CHAPTER - IV

ANALYSIS & INTERPRETATION OF THE COLLECTED DATA

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ANALYSIS AND INTERPRETATION OF DATA

Introduction –

In previous chapter, researcher has described the methodology of research. In present chapter she has done analysis and interpretation of the collected data.

To study the Environmental Education introduced in Professional Education Courses of Shivaji University questionnaire was given to the Principals/ HOD's, Teachers, Lab Assistants & Librarians from 16 colleges Interviews of 5 students from each college who are studying Environmental Education were also taken. Both qualitative & quantitive analysis of the collected data was done. For quantitive data analysis percentage was calculated .Interpretation of the percentages was done as follows.

1. Percentage above 55 – Majority of cases
2. Percentage between 46-54(except 50) about half of the cases
3. Percentage between 31-45 few cases
4. Percentage below 30 very few cases

Analysis of the data has been presented in following tables.

Note : In this chapter Environment Education has been abbreviated as EE

Table No.5 to 13 are related to objective No.1

Objective No.1 To analyse the syllabi of various professional education courses of Shivaji University with reference to Environment Education.

Table No.5

Components of Environment Education Introduced at B.Ed.Course

Theory Course	Practical Part
➢ Course Period 1 year ➢ Total Papers – 07Marks - 700 **Compulsory Part** ➢ Compulsory part/papers – 06 papers and a half - 650 marks ➢ In this compulsory part/Papers there is one subunits related to EE in Paper V ➢ The inclusion is as follows : ➢ Paper – V : Trends In Education Marks – 50 Total Units 5 Unit II includes EE component Unit II – Trends in Education (Basic concepts only) Total subunits - 06 ➢ One subunit (a) is related to EE a) Environmental Education, population education, Health Education Adolescence Education. **Optional Part** Elective paper – 50 marks EE is one of the 10 Electives Total 5 units – i) Environment ii) Environmental problems and their impact on Human life iii)Environmental Education iv) Population Explosion and its effects on Environment v)Environmental Management, Movements and Laws with special Reference to India	Any one of the following (10 marks) i) Study of pollution ii) Study of an Ecosystem iii) Organise two EE games in college or school and report. iv) Study of Environmental problems of a locality, suggest solutions and Report.

Observation :

From the above table it can be observed that in B.Ed. Theory course EE has been included as a subunit of one unit (out of 5 units) of section I (50 marks) of compulsory paper No.5 (100 marks) EE has also been included as an optional paper of 50 marks. It includes 5 units concerning with Environment its problems and management Population Explosion Environmental Laws and Movements.

There is no compulsory practical related to EE Optional EE paper has practical part of 10 marks where students have to study/perform and report about any one of the following – Study of Pollution or any other problem or Ecosystem or Use of environmental games in colleges or schools.

Interpretation :

It can be said that weightage given for EE in B.Ed. course is very low. In compulsory part of theory there is only one subunit entitled as 'Environment Education, Population Education, Health Education, Adolescence Education' where neither the scope has been spelt out, nor the total no. of lectures are mentioned.

In optional paper of EE though there are 5 units, the weightage given to Environmental Science part is more than the weightage given to Environmental Education part. Out of 5 units 4 are related to Environmental science and 1 is related to Environment Education. Actually Environment and its problems, Population Explosion, Environmental movements etc. those topics included in B.Ed. Syllabus are now studied at undergraduate level in all the disciplines.

In practical part only 1 practical of 10 marks is to be done. In the 4 practicals given 3 are of Environmental science i.e.study of an Ecosstem, study of pollution and study of other environmental problems. Only one

practical is directly related to Environmental Education i.e. use of Environmental games.

In methodology part also there is no inclusion of Environment Education Methodology.

Therefore we can say that to produce an effective teacher of EE equiped with necessary values, skills and competencies, there is no inclusion of essential components in B.Ed. course of Shivaji University.

Students from B.Ed. Colleges also opined that the B.Ed. syllabus should have components enabling the future teachers to impart EE effectively. For this the theoretical and practical part must include the components related to teaching learning strategies and evaluation in EE.

Table No.6

Component of Environment Education introduced at first year B.E. Course (it is same for all branches of Engineering)

Theory	Practical
Total 14 pages – 5 papers of 50 marks 7 papers of 100 marks. ➢ Communication Skill – 50 marks Total 7 units, some of them are Energy crisis, Environment, Pollution, Bio-gas etc. ➢ Engineering Physics – I, 50 marks 1 unit (Nuclear Energy) out of 6 units ➢ Engineering chemistry – I, 50 marks 1 unit (Water) out of 6 units. ➢ Engineering Chemistry – II, 50 marks one unit (Environmental Chemistry) out of 6 including air pollution and water pollution. ➢ Basic Civil Engineering – 100 marks 2 units out of 10 units. Environmental Engineering, Water management. ➢ Basic mechanical Engineering – 100 marks 1 unit out of 8 units. Energy sources renewable and non-renewable sources.	25 Marks Practical Determination of pH by PH meter, 4 practicals related to EE out of 19 practicals ➢ Hardness of water. ➢ Alkalinity of water. ➢ Dissolved oxygen in water ➢ Chloride in given water

Observation :

From above table it is observed that for first year which is same for all branches of Engineering, all papers are compulsory, 25 marks for practical part. Six papers out of 14 include EE units. The units are related

to Environmental problems, water management, Energy etc. practicals related Environmental problems have been included.

Interpretation :

It can be said that, in first year basic introduction to Environment and Environmental problems like air pollution and water pollution, Energy sources and related practicals have been included in syllabus.

Table No.7

Component of Environment Education introduced at Second year of B.E. (Civil/Environmental Engineering)

Theory all paper are (Compulsory)	**Practical**
Total 12 papers each for 100 marks out of 12 papers 2 papers are related to EE. ➢ Engineering geology (Total 12 units) whole paper is related with EE. Some topics are as follows Basic concepts, Natural resources like river, mountains, petrology etc. Natural disasters like Earthquakes Landslides volcano etc.	Practical and oral 50 marks Term work – 25 marks total 5 practicals ➢ Petrology – study and identification of rock types.
➢ Water Resource Engineering – I (Total 8 Units) – whole paper is related to EE including basic concepts of water, Natural Disasters like floods, Natural resources like water, soil etc. Water management, Watershed management.	Practical 25 marks Total No. of practicals 9 A Case study/report of watershed management.

Observation –

It from above table it is observed that for 2nd year Civil/ Environmental Engineering 2 papers out of 12 each for 100 marks are related to EE. One paper is fully related to EE. Based on the topics practical work and term work related to EE is included in syllabus.

Interpretation –

It can be said that, for 2nd year of B.E. Course in Civil and Engineering 2 papers out of 12 related to EE have been included in syllabus. These papers are compulsory. Including topics on basic Environmental concepts, Natural resources, Natural Disasters and their management etc. Practical work and term work also are related to Environment e.g. study and identification of Rocks, case study of watershed management etc.

Table No.8

Components of Environment Education Introduced 3rd year of at B.E. Course (Civil/Environmental Engineering)

Theory	Practicals
All papers are compulsory Total 12 Papers for 100 marks each. 2 papers related to EE. ➢ Environment Engineering I (100 Marks) ➢ Environment Engineering II (100 Marks) (Total 8 & 6 Units respectively). Both the papers are related to EE Some topics are Basic concepts, Ecology, Natural resources, water treatment, Management, water distribution system, solid waste, water. Pollution, air pollution, noise pollution etc.	Term work – 25 marks Oral – 25 1) Env. Engg. I Total 5 practicals. a) 10 experiments – pH , acidity, Alkalinity, Turbidity, Dissolved oxygen and Solids, Hardness etc. 2) Visit to a water treatment plant. 3) Journal submission and oral. Env.Engg 25 marks 2 practicals. - Characterization of Municipal waste water. - Design of sewage system and treatment system. - Visit to sewage treatment plant

Observation –

From above table it is observed that for 3rd year of B.E. Civil/Environmental Engineering 2 papers out of table each for 100 marks and 25 marks term work are totally related to EE components included are Environmental problems and remedies.

Interpretation -

It can be said that for 3rd year of B.E. Course (Civil/Environmental Engineering) 2 papers out of 12 are related to EE. These papers are compulsory. Including topics on basic environmental concepts, Natural resources and their management etc. and related term work based on theory papers for 25 marks is included in the syllabus.

Table No.9

Component of Environment Education Introduced at Final (4th) Year of B.E. Civil Engineering

Theory	Practical
Total 8 papers are compulsory and 2 papers are elective each for 100 marks. Compulsory paper – 2 papers are related to EE. ➢ Earthquake Engineering (100 marks) whole paper is related to EE including 8 units. ➢ Water Resource Engineering II (100 marks) Total 8 units. whole paper is related to EE.	Term work 25 marks and oral exam 25 marks. Total 2 practicals - Field visits to water power stations and Engineering projects.
Elective two papers, one for Semester – I , and the other 1 for Semester – II	
Sem. I Total 13 electives out of which 3 electives are related to EE each for 100 marks ➢ Advanced Engineering Geology Total 10 units 3 units are related to EE - Sub surface water, Geology of soil formation, Resource Engineering.	Term work – Total 9 practicals - Educational tour related to EE
➢ Air Pollution & control (100 marks) whole paper is related to EE total 8 units including concept of atmosphere, sources of pollution, effect of air pollutants on man, animals and vegetation, air pollution monitoring & regulatory control etc.	Term Work – Total 4 - Problems on air pollution - Sampling analysis of Ambient Air - Sampling and

	analysis of Automobile exhaust -Demonstration of stock gas monitoring.
➢ Solid waste management – I (100 marks) Total 8 units whole paper is related to EE. Topics included are solid waste management, Agricultural, animal & industrial waste, it's effect on environment, handling and processing of solid waste, Rules of waste management etc.	Term work 25 marks oral 25 marks - 2 work - Analysis of solid waste - Project on Disposal system in medium size town/ part of city.
	Seminar – 50 marks Total 13 topics, 5 topics are related to EE. 1. Town and country planning 2. Earthquake Engineering 3. Environmental Engineering 4. Water resources Engineering 5. Disaster Management
Sem II Total 13 elective papers. 4 papers are related to EE. each of 100 marks 1. Hazardous waste management (100) marks	Term work 25 marks and oral 25 marks. - Report on study of at

Total 8 units all related to EE including Basic concept of hazardous wastes, methods for treatment, storage and handling, case studies of hazard etc.	least 2 cases of Hazards & Episodes
➢ Industrial waste treatment (100 marks) Total 8 units all related to EE including topics like sources of wastewater, methods of dissolved solid removal, sludge disposal methods, Different types of waste treatment water pollution act etc.	Term work 25 marks and 25 marks - Characterization and Treatment plant design. - Solution of problems on B.O.D. Self purification of streams.
➢ Water Power Engineering (100 marks) Total 10 units related to EE including sources of energy, Hydropower schemes. Tidal power stations etc.	Term work – 25 works It consist of exercise based on theory.
➢ Remote sensing Application In civil Engg. Total 8 units 3 are related to EE 1. Geomorphology 2. Application in Geology 3. Application in water resources studies.	Soil studies, study of drainage density etc. oral exam based upon it.

