
PROMOTING ENVIRONMENTAL AWARENESS THROUGH SECONDARY SCHOOL: EVIDENCE FROM GOVERNMENT SCHOOLS IN DISTRICT PESHAWAR, PAKISTAN

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ABSTRACT

Like teachers, educational institutions (schools) have a prime role in conveying knowledge and awareness to learners. The progressive, trained and motivated workforce can only be nourished in environment friendly schools. They provide us great platforms for collaborating and sharing our common purpose through expanding our knowledge. The study provided an analysis to understand, document and find out secondary school role regarding environmental education. The population comprised all government high school teachers of grades 9 and 10 (both genders) in district Peshawar, Pakistan. The sample comprised 40 schools (20 boys & 20 girls) selected through stratified random sample; whereas, selection of schools in rural and urban areas in district Peshawar was made through cluster sampling. One teacher from each school was randomly selected from sampled teachers for interview, which makes a total of 40 teachers. The data was collected through in-depth semi structured interviews, which were further analyzed by thematic analysis. The results elicited that half of the teachers of the schools did not have knowledge and understanding of environment and environmental education. In addition, the respondents believed that secondary schools in the research area also did not promote environmental education due to lack of activities in the schools. The study recommended to include drills, workshops and associated activities regarding environmental education. It is further recommended to enhance teachers understanding regarding environmental education, which ultimately helps in achieving green and clean environment.

Keywords: Awareness; education; environmental education; secondary schools.

INTRODUCTION

Developing and moulding human behavior is one of education's primary goals. Around the world, various educational systems are created and developed with the aim of producing citizens who work and behave in desirable ways. We can encourage responsible citizenship and a healthy environment through education. Environmentally responsible citizens are those who have a thorough awareness of the environment, its future trends, and the issues that are related to it. They also work to improve and protect the environment and have the skills necessary to solve various environmental issues through active participation at all levels (Ardoin et al., 2013).

Formal (in schools and colleges), non-formal (through groups and workshops), and informal (through media, nature centres, and self-directed exploration) are the three types of environmental education. Its objective is to

give people the information and abilities they need to solve environmental issues while also encouraging a sense of duty and stewardship toward the environment (Li et. al., 2007).

There are many different ways to cultivate environmental awareness. These sources include printed and visual media, which can be extremely helpful in fostering environmental awareness and education. Through both formal and informal education, all family members must learn about the environment, and the school should support educational initiatives aimed at producing responsible citizens and students. Students will be able to gain first-hand knowledge of the environment through hands-on visits, excursions, and natural exploration. Games, field trip projects, and other activities all foster environmental consciousness (Neal, 1994).

As school activities can produce environmentally conscious citizens, students should have been taught to be environmentally conscious through a variety of case studies, community inventory projects, community action projects, environmental awareness plans, environmentally friendly projects, and related tasks/assignments (Howe & Disinger, 1988).

ENVIRONMENTAL EDUCATION IN PAKISTAN

In Pakistan, environmental awareness and education started in the early 1990s. Given the necessity and significance of environmental education, the government created "The National Conservation Strategy" in 1992, which called for the launch of various educational initiatives at various universities to raise environmental awareness and education among the next generation. In addition, many undergraduate, graduate, and doctoral programs in environmental science, engineering, and education were made available in order to advance environmental education in Pakistan. In 2005, the "National Environmental Policy" was also formulated (GoP, 2005).

According to Ardoin et al., (2013), promoting a clean and green environment is a crucial role for educational institutions and schools. Through official or informal channels, Pakistan is implementing and advancing environmental education at the school level. Since 2013, the government has implemented various initiatives, such as "Clean and Green Pakistan" and "Billion Tree Tsunami," to raise awareness of environmental preservation and enhancement on a local and international level. Campaigns for awareness and plantation efforts are fully focused on protecting and improving the environment. Newspapers, radio, television, and other forms of media have been actively involved in the past ten years. However, there is still a great need to advance fundamental conceptual and scientific knowledge and understanding of environmental challenges and difficulties both domestically and internationally.

Only by implementing environmental sciences and environmental programs at the primary, secondary, and upper secondary levels will able us to meet the intended national goals for environmental education. Equal efforts should be made to incorporate environmental education curriculum into school curricula in order to achieve this. Additionally, the educational staff should be ecologically literate in order to create environmentally conscious individuals and to promote constructive behavioral and attitude changes at all levels. The environmental education programs main focus is to change environmental behavior through increasing environmental knowledge (Green et al., 2016).

