

# Empowering Students: Role Of Secondary School Teachers In Promoting Environmental Education

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## Abstract

*The study examined how secondary school teachers empower students to promote environmental education. It provided an analysis to document and understand the knowledge and role of secondary school education regarding environmental education. The population comprised all government high school teachers of grades 9 and 10 (both genders) in district Peshawar. The sample comprised 40 schools (20 boys and 20 girls) selected through a stratified random sample; whereas, the selection of schools in rural and urban areas in district Peshawar was made through cluster sampling. The sample selection followed an equal allocation method combined with stratified sampling. In addition, one teacher from each school was randomly selected from sampled teachers for interview, resulting in a total of 40 teachers. Data was collected from 40 teachers through in-depth semi structured interviews and was analyzed through thematic analysis. The results of the study revealed that half of the (rural/urban) teachers themselves were unaware of environmental education. In addition,<sup>1</sup> the respondents indicated that secondary school teachers and students in the study area need to improve their understanding of the aims and importance of environmental education. The study recommends active involvement of secondary school teachers regarding environmental education and its promotion and suggests implementing both in-service and pre-service environmental education programs for secondary school teachers and students.*

**Keywords:** education; environmental education; secondary schools' teachers.

## Introduction

Education is the doorway to achieving goals, and it assumes a noticeable part in the advancement of any country. Similarly, it is education that fills and polishes the human personality, allowing it to reach its full development. It empowers the people to carry on with a superior existence intellectually, truly and profoundly. Education plans to shape and foster human way of behaving to act positive and capably (Hungerford & Volk, 1990).

Education is a strong instrument of social change and educational institutes are places where the fate of a country is prepped and sustained. The meaning of education can't be tried on the grounds that, it is connected to teachers, and Plato said "teachers are great signs of a country's prosperity". Essentially, a positive instructive climate can upgrade an understudy's capability to accomplish more (Adnan et al., 2023).

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According to the National Science Foundation (2001), it's the desire of human beings to explore their environment. Such desire, exploration and human activities totally changed the environment and the world scenario, resulting in many environmental problems. As we know, Humans altered the environment according to their needs without thinking the future problems.

Environmental education is the only solution to all such problems. It does not only give individuals more knowledge but can also change the individual's behavior (Hungerford & Volk, 1990). Environmental education helps us promote environmental awareness among the students, which serves as a tool protection, presentation, conservation and mitigation of environmental degradation. On the other hand, a lack of environmental awareness greatly affects the environment and is regarded as one of the main causes of its degradation. So, to improve, preserve and protect environmental quality at grass root level, we must create environmental awareness among the students as it is the only alternative to save human civilization from a future disastrous situation, which is only possible through environmental education (Parisamvad, 2014). Environmental education is an important part of education phases. Environmental education can leave an impact on students' understanding and behavior, especially in early childhood, states Palmer (1999). Only Knowledge could lead individuals to take constructive actions, as a piece of knowledge can be processed by a learner in several ways. For example, a person can not only remember facts, but can understand facts, analyze facts etc. (Anderson et al., 2001).

Teachers being a role model for the students and as agents of social change can promote the desire for environmental knowledge, awareness and can play a vital role among students by shaping their cognitive, affective and psychomotor domains simultaneously for developing a positive attitude towards environment. According to the new paradigm of education, role of the teacher can also be changed to work in such a way to focus on key elements like learning rather than teaching, critical thinking, care for environment and to solving problems locally as well as globally in the context of global education (NCFSE, 2005).

Teachers are responsible for developing the overall personality of the individuals. Different values, citizenship, environmental awareness, moral character, patriotism, etc. are all expected to be taught by the teacher, to make the children responsible members of the society and to gain the national goals of education. This is because that teacher not only ensures students learning and support but also possesses great strength and influence in shaping the next generation (Okumbe, 2001).