Observation –

From the above table it is observed that for final year of B.E. Civil Engg. course EE has been introduced very deeply. Out of 8 compulsory papers 2 papers fully related to EE i.e. Earthquake Engineering and Water Resource Engineering II for 100 marks including term work on it.

For Ist sem. Total 13 electives are there out of which 3 electives are related to EE (100 marks). Advanced Engineering Geology, Air Pollution and Control, Solid Waste Management – I including term work on it.

For 2nd Sem. EE has been introduced in elective paper out of 13 papers, 4 papers are related to EE (each of 100 marks). Hazardous Waste Management, Industrial waste treatment, Water power Engineering and Remote Sensing Applications in Civil Engg.

Along with this seminar for 50 marks in first semester is based on Town and country planning, Earthquake engineering, Environmental Engineering, Water Resources Engineering, Disaster management etc.

Interpretation –

It can be said that, for final year B.E. Civil Engg. course EE has been introduced. In compulsory and Elective paper satisfactory weightage has been given to EE. Term work and oral exam are related to EE included. Seminars on EE are also compulsory. Earthquake Engineering, Water Resource Engineering, Air Pollution Control, Solid Waste Management are important EE components in theory as well as practicals.

Table No.10

Component of Environment Education introduced at 4th yr. B.E. course Environmental Engineering

Theory	Practical
Total 5 papers each of 100 marks 4 papers are compulsory and 1 elective out of 4, 2 related to EE. 1) Air pollution and control (100 Marks) Total 9 units while paper related to EE. concept of atmosphere, sources of pollution. Air pollution control, act and etc.	Term work 50 marks + 25 marks oral - Problem of air pollution - Problem of air pollution control equipments designs and collection efficiency. - sampling and analysis of Ambient Air. - Sampling and analysis of stock or automobile exhaust.
2) Sanitary Chemistry and Microbiology Total 10 units. Basic concept of biochemistry Algae classification, it's role in waste water treatment, Control of Microbial population, physical and chemical method.	Term work 50 marks + 25 marks oral - Determination of Heavy metals in water and waste water sample related to EE.
Elective – I 1) Solid waste management total 9 units – origin of domestic solid wastes, origin of solid waste, effects on environment, solid waste management.	Term work 25 marks Project work on design of refuse collection and disposal for solid wastes from industry or a medium sized township

2) Water and waste water management Total 9 units Water supply and sewage system, project planning, cost of operation and maintenance etc.	Term work 25 marks Application of computer techniques.
3) Industrial waste treatment (100 marks) Total 8 units – Use of water in industry, sources of waste water. methods of dissolved solid removal, sludge disposal methods, Different types of waste treatment water pollution act etc.	Term work 50 marks - Visit report at least two - Study of one Industrial waste - Steam sampling survey
4) Advanced water and waste water treatment (Total 100 marks) total 12 units. 6 units related to EE slude treatment and disposal method Nutrient removal, tertiary treatment processes, waster water disposal and reuse etc.	Term work 50 marks - Design of waste water supply scheme - Design of complete waste water treatment plant.
5) Environmental policy and Law (Total 100 marks) Total 6 units. Water acts, Air pollution act Noise pollution act, Hazardous material act. Municipal wastes rules 1999, Conventional and Non-conventional energy sources,	No Practical

Ethical and Economic related Environmental issues.	
Seminar – - Identification of problem and survey - Survey of Industrial municipal waste treatment and waste Characterization. - Water supply project for Urban and rural area. - Solid waste management for city.	Term work 50 marks
Compulsory paper 1) Environmental Risk assessment (Total 100 marks) Total 6 units. Environmental risk, types of risk, Risk management etc.	Term work 50 marks 6 Tutorials based on theory
2) Environmental sanitation (Total 100 marks) 8 units - Man and environment, Public Health activities, transmission of diseases through air, water, food and contacts and its preventive measures	Term work 50 marks based on theory
3) Disaster planning and risk analysis (Total 100 marks) Total 4 units - Industrial safety laws protection and preventive measures for accidents and hazards	Term work 25 marks 5 tutorial based on theory

- Natural calamities and Environmental damages - Preventive measures for food control and greenhouse effect etc.	
4) Energy system and recycling (Total 100 marks) Total 5 units. - Conventional sources of energy, Commercial sources of energy, Nuclear energy, Hydro-Electric Energy, Introduction to Tidal and wave energy , wind energy, Biomass energy etc.	Term work 25 marks based on theory
5) Environmental Instrumentation (Total 100 marks) Total 16 units 4 units related to EE measurements of different metals in industrial waste, measurement and analysis of toxic metals in waste water, Biogas analysis, water filtration Disinfections, softening etc.	Term work 25 marks Calibration of at least six instruments from above theory
6) Noise Pollution and control Total 100 marks) Total 6 units Sources of Noise Pollution, types of noise pollution its effects on health, physiological and Psychological hazards, Engineering control of Noise legal aspect etc.	Term work 50 marks based on theory
7) Project work (200 marks) Problems Identified, Data	

collection, Laboratory work on the analysis and presentation of data by using computers.	

Observation –

From the above table it is observed that for final year B.E. Environmental Engineering whole syllabus is related with EE. Total 5 papers for 100 marks, Air Pollution &control, Sanitary Chemistry &Microbiology and 50 marks practical based on each paper included in syllabus along with this seminar based on EE for 50 marks and project work at the end of the year for 200 marks based on EE included in syllabus.

Interpretation –

It can be said that, EE is introduced very systematically for final year B.E. Environmental Education Total 5 papers for 100 marks and 50 marks practical based on each paper included in syllabus along with this seminar based on EE for 50 marks and project work at the end of the year for 200 marks based on EE included in syllabus.

Note- For 2nd yr. Mechanical Engineering no EE related topics included in syllabus so it is not considered for analysis.

Table No.11

Component of Environment Education introduced at 3rd & 4th year B.E. course Mechanical Engineering .

Theory 3rd year Mechanical Engineering Compulsory part	Practical
Total 12 papers 1 paper is related to EE paper 1 Energy Engineering for 100 marks. The components are Man and energy, Solar Energy, Wind energy, Geothermal energy, Tidal power, Ocean thermal energy, wave energy, Energy management, Energy audit.	No Practical work
4th yr. Mechanical Engineering	
Theory	Practical
Compulsory Total 8 papers one is related to EE 1) Power plant Engineering for 100 marks Total 8 units : Resources and development of Power in India, Environmental aspects of power generation, Energy storage system, Instrumentation and control of power plant.	Term work – 25 marks Total 8 - Study of various pollution control devices. - Study of various energy storage devices - Visits to non-conventional power plant, steam power plant. - Measurement of pH/ dissolved O_2/ Gas analysis

Observation –

From above table it is observed that for 3rd year B.E. of Mechanical Engineering one compulsory paper is related to EE(for 100 marks)included in syllabus. No practical work or term work for this paper has been included. For 4th year Mechanical Engineering one compulsory paper is related to EE(for 100 marks) and term work is for 25 marks .

Interpretation –

In 3rd and 4th year of Mechanical Engineering one paper each is totally related to Environment – Energy Engineering for 3rd year and power plant Engineering for 4th year. The term work include practicals related to pollution and energy

Table No. 12

Components of Environment Education Introduced at LL.B. course :

(Both 3 years and 5 years)

Theory Course	Practical Part
➢ Course Period i) 3 year ii) 5 years ➢ The syllabus related to laws is same for both the courses. The 5 years course includes papers related to subjects of their basic subjects of their basic degrees such as History Political Science etc. **Compulsory Part** Compulsory part/papers – 10 papers - 100 marks ➢ Paper VI – Environmental Laws ➢ It is for Sem III & IV of 3 years. Course & Sem VII and VIII 5 years course. ➢ Total marks – Theory for 80 marks Project for 20 marks There are total 9 units in this paper. For Sem III of 3 years course and Sem VII of 5 years course there are five units as follows. 1) Concept of Environment and pollution 2) Legal control : Historical Perspective 3) Constitutional perspectives 4) Water and Air pollution 5) Noise Pollution For Sem IV of 3 years course and Sem VIII of 5 years course there are 4 units as follows 1) Environmental protection 2) Forest and Greenery 3) Internation regime 4) Prevention of cruelty to Animals.	20 marks practical Related to Environment

Observation :

It is observed from the above table that in LL.B. course of Shivaji University in the compulsory part one paper of 100 Marks (80 marks theory and 20 marks project) entitled 'Environmental Laws' has been included in both, 3 years course and 5 years course.

This paper includes 9 units 5 in one semester and 4 in the next. In those 9 units Fundamental knowledge regarding Environment and the Laws for protection of Environment are included.

Interpretation :

It can be said that in the LL.B. course (Both 3 years & 5 years) there is one paper of marks entitled 'Environmental Laws' which includes basic concepts related to Environment and its problems, as well the content required for Law Profession i.e. different environmental laws. Thus it can be said that the theory part of Law syllabus has given the proper weightage as far as the Law Profession is concerned.

The students from Law colleges expressed their expectation for inclusion of practicals related to the study of cases filed in relation with Environmental Degradation.

Table No.13

Components of Environment Education Introduced at M.B.B.S. Course

Theory	Practical
Course Period – 4 year Total Phases – 3 (Each phase is compulsory) In 3 phases units related to EE are included as follows. **Phase I** – 4 subjects each for (200 marks) 1) The paper Human Anatomy contains 1 unit Environmental Biochemistry. 2) Introduction to community medicine whole paper is related to EE including 13 units related to Basic concepts of health, population & health, pollution and health, Hospital management, Health problems of the world	60 marks Practical for each subject Field visits to. - Sterilization section - Primary health centre - Public Health laboratory
Phase II 4 subjects each for (300 marks) 1) General Pathology – containing one unit- general microbiology including waste disposal, classification of waste, treatment etc. 2) Preventive and social Medicine	120 marks Clinical posting lecture cum demonstration. 1) Sterilization, the physical and chemical agent methods of waste disposal Seminar on topics like Disaster management, Road traffic accidents, Population Explosion.