Knowledgeable, driven, and competent people can keep up with the current world's pace. We will be behind in every aspect of life if we don't accomplish this and have no vibrant, mature people to face the modern world. Only by improving and fortifying our educational system can this be possible. Only education can provide a solution to prevent and lessen pain in the current world. In a similar vein, environmental education can be used to curb environmental damage. Since the advancement of education is linked to success in many facets of life, education is the most dependable and efficient source of information if we must make progress. Only educational institutions are capable of carrying out this duty, states, Li et. al. (2007).

ENVIRONMENTAL EDUCATION AND SCHOOLS

Considering their function, we can state that the information and materials taught at various school levels contribute to the development and enhancement of students' consciousness and responsibility regarding many concepts such as the environment, environmental education, and awareness, among others. In order to create responsible citizens, the institutions are also having a significant impact on students' environmental education and awareness. (Ardoin et al., 2013).

Furthermore, with the cooperation of teachers and students, this role can also be carried out through curricula and other related activities. In a nutshell, environmental education and awareness are promoted in schools. Additionally, it encourages teachers and students to communicate and work together on environmental issues. Additionally, the school organizes field trips for students to promote environmental awareness. Additionally, schools offer chances to address and manage environmental issues. Similar to this, teachers in schools employ meaningful activities when instructing lessons about the environment. They also uphold eco-friendly practices like plantations, cleanliness, and health hygiene. They also engage in various activities that not only inspire their students to actively participate in the promotion of a clean and green environment, but also themselves. Since schools are places where future minds are nourished and educated to become responsible citizens, we can say that they are the only places that can easily develop such and other related information and responsibility towards a friendly environment (ACEE, 2011).

THEORETICAL FRAMEWORK

A type of structure that aids, supports, and holds a research study together is the theoretical framework. The study's theoretical framework is based on Bloom's Taxonomy, which supports the research effort in addition to describing and explaining the research problem. According to Bloom (1956), the educational goals lies in three different domains i.e. the cognitive, the effective and the psychomotor domains, famously known as Bloom's taxonomy.

While the work of various people to make a positive impact and those who have an emotional attachment to the environment fall under the affective domain, environmental education also deals with domains like knowledge and information about environmental problems related to the cognitive aspect. The psychomotor domain is related to the various activities that seek physical involvement, such as cleaning, planting, increasing the number of forests, recycling, and waste management, among others. The six levels of Bloom's cognitive domain hierarchy are recognition (knowledge), comprehension, application, analysis, synthesis, and evaluation. Since the first three levels of Bloom's cognitive domain are frequently used at secondary school level, curricula and assessments, and their applications are widely known in such studies, the study only used these levels to accomplish its goals.

RESEARCH QUESTION

What role do Schools have in making the Environment Clean and Green?

METHOD AND PROCEDURE

In-depth interviews were used to gather data for this qualitative study. The research question and the first three cognitive domain levels of Bloom's taxonomy were taken into consideration when designing the instrument.

POPULATION OF THE STUDY

Gay (1990) defined a population as a group that a researcher oversees and from which the findings of a study can be extrapolated. Entire government schools of the province desperately need to provide environmental education and awareness. Nonetheless, all of the male and female government high schools in the Peshawar district make up the study's population. In district Peshawar, there are 141 high schools in total, with 77 for boys (46 rural and 31 urban) and 64 for girls (36 rural and 28 urban), according to EMIS (2017–18). The population of this study consists of all teachers of grades 9 and 10 in the Peshawar district's government high schools.

SAMPLE OF THE STUDY/ PARTICIPANTS

Gay and Airasian (2000) describe a procedure whereby a number of people are chosen for a study in a way that is representative of the broader population from which they are chosen. The study's sample consisted of 40 schools in the Peshawar district. Based on equal distribution, 20 of the 40 schools were high schools for boys and 20 for girls. Of the high schools for boys, ten were from the Peshawar district's rural areas and ten were from the city. Additionally, ten of the girls' high schools in the Peshawar district were from rural areas, and ten were from urban areas. Cluster sampling was used to choose rural and urban areas, while stratified sampling was used to choose schools for boys and girls. All of the subjects taught to classes 9 and 10 were taken into consideration when choosing the teachers. In addition to their consents, one teacher from each school was chosen at random from the sampled teachers to participate in an interview, for a total of 40 teachers.

