

Received: 10 January 2024, Accepted: 15 February 2024

DOI: <https://doi.org/10.33282/rr.vx9il.104>

ANALYSIS OF KHYBER PAKHTUNKHWA SECONDARY SCHOOL CURRICULA IN SHAPING STUDENTS' BEHAVIOR REGARDING ENVIRONMENTAL EDUCATION

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ABSTRACT

This study highlights the significance of students' behavioural development in environmental education, using Bloom's cognitive domain as its theoretical foundation. It provides an analysis to comprehend, document, and investigate the activities of secondary school teachers and students in relation to environmental education. Furthermore, it emphasizes the role of the Khyber Pakhtunkhwa Textbook Board curricula at the secondary level in promoting students' action-oriented behaviours regarding environmental education. The population comprised all government high school teachers of grades 9 and 10 (both genders) in district Peshawar. The sample included 40 schools (20 boys and 20 girls) selected through stratified random sampling, while the selection of schools in rural and urban areas in district Peshawar was conducted through cluster sampling. One teacher from each school was randomly chosen from the sampled teachers for an interview, making a total of 40 teachers. The data were collected through in-depth semi-structured interviews, which were further analyzed using thematic analysis. The results revealed that half of the teachers lacked knowledge and understanding of the environment and environmental education. Additionally, the respondents believed that textbooks published by the Khyber Pakhtunkhwa Textbook Board did not adequately promote environmental education, leading to a lack of related activities in schools. Consequently, teachers did not encourage practical activities related to environmental education and awareness. The study recommends including environmental education as book chapters and incorporating its concept into exercises

and associated activities. It is further recommended to include credits in the detailed marks certificate for students' practical activities related to environmental education, which ultimately helps in achieving green and clean Pakistan.

Key words: Awareness; education; environmental education; secondary schools.

INTRODUCTION

Education is one of the important indicator of development in any region. It is the most important investment for future development, key for human development, and the basic rate of every individual. However, this basic rare also suffer from different natural and man-made disasters like environmental degradation, flood etc. Henceforth, such calamities have high effects on economic, social and physical setup (Lehner et al., 2006).

The term environment simply means “our surrounding”. The word environment is taken from French word “Environ”, which also means “surroundings”. Being a part of the environment, we human beings live in the environment and uses its different resources like water, air, soil etc. for the purpose to meet our needs. But such interaction and excess use of environmental resources creates pressure on the environment resulting in shape of environmental degradation. To avoid such problems and to protect environment we need/ required awareness in this regard to use the natural resources in its limits (EPA, 2014).

Environmental education describes the natural environment, problems faced by the natural environment as well as aims to balance the environment through knowledge and developing attitude and skills necessary for its protection. It helps the community to maintain their lives in such a way where men not only use the environmental resources in a better way but also control environmental problems and problems of population explosion etc. Simply environmental education constructs and promotes a vast details and awareness of environmental problems (Parisamvad, 2014).

Efforts are needed to foster community attitudes and behavior, especially school students. Environmental attitudes and behaviors can be developed if driven by feelings that are already

related to the environment. Good coaching is guidance given since early beginning, has sustainability and is the key to success in shaping attitudes and behavior towards the environment. When attitudes and behaviors of care for the environment based on knowledge have been fostered, awareness will be formed in maintaining an environment sustainably (Mullen Bach & Green, 2018).

Parents can enable their children to have positive attitudes and behaviors on environment, by being a role model until their adulthood periods. If not, there may occur disruptive behaviors as to environmental issues. Only gaining cognitive skills does not necessarily mean that individuals will be sensitive to environmental issues. Rather, they must be encouraged and practical steps may be initiated in order to internalize environmental issues. In this regard, he noted that the focus of environmental education programs must be to change environmental behavior through increasing environmental knowledge (Green et al., 2016).

Environmental Education in Global Context

The world realized that the economic development that science and technology has brought lead to harm the environment. Such a development is making the non-stoppable use of the natural environment and resources. The natural resources of the planet have been depleted with great speed without regenerating and enhancing the capacity of planet in this regard due to the use of latest technologies. The use of new technologies has alarming effects like atmospheric pollution, desertification, global warming, loss of biodiversity etc. In short, such situation is threatening the future generations and life of the planet (Berto, 2005).

