Online Media and Students' Pro-Environment Engagement- Raising Awareness, Facilitating Environment-Friendly Behavior and Social Capital

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Abstract

The functioning of online media as a tool imparting awareness about environmental issues of Pakistan requires attention from academia. Therefore, the present article explains the way students use online media to engage with environment related issues of Pakistan. A carefully constructed survey using a 5-point Likert scale was administered to 223 students of Lahore who were selected through simple random sampling technique. Using Kendall's Tau-b test and measure of rank correlation Gamma (G or γ), association between online media engagement related to environmental issues and pro-environment offline behavior was measured. Moreover, relations between usage of online media, students' awareness about environmental problems and their social capital were also calculated. Data revealed that a significant association existed between students' online media engagement and pro-environment offline behavior. Similarly, a significant association was also present in environment related online engagement and social capital of students. This research study helps to fill the gap of an understudied, yet an extremely important aspect of online media which pertains to its ability in educating and engaging the youth of the global south in pro-environment activities.

Keywords: Environment associated online learning, students' democratic engagement, online media and youth democracy.

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Introduction

While the role of online media as a platform of entertainment and social networking is quite popular, its role as a provider of vast information to users is of great interest to academia across the globe. Research shows that online media acts as a facilitator of democracy, providing awareness to citizens about issues that a society faces (Margolis & Moreno-Riaño, 2013; Margetts, 2013). One such issue which not only affects global ecology, but the lives of each and every Pakistani citizen is environmental degradation in the country. The present study focuses on Pakistani college and university students making use of online media to gather information about environmental issues. Their interest in pro-environment engagement online and offline means that online media is not only providing them with awareness, but is also providing a platform where the young can 'hang out' to discuss environmental issues.

Most noteworthy is the fact that United Nations Sustainable Goals for Pakistan carry several objectives which relate to environmental degradation. Out of the 17 SDGs, clean energy, sustainable cities, responsible consumption production, climate action, life below water and on land, clean water and sanitation are the seven goals which Pakistan immediately needs to pay attention to. Environmental Performance Index (2018) developed in collaboration with the World Economic Forum, Yale and Columbia Universities declared that Switzerland enjoyed the best environmental health and ecosystem vitality. This ranking was followed by France, Denmark, Malta and Sweden with exceptional EPI scores. But unfortunately EPI placed Pakistan as the 169th ranking country with exponential levels of pollution. Amnesty International also took note of the rapid degradation of environmental health in the country. In 2019 its members called out the Government of Pakistan in this regard, declaring the hazardous environment a violation of human rights.

Providing a healthy environment with minimum levels of pollution is the right of every Pakistani, a right safeguarded in Article 9 of the Constitution. Pakistan Environmental Protection Act (1997) also reiterates citizens' right to a clean environment. But this is not possible if the public is not aware of environmental hazards, in addition to engagement on the public's part to preserve the environment. Developing citizens' engagement, in particular youth civic engagement holds utmost importance for any given democracy (Bennett, 2008; Carpini, 2000; Dahlgren, 2013; Loader, Vromen and Xenos, 2014). According to Borojevic, Petrovic and Vuk, "New political frameworks and courses of development regarding the welfare of the young are more and more being directed towards platforms for involving young people in the issues of environmental protection and sustainable development" (2014).

As humans transition from childhood to adulthood their personalities are molded (Finlay, Wray-Lake & Flanagan, 2010). This is the period when their exposure to pro-democratic information from online and offline sources can set a life-long pattern where they perform responsible citizenry and take part in civic engagement (Bode, Vraga, Borah & Shah, 2014). Youth civic engagement, such as pro-environment interests and related information gathering help structure "ideological foundations for future engagement" throughout their lives (Östman, 2014).

Exposure to information through online media can be incidental or intentional (Weeks, Lane, Kim, Lee & Kwak, 2017). In Pakistan, where 78 million citizens enjoy broadband internet and 76 million use 3G/4G data, contact with various kinds of information is probable. In addition to this, Pakistan is considered one of the youngest countries in the world with more than 64% of

its population under the age of 30. According to UNDP (2018), 29% of Pakistan's population is aged 15-29 which draws attention to the fact that youth voice matters for such a young country. With a large number of youth population and high rates of online media penetration, pro-environment information and engagement through this media carries potential.