DATA COLLECTION AND ANALYSIS

The research study was qualitative, and interviews were used as the primary data collection method. For the sampled teachers in the research study, a semi-structured interview was used. In order to gather information about the perceptions and opinions of forty teachers, the researcher used a semi-structured interview or the method was used for the randomly chosen participants. The role of secondary schools (institutions) in creating a clean and green environment as well as the hands-on environmental education field trips are included in the data analysis. The research study employed qualitative paradigms for data collection. Schools (teachers) provided the primary data, while newspapers, libraries, and the internet provided the secondary data. Interview data were analyzed under themes, and following transcription, the data were coded. In addition to thematic analysis, the researcher took notes and documented the interview's outcomes for qualitative data analysis.

RAPPOROT DEVELOPMENT

Building a relationship with the respondents is crucial before starting the research study. Prior to conducting the interviews, the researcher met the teachers who were participating in the study. The Elementary and Secondary Education Department in Peshawar, Khyber Pakhtunkhwa, as well as the concerned principals and headmistresses, gave their prior consent for such meetings. Additionally, the nature of the entire research study, its significance and necessity, its duration, and other minute and related details were successfully conveyed to the teachers who responded, and a general understanding was established with them. Since the respondents are regarded as one of the key components of the research, a cordial environment was established with them in order to collect accurate and legitimate data. The respondents were hesitant and a little bashful at first, but as time went on, they gained confidence and became very interested and passionate in the study.

ETHICAL CONSIDERATION

Ethical consideration is of utmost importance when conducting interviews with human participants. Respecting the rights, privacy, and well-being of interviewees is essential for maintaining trust and integrity in research. Informed consent is a foundational principle, which was kept intact, ensuring participants are fully aware of the study's purpose, procedures, and any potential risks involved. Anonymity and confidentiality of participants' identities was ensured during the analysis of the data. Researcher avoided causing any harm to professional or cultural differences during the interview process. Transparency in the entire research process was ensured.

FINDINGS AND DISCUSSION

Theme: Secondary Schools role/ Secondary Schools' Practical Visits

This section presents a thorough examination of the theme. In order to gain a comprehensive understanding of the respondents, the theme provides answers to the study's research question as well as an explanation of the interview questions i.e. "What role does your school play in making the environment clean and green?", "What activities would you suggest to enhance the role of school in making environment clean and green?" and "Name the practical visits which can be arranged by schools regarding environmental education?". In a similar vein, the focus was maintained on Bloom's taxonomy, specifically on the first three levels of its cognitive domain, while the respondent teachers were asked general awareness questions about the secondary schools and their role in creating a clean and green environment. Detailed explanations of the respondents' responses of the statements are provided under the headings FTR (Female teacher rural), MTR (Male teacher rural), FTU (Female teacher urban), and MTU (Male teacher urban).

The following is a list of teachers' interview statements and their reactions (their opinions) regarding the theme.

What role does your school play in making the environment clean and green?

In response, FTR1, FTR2, FTR3, FTR7, FTR8, and FTR9 stated that their schools are contributing significantly to a clean and green environment. Despite having few resources, they effectively mentor and inspire their students to maintain a clean environment. Students are also given information and knowledge about the environment and climate change by their teachers and schools. However, FTR4, FTR5, FTR6, and FTR10 of the teachers who were interviewed responded that their schools are making a significant contribution to society through activism, discussions, and awareness-raising.

Teachers from MTR1, MTR2, MTR5, MTR7, and MTR10 responded that their schools are contributing significantly to a clean and green environment. Every year, their schools commemorate Plantation Day and social work. However, MTR3, MTR4, and MTR9 of the teachers who were interviewed responded that their schools are making a significant contribution through the plantation, assembly sermons, debates, model drawings, paintings, and local awareness campaigns.

In response, two MTR6 and MTR8 teachers stated that their school is not making a significant contribution in this area.

While the MTR6 also stated that,

"Even the related topics are not taught practically".

Many of the teachers FTU2, FTU3, FTU4, FTU6, FTU8, and FTU9 responded that their schools are contributing to the clean and green plantations, discussions, and awareness campaigns in society. Teachers from FTU7 and FTU10 responded that their schools are rarely or very little involved in creating a clean and green environment. Teachers FTU1 and FTU5 who participated in the interview also responded that their schools' role in this area is only adequate.

MTU2, MTU3, MTU5, MTU7, MTU8, and MTU9 responded that their schools' roles in promoting a clean and green environment are not very good and that they only very rarely or very little participate in these efforts. Teachers MTU1, MTU4, and MTU6 who were interviewed responded that their schools have an appropriate system in place for it. Various seminars and exhibitions about a clean and green school environment are organized by those schools.

Teacher MTU10, the only interviewee, responded that, "their schools are not supported by the high ups or by the concerned departments in this regard, due to which our schools' role is just satisfactory".