In Sweden in 1972, a United Nations Conference was held on the Human Environment to tackle the situation. In this conference the body recognized the need to educate and mobilize the public opinion, shaping their attitude and behavior through awareness and education. The UN specially the United Nations Educational, Scientific and Cultural Organization (UNESCO) and other international agencies took different steps and focused on all levels of education/schooling as well as educating the general public whether they are rural or urban, youth or aged through environmental education and awareness to manage and control their environment. To promote

international cooperation and research work on environmental education, in 1975 both UNESCO and the newly established United Nations Environment Program (UNEP) launched the International Environmental Education Program (IEEP) to coordinate and work for the international cooperation, research and training, exchange of information and development of materials about environmental education (World Bank, 2006). Similarly, in September 1977 in Tbilisi, USSR, the IEEP organized the intergovernmental conference on environmental education as well as in August 1987 in Moscow, the International Environmental Education Program (IEEP) also organized International Congress on environmental education and training for the purpose to view the implementations of different recommendations and point the future activities.

Beside the above, these as well as many other organizations are playing a vital role throughout the world in making the planet/world clean and green. Every year on June 5, the world celebrates the World Environment Day for the purpose to encourage the worldwide awareness and actions to protect our natural environment.

Environmental Education in National Context

Our country Pakistan, which has great natural and mineral resources, cultural diversity, manpower, green lands, high mountains etc. are the key factors responsible for its development but on the other hand, the population explosion, deforestation, illiteracy, unawareness, growing violence and extremism is influencing all the institutions of the country. As environmental degradation is a major world issue, but there is also a great dire and need to promote and develop environmental awareness in our country Pakistan. Lack of environmental awareness and education results in different problems i.e. environmental degradation, poverty, other social problems etc. Environmental education is the only solution to such problems and will have an effect on the sustainable development in Pakistan. Environmental degradation is considered as a major cause of the growing poverty in Pakistan. Majority of the country's population (especially of rural areas) fulfils their needs from the different natural resources such as water, land, forests, livestock, fisheries and minerals. Similarly, the use of such natural resources resulting different environmental issues like deforestation, water and air pollution, loss of biodiversity etc. which all

have adverse impacts on the livelihoods. Such adverse impacts can also be seen in the increase number of diseases affecting the health of poor (Malik, 2004).

According to an estimate/report presented by World Bank, lack of environmental education and awareness as well as environmental degradation costs Pakistan at least 6 percent of GDP. This amount is about a total of Rs. 365 billion which is equal to US \$6.05 billion per annum, and all these costs affects poor (World Bank, 2006).

The beginning of environmental education and awareness in Pakistan took place in early 1990s. Keeping in view the need and importance of environmental education, the government developed a strategy known as “The National Conservation Strategy” in 1992, where different educational programs were initiated in different universities for the purpose to develop environmental education and awareness among the future generations. Beside, different educational programs were offered for undergraduate, post-graduate and doctoral levels in environmental science, engineering and education to develop the environmental education in Pakistan as well as formulation of “National Environmental Policy” in 2005 were took place (GoP, 2005).

Theoretical Framework

Theoretical framework is a type of structure, which helps, support and hold a research study. The theoretical framework of this study is laid on Bloom’s Taxonomy, which not only describes and explains the research problem but also provides a support to the research work. Deal and Hedge (2013) research work is on Seinfeld and Economics for the purpose to achieve different high levels through Bloom’s Taxonomy and Revised Bloom’s Taxonomy. Valcke et al. (2009) conducted study of Active Cognitive Processing in collaborative groups. The study was quasi-experimental study using Bloom’s Taxonomy. Razzouk (2011) used Bloom’s Taxonomy of Learning Objectives in the field of Business with special attention/ focus on ‘analyses. Hamad (2007) also conducted his research work on Laptops, its impacts on students as well as on their learning using Bloom’s Taxonomy. John and Hansen (2005) also worked on Technology Based Education and the Cognitive Styles. As the Cognitive Styles have great linkage with

achievements. Robert et al., (2005) conducted his study on the different challenges involved in a degree receiving process for the purpose to assess the Learning Objectives throughout the degree completion program using Bloom's Taxonomy. Aviles (2000) used Bloom's Taxonomy of Educational Objectives during his study on Teaching and Testing for critical thinking.

