



Social Media Usage Patterns and Environmental Awareness Levels Among Pre-Service Teachers

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ABSTRACT

Social media has emerged as a low-cost and high-reach communication tool in the 21st century. Globally, platforms such as Facebook, YouTube, Instagram, and WhatsApp are widely used for information sharing, interaction, and engagement among students and teachers. The present study aimed to examine the level of environmental awareness among pre-service teachers through social media. A quantitative research methodology with a descriptive survey design was employed. The sample consisted of 313 pre-service teachers enrolled in B.Ed. programmes in Lucknow, Uttar Pradesh. Data were collected using a self-constructed Environmental Awareness through Social Media Scale based on a five-point Likert format. Descriptive statistics such as mean, standard deviation, and skewness were used for data analysis. The findings revealed that pre-service teachers demonstrated moderate to high levels of social media usage and environmental awareness. The study further indicated that social media serves as an effective tool for promoting environmental awareness and encouraging environmentally responsible behaviour among teacher trainees.

Keywords: Social Media, Environmental Awareness, Pre-Service Teachers, Environmental Challenges

INTRODUCTION

At present, the world is facing several environmental challenges such as climate change, global warming, pollution, and depletion of natural resources. Addressing these issues requires environmental education and awareness among citizens. Education is considered one of the most effective tools for solving social and environmental problems. In this regard, teachers play an important role in spreading awareness and promoting environmentally responsible behaviour among students. Therefore, it is essential that both in-service and pre-service teachers possess adequate environmental awareness.

In the digital era, technological resources have significantly contributed to the rapid exchange of information and communication across the globe. Social media platforms have evolved beyond networking tools and now function as significant educational and communication resources. Platforms such as Facebook, Instagram, X (formerly Twitter), WhatsApp, and YouTube are increasingly being used for educational purposes, including the dissemination of environmental information.

Mourlam (2014) explained that social media provides learners with opportunities to connect with environmental topics, experts, and awareness campaigns beyond traditional classroom settings. Rezaei, Ahmadi, and Karimi (2022) reported that social media platforms play a significant role in promoting environmental awareness among university students. Siddiqui et al. (2023) concluded that social media positively contributes to raising awareness regarding environmental issues such as smog and climate change.

The effectiveness of social media in promoting environmental awareness often depends upon users' patterns of engagement and participation. Therefore, it is important to examine how pre-service teachers use social media for



environmental learning and awareness. The present study investigates the relationship between social media usage patterns and environmental awareness among pre-service teachers. A quantitative approach was adopted to examine how teacher trainees engage with environmental issues using digital platforms and modern technology. The study focused on two major objectives: first, to examine the level of social media usage among pre-service teachers, and second, to study the level of environmental awareness developed through social media.

Understanding current patterns of social media usage among teacher trainees is important because future teachers can play a significant role in promoting environmental sustainability and awareness among future generations.

Need of the Study

The present study is significant because it examines how pre-service teachers use social media platforms to enhance environmental awareness and promote sustainable practices. Although social media has been widely used for sharing environmental information and raising public awareness, limited research has focused specifically on pre-service teachers.

Pre-service teachers' awareness and attitudes toward environmental issues are important because they influence classroom practices, curriculum implementation, and students' environmental behaviour. Environmental challenges have reached a critical stage globally, and India is no exception. In this context, environmental awareness becomes essential not only for individuals but also for educational institutions.

Social media has emerged as a powerful platform for communication, collaboration, and advocacy. For young adults, including pre-service teachers, social media is already an integral part of daily life. Harnessing its educational potential may make environmental awareness more interactive, engaging, and impactful.

REVIEW OF RELATED LITERATURE

Scholtz et al. (2016), in their study titled *A Social Media Environmental Awareness Campaign to Promote Sustainable Practices in Educational Environments*, examined the effectiveness of social media campaigns in promoting environmental awareness among employees of a higher education institution in South Africa. Using a case study research design, the researchers found that social media campaigns significantly contributed to environmental awareness and sustainable practices.

