

Chapter IV



ANALYSIS, FINDINGS AND
INTERPRETATION

CHAPTER-4

4.0 ANALYSIS, FINDINGS AND INTERPRETATION OF THE STUDY

This chapter deals with analysis, findings, and interpretation of the study, to determine the presence or absence of concepts and misconceptions as well as the students overall level of understanding of the major content principles.

The first objective of the present study is:

To study VI and VII grade students understanding of natural and social science concepts related to pollution.

4.1 SIXTH AND SEVENTH GRADERS' UNDERSTANDING OF POLLUTION ARE AS FOLLOWS:

4.1.1. Understanding About Sources of Air and Water Pollution:

Majority (87%) of VI grade students have sound understanding about the sources of air pollution. They pointed out that smoke from factories, vehicles and houses are the sources of air pollution.

Majority (67%) of the VII grade students were at partial understanding level. The investigator set a criteria that VII grade students would give additional responses as compared to expected responses of VI grade students. The additional responses listed for VII grade were:

- cutting of trees cause air pollution.
- Increase in number of vehicles also causes noise pollution.

Majority of students were able to interrelate that vehicles causes both air and noise pollution. But only few students were able to tell that air pollution is affecting plants or cutting of trees is a responsible factor for polluting air.

Ninty three percent of VI & VII grade students partially knew about sources of water pollution according to them bathing, washing of utensils and cloths and waste thrown in water are some of the sources of water pollution.

4.1.2 “1983 Bhopal Gas Tragedy” :

Majority of the students of both grades have sound understanding that leakage of poisonous gas from Union Carbide factory was responsible for the death of thousands of people in Gas Tragedy.

4.1.3 How Vehicles and Factories Pollute Air:

Majority of students of both grades were at partial understanding level on these items.

It was expected from VI grade students that they will be able to tell –“ smoke exhausted by vehicles and chimneys of factories contains poisonous gases and minute particle which has a bad effect on the health of humans”. Investigator found that 66% girls and 55% boys were at partial understanding level on the issue of air pollution by vehicles. Some girls respond that petrol fumes are poisonous and other told that petrol fumes contain certain chemicals, which pollute air. Some of the boys responded that smoke exhausted by vehicles contain poisonous gases which pollute air. Few students also pointed out that smoke of vehicles contains dust particles, which pollute air.

VII grade students were also expected to tell that pollutants like lead, hydrocarbons gets exhausted from vehicles. But, none of the students gave a response as expected from them. They only answered partially, smoke exhausted by vehicles get mixed in air causing breathing trouble, none mention about lead and hydrocarbons was there.

Grade VI girls told that burning of coal, production of fertilizers and other chemicals in factories make the smoke poisonous which when mixed with air, cause air pollution. According to boys of same grade, whenever coal is burnt, molting of iron, plastic and burning of waste results in production of poisonous gases which come out along with the smoke from the chimney and pollute air.

Majority of the VII grade students talked about only smoke of factory as a pollutant of air, but some of them also talked about chemicals and poisonous gases coming out of factory chimneys.

4.1.4 Responses about chemicals from chimneys as Air Pollutants:

It was expected that students of Grade VII will be able to give 2 – 3 names of chemicals (SO_2 , NO_2). None of the student was able to answer that particles of coal, poisonous gases like SO_2 , NO_2 and other undesirable and harmful substances are present in exhaust gases of industries which pollute air.

4.1.5 Affect Of Deforestation and Cutting of Plants:

Majority of VI grade students were at partial understanding level on this concept and answered that deforestation will result in decreased amount of O_2 . Only 44% boys had a sound understanding and knew that cutting of trees will also disturb the balance of nature. One boy had the opinion that animals would not get food, if plants are cut.

Majority of VII grade students were at partial understanding level and responded in the same manner as VI grade students. Only 40% girls had sound understanding that cutting of plants will also cause soil erosion and reduced rainfall. Similarly only 10% of boys had a sound understanding that region with less plantation will be hotter. Deforestation will disturb the balance. Few students of VII grade were of the opinion that cutting of

trees will result in spread of carbon dioxide in environment and cause death of human beings, as carbon dioxide is poisonous gas. This response shows lack of understanding on the part of students. The carbon dioxide is not poisonous, death occurs due to non-supply of oxygen which is required for respiration.