Getting the youth to care about the environment of the country means more security for Pakistan. As youth are the future, their habits and interests will shape tomorrow's world. If they get exposed to environmental issues faced by the country, they might start thinking about preservation and how they can help the environment (Borojevic, Petrovic and Vuk, 2014). Exposure to information today will direct them towards a pro-environment lifestyle. This exposure to information can come in many forms, ranging from family room discussions to climate friendly groups on Facebook (Valdez, Peterson & Stevenson, 2018). Their ease and frequency of using online media, for a wide range of activities, is commonplace and well know.

It is observed that Pakistani youth's online engagement about environmentalism does exist, but academic study has yet to measure it. There are several Pakistani Facebook groups like Climate Action Now, Eco Talks – Women in climate change, Citizens for clean air, etc. which have hundreds of followers and thousands of people sharing their content. Similarly, Twitter pro-environment Pakistani activists and groups are followed by many and do impart valuable information. During Lahore's smog season, which usually lasts the entire winter, Google Trends Data also shows a spike in the number of Pakistanis searching queries such as air pollution, smog, global warming, glaciers, tree planting, etc. Interestingly most of the spikes in Google search queries happen around October and November when the smog season hits and the air quality falters throughout the country.

This brings to light the fact that online media consumption has a relationship with democratic civic engagement and furthering social capital. Sahami (2017) writes about scholars working in the field of citizenship culture and social capital, where the later is enhanced when citizens are aware of their rights and responsibilities towards society, in addition to coming together to support community. Sense of belonging to a community makes individuals feel that their positive actions matter and are valued (Pooley, Cohen and Pike, 2005). Individuals especially young students need the feeling of integration in the community and society for sustaining and safeguarding the future of democracy (Flanagan & Levine, 2010). In a country like Pakistan a dire need exists for its young student population to feel a sense of social connection so they can engage actively with civic issues such as pro-environment activities. Therefore, the present study investigates the role of online media in enhancing students' engagement with environmental issues of Pakistan.

Literature Review

The sea of 'media and democracy theory' carries many elements where citizen engagement supported by media is analyzed and discussed. It is observed by several scholars that the online media, although mostly employed for entertainment and socializing purposes, can play a significant role in engaging citizens in democratic functioning. Dahlgren (2013) noted that the young generation has been more efficient in mastering the use of online media, which assists them in interacting with society. He holds the view that youth's civic agency is being developed though new media. He refuted the idea put forward by Putnam (2002) that youth civic engagement was

declining. Rather he found that the young are engaging in alternative ways of democratic participation though the use of online media.

Dahlgren believes that the young are not interested in classical forms of political engagement; rather they focus on issues of society which they can connect with. One such issue is the environmental degradation crisis which draws young people's attention in addition to dialogue and engagement online (Narksompong & Limjirakan, 2015). Norris (2001) pointed out that an increase in the number of online social movements and political activism just goes on to show that civic engagement is not atrophying; rather it simply is changing its form. Here the new media comes to the rescue and provides a platform for alternative ways of engagement.

Academic research shows that giving importance to youth voice can secure the future of democracy, in addition to proper transitioning of youth into responsible citizens. The years between childhood and adulthood are considered as being flexible where a person can be influenced to function for the betterment of society (Östman, 2014; Borojevic, Petrovic & Vuk, 2014). Here several influences play a vital role to prepare the future generations to act positively towards democratic engagement. Lee, N. J., Shah, D. V., & McLeod, J. M. (2013) found a strong relation between online media consumption related to news, information and their pro-democratic development. Their longitudinal study of American families using communication mediation model of youth socialization showed that families, peers and especially use of online informational media were all making the youth more prepared to act democratically.

