which has five faculties, nine colleges, and three campuses, totaling 24,033 students (Registration and Processing System, 2023). The hypotheses were tested via an online survey. Although online surveys have some limitations (Sheehan, 2001; Thompson et al., 2003), the need for an Internet connection and their use by prospective members of an online community make them suitable for data collection. The sample size for the population was determined to be 504 individuals using G*Power. The effect size used in this study is 0.3, with a statistical power of 0.80 (Faul et al., 2007). The degrees of freedom (*df*) were determined using the formula $[NI (NI+1)/2 - NP]$, in

which NI (Number of indicators) represents 18 observed variables, and NP (Number of parameters) represents 42, where $[18(18+1)/2 - 42]$ (Schumacker & Lomax, 1996). The result of this computation is 129 for *df*. This study used a Structural Equation Modeling (*SEM*) technique, using AMOS licensed software version 24. A stratified random sample (Ghosh, 1958) was employed, with a proportional number of students from each faculty or college.

Data were collected for this research between May and October 2023 via an online survey administered via Google Forms. An email and Google link notification were sent to 565 individuals (10% more in the event of insufficient data loss), with a URL to access the survey immediately.

Measurement

A pilot test was conducted from March to April 2023 using a sample of undergraduate students. The pilot test consisted of 30 surveys. Following a reliability check, several items underwent revisions. A 5-point Likert scale ranging from strongly disagree to agree strongly was used to assess all questions, except for age and behavioral intention to engage in sustainable consumption and production (SCP) behaviors, unless otherwise stated. Before delving into inquiries about digital media exposure, participants were provided with a comprehensive elucidation of digital media, a medium that disseminates material via digital technologies, encompassing social media platforms, websites, and mobile applications. The inquiry into future inclination to participate in Sustainable Consumption and Production (SCP) activities was preceded by an elucidation of the components of SCP practices. These components include adopting behaviors to minimize environmental impacts, such as reducing waste, recycling, and selecting sustainable items.

Data Analysis

The research used *Structural Equation Modeling (SEM)* to analyze the data and examine the offered hypotheses. A correlation analysis was first performed to investigate the bivariate correlations among all examined variables. Subsequently, Structural Equation Modeling (*SEM*) was used to evaluate the proposed model, where digital media exposure was included as an independent variable, and knowledge of SCP, attitude towards SCP, and behavioral intention were used as predictors of SCP behavior. The *SEM* process in the hierarchical regression

analysis comprised several phases. Researchers used digital media exposure as the predictor for the first dependent variable, awareness of SCP. Subsequently, to evaluate disposition towards SCP, we used SCP awareness as a predictor, in conjunction with exposure to digital media. Both digital media exposure and attitude towards SCP were included as variables in the behavioral intention model. Finally, the model used digital media exposure, knowledge of SCP, attitude toward SCP, and behavioral intention to predict the final dependent variable, SCP behavior.

The study used a hierarchical structure, facilitating sequential comprehension of the individual contributions of each layer within the model toward elucidating SCP behavior. This approach accounted for both direct and indirect impacts. A robust maximum likelihood estimate was used in the study to address any non-normality present in the data. The evaluation of model fit adequacy was conducted by the use of several indices, such as the Chi-Square test, degree of freedom, relative Chi-square test, Goodness of Fit Index (GFI), Adjusted Goodness-of Fit Index (AGFI), Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Root Mean Square Residual (RMR). And the Norm Fit Index (NFI)

Result

Table 1 presents the demographic characteristics of the 504 respondents. The majority of participants were female (54.2%), while males accounted for 38.5 percent, non-binary/third gender represented 6.2 percent, and 1.2 percent preferred not to disclose their gender. In terms of age, most respondents were between 19 and 20 years old (54.4%), followed by those under 18 years (28.4%), 21–22 years (14.1%), and 22 years or older (3.2%). Regarding year of study, sophomores comprised the largest group (59.7%), followed by freshmen (24.2%), graduate students (7.9%), and seniors (8.1%). As for the field of study, Information Technology students were the most represented (38.5%), followed by Business Administration (37.3%), Politics (23%), and Environmental Science (1.2%). These demographic profiles suggest a diverse sample that captures a broad range of student perspectives on digital media and sustainable consumption and production behaviors.