4.1.6 Pollution of Water by Pesticides and Fertilizers:

Majority of VI grade students were partially correct that pesticide used for the protection of crops, pollute water. Only 20% of them knew that fertilizers used to increase production of food grains also pollute water.

Similarly majority of VII grade students partially responded about pollution of water by pesticide. None (except one girl) of them was able to respond that fertilizers are washed away with rain water and pollute river and underground water. This response was not expected from VI grade but expected by VII grade students

4.1.7 Soil Pollution:

Majority of VI grade students were at partial understanding level and used the term "waste" thrown on ground as a cause of soil pollution. 50% of girls and 33% of boys were able to tell that plastic waste cause soil pollution.

Majority of VII grade students were also at partial understanding level, and knew that waste such as chemicals, medicines thrown outside cause soil pollution. Only 20% of girls and boys had a sound understanding that waste and polluted water causes soil pollution. Forty per cent students also responded that polythene which cannot decompose pollute soil.

4.1.8 Affects of Air Pollution:

Eighty three per cent of the girls and 78% boys of VI grade students have sound understanding that air pollution affects lungs. Girls also knew that air pollution causes asthma but none of the boys gave this response.

Among VII grade students, majority of them were at partial understanding level because they only answered about affect of air pollution on lungs. It was also expected from them to tell affects on eyes and skin. But only 20% of student gave this response. None of the student used the term 'asthama' caused by pollution of air.

4.1.9 Affects of Water Pollution :

Majority of VI grade girls had a sound understanding about water pollution affects. They responded that it affects all living beings. Whereas boys have partial understanding that pollution of water either affects humans and animals or human beings and plants.

Among VII grade students majority of them have partial understanding that pollution of water affects human beings, plants and animals. But none of them gave a response that polluted water also affects aquatic plants and animals, which was expected from them. However, 13% students responded that water pollution would kill fishes.

4.1.10 Diseases Caused by Water Pollution:

The investigator set a criteria that the students should give at least three names for sound understanding of water born diseases. Majority of the VI grade girls as well boys were at partial understanding level, because majority of the girls talked about cholera and jaundice and boys only talked about diarrhoea.

Similarly, all the VII grade students were at partial understanding level. Majority of girls talked about diarrhoea and majority of boys talked about diarrhoea and jaundice.

4.1.11 Control of Air Pollution:

Majority of the VI grade students were having sound understanding that trees should be planted around houses to control air pollution. Eighty percent of girls and only 22% boys were having sound understanding and able to tell that factories should be established far away from colonies to prevent air pollution by them.

Among VII grade students all the girls and only 50% boys were at sound understanding level. They responded that plantation and cleanliness of surrounding can control air pollution. Few boys were of the view that vehicles should be checked and Bio-gas stoves should be used to prevent air pollution.

Regarding control of pollution by factories 53% of the students were at partial understanding level. They pointed out factories should be established far away from residential area. Twenty percent of the boys also gave a response that 'factories should have tall chimneys so that smoke get spread in upper atmosphere and population is not effected'. Ten percent of the boys also gave a response that 'In power stations, water should be used instead of coal'. Forty percent of girls respondent that use of chemicals should be limited in factories. However, none of the VII grader had a sound understanding as they could not tell that an equipment can be installed which controls pollution.

Bio-gas Stove: Forty-seven percent of VI grade students were at partial understanding level and responded the bio-gas, which is produced from cow-dung, control pollution otherwise when cow-dung is directly used in

chullahs it leads to pollution. Only 13% of students were at sound understanding level and able to answer that 'smokeless gas' is produced from bio-gas-stove, 40% of students gave "No Response".

Thirty three percent of VII grade students had a sound understanding and responded that bio-gas burners are smokeless, which control pollution. 20% of students were at partial understanding level and responded that gas is produced from bio-gas-burner and pollution is controlled. Forty seven per cent of students gave "No Response".