Thanya and Suganthan (2023), in their study *Environmental Behaviour and Climate Change Promotion Impact via Social Media Platforms*, explored the role of social media in influencing public awareness and environmental behaviour. The findings indicated that social media platforms such as Instagram and X are effective tools for environmental information dissemination and climate change awareness.

De Leo, Gravili, and Miglietta (2016), in their study *Social Media and Environmental Sustainability: An Overview of European Countries*, investigated the relationship between social media usage and environmental sustainability across European countries. The findings suggested that social media acts as an effective tool for promoting environmental performance and sustainable development.

Mourlam (2014), in the study *Social Media and Education: Perceptions and Need for Support*, explored the educational utility of social media platforms in classroom teaching. The study revealed that social media supports collaborative learning and information dissemination; however, challenges such as privacy concerns and misuse also emerged.

Petrović et al. (2012), in their study *Possible Educational Use of Facebook in Higher Environmental Education*, examined the use of Facebook in environmental education among university students. The findings showed that although students actively used Facebook, its educational use for environmental learning remained limited.



Roshandel Arbatani et al. (2016), in their study *Effects of Social Media on Environmental Protection Behaviour*, investigated the influence of social media on public environmental protection behaviour. The study concluded that social media significantly contributes to environmental awareness and encourages environmentally responsible behaviour.

Simionescu et al. (2020), in their study *Social Media, Sustainability, and Environmental Protection in Sustainable Education*, found that social media platforms positively influence awareness regarding sustainable development and environmental protection. Siddiqui et al. (2023), in their research on social media campaigns and climate awareness, concluded that digital campaigns effectively raise awareness regarding environmental crises such as smog and climate change.

Rezaei et al. (2022) studied the role of online social networks in promoting environmentally responsible behaviour among university students. Their findings indicated that social media positively influenced environmental knowledge, attitudes, and responsible behaviour. Mallick and Bajpai (2019), in their study *Impact of Social Media on Environmental Awareness*, concluded that social media effectively promotes environmental education and public engagement with environmental issues.

Overall, the reviewed studies suggest that social media plays a significant role in promoting environmental awareness and sustainable behaviour. However, limited research has specifically focused on pre-service teachers in the Indian context.

Research Gap

Previous studies have highlighted the role of social media platforms such as Facebook, Instagram, and X in promoting environmental awareness and sustainable behaviour. However, limited research has been conducted specifically among pre-service teachers, particularly in the Indian context. Existing studies mainly focus on university students or the general public, while the environmental awareness and social media usage patterns of teacher trainees remain underexplored. Since pre-service teachers play a significant role in shaping future generations, it is important to examine how social media contributes to their environmental awareness and engagement.

Research Objectives

- To study the level of social media usage among pre-service teachers.
- To study the level of environmental awareness through social media among pre-service teachers.

Research Questions

- What is the level of social media usage among pre-service teachers?
- What is the Level of Environmental Awareness Through Social Media among Pre-Service Teachers?

Research Methodology

The present study employed a quantitative research method with a descriptive survey design to examine environmental awareness through social media among pre-service teachers. The population of the study comprised pre-service teachers enrolled in B.Ed. programmes in Lucknow, Uttar Pradesh. The sample included students from one Central University, namely Babasaheb Bhimrao Ambedkar University, and one State University, namely the University of Lucknow.

A random sampling technique was used for data collection. The final sample consisted of 313 participants.

Table: Sampling Frame

Types of University	Name of University	Number of Male Pre-service Teachers	Number of Female Pre-service Teachers	Number of Pre-service Teachers
Central	Babasaheb Bhimrao Ambedkar University	58	57	115
State	University of Lucknow	62	136	198
Total		198	120	313

Tool used for Data Collection

Data were collected using a self-constructed Environmental Awareness through Social Media Scale. Initially, the scale consisted of 35 items. The draft scale was reviewed by eight experts to assess the content validity, language clarity, and relevance of the items. Based on expert suggestions, five items were removed.

The final questionnaire consisted of 30 close-ended items based on a five-point Likert scale and included five dimensions:

- Access/Usage of Social Media (AS) – 7 items
- Environmental Content on Social Media (EC) – 6 items
- Social Media in Raising Awareness (SA) – 6 items
- Response to Environmental Content on Social Media (RE) – 6 items
- Challenges of Raising Environmental Awareness via Social Media (CS) – 5 items

Among the 30 items, 17 were positively worded and 13 were negatively worded.

