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Impact of Digital Environmental Engagement on Environmental Attitude and Pro-environmental Behaviour Among Degree Students in Nilgiris District

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Abstract

The contemporary digital world has recorded several environmental disasters all around the world which has necessitates the need for an urgent action. Integrate technology to fight against the environmental crisis should be one of the most effective actions for this purpose. The present study aims to examines the impact of digital environmental engagement on environmental attitude and pro-environmental behaviour among the degree students in Nilgiris district. Participants (N=120) were recruited using purposive sampling, responded to Environmental Attitude Inventory and Pro-environmental Behaviour Scale. Regression analysis revealed that digital environmental engagement has a strong positive impact on environmental attitude but not on the pro-environmental behaviour of the students.

Keywords: Digital environmental engagement, environmental attitude, pro-environmental behaviour, degree students, Nilgiris district

INTRODUCTION

The Nilgiris district of Tamil Nadu, India, is very important to the environment because of its rich and diverse ecosystem. It is the first biosphere reserve in India and the first UNESCO-declared biosphere in the country. According to B J Krishnan, one of the founders of the Save Nilgiris and Save Western Ghats Movement, the Nilgiris, being one of the eco-sensitive zones of India, needs statutory protection under the Environment Protection Act. In such a crucial moment it has become very much important to develop and reinforce the pro-environmental behaviours, especially in the students of the locality. Since the current situation demands an urgent action, it will be better to focus on any existing and easier to handle methods that aids the development of pro-environmental behaviours in the students than coming up with something entirely new. For this, especially in today's world where digitalization is the key to life, one of the most common and probably effective technique could be digital environmental engagement of the students, which may enhance the environmental attitude and pro-environmental behaviour of the students.

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Digital Environmental Engagement refers to the use of digital platforms, tools, and technologies to raise awareness, promote sustainable behaviors, and encourage environmental activism. It includes activities such as following environmental organizations on social media, sharing eco-friendly content, participating in online petitions, engaging in virtual discussions environment related issues, etc. (Leong et al., 2021). Digital platforms provide an accessible way for individuals, especially students, to stay informed about environmental issues and take part in pro-environmental initiatives

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(Hargittai et al., 2020). In the context of Kerala, where digital literacy is high, digital environmental engagement can play a crucial role in shaping environmental attitudes and behaviors. Studies suggest that increased digital environmental engagement correlates with a stronger pro-environmental mindset, as exposure to digital environmental content encourages individuals to adopt eco-friendly behaviors in real life (Kim & Stepchenkova, 2022). However, while digital engagement increases awareness, its impact on real-world environmental actions remains a critical area of study. Understanding how students interact with digital environmental content can help develop more effective eco-digital strategies for promoting sustainable lifestyles.

Environmental attitude refers to an individual's cognitive, affective, and behavioral tendencies toward the environment and environmental issues (Milfont & Duckitt, 2010). It plays a vital role in making the individuals aware of environmental issues and also in adopting sustainable behaviors. A positive environmental attitude is often associated with greater awareness of ecological problems, a sense of responsibility toward nature, and an inclination to participate in environmental conservation activities (Bamberg & Möser, 2007). Behaviors are often driven by internal factors like attitudes. Hence, trying to develop a positive environmental mindset in students can aid sustainable habits and can foster a lasting commitment to environmental responsibility.

Pro-environmental behavior refers to the actions individuals take to reduce their environmental footprint and support ecological balance (Steg & Vlek, 2009). This iterm is an umbrella term under which a variety of behaviours comes, from everyday practices like recycling and conserving water to higher level environmental activities such as joining conservation initiatives. Addressing environmental challenges requires proactive engagement in sustainable actions, both at an individual and collective level (Kollmuss & Agyeman, 2002). Including pro-environmental behavior as a variable in this study allows an investigation of how environmental attitudes translate into environment related actions. This will give an insight on the role of attitudinal changes in fostering sustainable habits.

There have been many studies on the connection between environmental attitude and pro-environmental behavior. The findings of most of those studies indicate a positive correlation between the two variables (Bamberg & Möser, 2007). However, attitude alone does not always determine behavior. There are several external factors like social norms, situational barriers, and individual capabilities also influence the likelihood of action (Kaiser, Wölfing, & Fuhrer, 1999). This study investigates how engaging in nature-related activities may serve as a link between environmental attitudes and behaviors. Activities such as tree planting, nature walks, and environmental clean-up drives offer hands-on learning experiences that deepen ecological awareness and foster a stronger emotional bond with nature (Chawla, 1999). These immersive experiences can gradually shape environmental attitudes, leading to consistent pro-environmental behaviors [1–6].

This study primarily focuses on young adults, particularly college students, due to their potential to drive future environmental change. Research indicates that early adulthood is a crucial period for solidifying environmental values and behaviors, making it an opportune time for fostering sustainable habits (Gifford & Nilsson, 2014). Furthermore, students in the Nilgiris region, given their proximity to an ecologically sensitive area, have a vested interest in conservation efforts. By studying this demographic, the research aims to examine the impact of nature-related activities on their environmental attitudes and behaviors, ultimately contributing to the region's broader sustainability initiatives. The objectives and the corresponding hypotheses of the present study are as follows;

Objectives

1. To analyze the impact of digital environmental engagement on environmental attitude and pro-environmental behaviour among degree students in Nilgiris district.
2. To find the level of environmental attitude among the degree students in Nilgiris district.
3. To find the level of pro-environmental behaviour among the degree students in Nilgiris district.
4. To explore the relationship between environmental attitude and pro-environmental behavior among degree students in Nilgiris district.