General Epidemiology contains total 8 units out of which 4 units are related to EE including basic Environmental Health, Disposal of hospital waste, liquid waste disposal, effects of pollution on human health etc.	
Phase III – 3 subjects out of which one is community medicine, Theory for 170 marks 16 units containing topics related to community development programmes, National Health policy. Health planning and management, National Health programmes, occupational health etc.	30 marks practical clinical posting Total II practicals - Health education activities in school - Clinical case presentation on disasters.

Observation –

From the above table it is observed that for M.B.B.S. course EE has been introduced in all 3 phases. In each phase under the paper 'community medicine' EE has been introduced and the practical work is based on it. Basic concepts of health, Pollution and health, Hospital management, Waste disposal, effects of Pollution on human health etc. have been included in syllabus.

In practical part Seminar on Disaster Management, Population Explosion, Traffic accidents etc. have been included.

Interpretation –

It can be said that for M.B.B.S. course EE has been introduced in all the 3 phases and related practicals have also been introduced the syllabus in syllabus working hours for each part have been mentioned clearly.

Effects of pollution on Health, Hospital and other waste Management, occupational Health, Environmental Health are the important topics included in theory as well as practicals.

Graph No.1

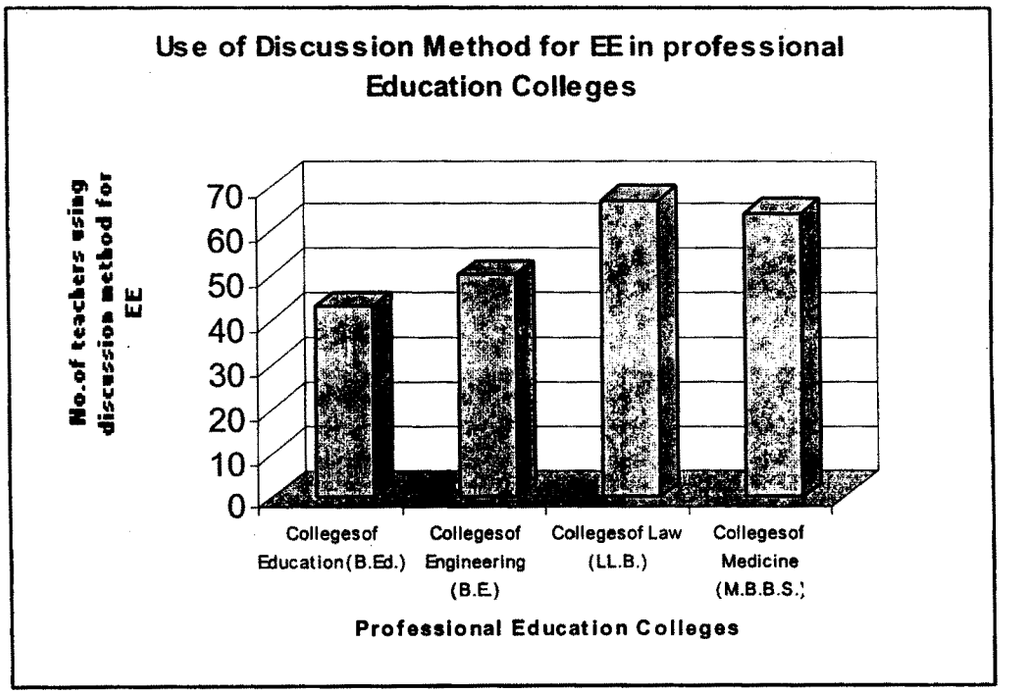
Use of Discussion Method for EE in professional Education Colleges
No.of teachers using discussion method for EE
70
60
50
40
30
20
10
0
Collegesof Education(B.Ed.)
Collegesof Engineering (B.E.)
Collegesof Law (LL.B.)
Collegesof Medicine (M.B.B.S.)
Professional Education Colleges

Table No.14 to 21 are related to objective No.2

Objective No.2 To identify the teaching strategies used for Environmental Education by teachers in various Professional Education colleges.

Table No. 14

Teaching Methods Used For Teaching EE.

(Teachers questionnaire – Q.No.1)

Sr. No.	Which teaching method do you use for teaching Environment Education Paper?	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges 7 Teachers	%	3 Colleges 4 Teachers	%	3 Colleges 3 Teachers	%	3 Colleges 14 Teachers	%
1	Lecture Method	07	100%	04	100%	03	100%	14	100%
2	Discussion Method	03	43%	02	50%	02	67	09	64%
3	Seminar Method	03	43%	01	25%	00	00	04	29%
4	Any other								
	1. Project Method	02	29%	00	00%	00	00%	14	100%
	2. Case study	00	00%	00	00%	00	00%	00	00%
	3. Excursion	00	00%	00	00%	01	33%	00	00%

Observation –

From the above table it is observed that,

1) For teaching EE all (100%) concerned teachers from all courses use Lecture method.
2) For teaching EE, Discussion method is used by 43% B.Ed. teachers 50% Engineering college teachers, 67% Law college teachers & 64% Medical college teachers.
3) Seminar method is used by 43% B.Ed. college teachers, 25%. Engineering college teachers, 29% Medical college teachers.
4) Project method is used by 29% B.Ed. college teachers only.

5) Case study method is used by all (100%) M.B.B.S. college teachers.

6) Excursion method is used by 33% Law teachers.

Interpretation -

It can be said that 1) For teaching EE Lecture method is used by all concerned (100%) teacher from all courses.

2) For teaching EE Discussion method is used by few (43%) B.Ed college teachers, about half of the (50%) Engineering college teachers majority (67%) Law college teachers Medical college teachers.

3) Seminar method is used by few (43%) B.Ed. College teachers, very few (25%) Engineering college teachers and very few (29%) Medical college teachers.

4) Project method is used by very few (29%) B.Ed. college teachers only.

5) Case study method is used by all (100%) Medical college teachers.

6) Excursion method is used by few (33%) Law college teachers only.

Counter data was collected from students. It was observed that students also gave the same information regarding the methods used for teaching EE at various. Professional Education colleges. There was no contradiction in the information given by the teachers and that given by the students.

Table No. 15

Use Of Different Teaching Methods Integrated Together For Teaching EE

(Teachers questionnaire – Q.No.2)

Sr. No.	Do you use different teaching methods integrated together for teaching Environment Education Paper?	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of (M.B.B.S.)	
		7 Colleges 7 Teachers	%	3 Colleges 4 Teachers	%	3 Colleges 3 Teachers	%	3 Colleges 14 Teachers	%
1	Yes	06	86%	04	100%	03	100%	04	100%
2	No	01	14%	0	0	0	0	0	0

Observation –

From the above Table it is observed that, for teaching EE use of different teaching methods integrated together are used by 86% B.Ed. college teachers, 100% Engineering college teachers, 100% Law college teachers and 100% Medical college teachers.

Interpretation -

It can be said that, for teaching EE use of different teaching methods integrated together are used by majority (86%) B.Ed. college teachers, all (100%) Engineering college teachers, all (100%) Law college teachers and all (100%) medical college teachers who teach EE or EE related subjects

Counter data was collected from students. It was observed that students also gave the same information regarding the use of different teaching methods integrated together for teaching EE at various Professional Education colleges.

There was no contradiction in the information given by the teachers and that given by the students.

Table No. 16

Types of Integration Used For Teaching EE

(Teachers questionnaire – Q.No.3)

Sr. No.	Which all the following are the types of integration you do?	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges 7 Teachers	%	3 Colleges 4 Teachers	%	3 Colleges 3 Teachers	%	3 Colleges 14 Teachers	%
1	Lecture and Question-Answer Method	06	86%	03	75%	02	67%	12	86%
2	Project & Discussion	03	43%	02	50%	0	0	03	21%
3	Excursion & Discussion	03	43%	04	100 %	0	0	03	21%
4	Seminar & Discussion	04	57%	02	50%	01	33%	03	21%
5	Experimental Method & Discussion Method	0	0%	03	75%	0	0	05	36%
6	Any other 1. Games & Discussion 2. Cases Study and Discussion	01 0	14% 0%	0 0	0 0	0 0	0 0	0 04	0 100%

Observation –

From above table it is observed that, for teaching EE Lecture & Question-Answer method are integrated by 86% B.Ed. college teachers, 75% Engineering college teachers, 67% Law college teachers and 86% Medical College teachers.

For teaching EE project and discussion method are integrated by 43% B.Ed.college teachers, 50% Engineering college 21% Medical college.

For teaching EE Excursion and Discussion method are integrated by 43% B.Ed. college teachers, 100% Engineering college teachers and 21% Medical college teachers.

For teaching EE Seminar & Discussion method are integrated by 57% B.Ed. college teachers, 50% Engineering college teachers, 33% Law college teachers and 21% Medical college teachers.

For teaching EE experimental & Discussion method are integrate by 75% Engineering college teachers & 36% medical college teachers. For teaching EE Games & Discussion method are integrated by14% B.Ed. college teachers.

For teaching EE case study and Discussion method are integrated by 100% medical college teachers.

Interpretation -

It can be said that, for teaching EE Lecture & Question –Answer method are integrated by majority of B.Ed. College teachers, Engineering college teachers, Law college teachers and Medical college teachers. (86%, 75%, 67% and 86% respectively).

Project & Discussion method are integrated by few (43%) B.Ed. college teachers, half of the (50%) Engineering college teaches and very few (21%) Medical college teachers.

Excursion & Discussion method are integrated by few (43%) B.Ed. college teachers and all of (100%) Engineering college teachers & very few (21%) Medical college teachers.

Seminar & Discussion method are integrated by majority (57%) B.Ed. college teachers, half of the (50%) Engineering college teachers and very few (21%) Medical college teachers.

Experimental & Discussion method are integrated by majority (75%) Engineering college teachers & few (36%) medical college teaches.

Games & Discussion method are integrated by very few (14%) B.Ed. college teachers only.

Case study and discussion method are integrated by all (100%) Medical college teachers only.

Table No. 17

The Teaching Methods That Teacher Feel Most Appropriate For Teaching EE

(Teachers questionnaire – Q.No.4)

Sr. No.	Which of the following teaching methods do you think is most appropriate for teaching environment education ?	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges 7 Teachers	%	3 Colleges 4 Teachers	%	3 Colleges 3 Teachers	%	3 Colleges 14 Teachers	%
1	Lecture Method	03	43%	01	25%	02	67%	0	0%
2	Project Method	02	29%	03	75%	01	33%	05	36%
3	Discussion Method	05	71%	02	50%	02	67%	07	50%
4	Other Method								
	1) Survey Method	01	14%	00	0%	01	33%	00	00%
	2) Field work	01	14%	3	75%	00	0%	5	36%
	3) Seminar method	02	29%	0	0%	0	0%	3	21%
	4) Games	01	14%	0	0%	0	0%	0	0%

Observation –

From the above table it is observed that, according to 43% B.Ed. college teachers 25% Engineering college teachers, 67% Law college teachers who teach EE or EE related subjects most appropriate method for teaching EE is Lecture method.