Similarly, Bloom (1956) described the educational goals in three different domains i.e. the cognitive, the affective and the psychomotor domains in his taxonomy famously known as Bloom's taxonomy. Environmental education also deals with these domains like knowledge and information about the environmental problems related to cognitive aspect, whereas the work of different individuals to leave a positive impact and of those who have emotionally attachments to environment comes under the affective domain while the different activities like cleanliness, plantation, increase in forests, recycling and waste management etc. seeks physical involvement which is related to psychomotor domain. Bloom's hierarchy of cognitive domain/ learning has six levels: recall (knowledge), comprehend, apply, analyze, synthesize, and evaluate. An overall model can be illustrated and shown as in Figure-A.

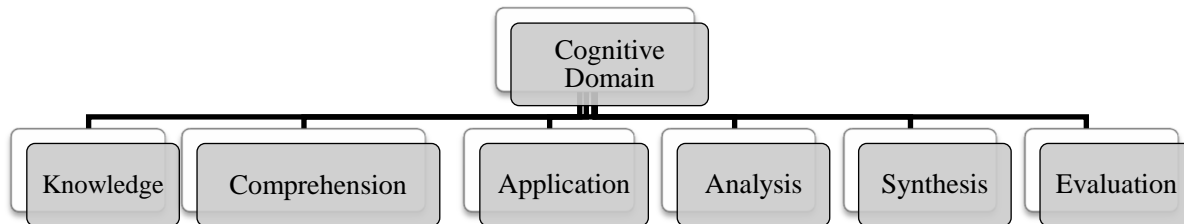


Figure A: Bloom's Cognitive Domain Levels

The study in hand just employed the first three levels of Bloom's cognitive domain to achieve the desire objectives as these three levels are commonly employed at secondary school curriculum and assessment, and its applications are widely termed in such studies.

RESEARCH QUESTION

How student's behaviors are modified regarding environmental education at secondary level in Khyber Pakhtunkhwa?

METHOD AND PROCEDURE

The study is qualitative in nature, and data was collected through in-depth interviews. The instrument was designed keeping in view the first three levels of cognitive domain of Bloom's taxonomy and the research question.

Population of the Study

According to Gay (1990) a population means a group, which a researcher manages, result of a study to be generalized. Environmental education and awareness badly need in all the government schools of Khyber Pakhtunkhwa. However, the population of the study comprise all the government high schools (both male and female) of district Peshawar. According to EMIS (2017-18), the total number of high schools in district Peshawar is 141, in which the number of boys schools are 77 (46 rural and 31 urban), whereas girls' schools are 64 (36 rural and urban 28). All teachers of grades 9 and 10 in government high schools of district Peshawar comprise the population of this study.

Sample of the Study

According to Gay and Airasian (2000), a process through which a number of individuals are selected for a study in such a manner which represents the larger group of the population from which they are selected. Sample of the study comprised a total of 40 schools in district Peshawar. Out of the total 40 schools, 20 were boys and 20 were girls' high schools based on equal allocation. From boy's high schools, 10 were from rural and 10 were from urban areas in district Peshawar. In addition, from girls' high schools, 10 were from rural and 10 were from urban areas in district Peshawar. The selection of rural and urban areas was made through cluster sampling; whereas, the selection of boys and girls schools were made through stratified sampling. The selection of teachers was made on the basis of all the subjects taught to classes 9 and 10. One teacher from each school was randomly selected, besides their consents, from the sampled teachers for interview, which makes a total of 40 teachers.

Data Collection, Instruments and Treatment of Data

The research study was a qualitative research in which research tools for data collection was interview. The research study employed a semi structured interview for sampled teachers.

