

Impact of Media Exposure on Environmental Legal Literacy and-Pro Environmental Behaviors Among University Students

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Abstract

This study discussed how much media exposure contributes to environmental legal literacy and pro-environmental behavior among university students in Saudi Arabia. It adopted a quantitative design through the administration of a structured questionnaire to 120 respondents purposively selected from the law and media student cohorts. The data revealed, by independent samples t-test analysis, that the environmental awareness and pro-environmental behavior were significantly higher in the media students compared to their counterparts studying law ($MD = 25.36$, $p < 0.001$). Indeed, such results would advocate that media channels are powerful instruments toward ecological responsibility as well as raising legal literacy levels among university students. Still, they demonstrate such behavior to a lesser degree due to curricular constraints in the learning process of matters relating to the environment, on ecological responsibility, and the role of clear legal guidance in enhancing its effects. These findings advocate the combination of media and legal education for raising environmental consciousness and sustaining pro-environmental behavior. Advancing the level of environmental awareness requires ecological standards to be implemented by the whole society so that the general public becomes acquainted with the standards of sustainability principles and practices.

Keywords: media exposure, environmental awareness, pro-environmental behaviors

1. Introduction

Environmental legislation comprises a set of laws designed to address and manage provisions aimed at controlling environmentally destructive human behaviors. The efficacy of these regulations and control mechanisms is largely contingent on individuals' comprehension, engagement, and oversight. These elements facilitate the dissemination of specific environmentally sustainable practices and knowledge, which are essential for appropriate community transformation (Chin et al., 2019). Numerous digital media platforms are instrumental in informing the public about pertinent legislation and fostering environmental awareness in the Philippines. Given that Internet users are generally well-educated, new media platforms hold significant potential for influence. Notably, university students' engagement with media outlets is indicative of how these platforms can enhance and reinforce pro-environmental behaviors. Environmental media predominantly focus on ecological issues and threats to the environment. The primary challenge lies in mitigating the adverse effects of anti-environmental activities and preparing for similar challenges in the future. Scholars have highlighted that the impact of purposive strategies formulated by policymakers and environmentalists results in successful public engagement and improved ecological management efficiency (Chen et al., 2023).

Modern governments use various strategies to enhance youth environmental consciousness. Social media has become an important factor in ecological education and environmental awareness. Meanwhile, the spread of information and the exchange of views increase the perceptual level of environmental challenges and simultaneously support active and sustainable practices (Xie et al., 2024). The problem statement of the current study emphasizes the extent to which media exposure can raise the level of environmental awareness, legal literacy, and pro-environmental behavior among university students. The key question in this regard is how well the preparation and planning of media messaging and broadcasting policies can support the stabilization and continuity of cultural practices that modify, support, and serve to preserve and protect the environment. In terms of objectives, the study examines and identifies the media's role in shaping the understanding and implementation of environmental law among students and further assesses adherence to

pro-environmental behavior among Saudi Arabian university law and media students. The hypothesis marks the positive influences of media on environmental awareness as well as the apprehension of ecological legislation without differentiating between media and law students.

National environmental centers are committed to sustainable development, fulfilling social responsibility, and maintaining ecological balance through policy evaluation. Stakeholder involvement is a critical step in legitimizing policies, enhancing inclusiveness, and supporting sustainability. These mechanisms are instrumental in promoting the attainment of a country's central environmental goals (Badran et al., 2024). This study analyzed the ecological awareness of university students in Saudi Arabia, specifically examining the environmental consciousness of law and media students. Notably, the two Law Student Groups (LSGs) and the Media Student Group (MSG) used a diverse array of media in their interactions and representations. Environmental challenges require a body of laws that governs human activities. However, political, economic, and institutional barriers, such as inadequate law enforcement and bureaucratic inconveniences, always allow for the degradation of the environment while simultaneously investing more resources ostensibly for its protection (Newell & Henry, 2016).