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Hypotheses

- *H_01:* There is no significant impact of digital environmental engagement on environmental attitude among the degree students in Nilgiris district.
- *H_02:* There is no significant impact of digital environmental engagement on pro-environmental behaviour among the degree students in Nilgiris district.
- *H_03:* There is no significant relationship between environmental attitude and pro-environmental behavior among degree students in Nilgiris district.

METHOD

Research Design

The present study uses multiple regression analysis within descriptive correlational research design. Through this study the researcher gains an insight about how does digital environmental engagement impact environmental attitude and pro-environmental behaviour among degree students in Nilgiris district in particular. It is proved to be one of the most effective and dependable research methods. It helps to determine the impact of one variable, the independent variable, have on other variables, the dependent variable.

Sample

Sampling may be defined as the selection of some part of an aggregate or totality on the basis of which a judgement or inference about the aggregate or totality is made. The present study uses the purposive sampling method along with random sampling method. Sample for the study consists of 60-degree students from Nilgiris district who have high digital environmental engagement and 60 college students from Nilgiris district who have low level of digital environmental engagement, making the total sample size 120. The data was collected from the sample through online platform, i.e., Google form. Students who were majoring in environmental sciences were excluded from the study.

Tools

- The brief version of the Environmental Attitudes Inventory (Milfont & Duckitt, 2007) which measures insights of environmental attitude, with scores ranging from 24 to 168. The EAI-24 scale has 24 items which uses a 1–7 point scale to score. The Cronbach alpha for the current sample indicated very good internal consistency at $\alpha = 0.89$
- Pro-environmental Behavior Scale (Larson et al., 2015) a 13-item questionnaire which assess levels of pro-environment behaviour, with scores ranging from 13 to 65. The Cronbach alpha for the current sample indicated good internal consistency at $\alpha = 0.72$
- Apart from these scales, sociodemographic data sheet was used to get the basic data as well as the level of digital environmental engagement.

Procedure

The data was collected using google form where the purpose of the study was explained and the informed consent was obtained before beginning with the questionnaire. The participation of the individuals was absolutely voluntary and confidential. Time taken to complete the form was approximately 20 minutes. the data was analysed using SPSS, where mean and standard deviation were used as the descriptive tools and Regression Analysis and Pearson's Coefficient of Correlation were used as the inferential tools [6–8].

RESULT & DISCUSSION

The normality of the data and the level of environmental attitude and Pro-environmental Behavior among degree students IN Nilgiri district was assessed using descriptive statistics. The achieved skewness and Kurtosis level indicate that the data are normally distributed. A mean score of 100.44 in Environmental attitude indicate an average level of awareness and a mean score of 34.54 indicate an average level of pro-environmental behavior in the degree students in Nilgiris district (Table 1).

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Table 1. Linear regression analysis of digital environmental engagement predicting environmental attitude and pro-environmental behavior.

Sl	Predictor variable	Dependent variable	R^2	B (estimate)	P-value
1	Digital Environmental Engagement	Environmental Attitude	0.310	8.58	< 0.001
2	Digital Environmental Engagement	Pro-environmental Behavior	0.0124	2.93	0.226

To examine the impact of Digital Environmental Engagement on Environmental Attitude and Pro-Environmental Behavior, a linear regression analysis was conducted. When assessing digital environmental engagement as a predictor of pro-environmental behavior, the R^2 value obtained was 0.0124, indicating that only 1.24% of the variance in pro-environmental behavior was explained by digital environmental engagement. The regression coefficient for digital environmental engagement ($B = 2.93$, $p = 0.226$) was not statistically significant, suggesting that digital engagement with environmental content does not have a meaningful effect on individuals' pro-environmental behaviors.

In contrast, when examining digital environmental engagement as a predictor of environmental attitude, a much stronger and significant relationship was observed. The R^2 value was 0.310, meaning that 31% of the variance in environmental attitude was explained by digital environmental engagement. The regression coefficient ($B = 8.58$, $p < 0.001$) was highly significant, indicating that greater digital environmental engagement is strongly associated with increased environmental attitudes.

The hypotheses stating that there is no significant relationship between environmental attitude and pro-environmental behaviour among degree students was tested using Karl Pearson's coefficient of correlation. The obtained correlation value and significant value for the correlation between environmental attitude and pro-environmental behaviour among degree students are 0188 and 0.191 respectively. Hence the Table 2 indicates that there is no significant relation between environmental attitude and pro-environmental behaviour among degree students. Ho3 is accepted [9–12].

Table 2. Pearson's coefficient of correlation between environmental attitude and pro-environmental behavior among degree students in nilgiris district.

Sl	Variable	Significance
1	Environmental Attitude	
2	Pro-environmental Behaviour	0.191

CONCLUSIONS

These findings suggest that engaging with environmental content through digital platforms plays a significant role in shaping individuals' environmental attitudes, even though it may not directly translate into pro-environmental behaviors. As a counteractive measure against the environmental crisis digital environmental engagement could be used. More environment related content should be made available in all the social medias and other digital platforms. Governmental policies should be developed and tailored to make the environmental agencies more available for the public through various digital platform. Along with the traditional measures such as including environment related modules in academics, incorporating technology could yield a better result in terms of fight against environmental crisis. Future research could explore whether environmental attitudes act as a mediator in the relationship between digital engagement and actual pro-environmental behaviors, offering insights into how attitudes can be effectively transformed into tangible actions.

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