Table 2 presents the correlation matrix, alpha reliability coefficients (shown in parentheses along the diagonal), and descriptive statistics for all 18 observed variables ($n = 504$). All variables demonstrated acceptable internal consistency, with Cronbach's alpha values ranging from .71 to .89, exceeding the recommended threshold of .70. The mean scores for all variables were relatively high, ranging from 4.17 to 4.41 on a 5-point Likert scale, indicating that respondents generally reported high levels of digital media exposure, awareness of SCP, attitudes toward SCP, behavioral intention, and actual sustainable consumption and production behaviors. Regarding inter-variable correlations, digital media exposure variables (DME1–DME4) exhibited strong positive correlations with awareness of SCP, attitudes toward SCP, and behavioral intention variables, with correlation coefficients ranging from moderate to strong ($r = .31$ to $.83$, $p < .01$). These results suggest that greater exposure to digital media is associated with higher awareness, more positive attitudes, and stronger behavioral intentions toward sustainable practices. However, the correlations between behavioral intention and actual SCP behavior (SC1–SC4) were relatively weaker than those for other variable pairs, providing an initial indication of a gap between intention and actual behavior, which is further examined through the structural equation modeling analysis.

Table 1 The demographics of respondents

Variables	%
Gender	
Male	38.5
Female	54.2
Non-binary/Third gender	6.2
Prefer not to say	1.2
Age	
under 18 years	28.4
19–20 years	54.4
21–22 years	14.1
22 years or older	3.2
Year of Study	
Freshman	24.2
Sophomore	59.7
Senior	8.1
Graduate student	7.9
Major/Field of Study	
Environmental Science	1.2
Business Administration	37.3
Information Technology	38.5
Politics	23
Other	-

Table 2 Correlations among observed variables, alpha reliabilities (in parentheses), and descriptive statistics
N = 504

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
DME1	(.89)	.71**	.75**	.70**	.76**	.83**	.82**	.81**	.75**	.68**	.63**	.66**	.65*	.65*	.68**	.47**	.57*	.58**
DME2		(.79)	.63**	.63**	.63**	.82**	.72*	.68*	.78**	.64*	.55*	.58*	.58**	.62**	.61**	.45**	.51**	.51**
DME3			(.81)	.61**	.66**	.77**	.78**	.72**	.71*	.73**	.62*	.56**	.67*	.59**	.59*	.41**	.61*	.50**
DME4				(.71)	.57**	.69**	.65**	.66**	.67**	.57*	.51*	.50*	.51*	.58**	.50*	.41**	.45**	.50**
AS1					(.80)	.76**	.73**	.77*	.72**	.65*	.65*	.57*	.59**	.61**	.63*	.43**	.52**	.56**
AS2						(.92)	.82**	.81**	.91**	.74**	.68*	.72*	.68*	.69**	.67**	.54**	.61*	.62**
AS3							(.89)	.84**	.79**	.79*	.68**	.62**	.70**	.66**	.66**	.47**	.57*	.58**
AT1								(.87)	.79*	.75**	.69**	.65**	.65*	.68*	.64*	.44**	.54**	.57**
AT2									(.89)	.73*	.65**	.70**	.67**	.66*	.64*	.51*	.56**	.61**
AT3										(.80)	.60**	.58**	.67**	.59**	.58*	.41**	.55**	.49**
BI1											(.73)	.55**	.54**	.57**	.57*	.35**	.49**	.48**
BI2												(.71)	.55*	.56*	.51**	.39*	.45*	.48**
BI3													(.73)	.53*	.54**	.37**	.50**	.43*
BI4														(.72)	.53**	.37**	.43**	.48**
SC1															(.71)	.35**	.42**	.48**
SC2																(.71)	.31**	.36**
SC3																	(.72)	.38**
SC4																		(.83)
M	4.35	4.34	4.34	4.24	4.35	4.41	4.36	4.34	4.38	4.36	4.28	4.31	4.31	4.22	4.26	4.21	4.23	4.17
SD	0.41	0.41	0.48	0.44	0.42	0.37	0.44	0.42	0.37	0.47	0.48	0.45	0.51	0.49	0.49	0.52	0.57	0.52

Note: DME1 = Frequency of social media use for environmental information, DME2 = Engagement with digital sustainability campaigns, DEM3 = Use of digital platforms for eco-friendly product research, DME4 = Participation in online sustainability forums or groups, AS1 = Knowledge of SCP concepts and practices, AS2 = Understanding of the environmental impact of products, AS3 = Awareness of sustainable lifestyle choices, AT1 = Positive beliefs about the importance of SCP, AT2 = Perceived personal responsibility for sustainable consumption, Willingness to change consumption habits for sustainability, BI1 = Intention to purchase eco-friendly products, BI2 = Intention to reduce waste and recycle, BI3 = Intention to use digital tools for sustainable living, BI4 = Intention to advocate for SCP through digital channels, SC1 = Actual purchase of eco-friendly products, SC2 = Actual reduction of waste and recycling activities, SC3 = Actual use of digital tools for sustainable living, and SC4 = Actual advocacy for SCP through digital channels. * $p < .05$, two-tailed, ** $p < .01$, two-tailed.