Educational media content plays a pivotal role in shaping young individuals' attitudinal orientations toward pro-environmental behaviors. Empirical research has demonstrated that students can internalize environmental knowledge and develop protective attitudes toward the environment (Balog & Siber, 2016). Various evaluative models assess the efficacy of media in communication based on content accuracy and the systems established to achieve effective governance in environmental management. Environmental news discourse functions as a medium for disseminating information regarding the state of the environment to diverse audiences and is instrumental in increasing awareness of ecological system protection. Ultimately, the dissemination of accurate environmental information reinforces preservation initiatives and informs the development of ecological regulations (Wangeci & Njoroge, 2021).

Most educational literature focuses on extensive, large-scale environmental campaigns. However, there is a scarcity of scholarly research on the role of media in fostering an ecological legal culture among university students. To the best of our knowledge, few studies have emphasized the media's role in sustaining pro-environmental behavior within the academic community. Academic communities are expected to be at the forefront of environmental management, social change efforts, and participation in educational and informational programs. Media apparatuses facilitate sustainable planning for environment-related risks (Aldlbahi, 2024). Raising awareness of environmental issues contributes to the development of legal literacy regarding ecological matters. Politically, this intervention reflects an emerging trend of reconciling economic progress with environmental stability. Consequently, contemporary discourse has increasingly focused on clean technologies and renewable energy sources (Aldegheishem, 2024). The implementation of environmental legislation establishes standards for legal compliance and enhances the efficacy of policy enforcement (Alturki, 2015). International laws and conventions contribute to mitigating climate-related challenges by ensuring the preservation of the environmental integrity of the planet. Furthermore, a relationship exists between the national and international legal frameworks (Sahu, 2021). Hence legal instruments investigate the role of media organizations in fostering environmental awareness among students and equipping them with practical and interactive ecological literacy skills.

2. Literature Review

Pro-environmental acts have increased amid rising threats to global sustainability (Alsahafi, 2020). Subsequently, protective efforts have led to government policies and public discourse becoming dominant social concerns (Holder & Lee, 2007). Thus, pro-environmental innovation requires the development and implementation of new products. In addition to establishing actions and methods to reduce environmental harm (Z. Jiang et al., 2022), directed steps can play a significant role in encouraging compliance with the law and raising the level of environmentally friendly conduct (Hernández et al., 2010). The news plays a major role in making people more involved in green efforts (Ilmi & Moh Zawawi, 2024). However, it must focus on eco-issues with better studies on public involvement for stronger green initiatives to be well-planned (Badri & Khan, 2023; N. Jiang et al., 2023). Therefore, this review emphasizes three main themes: environmental awareness, media involvement, and legal action.

2.1 Dynamics of Environmental Awareness

The dynamics of environmental awareness are most effective when people are aware of and care about the environment. This occurs through education and the media (Rahmani et al., 2021). In particular, integrating environmental knowledge into educational institutions' curricula increases students' awareness. It also serves to extend engagement in behaviors that support environmental preservation (Hoang et al., 2021). Structured educational programs serve as mechanisms for acquiring this information. They are of great help in promoting ecological literacy (Thanh & Van Toan, 2023). Such actions contribute to improved waste management procedures, which are essential for environmental protection (Szeberenyi et al., 2022). Studies have also emphasized the role of student participation and preacher collaboration in academic outreach programs (Meseret, 2016). Consequently, environmental literacy over time is a driver of innovation and intervenes in ecological quality.

Institutional structures highlight environmental consciousness and corporate social responsibility (CSR) in public establishments and enterprises (PEEs). Ecologically oriented CSR has gained strategic significance in both the private and public sectors (El Medaker et al., 2023). Hence, collective social involvement inspires citizens to engage in strategic environmental protection activities (Ravikumar et al., 2022). Nevertheless, the current research emphasizes the deviation in policy enforcement between central and local authorities during the implementation phase (Wang, 2021). In particular, institutional quality, especially legal power, is a significant obstacle to environmentally harmful activities. Therefore, advancing long-term environmental outcomes necessitates strengthening these legal institutions (Mahmood & Alanzi, 2020).