Exposure to informational media has an impact on how the youth interact with their surroundings and also helps form social orientations which last a life time (Östman, 2014). As youth are the future of democracy, getting them to care about society means survival of democracy (Keating & Melis, 2017). If the youth stop caring about civic involvement this can mean the future of democracy is bleak. Marzęcki and Stach (2016) bring attention to the fact that the attitudes of today's youth will shape the democracy of tomorrow. They study the attitudes of European youth, in particular Polish youth, and their feelings towards contemporary democracy. They find that the Polish youth have a certain level of distrust in political parties and their abilities. British youth seem to feel the same way and show interest in issues related to racism, sexism, environment, animal rights and so on (O'Toole, 2004). The British Government, during the 1990s, became so apprehensive about youth civic engagement that they made civic education compulsory in schools around UK. O'Toole's analysis found that the British youth were not apathetic towards democracy or civic engagement; they were simply not interested in mainstream politics just like the Polish youth.

Borojevic, Petrovic and Vuk (2014) propose that formal education about environment can prepare the youth to adopt a pro-environment lifestyle. Through their study which came out in 2014, they suggested that environmental education starting from elementary school all the way up to university, should make sure that the youth care for environment. As the youth are disproportionately affected by environmental deterioration because they have to live longer in the hazardous environment left for them by previous generations, they have a right to awareness about such problems. Only through awareness they will know where they stand and what measures can be adopted to tackle pollution.

Family discussions, peer influence and informational media consumption by youth also play a significant role in preparing them for pro-environmental lifestyle. Östman, J. (2014) though

his study of Swedish youth found out that their information media use, both online and offline, had a positive relation with their awareness about pollution and climate change. Their conversations with family and friends also influenced their choice to use informational media, which in turn affected their everyday pro-environment behavior. Östman's study of the Swedish youth was carried in the light of political socialization approach on citizens' involvement. Analyzing the above mentioned studies it becomes evident that youth involvement is necessary if environmental issues need to be addressed. In a country like Pakistan youth voice may not always receive the attention is requires. But this all can be tackled with if online media can simply become a teacher telling the youngsters what hazardous environment they live and what part they can play to help. Online media can also be seen as a classroom where the youth can talk to each other on this issue, share their experiences and come up with solutions.

Theoretical Framework

Civic engagement and media derives thought from the Normative Traditions of Media presented by Christians, Glasser, McQuail, Nordenstreng and White (2010). These Normative Traditions, presented more recently as compared to the classical normative traditions presented by Siebert, Peterson and Schramm (1956), give an understanding about the relationship between media and society. They can be categorized under Libertarian, Social Responsibility and Corporatist tradition, in addition to the Citizen Participation Tradition. Although this particular tradition is several years old, it is believed that the Citizen Participation Tradition could never be made part of the main stream media and can only function through alternative routes (Christians, Glasser, McQuail, Nordenstreng & White, 2010). Citizen Participation is placed in the contemporary post-modern period and application of this tradition can be observed taking place on alternative media which is the online digital media.

The new normative tradition presented the way how the democratic cooperation facilitated diverse voices of the civil society. Additionally these theories not only consider the role of state and press, but also the role of the public as consumers and producers using various media forms. This tradition is so vast and flexible that it can aptly be applied to the non-western world as well (Benson, 2011). Normative tradition formed basis for several models and theories like the Citizen Participation and Civic Democracy Models or the Theory of Media and Democracy, all presenting a lens which sees how citizens are making use of participatory media like online media (Christians, Glasser, McQuail, Nordenstreng & White, 2010).

Working in the area of Media and Democracy one comes across several prominent theorists like Peter Dahlgren, Stephen Coleman, Pippa Norris and W. Lance Bennett with mastery over theories of democracy, deliberate democracies, digital media and youth civic engagement, and theories of media and democracy. According to Dahlgren (2013), minimal levels of civic participation is essential for the survival of democracy and media can play an integral part by providing contemporary platforms of citizen engagement. The study of contemporary democracies where alternative media platforms, like the online media, are believed to support and maintain civic engagement. Although the use of online media for civic agency is limited as compared to other uses such as entertainment, even then this function cannot simply be ignored. As the world of political communication changes, online media has the potential to step up and provide a platform where horizontal communication can take place between different actors of the society, including political actors and the general public.