4.1.12 Control of Water and Soil Pollution :

Majority of VI and VII grade students were at partial understanding level about the concept of control of water and soil pollution. They responded that

- bathing, washing of cloths, and utensils in lakes, ponds should be avoided;
- tanks and wells should be kept covered;
- cleanliness should be maintained around sources of potable water
- pipe carrying potable water should have no leakage.

Seventy percent girls and 22% boys of VI grade responded that waste should be dumped deep into the ground so that upper fertile soil is not damaged. In the same way, 20% girls of VII grade responded that waste should be dumped under the ground. Ten percent of the boys of same grade gave a response that waste should be thrown and burnt over stony areas, so that soil does not get polluted.

4.1.13 Purification of Potable Water:

When asked how purification of potable water can be done majority of students of both grades were at partial understanding level. Fifty three

percent VI grade students talked about filtration whereas use of phitkari and boiling are other common practices of purification.

Majority 73% of VII grade students talked about use of Phitkari and boiling water for purification. Sixty per cent students talked about filtration and 20% of students of both grades answered that medicines are used to remove impurities present in the water. Few girls of both grades knew about use of aqua guard .

4.1.14 Over population is Related to Pollution:

All the students of VI and VII grade have sound understanding that over-population will result in pollution.

4.1.15 Noise Pollution:

All the students of VI and VII grade knew that loud sound causes noise pollution. It may lead to hearing impairment also.

4.1.16 Air Pollution:

All students of VI and VII grades were able to define air pollution partially. They knew that polluted air means impure and poisonous air containing chemicals and dust particles caused by the smoke of industries and vehicles. But they were not able to tell that it has harmful affects on all living beings and environment.

4.1.17 Pollution :

It was found that all students of VI and VII grade were unable to give operational definition of pollution. Majority of students defined pollution in the form of pollutants i.e. smoke from cars and factories; waste causes water and soil pollution and noise pollution. Majority of VI grade boys respond that pollution is waste and chemicals mixed in air, water and soil. According to 33% girls "pollution is a poison which affects environment".

Thirty per cent of VII grade boys responded that pollution means making soil, air and water dirty. Forty per cent of boys were able to tell that air pollution is harmful for human beings and nature. Twenty percent of the girls responded that if human beings will in therefore or/play with nature it will increase pollution.

CONTENT ANALYSIS OF SCIENCE TEXT BOOKS:

Content analysis of VI and VII grade science text book shows that no reference is there about the ozone layer, but some students have mentioned about it while responding to the items related to ozone layer, acid rain and eruption of volcanoes .

4.1.18 Ozone Layer:

Twenty per cent of VI grade student partially knew that ozone layer prevent heat of the sun to reach earth and it is dissolving due to pollution. Majority of students of both the grades gave "No response".

Twenty seven per cent of VII grade student were at partial understanding level and responded that ozone layer prevents sun rays to reach earth directly. They knew that pollution is responsible for depletion of ozone layer which is causing skin cancer in humans beings.

Only one student of VII grade had a sound understanding about ozone layer. Pollution by chemicals like chloro-fluro-carbon (CFC) is responsible for depletion of ozone layer, which is known as 'ozone hole'. Ozone hole is causing skin cancer in humans.

4.1.19 Acid Rain:

Only 13% of students of both the grades have partial understanding about the concept of acid rain. From VI grade only girls responded that, chemicals from factories causes acid rain. From VII grade only boys gave a response that polluted air causes acid rains. Majority of students do not know about acid rain. But this answer was expected from VII grade students.

4.1.20 Valcano:

Fifty three per cent of VI grade students and 47% of VII grade students partially knew that lava and poisonous gases come out from volcano which pollute air. Remaining students gave 'No response'. VII grade girls

also knew that lava and black fumes of volcano have bad effect on the people and environment.

Interviewer for each grade level came up with a statement of student knowledge at their grade level for each content principle. These statements were then collected and analyzed by the investigator. This led the investigator to generalize knowledge statements related to the content principles used in the analysis of the interviews.