Counseling, social mentoring, role modeling, and public participation are important for developing environmental awareness and building responsible relationships with ecological consequences (Sulistyaningsih, 2022). In addition to formal learning, sustained efforts to implement environmental plans can significantly raise awareness among the masses and encourage people to adopt a balanced approach with globally beneficial results (Jabeen, 2024). Environmental protection requires the enforcement of laws during armed conflicts; these measures reduce environmental damage and facilitate post-conflict recovery (Nurbani, 2018).

2.2 Efficient Media and Environmental Concerns

A good media system and organized environmental discussions raise the level of public consciousness regarding ecological matters and support protective plans. Corpus-based discourse analysis has also identified linguistic and rhetorical patterns that help build sustainability and environmental consciousness in Saudi Arabia's online media (Aladwey, 2024; Almaghlouth, 2022). Media plays a significant role in creating the cultural identity of environmentalism among Saudi youth, guiding their ecological values and social participation (Khubrani & Aldairy, 2025). The way headlines frame news stories, along with word choices, influences how people think about and feel regarding something, demonstrating that language plays a role in shaping the environment and advocating for it. (Jabeen, 2024).

According to (Hao et al., 2022), the media inspires students to expand their knowledge of environmental issues and adopt more responsible behaviors. Be that as it may, an increase in consciousness on its own does not close the existing ideological differences. Therefore, subsequent educational and dissemination processes must be incorporated into the program (Almulhim, 2021). To achieve this goal, social media creators work on targeted environmental literacy promotion tactics and, based on the available information, conduct public participation activities that fill gaps in the data (Alsahafi, 2020). However, few interdisciplinary studies have examined the influence of social media on education and organizations (Alghamdi, 2024).

2.3 Law-Based Enforcement Mechanisms Environmental

Environmental law ensures the preservation and use of natural resources within a framework of sustainable development. It is a discipline that meets pollution regulations and conforms to the concept of ecological civilization. This is backed up by legal enforcement mechanisms that are in place to ensure that these regulations are followed. Moreover, initiatives for the growth of public consciousness are factors that make it possible for these regulations to be more efficient (Zhang et al., 2016). Industry and commerce take actions that reflect the spirit of global legal reform, which emphasizes management efficiency and regulatory precision to control environmental risks while promoting peace at the same time (Tín, 2019). New adjustments in the rules highlight more space for biodiversity conservation, and simultaneously, renewable energy objectives are being showcased. This proves the renewal of non-reflective theory initiatives like this one (Durá-Alemañ et al., 2023). For instance, some businesses have included the sea in their frameworks, contributing to improved governance. These forms also inform decision-making and planning (Harvey, 2000).

A practical example proves that China's legal reforms sustain development by inserting ecological mandates into the law, enforcing environmental penalties, and leading public awareness initiatives (Xue et al., 2023). This is in line with the understanding that environmental preservation sustains human life. Undoubtedly, the environment ensures and sustains human life. The law applies regardless of the challenges associated with enforcement. Here, the legal discipline enables an orderly collaboration of personal rights and ecological safety as a solution to environmental issues (Gearty, 2010). Therefore, legal reform creates more responsibility and mandates that systems can act against any breach of environmental rights (McAllister, 2009). Ecological crises across the globe are worsening. In addition, the audience needs to be educated and made aware of the topic. Such gaps are often identified, highlighting the need for preliminary multidisciplinary studies to address ongoing objectives.