According to 29% B.Ed. college teachers, 75% Engineering college teachers project method is appropriate for teaching for EE. 33% Law college teachers who teach EE or EE related subjects and 36%

medical college teachers project method is most appropriate for teaching EE & EE Related subjects.

According to 71% B.Ed. college teachers, 50% Engineering College teachers, 67% Law college teachers, 50% Medical college teachers who teach EE or EE related subjects discussion method is most appropriate for teaching EE.

According 14% B.Ed. college teachers and 33% Law college teachers who teach EE or EE related subjects EE & EE related subjects survey method is most appropriate method for teaching EE.

According to 14% B.Ed. college teacher and 75% Engineering college teachers, 36% Medical college teacher EE & EE Related subjects field work is most appropriate medical for EE.

According to 29% B.Ed. College teaches and 21% Medical College teachers who teach EE or EE related subjects EE & EE related subjects seminar method is most appropriate for teaching EE.

According to 14% B.Ed. College teachers who teach EE or EE related subjects EE & EE related subjects Games method was most appropriate for EE.

Interpretation –

It can be said that for teaching EE most appropriate method is lecture method according to few (43%) B.Ed. College teachers, very few (25%) Engineering college teachers, and majority (67%) law college teachers who teach EE or EE related subjects.

Project method is most appropriate method according to very few (B.Ed) College and law college teachers (28% and 33% respectively) and majority (75&) Engineering college teachers who teach EE or EE related subjects.

Discussion method is the most appropriate method according to majority B.Ed. College and law college teachers (71% & 67%

respectively) and few (50%) Engineering college teachers who teach EE or EE related subjects.

Table No. 18

Use Of Any Special Innovative Strategy For Teaching EE

(Teachers questionnaire – Q.No.5)

Sr. No.	For effective teaching of Environment Education do you use any special innovative teaching strategy?	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges 7 Teachers	%	3 Colleges 4 Teachers	%	3 Colleges 3 Teachers	%	3 Colleges 14 Teachers	%
1	Yes	00	0%	00	0%	00	0%	0	0%
2	No	07	100%	04	100%	03	100%	14	100%

Observation –

From Table it is was observed that for teaching EE any special innovative strategy is not used by any teacher who teach EE or EE related subjects EE & EE related subjects in Professional Education Colleges.

Table No. 19

Opinion On Teaching Strategies Used For Teaching EE

(Teachers questionnaire – Q.No.10)

Sr. No.	Give your opinion on teaching strategies used for teaching Environment Education?	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges 7 Teachers	%	3 Colleges 4 Teachers	%	3 Colleges 3 Teachers	%	3 Colleges 14 Teachers	%
1	Use of games survey, project & discussion is important.	04	57%	04	100%	02	67%	04	29%
2	Besides lecture method field experiences are important.	01	14%	00	0%	02	67%	07	50%
3	Current and new knowledge should be given.	02	29%	00	00%	03	100%	08	57%

Observation –

From above Table, it is observed that, opinion of teachers on teaching strategies used for teaching EE at B.Ed., B.E., LL.B. & M.B.B.S. Courses.

1) Use of games, survey method, project & discussion method are important according to 57% B.Ed. college teachers, 100% Engineering college teachers, 67% Law college teachers & 29% Medical college teachers.

2) Besides lecture method field experiences are important according to 14% B.Ed. College teachers, 67% Law college teachers & 50% Medical College teachers.

3) Current and new knowledge should be given according to 29% B.Ed. teachers, 100% law college teachers & 57% medical college teachers.

Interpretation –

It can be said that, opinions of teaches on teaching strategies used for teaching EE at B.Ed., B.E., LL.B. & M.B.B.S. Courses.

1) Use of games, survey method, project & discussion method is important according to majority (57%) B.Ed. college teachers, all (100%) Engineering college teachers majority (67%) Law college teachers & very few (29%), Medical college teachers.

2) Besides lecture method field experiences are important according to very few (14%) B.Ed. college teachers, majority (67%) Law college teachers & half of (50%) medical college teachers.

3) Current & new knowledge should be given according to very few (29%) B.Ed. college teachers all (100%) law college teachers & majority (57%) medical college teachers.

Graph No.2

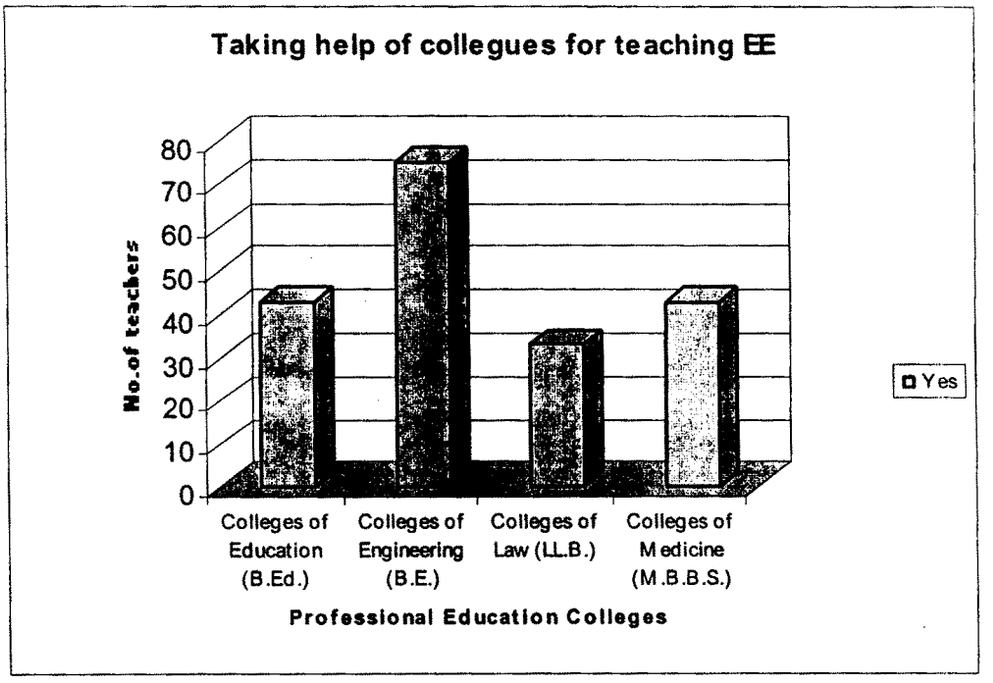
Taking help of collegues for teaching EE
No.of teachers
80
70
60
50
40
30
20
10
0
Colleges of Education (B.Ed.)
Colleges of Engineering (B.E.)
Colleges of Law (LL.B.)
Colleges of Medicine (M.B.B.S.)
Professional Education Colleges
Yes

Table No. 20

Taking Help Of Colleagues For Teaching EE

(Teachers questionnaire – Q.No.21)

Sr. No.	While teaching Environment Education do you take help of your colleagues?	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges 7 Teachers	%	3 Colleges 4 Teachers	%	3 Colleges 3 Teachers	%	3 Colleges 14 Teachers	%
1	Yes	03	43%	03	75%	01	33%	06	43%
2	No	04	57%	01	25%	02	67%	08	57%

Observation –

From above table it is observed that, while teaching EE help is taken from colleagues by 43% B.Ed. college teachers, 75% Engineering college teachers, 33% Law college Teachers & 43% Medical college teachers only.

Interpretation –

It can be said that, while teaching EE few (43%) B.Ed. colleges teachers, majority (75%) Engineering college teachers, few (33%) Law college teachers & few (43%) Medical college teachers take the help of their colleagues.

Table No. 21

Purpose Of Taking The Help Of Colleagues

(Teachers questionnaire – Q.No.22)

Sr. No.	If yes, for what reason do you take help of your colleagues?	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges 7 Teachers	%	3 Colleges 4 Teachers	%	3 Colleges 3 Teachers	%	3 Colleges 14Teachers	%
1	Content Enrichment	01	14%	00	0%	01	33%	03	21%
2	To choose teaching strategies/ Method	00	00%	01	25%	00	00%	00	00%
3	Both Content enrichment & teaching strategies	02	29%	02	50%	00	0%	03	21%

Observation –

From above table it is observed that for following purposes teachers take the help of their colleagues,

14% B.Ed. college teachers, 33% Law college teachers & 21% Medical college teachers take help from their colleagues for the content enrichment.

28% Engineering college teachers take help of their colleagues to choose teaching strategies or methods

29% B.Ed. College teachers, 50% Engineering College teachers & 21% Medical college teachers take help for both content enrichment and to choose the teaching strategies or methods.

Interpretation –

It can be said that the teachers in B.Ed. Colleges, Law Colleges, Engineering Colleges and Medical Colleges take the help of their colleges for content enrichment purpose and in choosing the teaching strategies/methods.

Table No.22 to 53 related to objective No. 3

Objective No.3 To identify the resources available at various Professional Education Colleges.

Table No. 22

Any other course related to EE

(Principals questionnaire – Q.No.3)

Sr. No.	Which courses related to Environment Education have been started in your college?	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges	%	3 Colleges	%	3 Colleges	%	3 Colleges	%
1	Yes	00	00%	00	00%	00	00%	00	00%
2	No	07	100%	03	100%	03	100%	03	100%

Observation –

From the above table it is observed that any course related to EE has not been started in any B.Ed. college, Engineering college, Law college or any Medical college.