Table 3 shows that the structural equation modeling (SEM) paradigm suggests that each independent variable has a distinct impact on the dependent variables. The total effect (TE) of Digital Media Exposure on Awareness of SCP is 1.005, indicating that a one-unit increase in Digital Media Exposure is associated with a 1.005 rise in Awareness of SCP. This phenomenon may be classified as a direct effect (DE) because no indirect impact (IE) has been documented. The TE

and DE values for Digital Media Exposure concerning Attitude Toward SCP are 0.964. Similarly, Behavioral Intention's TE and DE values are .921, indicating robust direct effects without indirect routes. A significant correlation exists between Awareness of Sustainable Consumption and Production (SCP) and Sustainable Consumption and Production Behavior, as shown by a TE value of 3.087. The observed significant impact implies a direct relationship between awareness and behavior,

Table 3 Model Summary

Dependent Variables	Awareness of SCP			Attitude Toward SCP			Behavioral Intention			Sustainable Consumption and Production Behavior		
Independent Variables	TE	DE	IE	TE	DE	IE	TE	DE	IE	TE	DE	IE
Digital Media Exposure	1.005	1.005	-	.964	.964	-	.952	.952	-	.921	-	.921
	-	-	-	-	-	-	-	-	-	-	-	-
Awareness of SCP	-	-	-	-	-	-	-	-	-	3.087	3.087	-
	-	-	-	-	-	-	-	-	-	-	-	-
Attitude Toward SCP	-	-	-	-	-	-	-	-	-	-2.260	-2.260	-
	-	-	-	-	-	-	-	-	-	-	-	-
Behavioral Intention	-	-	-	-	-	-	-	-	-	-.001	-.001	-
	-	-	-	-	-	-	-	-	-	-	-	-
R-Square	.994			.994			.964			1.149		

Note: $\chi^2 = 116.234$, $df = 102$, Relative $\chi^2 = 1.140$, $p = .159$, GFI = .975, AGFI = .957, CFI = .998, TLI = .997, NFI = .989, RMSEA = .017, RMR = .004

a crucial observation for developing focused treatments. The influence of Attitude Towards SCP on behavior is shown to have a negative impact (TE and DE) of -2.260, suggesting that a rise in positive attitudes is associated with a paradoxical drop in actual sustainable behavior. Finally, Behavioral Intention has a negligible impact (TE and DE) of -.001 on behavior, indicating that intentions alone do not manifest actionable actions within this model. The model has high precision, as indicated by most fit indices, suggesting a robust alignment between the model and the observed data. Significant R-Square values indicate that the independent factors account for a substantial proportion of the variability seen in the dependent variables. The Chi-square statistic, relative to degrees of freedom (Relative $\chi^2 = 1.140$), and the Root Mean Square Error of the Approximation (RMSEA).017 shows a firm fit. The p-value of .159 suggests that the model will likely be a reasonably accurate representation of the population. The relative mean square (RMR) value of 0.004 is deficient, suggesting that the residuals, representing the differences between observed and calculated values, are minimal. The model is robust in elucidating the connections between exposure to digital media and several facets of sustainable behavior among students. The model's fit is also supported by the Global Fit Index (GFI) of .975 and the Adjusted Global Fit Index (AGFI) of .957, both of which approach 1, indicating a solid fit. The Comparative Fit Index (CFI) of .998 and the Tucker-Lewis Index (TLI) of .997 indicate a high level of alignment between the postulated model and the observed data, suggesting strong consistency. The Normed Fit Index (NFI) value of .989 supports the robust model fit. Collectively, these indicators validate the model's resilience in elucidating the impact of digital media exposure on students' knowledge, attitudes, intentions, and actions regarding sustainable consumption and production

Table 4 summarizes the results of the hypothesis testing derived from the structural equation modeling analysis. Of the seven hypotheses proposed, five were

supported while two were not. H1, H2, and H3 were all supported, confirming that digital media exposure has a significant direct positive association with awareness of SCP, attitudes toward SCP, and behavioral intention, respectively. H4 was also supported, indicating that awareness of SCP has a significant direct positive association with SCP behavior. H7 was similarly supported, demonstrating that digital media exposure has a significant, positive, indirect association with SCP behavior through the mediating variables. In contrast, H5 and H6 were not supported. H5 revealed a negative relationship between attitudes toward SCP and actual SCP behavior, suggesting that more positive attitudes paradoxically corresponded with lower actual sustainable behavior. H6 indicated that behavioral intention had a negligible effect on SCP behavior, highlighting a significant gap between students' intentions and their actual behavioral outcomes. These findings underscore the complexity of translating digital media exposure and positive attitudes into concrete, sustainable consumption and production behaviors among university students.