3. Methodology

The study employed a quantitatively dependent variable, "environmental law awareness and protection behaviors" (ELAPB), to facilitate the comparative analysis. In particular, it measures environmental awareness among law and media students in a case similar to the current study. In addition, it assessed environmental behavior within both groups. These variables collectively enabled a systematic evaluation of the disciplinary differences in environmental

engagement. The validity of this variable matched the underlying statistical rules governing the independent samples t-test (Ross & Willson, 2017). The dataset had an even distribution, supporting these findings. Two groups of students who participated in a structured survey were randomly selected for this study. The survey included questions on green practices and legal knowledge, providing the data necessary for this study.

This study assessed the influence of media on environmental consciousness among Saudi law and media students in Saudi Arabia. Three empirically based research questions guided this study: it evaluated environmental risk awareness and legal knowledge, and examined the differences between them. It is worth mentioning that the study considered factors that might account for such differences wherever disparities emerged. The data collection plans observed independence and representativeness, thereby increasing methodological rigor and improving inferential reliability. The study followed a random sampling criterion to select participants from different academic disciplines. Corroborative evidence further affirmed the sample's representativeness.

This study assessed the impact of media on environmental legal awareness and pro-environmental behavior among university students in Saudi Arabia. Standardized questionnaires and selected materials were used for hypothesis testing in this study. The survey described which media platforms had the most influence on legal awareness, accountability, behavioral motivation, and academic specialization. The process of collecting data utilized random sampling strategies without replacement; there was no intervention to ensure independent selection by not involving any individuals, thus maintaining data integrity (Andersson, 2011; Zhou et al., 1997). This study employed reliable resources to confirm the consistency of our hypothesis and improve methodological rigor. Responses were measured using a Likert scale and analyzed using IBM SPSS Statistics by applying inferential statistical tests. Hence, we compared “environmental legal awareness and pro-environmental behaviors” between the two groups of law and media students using independent samples t-tests to substantiate the statistical results.

The researchers employed quantitative methods to measure the level of environmental consciousness and behavioral acts of law and media students at selected universities in Saudi Arabia. It also focused on analyzing the effects of media exposure on students' perceptions of legal matters and their subsequent actions. The study comprised 120 students selected from two separate random samples according to their areas of study. This method ensured both demographic and educational diversity, thus enabling meaningful and reliable comparisons. Scientific and ethical codes were observed from the recruitment of participants to the final stage of data analysis. The process was transparent and accountable to the participants. This study used a valid tool and organized activities to assess its reliability.

4. Results

An independent t-test was used to compare the mean ELAPB scores of law and media students. The effect of media on uplifting environmental consciousness and protective behavior in these academic fields was assessed. This study examined the influence of mass communication media on ecological rules and community awareness of pro-environmental behavior. A quantitative comparative model was applied between the two samples of students to elicit data that would answer how much influence the media has on their views of environmental threats and related laws. It measures students' knowledge of environmental responsibility. This study discusses how media institutions are controlled, considering the different concerns that might affect their efficiency, such as adequate risk perception and sufficient knowledge of environmental law.

The Results section is consistent with the study framework and reaffirms the objectives and research questions. It provides a demographic overview of media and law student demographics. Additionally, descriptive statistics were used to provide mean scores and standard deviations for ELAPB. Furthermore, inferential statistics employed an independent samples t-test, which revealed a significant difference in environmental law awareness between the groups. Notably, the Group Statistics and Independent Samples Test tables support this interpretation. This section verifies the tested hypothesis while emphasizing the significance of the observed discrepancies and laying the groundwork for the subsequent discussion.

Using random and representative sampling techniques, two groups were developed: one group contained 70 media students, while the other contained 50 law students. It was found that media students had a higher sensitivity to environmental issues and practical awareness than law students. The questionnaire comprised three major indicators, which are elaborated on in the analysis: (a) influence on awareness, (b) legal accountability, and (c) compliance. This study helps to discover the different approaches of various disciplines in the interpretation and evaluation of messages as accurate or otherwise, since a comparison between groups is feasible due to the abundance of information revealing how legal concepts are perceived and their importance.