What activities would you suggest to enhance the role of school in making environment clean and green?

The majority of the FTR interviewees (FTR1, FTR2, FTR3, FTR4, FTR6, FTR7, FTR9, and FTR10) agreed and proposed various activities to further strengthen the role of schools in creating a clean and green environment. These activities include: large-scale plantations; frequent educational trips that emphasize the value of gardening; debates; competitions for speeches and essays; competitions for charts and posters; awareness campaigns and walks; etc. In contrast, interviewees FTR5 and FTR8 recommended that a designated day be set aside for the purpose of keeping the school and its surroundings clean, including cleaning and sanitizing classrooms and disposing of trash in designated bins.

The majority of interviewees (MTR1, MTR2, MTR3, MTR4, MTR5, MTR6, MTR7, MTR8, and MTR9) agreed and proposed various activities to further strengthen the role of schools in creating a clean and green environment. These activities include: large-scale plantations; frequent educational trips that emphasize the value of gardening, community involvement, health hygiene, and the use of A.V. aids; debates; competitions for essays and speeches; competitions for charts and posters; awareness campaigns and walks, among other activities.

Just a single interviewee MTR10 suggested that, “curricula/ syllabus play important role in enhancing school role in promoting a green and clean environment, so we need to modify our curricula and so on”.

In order to strengthen the role of secondary schools, interviewees FTU1, FTU2, FTU4, FTU5, FTU9, and FTU10 agreed and proposed various activities, such as plantations, frequent educational excursions, debates, speech/essay competitions, charts/posters competitions, awareness campaigns/walks, etc. However, interviewees from FTU3 and FTU8 indicated that environmental education training and refresher courses would improve teachers' abilities and secondary school roles. In addition to the aforementioned, FTU6 and FTU7 reported that their schools hardly ever engage in eco-friendly activities.

In order to strengthen the role of secondary schools, the respondents MTU1, MTU3, MTU5, MTU7, MTU8, MTU9, and MTU10 agreed and proposed various activities, such as plantations, regular school/classroom cleanliness, awareness campaigns, or walks. Additionally, they mentioned that secondary schools would benefit from various assignments and projects as well as activity-based learning about a clean and green environment. In order to foster a beneficial environment and strengthen secondary school roles, MTU4 and MTU6 interviewees recommended holding monthly meetings for teachers and a session for students at the school once a month.

In addition to the aforementioned, one MTU2 teacher said, “the head of each school should be made responsible and clear directions should be issued to them to participate in environmentally friendly practices. Rewards and degradation/ punishment process should be adopted for it”.

Name the practical visits which can be arranged by schools regarding environmental education?

In addition to emphasizing various field trips and visits to nurseries and river gardens, the interviewee teachers FTR2, FTR4, FTR5, FTR6, FTR8, and FTR10 also said that students should be taken to conferences and seminars about environmental education, awareness, and issues, among other things.

Teachers who responded to the FTR1, FTR3, FTR7, and FTR9 surveys stated that schools can plan field trips to various locations or adjacent fields, such as Tarnab Farm and Naran, to observe and talk about the natural beauty, as well as to the Hayatabad industrial area to see the harm being caused by noise, air pollution, and dirty water, among other things.

According to interviewees MTR3, MTR5, MTR7, MTR8, MTR9, and MTR10, students should be taken to seminars, conferences, and speech contests about environmental education, awareness, and issues, among other things. They also highlighted various field trips, visits to museums, zoos, historical sites, forests, nurseries, river gardens, and northern parts of the country. However, MTR1, MTR2, MTR4, and MTR6 stated that their schools have not yet organized any such visits and did not provide the names of the various practical visits.

According to every FTU interviewee (FTU1, FTU2, FTU3, FTU4, FTU5, FTU6, FTU7, FTU8, FTU9, and FTU10), schools can plan hands-on field trips to various green spaces to observe and talk about the beauty of nature as well as to industries to see the harm that our misdeeds are causing.

All of the interviewees (MTU1, MTU2, MTU3, MTU4, MTU5, MTU6, MTU7, MTU8, MTU9, and MTU10) also mentioned that schools can organize scouts' or practical visits to various green spaces, northern areas, parks, agricultural universities, zoos, and forests in order to raise awareness of the environment's general value and to educate students about its various threats and problems.

This section of the conversation explains the qualitative data in general and offers an analysis of the significant role that secondary schools (institutions) play in environmental education. The interview schedule asked questions about environmental education, field trips, and practical visits for secondary schools, as well as the role that secondary schools play in creating a clean and green environment. As explained above, different statements about the role and activities of secondary schools were asked of secondary school teachers from both genders (male and female) and from different geographic locations (rural and urban).