Graph No.3

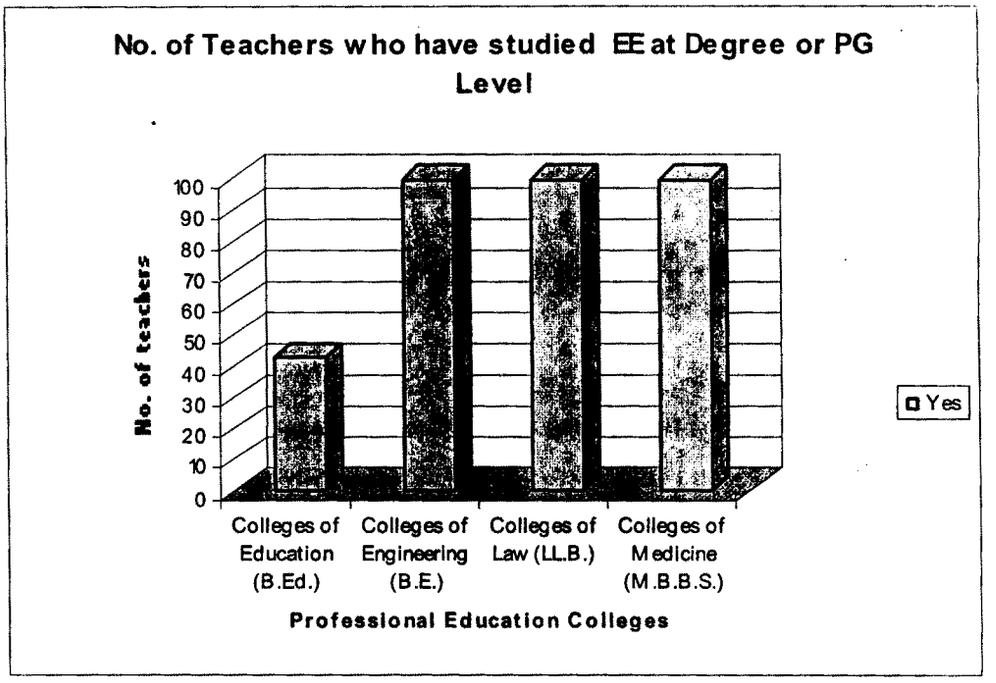
No. of Teachers who have studied EE at Degree or PG Level
No. of teachers
100
90
80
70
60
50
40
30
20
10
0
Colleges of Education (B.Ed.)
Colleges of Engineering (B.E.)
Colleges of Law (LL.B.)
Colleges of Medicine (M.B.B.S.)
Professional Education Colleges
Yes

Table No. 23

No. of Teachers who have studied EE at Degree/P.G. Level

(Teachers questionnaire – Q.No.11)

Sr. No.	Have you studied Environment Education component at your degree/P.G. level?	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges 7 Teachers	%	3 Colleges 4 Teachers	%	3 Colleges 3 Teachers	%	3 Colleges 14 Teachers	%
1	Yes	03	43%	04	100%	03	100%	14	100%
2	No	04	57%	00	00%	00	00%	00	00%

Observation –

From the above table it is observed that EE component has been studied at Degree/PG level by 43% of the B.Ed. college teachers, 100% Law college teachers 100% of the Engineering college teachers & 100% Medical college teachers who teach EE or EE related subjects in their colleges.

Interpretation –

It can be said that, EE component has been studied at Degree/PG level by few (43%) B.Ed. college teachers, all (100%) Law college teachers, all (100%) Engineering college teaches & all (100%) Medical college teachers.

Graph No. 4

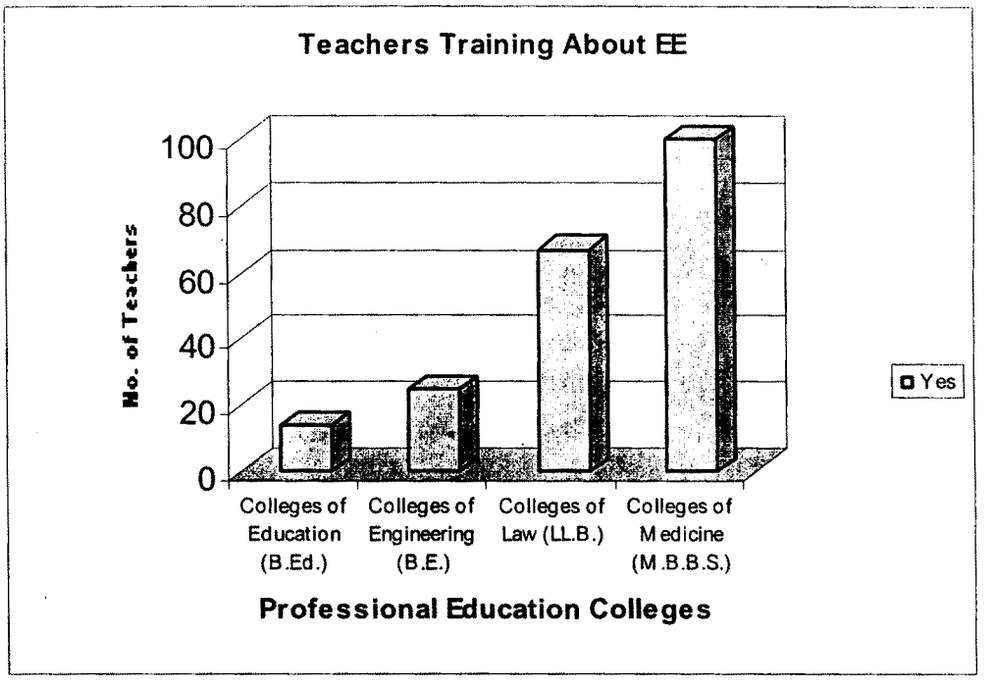
Teachers Training About EE
No. of Teachers
100
80
60
40
20
0
Colleges of Education (B.Ed.)
Colleges of Engineering (B.E.)
Colleges of Law (LL.B.)
Colleges of Medicine (M.B.B.S.)
Professional Education Colleges
Yes

Table No. 24

Teachers' Training about EE

(Teachers questionnaire – Q.No.12)

Sr. No.	Have you received some sort of training in Environment Education?	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges 7 Teachers	%	3 Colleges 4 Teachers	%	3 Colleges 3 Teachers	%	3 Colleges 14 Teachers	%
1	Yes	01	14%	01	25%	02	67%	14	100%
2	No	06	86%	03	75%	01	33%	00	00%

Observation –

From the above Table it is observed that, training of EE has been received by 14% B.Ed. college teachers, 25% Engineering college teachers, 67% Law college teachers & 100% Medical college teachers who teach EE & EE related subjects.

Interpretation –

It can be said that, training of EE is received by very few (14%) B.Ed. college teachers, very few (25%) Engineering college teachers, majority (67%) Law colleges teachers & all (10%) Medical college teachers who teach EE & EE related subjects. Education or Environment related subjects

Table No. 25

Details about Training of Teachers Related to EE

(Teachers questionnaire – Q.No.13)

Sr. No.	If yes what type of training have you received?	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges 7 Teachers	%	3 Colleges 4 Teachers	%	3 Colleges 3 Teachers	%	3 Colleges 14 Teachers	%
1	3 days/regular mode	EE workshop 1	14%	00	00%	Environmental pollution workshop 1	33%	00	00%
2	1 week/regular mode	00	00%	Environm-ental Engg. workshop 1	25%	00	00%	00	00%
3	3 years/regular mode	00	00%	00	00%	00	00%	P.G.Course help training compulsory 14	100%

Observation –

From the above table it is observed that

1) 14% B.Ed. college teachers have undergone the training under EE workshop for 3 days in regular mode.
2) 25% Engineering college teachers have undergone the training under Environment Engineering working for 1 week in regular mode.
3) 33% Law college teachers have undergone the training under Environmental pollution workshop for 3 days in regular mode.
4) All (100%) Medical college teachers undergone the Health Training which is compulsory for 3 years in regular mode.

Interpretation –

From about table it can be said that very few (14%) B.Ed. College teachers have undergone the training under EE workshop for 3 days in regular mode.

Very few (25%) Engineering college teachers have undergone the training under Environmental Engineering workshop for 1 week in regular mode. Few (33%) Law college teachers have undergone training in the Environmental Pollution workshop for 3 days in regular mode.

All (100%) Medical college teachers undergone the Health training which is compulsory for 3 years in regular mode.

Table No. 26

Any Separate Course Related To EE Completed by Teachers

(Teachers questionnaire – Q.No.15)

Sr. No.	Have you completed any course related to Environment Education?	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges 7 Teachers	%	3 Colleges 4 Teachers	%	3 Colleges 3 Teachers	%	3 Colleges 14 Teachers	%
1	Yes	00	00%	00	00%	00	00%	00	00%
2	No	07	100%	04	100%	03	100%	14	100%

Observation –

From the above table it is observed that any separate course related to EE was not completed by any B.Ed. college teachers, any Engineering college teachers, any Law college teacher & any Medical college teacher.

Interpretation –

It can be said that, no teacher from any professional education College has completed any separate course related to EE.

Note : As no separate course has been completed by any teacher the response to question no.16 & 17 was nil.

Q.No.16) If yes, give the name and the structure of the course?

Q.No.17) How this course proved to be beneficial for your enrichment as a teacher of EE?

Table No. 27

Resourceful Environment Teacher : opinion about self

(Teachers questionnaire – Q.No.8)

Sr. No.	Do you think that you are a resourceful Environment Education teacher?	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges 7 Teachers	%	3 Colleges 4 Teachers	%	3 Colleges 3 Teachers	%	3 Colleges 14 Teachers	%
1	Yes	07	100%	04	100%	03	100%	14	100%
2	No	00	00%	00	00%	00	0.0%	00	0.0%

Observation –

From the above table it is observed that according to 100% B.Ed. college teachers, 100% Engineering college teachers, 100% Law college teacher, 100% Medical college teachers they are resourceful EE teachers.

Interpretation –

It can be said that, all (100%) B.Ed. college teachers, all (100%) Engineering college teachers, all (100%) Law college teachers & all (100%) Medical college teachers feel that they are resourceful EE.

Table No. 28

Justification of being a resourceful EE teacher

(Teachers questionnaire – Q.No.9)

Sr. No.	If yes, please justify.	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges 7 Teachers	%	3 Colleges 4 Teachers	%	3 Colleges 3 Teachers	%	3 Colleges 14 Teachers	%
1	Studied Environment Education at P.G. Degree level	03	43%	04	100%	03	100%	14	100%
2	Experience of teaching of Environment Education	07	100%	04	100%	03	100%	08	57%
3	Using different methods of teaching	03	43%	03	75%	02	67%	03	21%
4	Publications in Environment Education	01	14%	00	00%	01	33%	00	00%
5	Research in Environment Education	02	29%	00	00%	01	33%	00	00%
6	Work as resource person in Environment Education	02	29%	00	00%	01	33%	04	29%
7	Conducting Extra curricular activities for Environment Education	03	43%	02	50%	02	67%	03	21%

Observation –

From the above table it is observed that, teachers feel that the are resourceful EE teachers. They justified their answer as follows :

1) 43% B.Ed. college teachers, 100% Engineering college teachers, and 100% Law college teachers have studied Environment Education P.G. level.

2) 100% B.Ed. college teacher 100% Engineering college teacher 100% Law college teacher & 57% Medical college teachers have enough experience of teaching EE.

3) 43% B.Ed. college teachers 75% Engineering college teachers, 67% Law college teachers & 21% Medical college teachers use different teaching methods for imparting of EE.

4) 14% B.Ed. college teachers & 33% Law college teachers have publications on EE.

5) 29% B.Ed. college teachers & 33% Law college teachers have done/are doing research on EE.

6) 29% B.Ed. college teachers, 33% Law college teachers & 29% Medical college teachers work as resource person in EE.