Norris (2001) explained that while conducting studies on digital media, researchers specially Western researchers, belonging to strong democracies, focus that mass public participation through online media is its strongest advantage. But Norris disagreed and pointed out that the peripheral voices which can only be heard through online media need to be valued. Following the Schumpeterian tradition she focused on effective pluralistic participation by citizens who are educated about society and democracy through online media. As being informed citizens they are able to make informed choices, formulate opinions and gain confidence as citizens forming a society. Norris stated, "mass public participation represents one important element in any conceptualization of democracy but it is far from the only," (2001). By providing a platform to upcoming voices such as pro-environmental sentiment, online media is playing its part in helping nurture democracy.

Blumler and Coleman (2015) stated, "The very model of political communication systems prevalent in the practice and scholarship of liberal democracies in the twentieth century has been transformed and is now out of date in many respects." New media studies and its function promoting civic agency need academic research to understand its potential. The late modern society's citizens, especially the youth are employing online media and related technologies for gathering information and coming together in 'disorganized clusters' online discussing particular issues which may result in 'democratic gains' (Dahlgren, 2013). Single issue activism like environmental problems of Pakistan where people see themselves as civic agents holds benefits for democracy and for the individuals as well. Offline practices such as family and peer discussions about politics or societal issues including pro-environmental talks, also affects how the youth make use of ICTs to engage in democratic functioning. Dahlgren (2013) stated, "young people, citizenship, new media, and learning processes. When taken together, these four topics merge to define an arena of social and research attention that has become compelling in recent years."

Dahlgren further observed that the youth of the 21st centaury's ever evolving democracies are not showing interest in conventional political participation such as voting and meeting in town halls. They are more interested in issue-based engagement online, where peers or persons interested in a particular issue come together and take part in democratic functions. As the democracies are evolving in the post-web world, media is also evolving to act as a sustainer of democracy. Online platforms remove societal and geographical barriers in addition to providing large number of audiences a low-cost platform. Dahlgren and coauthors call this new form of online civic engagement, 'alternative' democracy which also supports youth's individual identity formulation (Banaji, 2008).

Objectives and Hypotheses of the Study

The present article addresses the following objectives:

Objective 1: Investigate whether online media is creating awareness about environmental issues among the students of Lahore, Punjab.

Objective 2: Examine online media's impact on the students' thoughts, beliefs and attitudes towards environmental issues.

Objective 3: Analyze students' online and offline engagement regarding environmental issues.

The above mentioned objectives directed this study to test the following hypotheses:

H_{0A}: There is no association between students' online engagement related to environmental issues of Pakistan and their awareness about the same.

H_A: Students' online engagement related to environmental issues of Pakistan have a significant association to their awareness about the same.

H_{0B}: No significant association exists between students' pro-environment online engagement and their offline pro-environment behavior.

H_B: Pro-environment online engagement of students have a significant association to their offline pro-environment behavior.

H_{0C}: Students' pro-environment online engagement have no significant association with their social capital.

H_C: Students' pro-environment online engagement is significantly associated with their social capital.

Methodology

The present study focuses on students that the youth are a diverse group with heterogeneous characteristics. They carry different beliefs about the environment of Pakistan, climate change and the role they can play to solve environmental problems of the country. Their range of ideas about what matters to them and how they accumulate knowledge online about the problem was investigated in this study. The present study's population consisted of College and University students of Lahore, Pakistan. Through simple random selection technique, sample was selected and the data was collected from 223 students of various educational intuitions across Lahore, ranging from 15-25 years of age. Educational institutes which were randomly selected across Lahore were MAO College, Punjab University, Lahore College for Women University, LGS Main Gulberg, SICAS and Beaconhouse National University.

Instrument for the present study, in the form of a questionnaire, was carefully developed carrying seven sections and a 5-point Likert scale. These sections were developed to inquire socio-demographics, environmental awareness, pro-environment offline engagement or behavior, environment related beliefs, media habits of family and friends. Respondents' media usage regarding environment issues was carefully studied and their self-reported social capital was also looked into. Sections of the instrument related to environmental awareness and beliefs were based on the scales inspired by the ISSP 2010 – Environment III Basic Questionnaire. Pro-environment offline engagement measure was developed with the help of scales from various studies including Ojala, M., & Bengtsson, H. (2019), Heyl, Moyano Díaz & Cifuentes (2013), Moyano, E., Encina, Y., & Vicente, D. (2007) and Pato, C., Ros, M., & Tamayo, A. (2005). Media usage section of the questionnaire where respondents indicated their online activities regarding environmental issues was adapted from the instrument of Metag, Maier, Füchslin, Bromme and Schäfer (2018).