Concepts are views as the building blocks of content principles and the content principles are a more valid measure of students understanding about different concepts. Student responses were analyzed at the content principle level to investigate the conceptual framework or understanding of the students have about the concept under study.

Sixth graders understanding of pollution is summarized as in Table – 4.1.1. These children had a more conceptual understanding of pollution. They do have to sense it for it to be there. Unseen chemicals exhausted by vehicles are pollutants. Technological factors such as factories and cars are viewed as sources of pollution. They know that waste such as plastic, iron, glass bottles and stuff that people do not want is thrown on the ground and causes soil pollution. Pollution of water is caused by human beings, and therefore it can be controlled by them only. Polluted water affects all living beings and causes diseases in human beings. They also pointed out that deforestation and cutting of trees decreases amount of O_2 as plants supply oxygen. Population continues to be an important factor contributing to pollution. They know that air pollution can be controlled by doing plantation. They defined pollution as a poison which affects environment. Due to air, water and soil pollution, earth has becomes poisonous. Loud sound causes hearing impairment

Table 4.1.1.

Sixth Grade Students Understanding Of Content Principles Related To Pollution

- i) Pollution is primarily chemical. It causes breathing trouble to humans and harms the environment and other living things. Plants gets dry due to water pollution. Pollution is a solid waste thrown on ground. Intense sound cause noise pollution.
- ii) Poisonous gases and fumes from factories and vehicles make pollution. Population affects the amount of pollution. Poisonous gas leakage was responsible for killing thousand of people in Bhopal Gas Tragedy.
- iii) People are slowly destroying the environment by cutting trees and deforestation. It will result in decrease in amount of oxygen. Pollution has made earth poisonous.
- iv) Man can control pollution by planting trees. Factories should be established for away from residential area. Waste should be thrown in dust-bin. Government make laws to reduce pollution.

Table – 4.1.2. contains a summary of the correct conceptions of VII graders. There responses reflects a greater number of concepts, some meaningful connection between concepts, when compared with VI class responses. But for majority of items they are at partial understanding level as more is expected from their educational level. Unseen chemicals and smoke coming out from the vehicles and chimneys of factories causes air pollution. Waste such as polythenes, chemicals, medicines pollute water and soil. One student responded that polythene bags etc block food pipe of animals while drinking water and cause death of animal. The students responded that cutting of trees will result in increase of CO₂ in environment which will kill (rather than harm) human beings. Water pollution kills fishes and living beings fall sick. Intense sound causes noise pollution. They also pointed out that due to more people there would be more smoke resulting reduced oxygen and more pollution. Air pollution can be controlled by planting more and more trees. Factories should have high chimneys so that smoke goes in upper atmosphere and does not affect the people. In power station water should be used in place of coal. Waste should be dumped or burnt in such a way that it does not affect the upper fertile

soil. According to them air pollution means mixing of poisonous air and chemicals in the air. Pollution means impurity of air, water and soil, which is harmful for human beings and nature.

TABLE 4.1.2 **Seventh Grade Students' Understanding of Content Principle Related To Pollution**

- i) Pollution is caused by people. Polluted environment is harmful for living beings. Air pollution kills (rather than harm) human beings. Water pollution makes human beings sick and kills fishes. Air pollution is a 'smoke', which spreads in the environment. Loud sound causes hearing impairment.
- ii) Sources of pollution include smoke and chemicals from vehicles and industries. Solid waste thrown around and rivers etc also leads to pollution. Over-population is also a cause of pollution. Bathing, washing clothes and utensils in rivers, dumping of statues of Gods, throwing of dead bodies, are the sources of water pollution.
- iii) Cutting of trees will lead to decrease in amount of oxygen and increase of carbon dioxide in environment which will cause death of human beings. Balance of nature will get disturbed. It will result in soil erosion and decreased rainfall.
- iv) Air pollution can be controlled by planting trees. Factories should have high chimneys so that smoke get spread in upper atmosphere. Smokeless stove should be used. Solid waste should be thrown and burnt over rocks, so that soil does not get pollute.