7) 43% B.Ed. college Teachers, 50% Engineering college teacher 67% Law college teachers & 21% Medical college teachers conduct extra-curricular activities related to EE.

Interpretation –

It can be said that, teachers feel that they are resourceful EE teachers. They justified their answer as follows.

1) Few (43%) B.Ed. college teacher, few all (100%) Engineering college teachers, all (100%) Law college teachers & all (100%) Medical college teachers have studied EE at P.G.level
2) All (100%) B.Ed. college teachers, Engineering college teachers, Law college teachers & majority (57%) Medical college teachers have enough experience of teaching Environment Education.

3) Few (43%) B.Ed. college teachers, majority (75%) Engineering college teachers, majority (67%) law college teachers & very few (21%) Medical college teachers use different teaching methods for imparting EE.
4) Very few (14%) B.Ed. college teachers & few (33%) Law college teachers have publications on EE.
5) Very few (29%) B.Ed. college teachers & few (33%) Law college teachers have done/are doing research on EE.
6) Very few (29%) B.Ed. college teachers, few (33%) law college teachers & very few (29%) Medical college teachers work as resource persons in EE.
7) Few (43%) B.Ed. college teachers, few (50%) Engineering college teachers, majority (67%) Law college teachers & very few (21%) Medical college teachers conduct extra-curricular activities related to EE.

Table No. 29

A separate Environmental Lab of EE

(Teachers questionnaire – Q.No.18)

Sr. No.	Do you have a separate Environmental Lab in your College?	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges 7 Teachers	%	3 Colleges 4 Teachers	%	3 Colleges 3 Teachers	%	3 Colleges 14 Teachers	%
1	Yes	00	00%	04	100%	00	00%	14	100%
2	No	07	100%	00	00%	03	100%	00	00%

Observation –

From the above it is observed that a separate Environment Lab is present in 100% Engineering colleges & 100% Medical colleges.

There is no separate Environmental Lab in any B.Ed. college & any Law college.

Interpretation –

It can be said that a separate Environment Lab is present in all (100%) Engineering colleges & all (100%) Medical colleges.

There is no separate Environmental Lab in any B.Ed. college & any Law college.

Table No. 30

Equipments related to EE and their quality

(Lab Assistants questionnaire – Q.No.1)

Sr. No.	Gives the name of equipments related to Environment Education in your laboratory	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges	%	3 Colleges 3 Lab Asst.	%	3 Colleges	%	3 Colleges 3 Lab Asst.	%
1	Major equipments for EE Practicals pH meter Nephelometer, B.O.D. Incubator Sound level meter, Jar Test Apparatus. Respirable dust sampler. Digital noise meter / All adequate and good conditions	00	00%	03	100%	00	00%	00	00%
2	Spectro Photometer and Jar Test apparatus adequate and in good conditions	00	00%	02	67%	00	00%	00	00%
3	Horrocks kit, O.T. Kit, Rain guage, Barometer, water sampling bottle adequate and in good conditions	00	00%	00	00%	00	00%	03	100%

Observation and Interpretation –

It is observed from the above table that as reported by the Lab Assistant in Engineering Colleges equipments related to EE such as Nephelometer, BOD incubator sound level meter, Jar Test Apparatus, Respirable dust sample, Digital Nose meter. Spectrophotometer etc. are available in their lab and they are in adequate quantities and good condition. Similarly as reported Lab Assistants in Medical Colleges equipments related to EE such as Horrocks Kit, 0.7 Kit, Rain Gauge, Barometer, Water Sampling Bottle etc. in their Lab and these equipments are in adequate quantity and in good condition.

However according to the students in those colleges some equipments are inadequate and some are not in good condition.

However if there are modern equipments related to EE and the practicals related to EE are conducted in Engineering and Medical Colleges the visits of B.Ed. College students and Law college students to those Laboratories can be beneficial to increase their awareness regarding Environmental issues.

Note – All essential equipments & material required for practical part of EE are available in Engineering & Medical colleges therefore Q.No.3 & Q.4 which depends on Q.No.1 of Lab Assistants questionnaire were not responded, so they were not analysed.

Q.No.3 If no, then what measures do you adopt to make them available?

Q.No.4 What are the difficulties of your college related to the equipments or material required for EE practicals?

Table No. 31

The Difficulties Faced By Lab Assistants While Maintaining The EE Related Equipments

(Lab Assistants questionnaire – Q.No.2)

Sr. No.	What difficulties do you face while maintaining the EE related equipments?	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges	%	3 Colleges 3 Lab Asst.	%	3 Colleges	%	3 Colleges 3 Lab Asst.	%
1	No other lab Asst. to help so it is difficult to maintain these equipment & their records.	00	00%	02	67%	00	00%	01	33%
2	Sometimes students do not used these equipments properly	00	00%	01	33%	00	00%	02	67%

Observations –

From the above table it is observed that, the difficulties faced by Lab Assistants while maintaining the EE related equipments are as follows -

According to Lab Asst. from 67% Engineering Colleges and Lab Assistants from 33% Medical colleges. There is no other Lab Asst. to help so it is difficult to maintain these equipments & their records

According to Lab Assistants from 33% Engineering Colleges and Lab Assistants from 67% Medical Colleges, sometimes students do not use these equipments properly.

Interpretation –

It can be said that, the difficulties faced by the Lab Assistants while maintaining the EE related equipments are as follows :

According to Lab Assistants from majority (67%) Engineering colleges, Lab Assistant from few (33%) Medical colleges, there is no other Lab Assistant to help so it is difficult to maintain these equipments & their records

According to Lab Assistants from few (33%) Engineering colleges & Lab Assistants from majority of the (67%) Medical colleges sometimes the students do not use the equipments properly.

Table No. 32

Information Related To EE Books Available in Library

(Librarians questionnaire – Q.No.1)

Sr. No.	Please give the following information related to Environment Education in your Library	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges 7 Librarians	%	3 Colleges 3 Librarians	%	3 Colleges 3 Librarians	%	3 Colleges 3 Librarians	%
1	Is the no. of books on EE are sufficient.								
	a) Yes	04	57%	02	67%	03	100%	02	67%
	b) No	03	43%	01	33%	00	00%	01	33%

Observations –

Number of books available related to EE & EE component are sufficient according to Librarians from 57% B.Ed. colleges, 67% Engineering colleges, 100% Law colleges and 67% Medical colleges.

Number of Books available related to EE & EE components are not sufficient according to Librarians respectively from 43% B.Ed. colleges, 33% Engineering colleges & 33% Medical Colleges.

Interpretation –

Number of books available related to EE & EE related components are not sufficient according Librarians to from majority of B.Ed., Engineering & Medical colleges (57%, 67% and 67% respectively. All (100%) Librarian from Law colleges.

Number of books available related to EE & EE related EE components were not sufficient according to Librarians from few B.Ed. colleges, Engineering colleges and Medical colleges (43%, 33% and 33%)

Counter data was collected from students. It was observed that students gave contradictory information regarding availability of books. According to the students number of books related to EE are not sufficient.

Table No. 33

Journals related to EE Available in Library

(Librarians questionnaire – Q.No.2)

Sr. No.	Please give the following information related to your library	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)			Colleges of Law (LL.B.)			Colleges of Medicine (M.B.B.S.)		
		7 Colleges 7 Librarians	%	3 Colleges 3 Librarians	No. of Colleges	%	3 Colleges 3 Librarians	No. of Colleges	%	3 Colleges 3 Librarians	No. of Colleges	%
1	Title of journal related to EE component/Number/ weekly/monthly/yearly	00	00%	1) Environment Pollution Control/Bimonthly.	01	33%	1) Environmental Law/monthly.	02	67%	1) Journal of Environmental Biology/Quarterly	02	67%
				2) Journal of Environmental Science and Engineering/ Quarterly	02	67%	2) The ICFAI Journal of Law/quarterly	01	33%	2) Indian Journal of occupational and Environmental Medicine/ Quarterly	02	67%
				3) Water & Energy/ Quarterly	02	67%				3) W.H.O's Report/ Yearly	03	100%
				4) Hydrology/ Quarterly	01	37%						

Observations –

It can be observed that except B.Ed. Colleges all other Professional Education college i.e. Engineering, Law & Medical colleges prescribe Journals related to EE

Interpretation –

It can be said that Engineering, Law & Medical colleges prescribe EE related Journals. It indicates their interest in EE however no B.Ed. college is prescribing any EE related Journal. It indicates their non-interest in EE.

Table 34 to 56 are related to objective No.4

Objective No.4 : To study the exchange of resources for Environment Education at various professional Education Colleges

Table No. 34

Association of College with Environment Related NGO

(Teachers questionnaire – Q.No.23)

Sr. No.	Is your college Associated to any Environment Related NGO?	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges 7 Teachers	%	3 Colleges 4 Teachers	%	3 Colleges 3 Teachers	%	3 Colleges 14 Teachers	%
1	Yes	01	14%	00	00%	00	00%	00	00%
2	No	06	86%	04	100%	03	100%	14	100%

Observation –

From above table it is observed that, 14% B.Ed. colleges are associated with Environment related NGO's.

Engineering colleges, Law colleges, Medical colleges are not associate with Environment related NGO's.

Interpretation -

It can be said that very few (14%) B.Ed. colleges are associated with Environment related NGOs.

Engineering colleges, Law colleges & Medical colleges are not associated with any Environment related NGOs.

Counter data was collected from students It was observed that students also gave the some information regarding association of college or institute with Environment related NGOs.

There was no contradiction in the information given.

Table No. 35

NGOs With Which college is Associated

(Teachers questionnaire – Q.No.26)

Sr. No.	If yes, with which Environment Related NGOs Colleges Associated?	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges	%	3 Colleges	%	3 Colleges	%	3 Colleges	%
1	World Wide Fund (WWF Kolhapur)	01	14%	00	00%	00	00%	00	00%

Observation –

From above table it is observed that, only 14% B.Ed. colleges are associated with an NGO i.e. World Wide Fund, Kolhapur. No college of Engineering, Law or Medical college is associated with any NGO.

Interpretation –

It can be said that only B.Ed. Colleges are associated with Environment Related NGO i.e. NGO they are also only a few (14%)

Counter data was collected from students. It was observed that students also gave the same information regarding association of colleges with NGOs.

There was no contradiction in the information, given by the teachers & that given by the students.

Table No. 36

Programmes Organized In Collaboration With NGO

(Teachers questionnaire – Q.No.25)

Sr. No.	What Environment related programmes are organized in collaboration with this NGO in your college?	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges	%	3 Colleges	%	3 Colleges	%	3 Colleges	%
1	Slide Show	01	14%	00	00%	00	00%	00	00%
2	Field work	01	14%	00	00%	00	00%	00	00%

Observation –

From above Table it is observed that programmes organized in B.Ed. colleges in collaboration with NGOs are

1) Slide shows by very few (14%) B.Ed. colleges.