The present study is based upon the relationship or association of respondents' online activities which were related to environmental issues. This *pro-environment online engagement* was analyzed in the questionnaire by asking respondents the various ways in which they engaged with environmental information of Pakistan through Google, Facebook, Youtube, Whatsapp and Twitter. Respondents' level of online engagement was categorized as frequent level of

engagement, moderate and infrequent. Similarly, respondents' *awareness about environmental issues* was also measured and categorized as high, medium and low level of awareness. In addition to these two variables, respondents' offline or real-life engagement which support environment were also examined. Respondents had to report their *pro-environment offline engagement* and their responses were categorized ranging from infrequent to frequent engagement.

Lastly, while measuring the variable of *social capital* respondents were asked what role they played to preserve the environment of Pakistan, how connected they felt with the environment and their sense of responsibility towards it. Respondents' feelings towards the country's environment preservation and the sense of being responsible citizens was also inquired. To further measure individual's social capital, they were asked to indicate the feeling of well-being and connection with society when they engage with environmental issues through online media in the form of Google, Facebook, Whatsapp and Twitter.

Results and Discussion

Data collected from 223 students of Lahore, Pakistan was fed into IBM SPSS Statistics 21 and 206 valid entries came up which account for 92.4% response rate. These students all belonged to the age group of 15-25 years. During the decades of 1950s and 1960s Leo Goodman and William Kruskal proposed a measure of rank correlation Gamma (G or γ) which is a non-parametric measure of the strength and direction between two ordinal variables. Goodman and Kruskal's gamma is considered the best estimator of the actual degree of association on average (Göktas and Isçi, 2011). Its ranking is similar to Spearman's Rank Correlation ranging from -1 to +1, with 0 indicating no association. Additionally Kendall's Tau-b test of association was applied to the data to measure ordinal association. Maurice Kendall in 1983 developed the Kendall Rank Coefficient (τb) to statistically test hypothesis and establish association and independence of variables. Kendall's test also ranks association between the values of -1 to +1, with 0 value indicating absence of association between variables. The instrument of the present study was checked for internal reliability using Cronbach's Alpha. The Cronbach's Alpha (α) was 0.884 which demonstrated that the 28 items of the instrument carried high internal consistency.

Table 1
Summary of responses

Total respondents	Missing responses	Valid responses	Cronbach's Alpha (α)
223	5	206	0.884
100%	2.4%	92.4%	

Association between respondents' online engagement related to environmental issues, awareness regarding environmental issues, pro-environment offline engagement and social capital was tested. The results of the hypotheses tested in the present study are reported in the following tables (Table 2.1, 2.2 and 2.3):

Table 2.1

Summary of the association between pro-environment online engagement and respondents'
awareness about environmental issues of Pakistan

Online Engagement Median Score and Awareness Median Score							
			Awareness – Median Score					
			Low	Medium	High	G/ γ	τb	*p*-value
	Infrequent	Actual number of respondents	3	3	70	.183	.064	.198
		Expected number of respondents	2.5	4.9	68.6			
		Total percentage	1.4%	1.4%	32.6%			
Online Engagement – Median Score	Moderate	Actual number of respondents	3	11	62			
		Expected number of respondents	2.5	4.9	68.6			
		Total percentage	1.4%	5.1%	28.8%			
	Frequent	Actual number of respondents	1	0	62			
		Expected number of respondents	2.1	4.1	56.8			
		Total percentage	0.5%	0.0%	28.8%			

Table 2.1 demonstrates that majority of respondents (32.6%) reported a high level of awareness about environmental issues with infrequent pro-environment online engagement. Equal percentage of respondents reported high levels of awareness but their online engagement was moderate and frequent (28.8%). It can be concluded that awareness level of respondents was considerable, but their online engagement about this issue varied from infrequent to frequent. Observed count (62) of respondents, who were frequently making use of online media and having high level of awareness, was much more than expected count (56.8), if null hypothesis is considered true. Association between online engagement score and awareness score is observed to be positive, but weak (0.064). The p-value shows insignificant relationship between the two phenomena and gamma also leads to the same conclusion. No sufficient evidence can be found to reject null hypothesis (H_{0A}) which means that youth's online engagement related to environmental issues of Pakistan does not have a significant association to their awareness about the same.