Data Analysis

The researcher in the research administered and collected information through a semi structured interview from (40) teachers to note their perceptions and opinions and such semi structured interview was employed for the randomly selected sample teachers. Analysis techniques help us in organizing and verifying the data. Through data analysis we not only reduced and describe large volumes of data but also produce meaningful and useful information for discussion and interpretation. The data analysis includes environment and environmental education, environmental awareness and protection, secondary schools' curricula, secondary school roles/ activities as well as secondary school teachers' perceptions about them. In the research study, the paradigms used for the data collection was qualitative. The sources of primary data were schools (teachers) and that of secondary data were libraries, internet and newspapers etc. Qualitative data or data collected through interview were explained under theme and sub themes and coding were given to the data after transcribing. For qualitative data analysis, the results from the interview were documented and notes were taken by the researcher, and the thematic analysis was used for the analysis of qualitative data in this study. As interviewer, the researcher role should be as a facilitator or moderator rather than an interviewer (Bailey,1978; Punch, 2000).

Rapport Development

Before conducting the research study, it is of great importance to develop a rapport with the respondents. The researcher met those teachers who were involved in the research process before the conduction of the interviews. Such meetings were made with the prior permission of the Elementary and Secondary Education Department, Peshawar Khyber Pakhtunkhwa, and of the concerned principals/headmistress. Furthermore, nature of the overall research study, its importance and need, time duration, and other minute and related details were communicated effectively with the respondents (teachers) and an overall understanding was developed with teachers. A friendly environment was created with the respondents as it is considered one of the

important entity in the research for the purpose to obtain reliable and valid data. In the beginning, the respondents were hesitating and a bit shy but with the passage of time they got confidence and involved themselves with great interest and passion.

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.

RESULTS AND DISCUSSION

Sub theme: Secondary Schools Curricula

This part highlights a detailed analysis of the sub theme secondary schools' curricula. Similarly, the sub theme under discussion provides answers to the subsidiary question of the study. The respondent teachers were asked questions of general awareness about the sub theme while the focus were kept on the Bloom's taxonomy specially on the first three levels of its cognitive domain.

Teacher's interview statements and their responses (teachers' perceptions) about the sub theme are listed below.

What is the role of textbooks in promoting environmental education?

Majority of respondent teachers FTR2, FTR3, FTR4, FTR5, FTR6, FTR7, FTR9 and FTR10 agreed and stated that textbooks are a great source of education and knowledge. They also added that textbooks are the most important tool/ source of understanding, creating awareness and environmental education among students. While FTR1 and FTR8 replied, indicating that textbooks at secondary level are just highlighting the theoretical aspects and not the practical

aspects of environmental education. MTR2, MTR3, MTR6, MTR7 and MTR9 stated that textbooks are playing an important role in understanding, creating awareness and environmental education among students. While MTR4, MTR5, MTR8 and MTR10 replied that textbooks at secondary level has a key role in promoting environmental education but they didn't mention the role.

Yet a single male rural teacher MTR1 described that, *"the secondary school curricula/ textbooks is promoting the environmental education up to a fair extent but still it needs to be modified"*.

Majority of the respondents FTU1, FTU2, FTU3, FTU5, FTU6 and FTU7 just stated that textbooks are playing a great role in promoting environmental education but they didn't describe it that how? While FTU4, FTU8, FTU9 and FTU10 replied that textbooks at secondary level providing a lot of information about environmental education but students just cram these details and are not aware of the practical aspects of environmental education. Similarly, majority of respondent male urban teachers MTU1, MTU3, MTU4, MTU5, MTU6, MTU7, MTU8, MTU9 and MTU10 stated that textbooks are playing a great role in promoting environmental education and awareness among secondary school students as textbooks are the main source and approach for students during their learning process. Beside the above, a single teacher MTU2 replied that, *"textbooks at secondary level are not fulfilling the criterion as well as not providing a lot of information about environmental education, so additional material should be included for promoting environmental education"*.

How textbooks can be enriched with the content of environmental education and in which subjects?