2) Field visits by very few (14%) B.Ed. colleges.

Counter data was collected from students. They also gave the same information regarding the programmes organized in collaboration with NGO in Professional Education colleges. There was no contradiction in the information given by the teachers and that given by the students.

Table No.37

Colleges Associated With Any Other EE Related Institute

(Teachers questionnaire – Q.No.26)

Sr. No.	Is your college associated with any other Environment Education Related Institute?	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges	%	3 Colleges	%	3 Colleges	%	3 Colleges	%
1	Yes	00	00%	00	00%	00	00%	02	67%
2	No	07	100%	03	100%	03	100%	01	33%

Observation –

From above table it is observed that, 67% Medical Colleges are associated with other EE related institute.

B.Ed. colleges, Engineering colleges, Law college & are not associated with other EE related institute.

Interpretation –

It can be said that majority (67%) Medical colleges are associated with other Environmental education related institutes.

B.Ed. colleges, Engineering colleges, Law colleges are not associated with other EE related institutes.

Table No. 38

EE Related Institutes With Which Colleges Are Associated.

(Teachers questionnaire – Q.No.27)

Sr. No.	Which are those Environment related Institutes?	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges	%	3 Colleges	%	3 Colleges	%	3 Colleges	%
1	HFWC	00	00%	00	00%	00	00%	01	33%
2	Zilha Parishad	00	00%	00	00%	00	00%	02	67%
3	Public Health Club	00	00%	00	00%	00	00%	02	67%

Observation –

From above table it is observed that 33% Medical colleges associated with HFWC 67% Medical colleges associated with Zilha Parishad & 67% Medical colleges associated with Public Health Club.

Interpretation –

From above table it can be said that, few (33%) Medical colleges associated with HFWC & majority (67%) Medical colleges are associated with Public Health Lab and Zilha Parishad.

Table No. 39

Programmes organized in Collaboration with the Environment Related Institutes

(Teachers questionnaire – Q.No.28)

Sr. No.	What programmes are organized in collaboration with these institutes?	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges	%	3 Colleges	%	3 Colleges	%	3 Colleges	%
1	Health Camps	00	00%	00	00%	00	00%	02	67%
2	Slide Shows & lectures	00	00%	00	00%	00	00%	02	67%

Observation –

From above table it is observed that, 67% Medical colleges organize programmes like Health Camps slide shows & lectures in collaboration with other EE related institutes.

Interpretation –

It can be said that majority (67%) Medical colleges organize programmes like Health Camps, slide shows & lectures in collaboration with other EE related institutes.

Table No. 40

The Ways Other Institutes Help In Imparting EE (Principals questionnaire – Q.No.1)

Sr. No.	In what ways other institutes help you in imparting environment education?	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges	%	3 Colleges	%	3 Colleges	%	3 Colleges	%
1	Short Tours & Field visits	01	14%	01	33%	00	00%	00	00%
2	Lectures of resource persons	01	14%	00	00%	00	00%	00	00%
3	Project work, workshop or programmes	00	00%	00	00%	00	00%	02	67%

Observation –

From the above table it is observed that, other institutes help Colleges in imparting EE in following ways.

1) To 14% B.Ed. colleges and 33% Engineering colleges in arranging short tours and field visits.
2) To 14% B.Ed. colleges in arranging lectures of resource persons.
3) To 67% Medical colleges in arranging project work, workshops or programmes.

Interpretation –

It can be said that, other institutes help in imparting EE in following ways –

1) Very few (14%) B.Ed. colleges and few (33%) Engineering colleges in arranging short tours and field visits.
2) Very few (14%) B.Ed. colleges in arranging lectures of resource persons.
3) Majority (67%) Medical colleges in arranging project work, workshop or programmes.

Table No. 41

Providing Help To Other Institutes In Imparting EE

(Principals questionnaire – Q.No.2)

Sr. No.	In what ways your institute help other institutes in imparting Environment Education ?	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges	%	3 Colleges	%	3 Colleges	%	3 Colleges	%
1	Guidelines for Project work and workshops	00	00%	01	33%	01	33%	01	33%
2	Lectures	02	29%	00	00%	00	00%	02	67%
3	Equipments and books	00	00%	00	00%	00	00%	01	33%

Observation –

From the above table it is observed that, the ways of helping other institutes in imparting EE are as follows.

1) Guidelines for project work and workshops is given by 33% Engineering and 33% Medical colleges teachers who teach EE & EE related components.

2) Lectures are delivered by 29% B.Ed. college teachers, 33% Engineering teachers & 67% Medical colleges teachers who teach EE & EE related subjects.

3) Equipments & Books are made available to other institute persons by 33% Law colleges & 33% Medical colleges.

Interpretation –

It can be said that, the ways of colleges or institutes help other institutes in imparting EE are as follows.

1) Guidelines for project work and workshops is given by only a few (33%) Engineering college and a few (38%) Medical college teachers who teach EE & EE related components.

2) Lectures are delivered by very few (29%) B.Ed. college teachers & Majority (67%) Medical college teachers who teach EE & EE related subjects.

3) Equipment & Books are made available to other institutes by few (33%) Law colleges & few (33%) Medical colleges only.

Table No. 42

Organization Of Lectures Or Guidance Of Resource Persons From Other Institutes For Teaching Of EE

(Teachers questionnaire – Q.No.19)

Sr. No.	Do you organize lectures/guidance of resource persons from other institutes for teaching of units related to Environment Education?	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges	%	3 Colleges	%	3 Colleges	%	3 Colleges	%
1	Yes	01	14%	01	33%	01	33%	02	67%
2	No	06	86%	02	67%	02	67%	01	33%

Observation –

From the above table it is observed that lectures/guidance programmes of resource persons from other institutes for teaching EE are organized by 14% B.Ed. colleges, 25% Engineering colleges, 33% Law colleges and 67% Medical colleges.

Interpretation –

It can be said that lectures/ guidance programmes of resource persons from other institutes for teaching of EE are organized by few (14%) B.Ed. colleges, very few (25%) Engineering colleges, few (33%) Law colleges & 67% Medical colleges.

Counter data was collected from students. It was observed that students also gave the same information regarding the organization of lectures resource persons from other institutes for teaching of EE at various Professional Education courses.

There was no contradiction in the information given by the teachers and that given by the students.

Table No. 43

Resource Persons Invited From The Other

(Teachers questionnaire – Q.No.20)

Sr. No.	If yes, from which institutes the resource persons are invited?	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges	%	3 Colleges	%	3 Colleges	%	3 Colleges	%
1	Medical Education Institutes	00	00%	00	00%	00	00%	02 (Other Institutes)	67%
2	Law Education Institutes	00	00%	00	00%	01	33%	00	00%
3	Journalism Education Institutes	00	00%	00	00%	00	00%	00	00%
4	Engineering Education Institutes	00	00%	01 (Other Institutes)	33%	00	00%	00	00%
5	Environment Education Institutes	00	00%	00	00%	00	00%	00	00%
6	Any other 1)Forest Officers 2)WWF	01	14%	00	00%	01 00	33% 00%	00	00%

Observation –

From above table it is observed that, resource persons invited for teaching EE from other Education institutes as follows :

1) 14% B.Ed. colleges invite resource persons from W.W.F. (World Wide Fund) Kolhapur.
2) 33% Engineering colleges invite resource persons from other Engineering Education Institutes.
3) 33% Law colleges invite resource persons from Forest Department and other Law colleges.

4) 67% Medical colleges invite resource persons from other Medical colleges.

Interpretation – It can be said that,

1) Very few (14%) B.Ed. colleges invite resource persons from W.W.F. (World Wide Fund) Kolhapur.
2) Few (33%) Engineering colleges invite resource persons from other Engineering Education Institutes.
3) Few (33%) Law colleges invite resource persons from Forest Department and other law colleges.
4) 67% Medical colleges invite resource persons from other Medical colleges.

Counter data was collected from students. It was observed that students also gave the same information regarding the resources persons invited for teaching EE from other Education Institutes at various Professional Education colleges.

There was no contradiction in the information given by the teachers and that given by the students.

Table No. 44

How Students Are Benefited From Environment Related NGOs And Institutes

(Teachers questionnaire – Q.No.29)

Sr. No.	How your students are benefited from these NGOs/ Institutes?	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges	%	3 Colleges	%	3 Colleges	%	3 Colleges	%
1	They provide books	01	14%	00	00%	00	00%	00	00%
2	They provide materials like slides, CDs, etc.	01	14%	00	00%	00	00%	02	67%

Observations –

From above table it is observed that students are benefited from environmental related NGO's & institutes are in following ways –

1) Books are made available for students in 14% B.Ed. college

2) Material like slides, CD's etc. are made available for students in 14% B.Ed. colleges & 67% Medical colleges

Interpretation –

It can be said that students are benefited from the associated Environment related NGO's & institutes in following ways.

1) Books are made available for students in very few (14%) B.Ed. colleges

2) Materials like slides, CD's etc are made available for students. in few (14%) B.Ed. colleges & majority (67%) Medical colleges.

Counter data was collected from students. It was observed that students also gave the some information regarding how students get

benefited from Environment related NGO's & institutions for EE at various Courses.

There was no contradiction in the information given by the teachers and that given by the students.

Table No. 45

Problems Faced While Organizing Environment Related Programmes

(Teachers questionnaire – Q.No.30)

Sr. No.	Which problems arises while organizing Environment Related programmes in collaboration with these NGOs/Institutes?	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges	%	3 Colleges	%	3 Colleges	%	3 Colleges	%
1	Time Management	01	14%	00	00%	00	00%	02	67%

Observation –

From above table it is observed that, time adjustment problems arise while organizing Environment related programmes according to 14% B.Ed. colleges & 67% Medical colleges.

Interpretation –

It can be said that, time adjustment problems arise while organizing Environment related programmes according to very few (14%) B.Ed. colleges & majority (67%) Medical colleges.

Table No. 46

Opinion About The Environment Related Programmes Conducted In Collaboration With Other Institutes Or NGOs

(Teachers questionnaire – Q.No.31)

Sr. No.	Opinions about the environment related programmes conducted in collaboration with other institutes?	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges	%	3 Colleges	%	3 Colleges	%	3 Colleges	%
1	It is very helpful to conduct programmes in collaboration with other institutes. Students get benefited from these programmes to update their knowledge.	01	14%	00	00%	00	00%	02	67%

Observation –

From above table it is observed that, opinion of teacher about the Environment related programmes conducted in collaboration with other institute or NGO's is as follows : According to 14% B.Ed. college teachers and 67% Medical college teachers it is very helpful to conduct EE programmes in collaboration with other institutes. Students get more benefited from these programmes to update their knowledge.