In Brody's (1991) study of IV grade reflected that children's responses were related to their senses, but results about VII grade was similar to the one found in the present study (see Table 4.1.3.) Students of VI and VII grades had a more conceptual understanding of pollution, including the concept of cumulative effects.

TABLE 4.1.3

Brody's Eighth Grade Understanding of Content Principles related to pollution

- i) Pollution is human-made solid waste that is not bio-degradable. It kills fish and harms the environment, plants, and other living things. Pollution is primarily chemical.
- ii) Human factories and cars make pollution. Over-population affects the amount and seriousness of pollution. It all adds up over time. Pollution kills fish and makes living things sick. Most types of pollution get into the water and are harmful.
- iii) Air pollution is smoke, which spreads. Water pollution travels down rivers into the ocean. All this pollution adds up and is destroying our world
- iv) People are slowly destroying the world environment. Pollution is affecting the planet even though you cannot see it. A large part of the earth is polluted now. Pollution looks bad, and people do not want to live with it. Governments can make laws to reduce pollution, but they are ineffective.



The second objective of the study is “To study gender difference if any, related to understanding of pollution among students of VI and VII grade”.

4.2 GENDER DIFFERENCE RELATED TO UNDERSTANDING OF POLLUTION:

Table – 4.2.1 shows on total seven items there is a marked difference in the percentage of girls and boys of VI grade, who are at sound understanding level and partial understanding level. Eighty three percent of the girls responded that polluted air will cause ‘asthama’ whereas none of the boy talked about it. Boys only said that polluted air will affect lungs, they were not specific in their response.

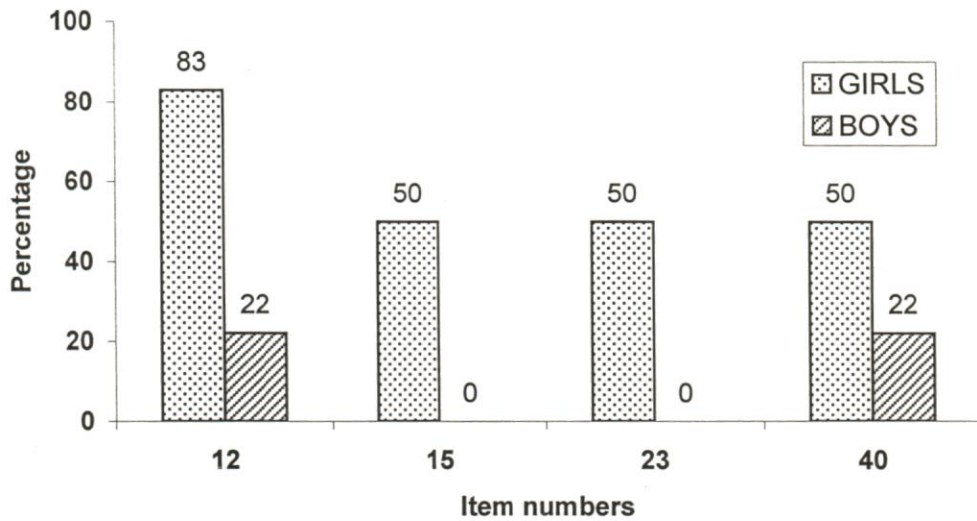
TABLE 4.2.1.1 Gender difference among VI grade students at sound understanding level

Item No.	Pollution related concepts	Percentage of girls	Percentage of Boys
12	To control pollution by factories these should be far away from colonies	83%	22%
15	Air pollution causes ‘asthama’	50%	None
23	Water pollution affects all living beings	50%	None
40	Due to all types of pollution earth has become poisonous	50%	22%