Discussion

This study has highlighted the diverse demographic profile of participants, suggesting a greater potential impact of digital media on sustainable consumption practices within these disciplines (Boulianne & Theocharis, 2020; Widayati et al., 2022). Understanding the intricacies of demographics helps tailor educational approaches and policies to foster diverse perspectives and participation in sustainability initiatives. Coupling the Theory of Planned Behavior with quantitative analysis via Structural Equation Modeling, the study investigates how digital media exposure shapes students' attitudes, perceived social norms, and perceived behavioral control, which, in turn, influence sustainable practices (Horrich et al., 2024). Notably, digital media elevates awareness and shapes positive attitudes toward SCP and the intention to behave sustainably (Abbas et al., 2019).

Table 4 Summary of hypothesis test

	Hypothesis	Result
H1	Digital Media Exposure → Awareness of SCP.	Yes
H2	Digital Media Exposure → Attitudes toward SCP.	Yes
H3	Digital Media Exposure → Behavioral Intention	Yes
H4	Awareness of SCP → SCP behavior	Yes
H5	Attitudes toward SCP → SCP behavior (negative relationship)	No
H6	Behavioral Intention → SCP behavior (negative relationship)	No
H7	Digital Media Exposure → SCP behavior	Yes

The findings reveal a direct and significant relationship between the awareness of SCP and actual sustainable behavior, stressing the efficacy of direct interventions (Chai & Ye, 2024). This is consistent with Abbas et al. (2019) highlighting the crucial role of social media in shaping university students' learning behaviors toward sustainable education. The influence of social media on sustainable education is becoming increasingly significant, impacting the relationship between the positive and negative aspects of social media and students' attitudes towards learning for sustainability. Although the implications of social media on students' psychological adjustment and learning behaviors are not fully understood, the educational system can leverage social gratification theory to explore students' social media behaviors. The contrasting and innovative features of social media provide opportunities for future research, enhancing our understanding of its use in web-based social networks. However, an unexpected inverse correlation between favorable attitudes and sustainable behavior was observed, indicating nuances in how attitudes translate into actions. In addition, the weak effect of Behavioral Intention on actual behavior reflects the gap between students' intentions and actions (Sharma et al., 2023).

The model's robust fit indices confirm its validity and highlight the link between digital media exposure and sustainable behavior among university students. This aligns with Verdugo and Villarroel (2021), who noted that while university students access diverse social media content, the connection between their social media exposure and sustainability valuation in entrepreneurship remains underexplored. The study emphasizes the potential of social media in enhancing higher education for sustainable entrepreneurship. For further research, the educator should focus on identifying specific types of content, such as particular products, to understand which Sustainable behavior most influences students' and society's perceptions of sustainability. It can be emphasized that higher education universities could plan an essential approach to promoting sustainability and contributing to the Sustainable Development Goals.

Conclusion and Recommendation

The study highlighted the significant impact of digital media on students' understanding of sustainable practices. This research examined how exposure to digital media affects students' knowledge and attitudes toward sustainability. The findings indicate that digital media enhances awareness and positively influences attitudes toward sustainable behaviors.

Furthermore, the study explored the factors mediating the relationship between this increased awareness and the shift in attitudes, focusing on how these attitudes translate into sustainable behaviors among students. The structural equation modeling used in the research confirms a direct and significant relationship between students' awareness of sustainable practices and their real-world sustainability behaviors, underscoring the potential of digital media as a transformative educational tool.

By investigating these dynamics, the study seeks to inform and enhance educational strategies and policies, aiming to support more effective sustainability initiatives within the university and, potentially, across broader educational contexts. This approach aligns with global efforts to integrate sustainability into educational curricula and contributes to the Sustainable Development Goals.

The research findings highlight the pivotal role of digital media in enhancing sustainability education. Educational institutions can utilize these insights by integrating digital media into their curricula to demonstrate real-world sustainability challenges and solutions, making abstract concepts tangible. For example, interactive simulations and digital storytelling can be employed to illustrate the impact of sustainable practices. This approach can be adapted across various educational levels, enriching students' learning experiences and preparing them for responsible citizenship in a sustainable world.

In the business world, these research results can guide the development of digital marketing strategies that promote sustainable products and practices. Companies can use targeted social media campaigns to educate consumers about the environmental benefits of their products, potentially increasing market share among environmentally conscious consumers. Furthermore, businesses can leverage this research to develop training programs that use digital media to enhance employees' understanding of corporate sustainability goals, thereby aligning individual behaviors with broader corporate sustainability objectives. This strategic use of digital media fosters a culture of sustainability within organizations and enhances their reputation as leaders in corporate responsibility.

Conflict of Interest

The authors declare that there are no conflicts of interest regarding the publication of this paper. The research was conducted independently, without any influence from external organizations or entities that could potentially benefit from the study's outcomes.

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