The respondents FTR2, FTR3, FTR4 and FTR8 answered that textbooks can be enriched in such a way that, special curricula should be designed for environmental education, similarly by putting in more original pictures and new topics in the textbooks along with the basic knowledge about environment. While the respondents FTR1 and FTR6 described that the subjects of biology and chemistry are playing key role and enriched with the content of environmental education but practical activities/ visits in this regard should be mandatory. Similarly, FTR7 and FTR9 responded that textbooks can be enriched by adding lessons/ activities in subjects like science, chemistry and social studies. Yet some respondents FTR5 and FTR10 revealed that textbooks can be enriched if we include topics especially from Islamic point of view about environmental

education. MTR1, MTR2, MTR8 and MTR10 answered that textbooks can be enriched by incorporating additional topics/ chapter in them on environmental education. More activity based contents should be introduced. It can be included in all subjects especially in science subjects' i.e. Biology, chemistry etc. While MTR3, MTR4 and MTR5 stated that we need to introduce environmental education at all levels at school and enrich the textbooks by adding pictures, sceneries and activities as well.

A single male respondent teacher MTR9 described that, *"we need to include a book of general knowledge comprising of environmental education full of audio visual aids/ activities"*.

Similarly, another interviewee teacher MTR7 stated that, *"textbooks can be enriched by adding a separate book on environmental education"*. Yet another respondent MTR6 revealed that, *"textbooks don't need any modification regarding environmental education"*.

FTU1, FTU2, FTU5, FTU6, FTU7 and FTU9 answered that textbooks can be enriched by the inclusion of environmental topics/ useful contents with attractive pictures in a vast quantity about environmental education especially in the subjects of science, general science and social sciences. While interviewee FTU3, FTU4, FTU8 and FTU10 just stated that we need to enrich our textbooks in subjects like science, arts and social studies.

Majority of the respondents MTU1, MTU2, MTU3, MTU4, MTU5 MTU7, MTU8 and MTU9 answered that textbooks can be enriched by adding environmental and daily life problems, major issues related to environment, useful contents with new discoveries about environmental education especially in the subjects of science (bio/chem), general science, geography and social sciences. They further added that practical activities should be the compulsory part of the syllabus.

Similarly, a male urban teacher MTU6 responded that, *"there should be at least a unit or chapter about environmental education almost in all subjects"*. Yet another male interviewee MTU10 stated that, *"we need to enrich the subjects of Islamic studies because religious teachings have great effect and impact on the society"*.

How you see textbooks towards promoting activities about environmental education?

Respondents FTR2, FTR3, FTR5, FTR7, FTR8 and FTR10 admitted that textbooks are playing a positive role in promoting environmental education as they are all of great value at secondary level. Similarly, FTR6 and FTR9 replied that although textbooks play a vital role in promoting

environmental education but on the other hand it's the students which are unable to pick it. Yet respondents FTR1 and FTR4 stated that the existing textbooks at secondary level are not up to the mark.

MTR1, MTR2, MTR6, MTR7 and MTR9 admitted that textbooks are playing a positive role in promoting environmental education as they are all of great value at secondary level. They also have enough number of activities related to environmental education in it. While MTR3, MTR4 and MTR10 replied that existing textbooks at secondary level need to be modified in this regard.

Yet MTR5 stated that, *"the existing textbooks at secondary level are either ignored or taught little in schools and are therefore, not up to the mark"*. Beside the above, another single respondent MTR8 answered that, *"I think the books doesn't have enough content about environmental education. There should be more content and focus on this subject"*.

Interviewees FTU1, FTU2, FTU5, FTU7, FTU8 and FTU10 admitted that textbooks are playing a major role in promoting environmental education but the existing curricula is not sufficient in this regard and still it required meaningful contents about environmental education. Similarly, FTU3 and FTU9 replied that the present textbooks at secondary level are playing a vital role in promoting environmental education. Yet respondents FTU4 and FTU6 stated that the existing textbooks at secondary level may be useful.

Respondents MTU2, MTU4, MTU5, MTU7 and MTU10 admitted that textbooks are playing a major role in promoting environmental education but the existing curricula is not sufficient in this regard and still it required meaningful contents/activities about environmental education.