Table 2.2
Summary of the association between online engagement related to environmental issues of
Pakistan and respondents' pro-environment offline behavior

Online Engagement Median Score and Offline Behavior Median Score	
	Offline Behavior – Median Score

			Infrequent	Average Frequency	Frequent	G/ γ	τb	*p*-value
Online Engagement – Median Score	Infrequent	Actual number of respondents	12	24	40	.483	.280	.000
		Expected number of respondents	7.1	17.7	51.3			
		Total percentage	5.6%	11.2%	18.6%			
	Moderate	Actual number of respondents	5	22	49			
		Expected number of respondents	7.1	17.1	51.3			
		Total percentage	2.3%	10.2%	22.8%			
	Frequent	Actual number of respondents	3	4	56			
		Expected number of respondents	5.9	14.7	42.5			

Table 2.2 makes clear that majority of the respondents (26.0%) are frequently performing pro-environment offline activities along with frequent online activities regarding the same. This percentage is followed by respondents (22.8%) who are moderately engaging in online pro-environment activities and frequently performing environment friendly offline activities. Those who are moderate (10.2%) and infrequent (11.2%) in their online activities also indicate that their offline activities helping environment are averagely frequented. Statistical association between online and offline activities helping support the environment through Kendall Tau-b (0.280) was ranked as positive, having a small association. Gamma (0.483) ranks the same association as positively moderate. But overall the association is found to be significant (*p*-value 0.000) which proves that null hypothesis (H_{0B}) is rejected. A positive and moderate association does exist between pro-environment online and offline behavior of respondents.

Table 2.3
Summary of the association between pro-environment online engagement and respondents' social capital

Online Engagement Median Score and Social Capital Median Score						
	Social Capital – Median Score					
	Low	Medium	High	G/ γ	Tb	*p*-value

Online Engagement – Median Score	Infrequent	Actual number of respondents	14	26	36	.537	.310	.000
		Expected number of respondents	6.7	17.0	52.3			
		Total percentage	6.5%	12.1%	16.7%			
	Moderate	Actual number of respondents	3	14	59			
		Expected number of respondents	6.7	17.0	52.3			
		Total percentage	1.4%	6.5%	27.4%			
	Frequent	Actual number of respondents	2	8	53			
		Expected number of respondents	5.6	14.1	43.4			
		Total percentage	0.9%	3.7%	24.7%			

Table 2.3 elucidates association stated in hypothesis (C) between online activities of respondents related to environment and the social capital or ties which they feel with the society. Table shows that those with moderate (27.4%) and frequent (24.7%) online activities are the ones who indicate high level of social capital. On the other hand respondents who are infrequently making use of online media (6.5%) are also demonstrating low levels of social capital. Statistical analysis shows that a significant association (*p*-value 0.000) exists between the variables. Kendall Tau-b rank (0.310) points to a positive and moderate association, whereas Gamma (0.537) shows a substantial association between the variables. This leads to the rejection of null hypothesis (H$_{0C}$) which means that youth's pro-environment online engagement is significantly associated with their social capital.