1. School role in making environment clean and green

According to a group of teachers who responded, their school is not doing its share in this area. According to some, their superiors don't support them for it. Others pointed out that one of the biggest challenges to advancing a green environment is a lack of resources. Although some people believe that their school hosts yearly plantations, debates, and other related events to promote a clean and green environment, such statements lead to the conclusion that schools are not making a significant contribution to a prosperous environment.

2. Enhancing school role

According to the majority of interviewees, schools can play a bigger role in creating a clean and greener environment through a variety of initiatives, including expanding plantations, awareness campaigns, contests, debates, exhibitions, field trips, educational activities, drawings and paintings, rewards and penalties, and other eco-friendly practices. Schools and other educational institutions have a vital role to play in encouraging students to live in a clean and green environment (Ardoin et al., 2013).

3. Practical visits

The teachers who participated in the interview highlighted various environmental education-related field trips, conferences, seminars, competitions, etc. that schools can organize. In order to raise awareness about clean and green environments, another group of respondents suggested that schools set up hands-on field trips to green spaces like Naran and Kaghan. In a similar vein, it is important to visit various industrial and polluted areas in order to learn about the negative aspects of the unhealthful and contaminated surroundings. Responsible citizens are more likely to resolve environmental issues and problems (Howe & Desinger, 1988).

RESULTS

1. FTR (Female Teacher Rural)

Most respondents believe schools play a crucial role in maintaining a clean and green environment, despite limited resources. Teachers provide students with knowledge about environmental issues and climate change, and some schools organize plantations, debates, and awareness campaigns. To further enhance their role, schools should implement activities like massive plantations, educational trips, gardening, debates, and awareness campaigns. Teachers also suggest field trips, seminars, and practical visits to nearby fields to observe natural beauty and environmental issues.

2. MTR (Male Teacher Rural)

A survey of teachers revealed that half of their schools are actively involved in promoting environmental cleanliness and greenery. Some schools observe social work and plantation days, while others use plantation, sermons, debates, and awareness campaigns. Some teachers suggest activities like massive plantations, educational trips, community involvement, health hygiene, and A.V aids use. However, only one suggests modifying curricula. Most teachers emphasize field trips, visits to museums, zoos, forests, nurseries, and other locations, and attending seminars and conferences on environmental education.

3. FTU (Female Teacher Urban)

A majority of teachers believe their schools are actively contributing to environmental cleanliness and greenery through plantations, debates, and awareness campaigns. However, some teachers report low participation or satisfaction. To enhance secondary schools' role, they suggest activities like plantations, educational trips, debates, and awareness campaigns. Some suggest refresher courses and environmental education training. Practical visits to green areas and industries can also help promote environmental awareness.

4. MTU (Male Teacher Urban)

Over half of respondents expressed dissatisfaction with their schools' roles in maintaining a clean and green environment. Some teachers suggested activities like plantation, regular classroom cleanliness, awareness campaigns, and activity-based learning to enhance secondary schools' role. Other suggestions included monthly sessions for students and teachers, clear directions for environmental friendly practices, and rewards and punishment processes. Practical visits to green areas, northern areas, parks, agricultural universities, zoos, and forests were also suggested to raise awareness about environmental issues and threats. However, only a single teacher expressed dissatisfaction with their schools' role.

CONCLUSION

The study was carried out to record the current contribution of Pakistani secondary schools in the Peshawar district to maintaining a clean and green environment. It also identified and recommended actions to strengthen the role of schools in this area. The study also discussed hands-on field trips that schools can organize to teach environmental education. To comprehend and record the role of secondary schools in environmental education, an analysis of the data gathered was conducted. In addition to highlighting hands-on learning opportunities and ways to strengthen schools' role in creating a clean and green environment, the study discovered what activities are carried out in schools to raise awareness of environmental issues. According to the study, teachers and students in almost half of the schools lack environmental knowledge and comprehension. The study also looked at how few field trips or visits pertaining to environmental awareness and promotion are ever organized by the majority of institutions (schools). However, it was also noted that there were insufficiently meaningful activities during the teaching and learning process, particularly in lessons pertaining to the teaching environment.

It was found that many teachers believed that their school and other educational institutions were doing their part to promote environmental awareness and education, but the results also revealed that many respondents disagreed or were unsure, indicating that this role still needs to be improved. The government must take decisive action to strengthen secondary schools' contribution to a clean and green environment, according to the study's findings.

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