Interviewees MTU3, MTU6, MTU8 and MTU9 replied that the present textbooks at secondary level are not up to the mark and poor regarding activities and in promoting environmental education. Yet another single respondent teacher MTU1 stated that, *"the existing textbooks at secondary level contain materials related to natural environment which are all useful and bringing positive change in student's behavior"*.

What in your opinion textbooks could modify student's behavior about environmental education?

Teachers FTR2, FTR3, FTR4, FTR5, FTR7 and FTR9 reported that there is a very great impact of textbooks on student's behavior as textbooks not only develops basic understanding of students but also guide students and create awareness and understanding among them. While

respondents FTR6 and FTR10 responded that students' behavior could be modified through different activities regarding environmental education. Similarly, respondents FTR1 and FTR8 responded that through rewards or if the students are awarded with marks/ grades or certificates, one can modify student's behavior.

Majority of teachers MTR2, MTR3, MTR4, MTR5, MTR6, MTR7, MTR8, MTR9 and MTR10 reported that textbooks are mandatory for students and it really modifies student's behavior as it develops awareness and understanding among them.

While just a single of the total rural male respondent MTR1 teachers responded that, *"inclusion of topics in textbooks related to environmental education can modify students' behavior up to some extent on environmental education"*.

All of the female urban teachers FTU1, FTU2, FTU3, FTU4, FTU5, FTU6, FTU7, FTU8, FTU9 and FTU10 reported that there is a very great impact of textbooks on student's behavior and textbooks can modify students' behavior if we (teachers) employ different meaningful activities regarding environmental education.

Similarly, all of the male urban teachers MTU1, MTU2, MTU3, MTU4, MTU5, MTU6, MTU7, MTU8, MTU9 and MTU10 reported that there is a very great impact of textbooks on student's behavior and textbooks can modify students' behavior by different means i.e. if teachers are trained and have knowledge about environmental education, through regular drill/ activities from course, through law and religious attention regarding environmental education. Simply they explained meaningful textbooks as a preliminary, basic source as well as second teacher for students' behavioral development towards environmental education.

Discussion

The following paragraphs and discussion provide a reflection on students' behavioral development towards environmental education in the light of Bloom's taxonomy at secondary level.

This part of the discussion described the qualitative data. The questions asked in the interview schedule were related to secondary school curricula. Secondary school teachers from both gender (male/female) and from different areas (rural and urban) were asked different statements regarding the secondary school curricula. Similarly, their answers and statements are also

explained under FTR (Female teacher rural), MTR (Male teacher rural), FTU (Female teacher urban) and MTU (Male teacher urban) in analysis as well as in findings portions in details.

1. Role of textbooks

Almost all of the interviewee stated that textbooks play an important part in transferring information from one to other. They added that we need to enhanced our curricula regarding environmental education and awareness. Although some considered that textbooks are sufficient but many other considered it insufficient and suggested that it need to be modified both in national and global perspective.

2. How textbooks can be enriched

Majority of the respondent teachers suggested that textbooks can be enriched by making them full of activities and up to dated. Social sciences and other sciences curricula can further be developed by adding environment related lessons/material etc.

3. How textbooks promote activities and environmental education

Different respondent teachers were having different opinion about textbooks and its existing role as some considered it up to mark while other emphasized on further activities and environmental education. Textbooks still need modification specially in terms of lessons and activities.

4. Textbooks could modify students' behavior

Almost all the respondents were agreed that textbooks can modify student's behavior about environmental education. As textbooks are considered as second teacher for students, and similarly through meaningful inclusion of topics and activities textbooks can modify student's behavior towards environmental education and leads awareness.

The discussion on qualitative data explored the respondents' opinion and the interviewee also freely expressed and shared their experience about the statements. Similarly, the responses of interviewee showed their understanding about the term secondary school curricula.

RESULTS

This portion of the findings is related to teachers' interview schedule and their outcomes.

1. *FTR (Female Teacher Rural)*

Majority of respondent teachers stated that textbooks are a great source of education and knowledge. It also creates awareness and environmental education among students. While a couple of them replied, indicating that textbooks at secondary level is just highlighting the theoretical aspects and not the practical aspects of environmental education.