4.2.1.2 Gender difference among VI grade students at partial understanding level :

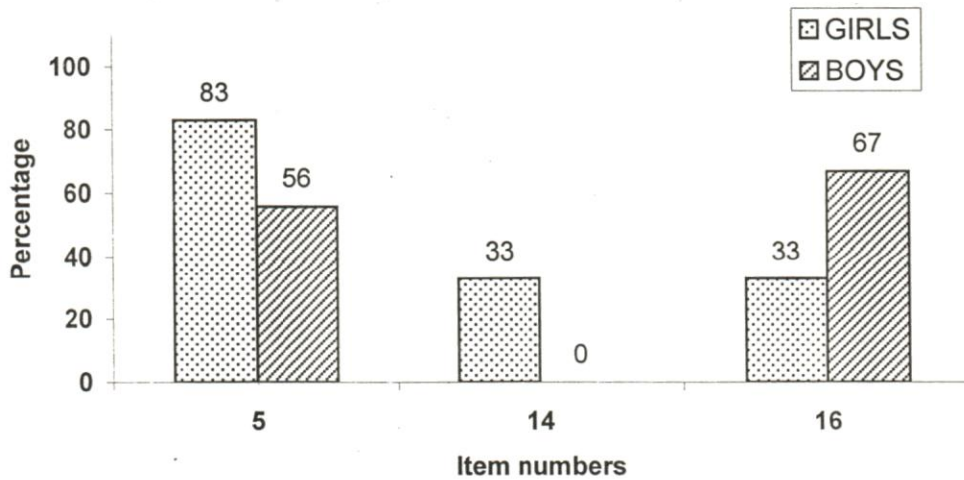
Item No	Pollution Related Concepts	Percentage of Girls	Percentage of boys
5	How factories pollute air ?	83%	56%
14	What is acid rain ?	33%	None
16	How eruption of volcano pollute air	33%	67%

Graph : Gender difference among VI grade students at sound understanding level



12 : Control of pollution by factories 15 : 'Asthama' caused by air pollution
 23 : Water pollution effects on living beings 40 : Earth has become poisonous due to pollution

Graph : Gender difference among VI grade students at partial understanding level



5 : Air pollution by factories 14 : Acid rain 16 : Air pollution by volcano

Similarly, marked difference is seen among girls and boys of VII grade. These students show marked difference in sound understanding and partial understanding on total eleven items (see Table – 4.2.2)

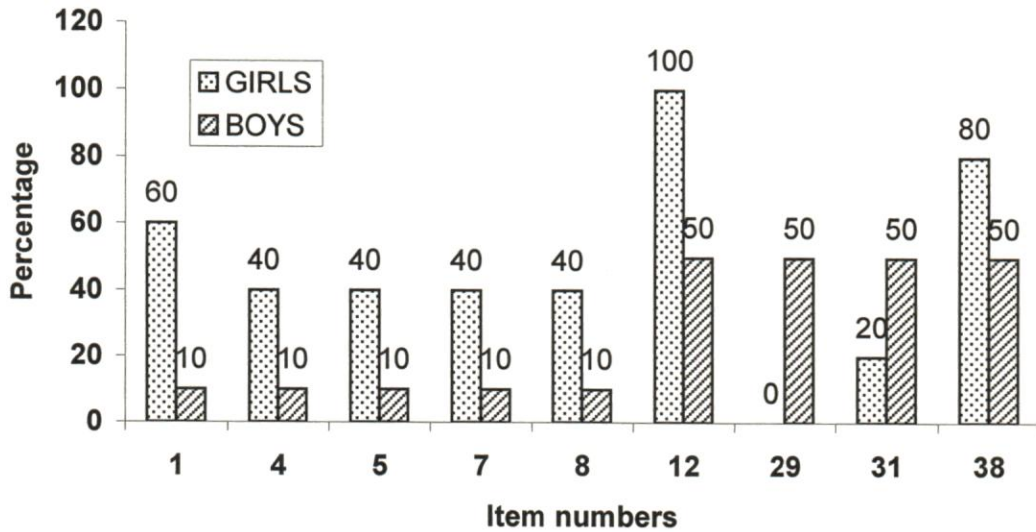
4.2.2.1 Gender difference among VII grade students at sound understanding level:

Item No.	Pollution related concepts	Percentage of Girls	Percentage of Boys
1	Sources of air pollution.	60%	10%
4	Pollution of air by vehicles.	40%	10%
5	Pollution of air by factories.	40%	10%
7	Diseases caused by air pollution.	40%	10%
8	Effects of deforestation on environment.	40%	10%
12	Control of pollution around residential area.	100%	50%
29	Control of pollution by bio-gas stoves.	None	50%
29	Polythene which cannot decompose causes soil pollution.	20%	50%
38	Sources of knowledge about pollution.	80%	50%