### **Theoretical Framework**

One sort of structure that aids, supports, and holds a research study is the theoretical framework. Bloom's Taxonomy serves as the foundation for this study's theoretical framework, which supports the research efforts. Similarly, in his taxonomy, famously known as Bloom's taxonomy, Bloom (1956) described the educational goals in three distinct domains, namely the cognitive, affective, and psychomotor domains. Since environmental education also deals with cognitive domain that is, knowledge and information about the environment and environmental problems, and its application regarding solutions, whereas, the emotional attachment to the environment comes under affective domain and the different activities like cleanliness, plantation and physical involvement is related to psychomotor domain. The research study only used the first three levels of Bloom's cognitive domain because these levels are normally practice in secondary school teaching learning processes.

### **Research Question**

How do secondary school teachers effectively promote environmental education among students?

### **Method and Procedure**

Data for the qualitative study was gathered through in-depth interviews. 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 population as a group that a researcher oversees and from which the findings of a study can be generalized. All of the district Peshawar's government high schools, both male and female, make up the study's population. EMIS (2017-18) reports that there are 141 high schools in the Peshawar district. Of these, 77 are for boys (46 are in rural areas and 31 are in urban areas), and 64 are for girls (36 are in rural areas and 28 are in urban areas). The study's population consists of all secondary school teachers working with students (grades 9 & 10) in Peshawar district.

### **Sample of the Study**

Gay and Airasian (2000) define sampling as the process of choosing a number of participants for a study in a way that best represents the larger group of the population from which they are drawn. The study's sample consisted of 40 schools in the Peshawar district. Based on an equal distribution, 20 of the 40 schools were high schools for boys and 20 for girls. The subjects taught in classes nine and ten were taken into consideration when choosing the teachers. In addition to obtaining their consent, one teacher from each school was chosen at random from the sampled teachers i.e. (a total of 40 teachers for an interview).

### **Data Collection and Analysis**

Interviews were used as research instruments for data gathering in this qualitative study. A semi-structured interview was used in the research study for sampled teachers. For the purpose of noting the impressions and opinions of the forty secondary school teachers, the researcher conducted semi-structured interviews with them in order to gather information. These teachers were chosen at random to be the sample. The data analysis includes environment, environmental education, environmental awareness and its importance as well as secondary school teachers' perceptions and understanding regarding them. The paradigms used in the research study's data collecting were qualitative in nature. Primary data came from teachers in schools, while secondary data came from the internet, libraries, newspapers, and other sources. The researcher took notes throughout the interview, recorded the outcomes, and conducted a thematic analysis in order to analyze qualitative data. Instead of conducting interviews, the researcher's role should be that of a facilitator or moderator (Bailey, 1978; Punch, 2000).

Teacher's interview statements and their responses are listed below under the headings of FTR (Female teacher rural), MTR (Male teacher rural), FTU (Female teacher urban), and MTU (Male teacher urban).

### **Rapport Development**

Prior to leading research study, it is critical to foster a compatibility with the respondents. The researcher met those respondents who were associated with the research cycle before the conduction of the meetings. Such gatherings were made with the earlier consent of the Elementary and Secondary Education Department, Peshawar, Khyber Pakhtunkhwa, and of the concerned principals/headmistress. Besides, nature of research study, its significance and need, time length, other moment and related subtleties were discussed successfully with the

respondents (teachers) and a general comprehension was created with respondents. A cordial climate was made with the respondents as it is viewed as one of the significant substance in the research for the reason to get reliable and valid data. At the outset, the respondents were delaying and a piece timid however with the progression of time they got certainty and involved themselves with incredible interest and enthusiasm.

### **Ethical Consideration**

Moral thought is of most extreme significance while leading meetings with human members. Regarding the privileges, prosperity and security of interviewees is fundamental for keeping up with honesty and trust in research. Informed assent is an essential standard, which was held together, guaranteeing members are completely mindful of the review's motivation, techniques, and any potential dangers implied. Obscurity and secrecy of members' personalities was guaranteed during the analysis of the data. Researcher tried not to hurt any professional or social contrasts during the process. Straightforwardness in the whole research process was guaranteed.

### **Findings and Discussion**

This section provides a thorough examination of the research question, outlining the environment, environmental awareness and education, and the role secondary school teachers have, in encouraging environmental education in their students.