These associations can be seen in the graphical presentation below. The graph shows that when the online activities regarding environmental issues are infrequent, levels of pro-environment offline activities and respondents' social capital are also low. As the online activities increase respondents' pro-environment behavior and social capital also increase. This is different from how respondents' awareness is behaving. Their awareness is both high when online activities are infrequent and frequent.
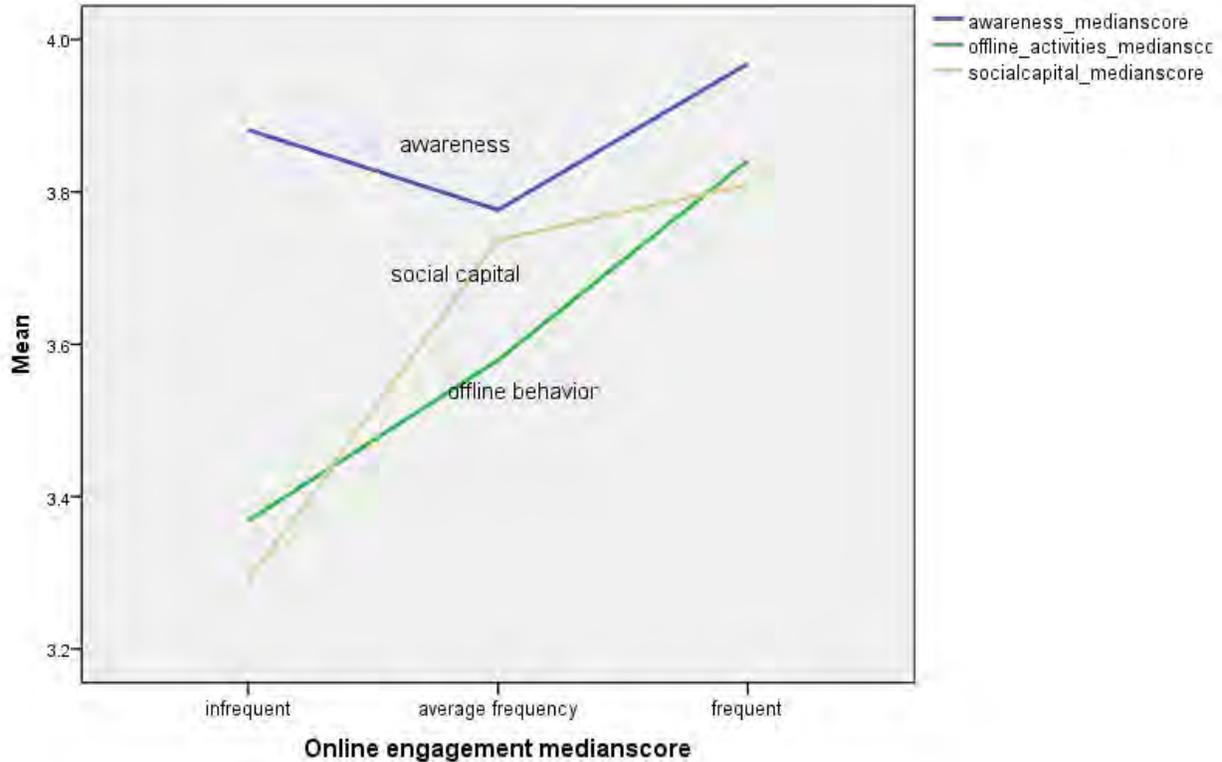
Figure 1: Median score of pro-environment awareness, offline activities, social capital in relation to median score of online engagement regarding environmental issues of Pakistan

Statistical analysis of data collected from 223 students of Lahore, Pakistan showed that a significant majority of respondents (90.13%) indicate having high awareness level about environmental issues of Pakistan. Young students also agree (79.07%) that online media has the capacity to act as an educator of the public, spreading awareness when it comes to environmental issues. Percentages and counts of various variables are demonstrated in the Table 3 below.

Table 3
Descriptive Statistics of data regarding online media engagement for environmental issues of Pakistan, pro-environment offline activities, awareness and social capital

	Low		Medium		High	
	N	%	N	%	N	%
Awareness about environmental issues and problems of Pakistan (median score)	7	3.14%	15	6.73%	201	90.13%
Estimation of online media as an educator of environmental issues	24	11.16%	29	13.49%	162	75.35%