The demographic composition covered three nominal variables: sex, discipline, and level of study. Of the respondents, 54.17% identified as male and 45.83% as female. By discipline, 58.33% belonged to a media-oriented curriculum, while 41.67% were undertaking legal education courses. By academic rank, 66.67% were from the bachelor's program, while 33.33% were in the master's program (see Table 1).

Table 1. Demographical information

Variable	Category	Percentage
Gender	Male	54.17%
	Female	45.83%
Academic Specialization	Media Studies	58.33%
	Law Studies	41.67%
Level of Education	Undergraduate	66.67%
	Postgraduate	33.33%

The descriptive statistics revealed differences in the levels of environmental legal awareness and behavior between media and law students. Media major students scored an average of 55.60 marks, with a standard deviation of 4.24, showing fairly consistent intra-group engagement. Law major students posted a lower mean score of 30.24, with a relatively high standard deviation of 11.02, indicating high variability as well as low consistency in engagement. In contrast, media students engaged in steady and coherent interactions with the environmental legal framework, possibly because of their exposure to media and thematic discourse (see Table 2).

Table 2. Group Statistics

	Academic Specialization	N	Mean	Std. Deviation	Std. Error Mean
Environmental Law Awareness and Protection Behaviors	media-major university students	70	55.6000	4.24059	0.50685
	Law-major university students	50	30.2400	11.02420	1.55906

An independent samples t-test was used to compare ELAPB between law-major and media-major university students. However, Levene's test indicated unequal group variances ($F = 70.621$, $p < 0.001$); therefore, the analysis did not assume homogeneity of variance. Furthermore, media-major students exhibited significantly higher ELAPB scores than law-major students. The results confirmed the alternative hypothesis (H_1). Hence, media coverage shapes environmental legal awareness and promotes protective behaviors across educational disciplines.

An independent-samples t-test was employed to assess the media's impact on environmental law awareness and protection behavior among LSG and MSG. However, the test revealed unequal variances ($\text{sig.} = 0.000 < 0.05$), requiring an adjusted interpretation of the results. The inferential statistical analysis demonstrated substantial differences ($t(df) = 59.433$, $p = 0.000$), with the MSG ($M = 55.6$, $SD = 4.24$) having higher scores than the LSG ($M = 30.24$, $SD = 11.02$). The mean difference (MD) = 25.36; 95% CI: 22.08–28.64 showed a significant effect. These results support H_1 , indicating that the media exerted a greater influence on environmental law awareness and protection behavior (ELAPB) (see Table 3).

Table 3. Independent Samples Test

		Levine's Test for Equality of Variances					t-test for Equality of Means		95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
ELAPB	Equal variances assume	70.621	0.000	17.538	118	0.000	25.36000	1.4459	22.49659	28.22341
	Equal variances not assumed			15.469	59.433	0.000	25.36000	1.63938	22.08012	28.63988

These results indicate that media students demonstrate a higher level of environmental legal literacy and more active behavior than their law student peers. Notably, the high score further strengthens the differences in the results. The results are instrumental in confirming the alternative hypothesis that "media reckoning has a significant role in the effect on awareness of environmental issues." Furthermore, media education plays a significant role in inculcating ecological responsibility across academic disciplines. In terms of the statistical analysis and comparisons conducted, the study confirmed differences in protective behavior between media and law students. In contrast, students specializing in media exhibited distinct behavioral patterns.

5. Discussion

A significant gap in ELAPB was found between LSG and MSG, with clear disciplinary differences between them. The MSG scored higher than the LSG in both awareness and involvement, with media students showing more interest, inclination, and coherent behavioral responses, as statistically validated by an independent samples t-test (mean = 25.36 within a 95% confidence interval of 22.08 to 28.64). The results emphasize the powerful role of selective media in promoting environmental

legal literacy. Because ELAPB correlated highly with academic majors, relating content to the specific educational context would be an extremely effective approach for comprehension as well as for encouraging proactive behavior. The differing results from LSG emphasize the need for more integrated coherence between environmental topics and legal education frameworks. These insights advocate using media as the main tool to make awareness more intense and to generate real discussions around such a crucial issue. This finding concurs with earlier studies that have attributed increased awareness of pro-environmental issues to responsible behavior changes (Pramita et al., 2023).