#### **What is the importance of environmental education for the students?**

In response, FTR2, FTR5, FTR7, and FTR8 said that it will encourage students to take care of their environment and personal hygiene while FTR1 and FTR9 stated that students will become accountable for ensuring the environment thrives in all ways as a result of the significance of environmental education and awareness. Comparably, FTR4 and FTR6 stated that in order for students to adopt environmental ethics for their own personal hygiene, environmental education is crucial. However, according to FTR3 and FTR10, environmental education is crucial for students because they are still in the learning phase and should be familiar with the fundamentals of the environment and issues related to it.

As students are the country's future, MTR1, MTR2, MTR6, MTR8, and MTR10 responded that environmental education is crucial for them. With students understanding of environmental education, we will have a clean, orderly and safe environment/society, which is vital for all living things. MTR4, MTR7, and MTR9 responded that it also aids in raising students' awareness of various environmental concerns, hazards, and problems. However, MTR3 and MTR5 claimed that environmental education helps people to work toward a clean and green environment while also developing their behavior, physical, and mental health. They become accountable for lowering pollution and environmental risks as a result of this education.

The importance of environmental education was addressed by FTU3, FTU4, FTU5, FTU6, FTU7, and FTU8. They stated that this kind of education will help students learn about their surroundings and will hold them accountable for creating and maintaining a clean, green and tidy environment. They went on to say that learning about the environment will also help students recognize and address various environmental issues. As significant members of society, FTU1, FTU2, FTU9, and FTU10 all mentioned how vital environmental education is to students. They did not go into great detail about the significance of environmental education.

In response, MTU2, MTU3, MTU4, MTU7, and MTU10 stressed the value of environmental education by pointing out that students are the country's future and that this kind of instruction will raise students' awareness of environmental issues. They will become more knowledgeable

about the environment and environmental education, and their academic performance will also improve.

Environmental education, according to a different group of MTU1, MTU5, and MTU8, will give students the chance to apply, recognize and resolve a variety of environmental issues while also fostering a better and cleaner environment. While MTU6 and MTU9 stated that since environment and heredity are mixed together to make up the human condition, one must be aware of the environment and environmental education.

### **What is the degree of understanding of secondary school students about the term environment and environmental education?**

A group of FTR2, FTR6, FTR7, and FTR9 responded that secondary school students' comprehension of the term "environment and environmental education" is somewhat satisfactory. In a similar vein, FTR5 and FTR8 stated that although they understood these terms well, they still needed more knowledge. According to FTR1 and FTR4, their students have a rudimentary understanding of these terms, but the secondary school curricula are useful in increasing their awareness of them. However, FTR3 and FTR10 thought that these terms could be taken into consideration initially in order to advance their comprehension of the environment and environmental education.

A group of MTR1, MTR2, MTR3, and MTR4 responded that secondary school students have a good or satisfactory understanding of the term "environment and environmental education," and that meaningful environmental education can help them further develop their understanding. MTR5, MTR6, and MTR9 reported that the lack of environmental education and related topics in secondary school curricula has left their students with only a cursory understanding of these terms.

MTR7, MTR8, and MTR10, on the other hand, believed that there is still room for improvement in secondary school students' knowledge of the environment and environmental education.

A group of responding teachers, comprising FTU3, FTU4, FTU9, and FTU10, responded that secondary school students' comprehension of the term "environment and environmental education" is moderately fair. In a similar vein, FTU5 and FTU7 stated that although they comprehend these terms well, they still need more awareness in order to use them. Female urban teachers FTU2 and FTU6 just mentioned how crucial environmental education is for pupils. Whereas, FTU1 and FTU8 believed that secondary school pupils had a poor comprehension of the environment and environmental education.

A group of responding teachers, comprising MTU1, MTU2, MTU3, MTU5, MTU9, and MTU10, responded that secondary school students' comprehension of the term "environment and environmental education" is inadequate, indicating that they are not familiar with it in its true sense. In a similar vein, MTU6, MTU4, and MTU7 stated that although they understood these terms well, they still needed more awareness in order to use them.