Level of pro-environment offline behavior (median score)	20	9.01%	51	22.97%	151	68.02%
Frequency of Google searches about environmental issues	49	22.79%	53	24.65%	113	52.56%
Incidence of coming across online news about environmental issues	44	20.46%	66	30.70%	105	48.84%
Frequency of watching Youtube videos about environmental issues	79	36.74%	53	24.65%	83	38.6%
Frequency of Twitter usage regarding environmental issues	153	71.16%	28	13.02%	34	15.81%
Frequency of using Whatsapp regarding environmental issues and discussions	88	40.93%	51	23.72%	76	35.34%
Incidence of using Facebook related environmental issues and discussions	66	30.84%	41	19.16%	107	50%
Online engagement related to environmental issues (median score)	76	35.35%	76	35.35%	63	29.30%
Feeling of being a responsible citizen while discussing environmental issues using social media	34	15.89%	58	27.10%	122	57.01%
Moral obligation towards protecting the environment	8	3.66%	22	10.05%	189	86.3%

Social Capital of respondents (median score)	19	8.56%	49	22.07%	154	69.37%

As it is evident from table 3 offline behavior of majority of the respondents (68.02%) as indicated by them is high. They indicate performing pro-environmental activities, such as planting trees, conserving electricity and water. On the other hand small sections of the sample (9.01%) indicate not performing such activities at all. Environment related online activities are found to be low with majority of the respondents. Respondents who indicate infrequent (35.35%) or medium level of online engagement (also 35.35%) make up the majority of the sample. Number of young students who are regularly engaging in environment related online activities is low (29.30%). If these activities are analyzed, mostly respondents (52.56%) are frequently using Google to perform searches related to environmental issues. 50% of the respondents show that Facebook is used frequently for engaging in environmental related information and activities. This is followed by respondents (48.84%) who indicate frequently consumption of environmental news available online.

Table 3 also shows the social capital median score based on several variables which measure respondents' connection with society. This includes respondents' moral obligations to conserve surrounding and feeling of accomplishment when they raise their voice on social media for environmental preservation. Majority (69.37%) indicate a high level of social capital median score, with most of the respondents (86.3%) feeling obliged to preserve the local environment. Majority (57.01%) also indicate that they feel like a responsible citizen when they engage with pro-environment online activities. These percentages clearly indicate that once the respondent engages in pro-environment online activities he feels involvement with environment around him, caring about conservation and feeling like an integral part of the society where he can play a constructive role.

Conclusion

Online media's ever increasing presence in the lives of people all over the world carries the potential that this particular media can be used to achieve democratic gains. The present study is only a brick in the tall wall of academic contributions in the field of media and democracy. It explains how online media can enhance the pro-environment functioning in society, especially when considering the students of Pakistan who will lead the country in the days to come. Data reveals that online media has an important pro-environment function in Pakistani society, raising awareness, engaging students to care about environment and providing innumerable online platforms to talk about environmental issues and problems.

Statistical analysis also revealed that students enjoy high levels of awareness, but association present in the first hypothesis (H_A) between awareness and online engagement was found to be weak. This could be due to the fact that students receive environmental information from all sorts of sources including, family, friends and other media such as Television. Association between online engagement and pro-environment offline engagement mentioned in the second hypothesis (H_B) was statistically ranked positive and moderate. Similarly, in the third hypothesis (H_C) association between online engagement and social capital came out positive and moderate.

Therefore, the present study establishes that online environmental engagement is associated with pro-environment offline behavior and helps enhance students' social capital. But not enough evidence was found to indicate a relation between online engagement and the high level of awareness which youth show about environmental issues. Keeping these results in mind, it is clear that online media has the potential to play a very important democratic function which will set a particular path for today's youth where they help preserve the environment. If further academic research is conducted which is able to study pro-environment online engagement trends of a wide range population across Pakistan, policies recommendations can be made to the concerned authorities to make full use of this wonderful media in helping solve Pakistan's environmental problems.

The research conducted for the present article has only analyzed a single factor of the advantageous functioning of online media with regards to youth democracy. Future research projects can focus more on various ways online media engages youth of Pakistan or the global south in democratic engagement. As noted by several academics, 21st century youth are more interested in issue based democracy, like environment related issues. Their interest in typical party politics is very low; rather they prefer to engage with issues related to society which interests them. Therefore, more academic research needs to be conducted where the youth and their democratic interests and related online media usage is studied.

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