Differences have been found in the knowledge of environmental laws between media and law students, as well as in their behaviors. This largely explains how academic majors can factor into the infusion of environmental legal matters, especially among media students who proactively understand ecological law concepts. Students' incoherent understanding may be due to the curriculum content not being adequately updated to reflect recent advances in the law, thus creating gaps in educational practice, or it may be due to limited access to legal content through the media. These data firmly support the claim that media availability increases environmental law knowledge. Academic specialty is another factor that raises awareness, supporting the assumption that the media promotes law-related activities.

Therefore, these results advocate for interdisciplinary educational programs. They highlight the interaction between legal awareness and media literacy. Earlier studies have identified newspapers as the major channel among all media through which awareness can be created and public opinion formed (Jabeen, 2024). The current study revealed disparities among Saudi university students; thus, specific improvements to educational programs are recommended. Related studies suggest that public awareness is a key factor in effective environmental management. However, the writing revealed knowledge deficits in the content area. This leads to low involvement in the environments where such activities occur (Rahmani et al., 2021). The results of these studies point to high awareness levels among respondents who emphasized the elements of protection and individual accountability toward the environment (Pramita et al., 2023).

This study highlights the role of the media in intensifying environmental awareness and promoting protective action. Some scholars have highlighted the role of the media in inspiring people to seek more knowledge and become more involved in environmentally related activities (Hao et al., 2022). Moreover, other findings indicate that media exposure influences students' intentions to adopt environmentally responsible behaviors (Jabeen, 2024). Specifically, the linguistic tactics used in media discourse effectively evoke pro-environmental behavior. What is disturbing is the lower score, which shows greater variation among law students. Studies indicate that teaching law does not, by itself, inspire behavioral engagement and requires the integrative effect of media (Wang, 2021). Thus, the formation of environmental identity in youth through media is deducible through consistent response patterns, particularly among students majoring in media (Khubrani & Aldairy, 2025).

This study strongly suggests the fusion of media and legal studies to better understand environmental issues and their translation into actions and attitudes. The proposed intervention recommends structures that fit regional cultural and environmental contexts at the state level so that each state can focus on the conservation of the environment, resource regulation, and urban development (Aboneama, 2018). At the academic level, empirical t-test results revealed the effect of media, opening avenues for curricular revisions, targeted initiatives on environmental law, and institution-specific awareness programs. This study assessed the extent to which media contributes to students' knowledge of environmental laws in Saudi universities and found a disciplinary gap between media and law. Media exposure increases knowledge of the Environmental Protection Law.

6. Conclusion

It was found that media students were more aware of the environment than their law counterparts, proving that the media holds more importance in inculcating legal understanding and behavior than law does. Thus, these results call for reform suggestions to bridge the gap, such as curriculum updates and relevant educational activities. Hence, environmental media will become more influential to LMS, and students will be more aware of the interdisciplinary nature of media, the environment, legislation, and pro-environmental behavioral actions.

This study recommends conducting complementary research on community-led awareness activities, formal educational programs, and media integration to develop sustainable environmental behavior. Additionally, this study prioritizes the promotion of responsible practices and sustainability in local protection efforts (Edeh & Anthony, 2024). This analysis proves how urgently plans that work through academic frameworks, alongside other strategies leveraging the power of media, need to be merged. These would serve as a bridge to fill the gap and increase the spread of environmental legal knowledge among students, making them more aware and active in the field.

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Authors contributions

Dr. Mohammed Elsadig Abdallah, was responsible for data collection from the students of the Faculty of Law as a complementary part of the university student sample. His contribution had a significant impact on completing the data prior to testing its validity and subjecting it to analysis.

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No additional data are available.

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