"Students of secondary schools have high level of understanding about the basics of environment and environmental education but still textbooks required to be enriched in these terms," said a lone male urban teacher, MTU8.

### **Why environmental education is important for you as a teacher?**

According to FTR1, FTR2, FTR4, FTR7, FTR8, and FTR10, environmental education is crucial for us as teachers because it will not only raise awareness among us but also allow us to better serve individuals, our students and society as a whole. However, FTR5 and FTR6 retorted that since educators are the nation's architects, it is critical that they stay knowledgeable

and current on environmental education. In a similar vein, FTR3 and FTR9 responded that teachers serve as role models for their students and that the latter adhere to and act upon what their instructors teach.

One significant group of the total male rural teachers, MTR1, MTR2, MTR3, MTR5, MTR6, MTR7, MTR8, and MTR9, responded that since teachers are thought of as nation builders, environmental education is very important to us. If a teacher is knowledgeable about environmental education, he can easily transfer his knowledge to the students, which can lead to a prosperous society or world. To put it another way, it is crucial for teachers to remember that they have an impact on both the general public and a large circle of students. When compared to other people, our voice is heard and reaches farther. MTR4 and MTR10, on the other hand, responded that it is crucial for educators since it will not only assist them in realizing their objectives of a better environment but also in lessening the negative consequences of pollution and resolving issues brought on by environmental deterioration.

A significant portion of the total number of female urban teachers, which included FTU1, FTU2, FTU3, FTU5, FTU6, FTU7, FTU8, and FTU9, responded that environmental education is crucial for us as educators because it will allow us to mentor and instruct our students in environmental and related subjects. In a similar vein, FTU4 and FTU10 responded that we can encourage healthy habits through environmental education.

A sizable contingent of the total number of male urban teachers, MTU4, MTU5, MTU6, MTU7, MTU8, MTU9, and MTU10, responded that environmental education is crucial for us as educators because it will allow us to mentor and instruct our students in environmental and related subjects. They went on to say that educators shape future generations and, to the extent that they are able, they will mentor society's youth and contribute to the development of safe environments.

While MTU3 and MTU4 responded that since we are also a part of this environment and society, and because it is our responsibility to maintain a clean and green society, environmental education is important for us.

Furthermore, one of these two, MTU4 teacher stated,

"being a teacher is important and cannot be denied because the current educational institutions are not imparting the required amount of knowledge about it."

### **What do you think of your understanding about the aims of environmental education and awareness?**

Based on their education in environmental-related subjects, the majority of female rural teachers, FTR1, FTR2, FTR4, FTR6, FTR7, and FTR8, indicated that they understood the goals of environmental education and awareness. While FTR5 and FTR10 expressed satisfaction with the statement they made regarding secondary school students and the necessity and significance of environmental education for them, stating that through it they can learn and maintain a clean environment for themselves and their surroundings. They disagreed, nevertheless, on what they understood to be the objectives of environmental awareness and education. In a similar vein, FTR3 and FTR9 responded that because new studies and developments are being conducted in the field, their knowledge of the objectives of environmental education and awareness is inadequate or out of date.

In response, a sizable group of male rural teachers from MTR2, MTR5, MTR6, MTR7, MTR9, and MTR10 gave their understanding of the objectives of environmental education and

awareness, defining it as raising awareness of the environment, environmental problems and issues, pollution and its dangers, and environmental protection in general. MTR3 and MTR8 responded that the goals of environmental education and awareness are to make our world safer and more worth living in, as well as to improve the environment and the living conditions of the majority of people. However, MTR1 and MTR4, two male rural educators, did not agree on what environmental education and awareness are meant to accomplish.