4.2.2.2. Gender difference among VII grade students at partial understanding level

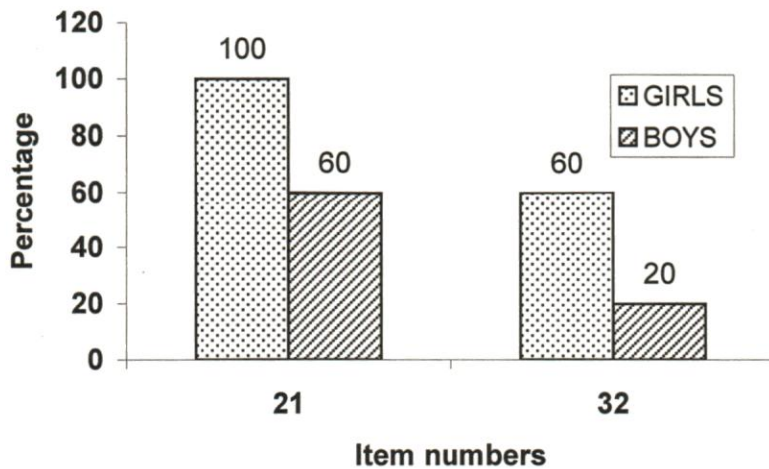
Item No.	Pollution related concepts	Percentage of Girls	Percentage of Boys
21	Pesticide pollute water.	100%	60%
32	Soil pollution by factories.	60%	20%

Graph : Gender difference among VII grade students at sound understanding level



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|--------------------------------------|------------------------------|
| 1 : Sources of air pollution | 8 : Effects of deforestation |
| 4 : Air pollution by vehicles | 12 : Control of pollution |
| 5 : Air pollution by factories | 29 : Biogas stoves |
| 7 : Diseases caused by air pollution | 31 : Soil pollution |
| 38 : Sources of knowledge | |

Graph : Gender difference among VII grade students at partial understanding level



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|------------------------------------|----------------------------------|
| 21 : Water pollution by pesticides | 32 : Soil pollution by factories |
|------------------------------------|----------------------------------|

The third objective of the present study is:

To identify misconceptions about pollution of VI and VII grade students

Some common misconceptions about pollution held by VI and VII grade students were identified. Misconceptions reflect partial understanding, necessarily formed from lack of knowledge and incorrect information.

4.3 MISCONCEPTIONS:

4.3.1 Heat of the sun is responsible for the depletion of ozone layer. (16% of girls of VI grader) they are unaware of the fact that gases like chlorofluoro-carbon-CFC has caused ozone hole. This ozone hole has been resulted in skin cancer in human beings.

4.3.2 Deforestation and cutting of trees, causes soil pollution. (6% of VI & VII graders) But the fact is that deforestation results in erosion of soil. However, pollution of soil is caused by polluted water and waste dump in a ground.

4.3.3 Twenty per cent students responded (VII graders) that there would not be rains due to deforestation, is on the extreme. It would be better to say that there would be some change in the rainfall.

Thirteen per cent VII grade students also gave a response that due to deforestation, carbon dioxide will get spread in environment resulting in death of human beings. They did not know the fact that carbon dioxide is non-poisonous. However, if there is little increase in percentage of CO₂, it will not cause immediate deaths of human beings.

In Brody's (1991) study also, students classified material strictly into pollutants and non-pollutants.

Above responses show that younger students, upto elementary level, have a black and white conception of pollution. They responded casually, that means while answering they were not specific.

4.3.4. Twenty per cent of the boys of VI grade and 10% boys of VII grade said that air pollution affects kidneys and brain, but it is not exactly correct.

4.3.5. Polluted water vapourises and causes acid rain (10% VII grade boys) . Fact is, it is not the 'polluted water' but harmful gases like SO_2 & NO_2 , coming out from the factories, which when mixed with rain water causes acid-rain.