Data Analysis and Interpretation

Table 2: Usage of Social Media Among Pre-Service Teachers.

Dimension	N	Mean	Media	Standard Deviation	Minimu	Maxi mum	Skewness	Interpretation Level
AS	313	3.64	3.71	0.483	1.71	5.00	-0.6529	Moderate to High
EC	313	3.32	3.33	0.424	2.00	4.67	0.0419	Moderate
SA	313	3.39	3.33	0.682	1.67	11.83	6.0693	Moderate
RE	313	3.42	3.33	0.462	2.00	5.00	0.0118	Moderate to High
CS	313	3.80	3.80	0.616	2.00	5.00	-0.0964	High

Table 2 presents the descriptive statistics related to the usage of social media among pre-service teachers across five

dimensions, namely AS, EC, SA, RE, and CS. The analysis includes measures of central tendency, dispersion, and skewness, which provide insight into the level and distribution of responses.

The EC dimension shows a moderate level of social media usage. The mean and median values are almost identical, and the skewness value is very close to zero, indicating an approximately symmetrical distribution. This suggests that respondents hold relatively balanced and consistent perceptions regarding this dimension. The SA dimension also demonstrates a moderate level of usage; however, it differs notably from other dimensions due to its extremely high positive skewness. This indicates the presence of extreme values or outliers in the dataset. The unusually high maximum value (11.83) further suggests possible data irregularities or highly varied responses. The higher standard deviation reflects greater variability among respondents in this dimension. The RE dimension reflects a moderate to high level of engagement. The distribution is almost perfectly symmetrical, as indicated by the skewness value close to zero. The moderate standard deviation indicates that participants' responses are fairly consistent. This suggests that social media contributes positively to enhancing responsibility and engagement related to environmental awareness among pre-service teachers. The CS dimension recorded the highest mean score among all variables, indicating a high level of social media challenges .

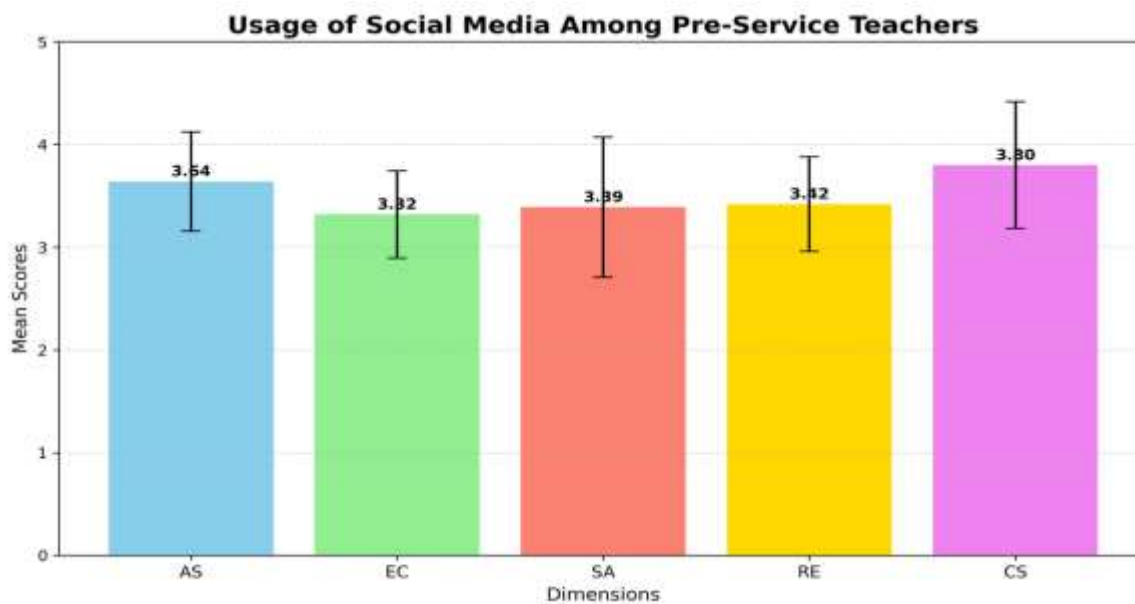


Fig 1: Usage of Social Media Among Pre-Service Teachers.