An extensive group of female urban teachers from FTU1, FTU2, FTU3, FTU4, FTU5, FTU6, FTU9, and FTU10 responded that they understood the goals of environmental education and awareness either well enough or sufficiently, but they did not elaborate on these goals. Although they did not address it, respondents FTU7 and FTU8 indicated in their responses that they were only vaguely aware of the objectives of environmental education and awareness. In a similar vein, respondents MTU4, MTU5, MTU6, MTU7, MTU8, MTU9, and MTU10 indicated that they understood the goals of environmental education and awareness well enough, but they did not elaborate on this understanding. As members of society, we must be aware of the various facets of the environment and endeavor to promote social awareness and education about it, MTU1, MTU2, and MTU3 responded, stating that they are aware of the goals of environmental education and awareness.

The following paragraphs and discussion provide a reflection on “empowering students: role of secondary school teachers in promoting environmental education”. The interview schedule asked questions about the environment, environmental education and environmental awareness of secondary school teachers in both rural and urban areas, regardless of gender. In a similar vein, their responses and assertions are also thoroughly explained during analysis and findings under the headings of FTR (Female teacher rural), MTR (Male teacher rural), FTU (Female teacher urban), and MTU (Male teacher urban).

#### 1. Importance of environmental education

Speaking about the value of environmental education for students, every interviewee said that future generations will need to know this information in order to work toward a clean, green, prosperous, and healthy earth and/or world. According to teachers' responses, the study area of the Peshawar district has a significant need for environmental education.

#### 2. Students' level of understanding

In a similar vein, most interviewees believed that more education is still necessary to adequately inform secondary school students about the contemporary demands made on the environment and its related fields, in addition to environmental education.

#### 3. Importance of environmental education for teacher

Since almost all of the respondents were educators, they all agreed that environmental education is very important to us. We can affect a large number of people through it, and each one of them will have an impact on the environment in their own unique way. Understanding raises consciousness and inspires responsible behavior (Korhonen & Lappalainen, 2004).

#### 4. Understanding about the aims of environmental education

The teachers who participated in the survey, whose comprehension of the objectives of environmental education and awareness varied, did not adequately wrap up their statements about these objectives. According to the results, it is necessary for most of them to become aware of it and stay informed.

The findings are related to teachers' interview schedule and their outcomes.

1. FTR (Female Teacher Rural)

The majority of female rural teachers believe that environmental education is crucial for students to take care of their hygiene and surroundings. They believe that environmental education helps students adopt environmental ethics and understand the basics of environmental issues. Most teachers believe that environmental education is important for teachers to create awareness and serve society. However, some respondents feel their understanding of environmental education is not up to date, as new research and advancements continue to impact the field.

2. MTR (Male Teacher Rural)

Male rural teachers believe that environmental education develops human behavior, health, and mental health, enabling them to work towards a clean and green environment. They believe that secondary school students' understanding of environmental education is good but needs improvement. Most teachers believe that environmental education is crucial for teachers to achieve their goals of a better environment, reduce pollution, and solve problems caused by degradation. The aims of environmental education are to improve living conditions and make the world safer, while some teachers lack understanding.

3. FTU (Female Teacher Urban)

The majority of female urban teachers believe environmental education helps students identify and solve environmental problems. They have moderately fair understanding of secondary school students about environmental education, while some have low understanding. Environmental education is important for teachers to guide students and promote healthy habits. While they have good understanding of environmental education's aims, they do not share their understanding.

4. MTU (Male Teacher Urban)

Half of male urban teachers believe environmental education is crucial for students to become future leaders and raise environmental awareness. They believe it creates opportunities for students to identify, solve, and promote a clean environment. However, over half of these teachers believe secondary school students' understanding of environmental education is not good enough. Most teachers believe environmental education is important for guiding students and creating a safe environment. While most teachers have a good understanding of environmental education's aims, they do not share their understanding.

## **Conclusions**

The study conducted in district Peshawar, Pakistan and the data was collected and analyzed, for the purpose to understand and document secondary school teachers understanding and role in promoting environmental education, found that near half of the teachers have lack of knowledge and understanding of environment and environmental education etc. Similarly, according to the respondent teachers their secondary school students have enough knowledge and understanding about environment and environmental education etc. In the present environmental situation, environmental education possesses a great importance. The desired objectives can only be accomplished by giving environmental education a key role in our education system. School children, especially secondary school students required to become aware of the nature, plants and animals, natural resources etc. for the purpose to take deep care of the nature/planet. In short, for a good environmental care attitude and behavior among students, teachers can play a vital role. Teachers are the key stake holders, who can shape the minds of their students, and implement and promote the environmental education and awareness at all stages of the learning. We all must assume responsibility in this regard.