Results indicates that majority of respondents answered that textbooks can be enriched in a way like this that special curricula should be designed for environmental education, similarly by putting in more original pictures and new topics along with the basic knowledge about environment. While the other respondents described that the subjects of biology and chemistry are playing key role and enriched with the content of environmental education but practical activities/ visits in this regard should be mandatory. Other textbooks can also be enriched by adding lessons/ activities in subjects like science, chemistry and social studies. Yet a few respondents revealed that textbooks can be enriched if we include topics especially from Islamic point of view about environmental education.

Results show that majority of the interviewed teachers admitted that textbooks are playing a positive role in promoting environmental education as they are all of great value at secondary level. Yet few respondents stated that the existing textbooks at secondary level are not up to the mark.

Majority of teachers reported that there is a very great impact of textbooks on student's behavior as textbooks not only develop basic understanding of students but also guide students and create awareness and understanding among them. Similarly, students' behavior could be modified through different activities regarding environmental education. While few respondents responded that through rewards or if the students are awarded with marks/ grades or certificates, one can modify student's behavior.

2. *MTR (Male Teacher Rural)*

Almost all of the male rural teachers stated that textbooks are playing an important role in understanding, creating awareness and environmental education among students but they didn't mention the role.

Most of the interviewees responded that textbooks can be enriched by incorporating additional topics/ chapter in them on environmental education. More activity based contents should be introduced. It can be included in all subjects especially in science subjects' i.e. Biology, chemistry etc. While some stated that we need to introduce environmental education at all levels at school and can enriched the textbooks via pictures, sceneries and activities as well. A single male respondent teacher described that, *"we need to include a book of general knowledge comprising of environmental education full of audio visual aids/ activities"*. Similarly, another interviewee stated that, *"textbooks can be enriched by adding a separate book on environmental education"*. Yet another respondent revealed that, *"textbooks don't need any modification regarding environmental education"*.

Most of the male rural teachers considered that secondary school textbooks have enough number of activities related to environmental education in it. While some replied that existing textbooks at secondary level need to be modified in this regard and further added that, *"the existing textbooks at secondary level are either ignored or taught little in schools and are therefore, not up to the mark"*. Just a single respondent teacher said that, *"I think the books doesn't have enough content about environmental education. There should be more content and focus on this subject"*.

Majority of male rural teachers reported that textbooks are mandatory for students and it really modifies student's behavior as it develops awareness and understanding among them. While just a single of the total rural male respondent teachers responded that, *"inclusion of topics in textbooks related to environmental education can modify students' behavior up to some extent on environmental education"*.

Just a single interviewee 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"*.

3. FTU (Female Teacher Urban)

Some of the respondents replied that textbooks at secondary level providing a lot of information about environmental education but students just cram these details and are not aware of the practical aspects of environmental education.

All of the female urban teachers answered that textbooks can be enriched by the inclusion of environmental topics/ useful contents with attractive pictures in a vast quantity about environmental education especially in the subjects of science, general science and social sciences. They further added that we need to enrich our textbooks in subjects like science, arts and social studies.

Most of the respondent teachers agreed that textbooks are playing a major role in promoting environmental education but the existing curricula is not sufficient in this regard and still it required meaningful contents about environmental education. Yet few respondents stated that the existing textbooks at secondary level may be useful.

All of the female urban teachers reported that there is a very great impact of textbooks on student's behavior and textbooks can modify students' behavior if we (teachers) employ different meaningful activities regarding environmental education.

4. *MTU (Male Teacher Urban)*

Majority of male urban teachers stated that textbooks are playing a great role in promoting environmental education and awareness among secondary school students as textbooks are the main source and approach for students during their learning process. Just a single teacher replied that, *"textbooks at secondary level are not fulfilling the criterion as well as not providing a lot of information about environmental education, so additional material should be included for promoting environmental education"*.