The combined graph presents the mean scores and standard deviations of five dimensions related to the usage of social media among pre-service teachers for enhancing environmental awareness. The dimensions include AS, EC, SA, RE, and CS. The graph clearly indicates that all dimensions obtained mean scores above the midpoint of the scale, demonstrating that pre-service teachers show a moderate to high level of engagement with social media for environmental learning and awareness.

The analysis of the data shows that teacher trainees have moderate to high environmental awareness through social media across all dimensions. Among all dimensions, EC has the greatest consistency in responses. Most dimensions follow approximately normal distributions, indicating reliable and balanced data. However, the SA dimension shows extreme positive skewness and higher variability, suggesting possible outliers or inconsistency in responses. The data indicates that social media plays a significant and positive role in promoting environmental awareness among teacher trainees.

Objective 2: To study the level of environmental awareness by using social media among pre-service teachers.

Table no.3 The level of Usage of Social Media among Pre-Service Teachers.

N	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Number of Pre-service Teachers	63	140	56	41	13	313
Percentage	20.17%	44.59%	18.03%	13.10%	4.11%	100%

From the above table, it is evident that most of the Pre-Service teachers are using Social Media. 63 pre-service teachers out of total 313 pre-service teachers, which is 20.7% of the sample, are highly using social media of the 140 pre-service, 44.59% of the sample are moderately used social media.

The 56 pre-service teachers which is 18.03% of sample size are somewhat used social media. The 41 pre-service (13.10%) teachers out of 313 who have participated in the study are slightly used social media and 13 pre-service teachers which is 4.11% of the sample are not using social media.

Objective 2: To study the level of environmental awareness by using social media among Pre-Service Teachers.

Table no.4 The level of environmental awareness by using social media among Pre-Service Teachers.

N	Highly Aware	Moderately Aware	Somewhat Aware	Slightly Aware	Not Aware	Total
No. of Student	59	114	79	41	20	313
Percentage	19.01%	36.32%	25.13%	13.15%	6.39%	100%

From the above table, it is evident that 60 pre-service teachers out of 313 which is 19.36% of the sample size are highly Aware towards the environment through social media. 36.32% of pre-service teachers are moderately Aware about the environment by using social media and 25.13% of pre-service teachers are somewhat aware towards the environment through social media. 13.5% of pre-service teachers are slightly aware and only 6.39% are not aware about the environment by using social media.

DISCUSSIONS

The present study examined environmental awareness through social media among pre-service teachers. The findings revealed that a majority of teacher trainees actively use social media platforms such as YouTube, Facebook, Instagram, and WhatsApp for accessing and sharing environmental information.

The results indicated that a substantial proportion of respondents demonstrated moderate to high levels of environmental awareness through social media. These findings are consistent with previous studies conducted by Rezaei et al. (2022) and Siddiqui et al. (2023), which reported that social media positively contributes to environmental knowledge and sustainable behaviour.

The study also revealed that social media serves as an effective educational tool by helping students discuss environmental issues, adopt sustainable practices, and participate in awareness campaigns. However, some respondents remained neutral, indicating that the influence of social media may vary depending on users' engagement and critical understanding of online content.



Overall, the findings highlight the educational significance of social media in promoting environmental awareness among future teachers.

CONCLUSION

The present study explored the role of social media in promoting environmental awareness among pre-service teachers. The findings revealed that most teacher trainees actively use social media platforms in their daily lives for communication, learning, and information sharing.

The study further indicated that social media contributes positively to environmental awareness and environmentally responsible behaviour. Although the overall impact was found to be moderate to high, variations in awareness levels suggest that not all students are equally influenced by digital content. The findings highlight the importance of integrating social media-based environmental education within teacher education programmes. Social media can serve as an effective educational tool for promoting sustainable development, environmental responsibility, and digital learning among future educators.

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