## Recommendations

1. For effective promotion of environmental education, teachers need to encourage their students and try to connect them with nature through paying visits to countryside, lakesides, mountains and recreational centers, and to get real outcomes, seminars and debates on different environmental issues may also be arranged by the teachers to tackle the challenges. To consider the limit waste generation, teachers need to develop a better understanding as well as benefits of recycling among students.
2. To limit waste generation, teachers need to develop a better understanding of recycling and its benefits among students. Moreover, to promote the care of the natural environment of both humans and wildlife, secondary school teachers may organize events in natural areas such as forests and beaches.

## References

1. Adnan, M., Ali, N., & Khan, R. (2023). A Correlational Study Of The Principals Instructional Leadership And School Improvement At Secondary School Level In District Mardan. *Global Educational Studies Review*, VIII (Ii), 159-166.
2. Anderson, L.W. (Ed.), Krathwohl, D.R. (Ed.), Airasian, P.W., Cruikshank, K.A., Mayer, R.E., Pintrich, P.R., Raths, J., & Wittrock, M.C. (2001). *A Taxonomy For Learning, Teaching, And Assessing: A Revision Of Bloom's Taxonomy Of Educational Objectives (Complete Edition)*. New York.
3. Bailey, K. (1978). *Methods Of Social Research*, Collier-Macmillan, London.
4. Bloom, B.S. (1956). *Taxonomy Of Educational Objective: The Cognitive Domain*. New York: Long Mans, Green &Co.
5. Bloom, B.S., (1956). *Taxonomy Of Educational Objectives, Handbook 1: The Cognitive Domain*. David Mckay Co Inc.
6. Emis. (2017-18). *Statistics Of Schools. Elementary & Secondary Education Department: Peshawar*. Retrieved On December 5, 2019 From [Www.Kpse.Gov.Pk](http://www.kpse.gov.pk).
7. Gay, L. R. (1990). *Educational Research: Competencies For Analysis And Application (3rd Ed.)*. Maxwell Macmillan.
8. Gay, L. R., & Airasian, P. (2000). *Educational Research: Competencies For Analysis And Application (6th Ed.)*. Pearson Education.
9. Hungerford, H. R., & Volk, T. L. (1990). Changing Learner Behavior Through Environmental Education. *Journal Of Environmental Education*, 21(3), 8-21.
10. Korhonen, K., & Lappalainen, A. (2004). Examining The Environmental Awareness Of Children And Adolescents In The Ranomafana Region, Madagascar. *Environmental Education Research*, 10(2), 195-216.
11. National Science Foundation (Nsf). (2001). *Inquiry: Thoughts, Views, And Strategies For The K-5 Classroom Foundations. A Monograph For Professional In Science, Mathematics, And Technology Education. Vol 2*. Washington D.C.: Author. Retrieved From [Www.Nsf.Gov/Pubs/2000/Nsf99148/Htmstart.Htm](http://www.nsf.gov/pubs/2000/nsf99148/htmstart.htm)
12. Ncfse. (2005). *The National Curriculum Framework For School Education*. Ncert.
13. Okumbe, J.A. (2001). *Human Resources Management. An Educational Perspective*. Educational Development And Research Bureau.
14. Palmer, J. A., (1999). Research Matters: A Call For The Application Of Empirical Evidence To The Task Of Improving The Quality And Impact Of Environmental Education, *Cambridge J. Of Education*, 29(3), 379-396.
15. Parisamvad, S. (2014). Environmental Awareness Through Education. *International Journal Of Education*, 4(2), 9-13.
16. Punch, K. F. (2000). *Introduction To Social Research. Quantitative And Qualitative Approaches*, London/Thousand Oaks/, Sage.