It was found that majority of the respondents answered that textbooks can be enriched by adding environmental and daily life problems, major issues related to environment, useful contents with new discoveries about environmental education especially in the subjects of science (bio/chem), general science, geography and social sciences. They further added that practical activities should be the compulsory part of the syllabus. Similarly, a male urban teacher responded that, *"there should be at least a unit or chapter about environmental education almost in all subjects"*. Yet another male interviewee stated that, *"we need to enrich the subjects of Islamic studies because religious teachings have great effect and impact on the society"*.

Majority of the respondents were having the opinion that textbooks are playing a major role in promoting environmental education but the existing curricula is not sufficient in this regard and

still it required meaningful contents/activities about environmental education. While some interviewees replied that the present textbooks at secondary level are not up to the mark and poor regarding activities and in promoting environmental education. Yet another single respondent teacher stated that, *“the existing textbooks at secondary level contain materials related to natural environment which are all useful and bringing positive change in student’s behavior”*.

All of the male urban teachers reported that there is a very great impact of textbooks on student’s behavior and textbooks can modify students’ behavior by different means i.e. if teachers are trained and have knowledge about environmental education, through regular drill/ activities from course, through law and religious attention regarding environmental education. Simply they explained meaningful textbooks as a preliminary, basic source as well as second teacher for students’ behavioral development towards environmental education.

CONCLUSIONS

As we know that we have disturbed this balanced universe, due to which we are facing different natural and manmade disasters and problems locally and globally. One of these problem includes environmental degradation. Lack of environmental education and awareness not only leads to environmental problems and issues but are also becoming more complex and challenging day by day. Simply we need to act environment friendly and in such a way to safeguard our world. To fulfill such desire of a clean and green environment we required to equipped our students with appropriate knowledge and skills about the overall environment and its aspects/ key components. It will help them to make better decisions and act responsibly. Simply, it is of utmost importance to make our students and future generations aware of environmental education and awareness as it will help us to preserve and protect the environment. The study was conducted on students’ behavioral development towards environmental education in the light of Bloom’s taxonomy at secondary level in the study area of district Peshawar. An analysis of the collected data was made to understand and document secondary school teachers understanding about the role of Khyber Pakhtunkhwa curricula at secondary level. The study found that the respondent teachers of the study area were of different opinion about the secondary school curricula and its role as according to a group of them such curricula about environmental education are sufficient while

other large number were disagreed to it. Beside it, it was also found that a number of respondents stated that the existing curricula is playing a role in making the environment clean and green.

From this study, it was concluded that government is required to take concrete steps to overcome the environmental problems and issues, improve the level of environmental education and awareness and the overall educational system of the country. In short, for a good environmental care attitude and behavior among students, government is required to plan, implement and promote the environmental education and awareness at all level of the education. Doing this will lead to creation of responsible citizens and a healthy environment.

RECOMMENDATIONS

The following recommendations are given, which will help us to enhance the level of understanding and awareness about environmental education, environment, its key components and positive and negative aspects of it.

1. The results of such study can be employed to plan school curricula/ programs which can be implemented to achieve and develop environmental friendly students. Such planning in the secondary school curricula can be made by keeping in view the aim sets, teaching strategies, students age/level and environmental problems and issues etc.
2. School curricula may be enhanced in such a way that separate books or chapters/units about environmental education and awareness be included with complete exercises and associated activities to overcome the gaps.
3. Marks and credits are required to be included in detailed marks certificates DMC's for students' practical activities regarding environmental education which will be helpful in achieving green and clean Pakistan. Schools in this regard may continue, improve and be consistent in implementing the existing as well as the future environmental education programs/ curricula to improve environmental attitudes and behaviors especially for students. Continuous and regular activities/ drills/ programs may be designed and followed.
4. For a good environmental care attitude and behavior among students, government required to implement and promote the environmental education and awareness at all level of education. Department like forestry, agriculture, horticulture, fisheries, tourism

etc. may work in coordination to preserve ecosystem and develop better environmental attitude.

5. Efforts may be made for public awareness. Education and trainings be provided to individuals, parents, teachers, students etc. about environmental education and awareness to promote awareness and reduce environmental destructions and damages. If possible, at secondary and higher secondary level the educational institutions may have their own mini zoo/ block for wildlife to increase awareness about natural environment.

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