4.3.6. Solid waste should be dumped deep into the ground or thrown over stony areas (few VI and VII graders) so that upper fertile soil does not get polluted. Similarly, in Brody's (1991) study of IV and VIII grade students reflect that solid waste in dump is safe. They seemed to think this was the end of the problem. These students do not know what dumps can do to underground water.

4.4 CONCLUSION AND IMPLICATIONS

After seeing the results of VI & VII grade understanding about the concept of pollution it is found that level of understanding of students is low. Knowledge is at general level and not at scientific level.

- Majority of them know that petrol fumes coming out of vehicles and black fumes of factories pollute air. None of them know about the names of the chemicals such as Pb, NO₂, SO₂ in burnt petrol and in fumes coming out of the chimney of factories. However, this answer is not expected from VI graders.
- They knew that deforestation will result in decreased amount of O₂. Did not know that it will disturb balance of nature and also cause soil erosion. It was also pointed out that there will be less rainfall.
- Only few of the VI graders knew that chemical fertilizers used in agriculture to increase production also pollute water.
- They did not know about the harmful affects of air pollution on living beings and environment. If the pollution would goes on increasing at the same rate, man and other living beings would not be able to get pure air.
- They did not define pollution in the form of process as given in their text book. Majority of students defined pollution in the form of pollutants.
- Majority of them talked about filtration for purification of impure water and some of them talked about boiling and adding phitkari to purify potable water. This reflect that these are the common practices used in houses for the purification of potable water. Twenty per cent of students responded that medicines are used for purifying water which reflects that use of chemicals for purification of potable water is not known to them. 20% of girls talked about aqua guard also.
- Most of the students responded that T.V. and parents are the sources of knowledge about pollution. Most of the boys talked about books also as the source of knowledge.

VII Grade students responses show that

- cutting of trees will pollute environment. Some have misunderstanding that cutting of trees will result in no rainfall but the fact is, it will result in reduced rainfall.
- It was expected that these students would respond that factories should install pollution control equipment to prevent pollution but none of them gave this response
- None of them responded that fertilizers are washed away by water, polluting water.
- Majority did not know that polluted water affects aquatic plants and animals. Only 13% of student gave a response that fishes would be killed if water gets polluted.
- Majority of students of both grades have partial understanding about soil, pollution, which reflects that since air and water pollution directly affect individual hence students have good understanding about these two concepts but child is unable to see bad effects of soil pollution.

FEW STUDENTS OF BOTH THE GRADES HAVE P.U. ABOUT FOLLOWING CONCEPTS.

- Partial understanding about ozone layer which protect heat of sun to reach earth. Ozone layer is dissolving due to pollution
- Chemicals from factories causes acid rains
- Poisonous gases and lava comes out from volcano which pollute air.

These are not in their text but still few students of both grades partially knew about above concepts. These are the current problems which is effecting environment. These issues should have hence general awareness. Students responses shows that how much sensitivity students have on the concepts of ozone layer and ozone hole. It also reflect impact of television and media on environmental knowledge. Media is publicizing issues of pollution effecting ozone layer and causing global warming and industries causing acid rain.

The results of the present study show that understanding about pollution of the VII grade students under study is not very sound as compared with VI grade students. So more inputs are required at the entry level of VII graders. During teaching learning scientific reasons should be emphasized. Students responses shows stereotyped views, which reflect that teachers are bookish in approach while teaching. Students have good knowledge about the sources and causes of pollution. But they know little about bad effects and control of pollution. Students knowledge about bad effects of pollution should be emphasized by illustrating with examples such as depletion of ozone layer due to pollution which causes skin cancer and global warming, polythene bag and other synthetic packing materials are non-degradable and polluting soil.

When they will know about the disastrous effects of pollution on all living beings and environment then only they will be able to think about its control. 'Prevention is better than cure' so students should be sensitized about the control of pollution. We all should learn to use alternatives of plastics, polythene and other non-biodegradable items. Children of today are a citizens of tomorrow. The sensitivity and awareness towards environment developed during schooling will help in contributing towards prevention of pollution.