Interpretation –

It can be said that, according to very few (14%) B.Ed. college teachers & majority (67%) Medical college teachers it is very helpful to conduct EE programmes in collaboration with other institutes. Students get benefited from these programmes to update their knowledge.

Table No. 47

Delivering Lecture As An Expert In EE

(Teachers questionnaire – Q.No.32)

Sr. No.	Do you deliver lecture as an expert of Environment Education in other institutions?	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges 7 Teachers	%	3 Colleges 4 Teachers	%	3 Colleges 3 Teachers	%	3 Colleges 14 Teachers	%
1	Yes	02	29%	00	00%	00	00%	08	57%
2	No	05	71%	04	100%	03	100%	06	43%

Observation –

From the above table it is observed that 29% B.Ed. college teachers and 57% Medical college teachers who teach EE & EE related scomponents deliver lectures as an expert in EE in other institutes.

Interpretation –

It can be very few (29%) B.Ed. college teachers & majority (57%) Medical college teachers who teach EE & EE related components deliver lectures as an expert in EE in other institutions. No Engineering College teachers and Law college teachers who teach EE related components deliver Lectures as an expert of EE in other institutions.

Table No. 48

Information About Work of Teachers as resource person.

(Teachers questionnaire – Q.No.33)

Sr. No.	Please give the following information.	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges	%	3 Colleges	%	3 Colleges	%	3 Colleges	%
1	Name of institutions	School students & teachers	29%	00	00%	00	00%	Education Department of university, colleges, public health centre	35%
2	Topics	General Environment and Environmental problems	-	-	-	-	-	School health, Environment health, rural Sanitation, Urban Sanitation, Nutritional aspects, Health Education	43%
3	Lectures or programmes per year	1/2 per year	-	-	-	-	-	5/6 per year	-
4	Nature of work	Lectures	-	-	-	-	-	Lectures, Demonstration Discussion for common people	-

Observation and Interpretation –

1) Very few (29%) B.Ed. college teachers teaching EE work as a resource persons for school students & teachers. They deliver 1 to 2 lectures per year. The topics are general Environment and environmental problems.
2) Few (35%) Medical college teachers teaching Environment related components work as resource persons in Education Department of University, different colleges and public Health Centre. They deliver lectures, give demonstration and conduct discussions for common people. The topics are Health Education, Environmental Health, School Health, Nutrition, and Rural and Urban settlements.

Table No. 49

Exchange of Equipments/Materials required for EE

(Lab Assistants questionnaire – Q.No.5)

Sr. No.	Do other colleges/Institutes lend equipment/ Materials required for Environment Education from your college?	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 colleges	%	3 Colleges 3 Lab Asst.	%	3 Colleges	%	3 Colleges 3 Lab Asst.	%
1	Yes	00	00%	00	00%	00	00%	02	67%
2	No	00	00%	03	100%	00	00%	01	33%

Observation –

From above table it is observed that exchange of equipments/materials required for Environment Education to other colleges or institutions is done by 67% Medical colleges.

Exchange of Equipments/materials required for Environment Education to other colleges or institutions is not done by any Engineering college.

Interpretation –

It can be said that, exchange of equipments materials required for Environment Education to other colleges or institutions is done by majority (67%) medical colleges. No such exchange is done by any Engineering college.

Table No. 50

The Materials Related To Environment Education Lend By other Colleges

(Lab Assistants questionnaire – Q.No.6)

Sr. No.	Which equipments/ materials do they lend from your college?	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges	%	3 Colleges 3 Lab Asst.	%	3 Colleges	%	3 Colleges 3 Lab Asst.	%
1	Charts	00	00%	00	00%	00	00%	02	67%
2	Models	00	00%	00	00%	00	00%	01	33%

Observation –

From the above table it is observed that, charts are lend by other colleges from 67% Medical colleges and models were lend from 33% Medical colleges.

Interpretation –

It can be said that charts are lend by other colleges from majority (67%) Medical colleges.

Models are lend by other colleges from few (33%) Medical colleges.

Table No. 51

Visits of students for EE Purpose From Other Institutes

(Lab Assistants questionnaire – Q.No.7)

Sr. No.	Do the students from other Institutes visit your college for Environment Education purpose?	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges	%	3 Colleges 3 Lab Asst.	%	3 Colleges	%	3 Colleges 3 Lab Asst.	%
1	Yes	00	00%	00	00%	00	00%	02	67%
2	No	00	00%	03	100%	00	00%	01	33%

Observation –

From the table it is observed that for EE purpose students from other institutes visit to 67% Medical colleges.

From other institutes no visit for EE to any B.Ed. colleges, Engineering or Law colleges are arranged.

Interpretation –

It can be said that, for EE purpose students from other institutes to majority (67%) Medical colleges. However such visits to B.Ed., Engineering or Law colleges are not arranged.

Table No. 52

The Institutes And Courses Which Visit To Professional Education Colleges For EE

(Lab Assistants questionnaire – Q.No.8)

Sr. No.	From which institutes and courses are those students who visit to your college?	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges	%	3 Colleges 3 Lab Asst.	%	3 Colleges	%	3 Colleges 3 Lab Asst.	%
1	School	00	00%	00	00%	00	00%	02	67%
2	Colleges								
	a) B.A.	00	00%	00	00%	00	00%	01	33%
	b) B.Sc.	00	00%	00	00%	00	00%	02	67%
	c) M.S.W.	00	00%	00	00%	00	00%	01	33%

Observation –

From the above table it is observed that for EE purpose

1) 67% Medical colleges are visited by School students and Science faculty college students.
2) 33% Medical college are visited by Arts Faculty colleges students and M.S.W. (Master of Social Welfare) students.

Interpretation –

It can be said that, for EE purpose, majority (67%) Medical colleges are visited by School students and Science faculty college students, few (33%) Medical colleges are visited by Arts Faculty College students and M.S.W. (Master of Social Welfare) students.

Table No. 53

The Purpose of EE Visits

(Lab Assistants questionnaire – Q.No.9)

Sr. No.	Please give the purpose of such visits.	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges	%	3 Colleges 3 Lab Asst.	%	3 Colleges	%	3 Colleges 3 Lab Asst.	%
1	For Project work	00	00%	00	00%	00	00%	02	67%
2	For Exhibition	00	00%	00	00%	00	00%	01	33%

Observation –

From the above table it is observed that, the purpose of EE visits of students to 67% Medical colleges is completion of project work and the purpose of those visits to 33% Medical colleges is attending the exhibition.

Interpretation –

It can be said that, the purposes of EE visits of students to medical colleges are 1) for the completion of project work and 2) for exhibition.

Table No. 54

Exchange of Material of EE From Other Institutes

(Lab Assistants questionnaire – Q.No.10)

Sr. No.	Do you exchange material with other institute?	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges	%	3 Colleges 3 Lab Asst.	%	3 Colleges	%	3 Colleges 3 Lab Asst.	%
1	Yes	00	00%	00	00%	00	00%	00	00%
2	No			03	100%			03	100%

Observation –

From the above table it is observed that, exchange of material of Environment Education with other institute is not done in any of the Engineering or Medical college.

Because there is no exchange of material Q.No.11 and 12 which depended on this Q.No.10 were not responded.

Q. 11 For what purpose you exchange the materials ?

Q. 12 What are the difficulties in such exchange?

Table No. 55

Exchange of EE Books

(Librarians questionnaire – Q.No.3)

Sr. No.	Do you exchange EE books with other institute?	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges 7 Librarian	%	3 Colleges 3 Librarian	%	3 Colleges 3 Librarian	%	3 Colleges 3 Librarian	%
1	Yes	00	00%	00	00%	00	00%	00	00%
2	No	07	100%	03	100%	03	100%	03	100%

Observation –

It is observed from the above table that there is no exchange of EE books in any of the Professional Education Institution.

As there is no exchange of books question No.4 and 5 from the questionnaire to librarian did not get any response.

Q.4 Which books do you exchange?

Q.5 What are the difficulties in such exchange?

Table No.56 to 58 related to objective No.5

Objective No.5 To study the difficulties of teachers while teaching Environment Education at various Professional Education Colleges

Table No. 56

Difficulties Faced While Using Different Teaching Strategies For Teaching EE Related Components

(Teachers questionnaire – Q.No.6)

Sr. No.	Which difficulties arise while using different teaching strategies for teaching Environment Education?	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges 7 Teachers	%	3 Colleges 4 Teachers	%	3 Colleges 3 Teachers	%	3 Colleges 3 Teachers	%
1	Curriculum cannot be completed in fixed time.	04	57%	03	75%	02	67%	11	79%
2	Students response is less	02	29%	02	50%	01	33%	00	00%
3	Memory oriented examination	01	14%	00	00%	02	67%	03	21%
4	Other reasons • Absence of lab	01	14%	00	00%	00	00%	00	00%

Observation –

From the above table it is observed that 57% B.Ed. college teachers, 75% Engineering college teachers, 67% LL.B. college teacher, 79% Medical college teacher who teach EE & EE related components told that while using different teaching strategies for teaching EE curriculum cannot be completed in time.

29% B.Ed. college teachers, 50% Engineering college teachers, 33% Law college teacher, who teach EE & EE related components told that student response is less

14% B.Ed. college teachers, 67% Law college and 21% Medical college teachers, who teach EE & EE related components told that memory oriented examination system is one of the difficulties.

14% B.Ed. College teachers, who teach EE & EE related components told that absence of the Lab. is a difficulty.

Interpretation –

It can be said that majority of B.Ed. college teachers, Engineering college teachers, Law college teachers & Medical college teachers (57%, 75%,67% and 79% respectively.) who teach EE & EE related components feel that if they use different teaching strategies curriculum cannot be completed in time.

Student response is less according to very few (29%) B.Ed. college teachers, about half of the (50%) Engineering college teachers and few (33%) Law colleges teachers who teach EE & EE related subjects.

Memory oriented examination system is one of the difficulty according to very few (14%) B.Ed. college teachers, majority (67%) Law college teachers very few (21%) Medical college teachers who teach EE & EE related components.

Absence of laboratory materials is a difficulty according to very few (14%) B.Ed. college teachers who teach EE & EE related components.

Table No. 57

Measures Adopted To Face The Difficulties

(Teachers questionnaire – Q.No.7)

Sr. No.	What measures do you adopt while facing these difficulties?	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges 7 Teachers	%	3 Colleges 4 Teachers	%	3 Colleges 3 Teachers	%	3 Colleges 14 Teachers	%
1	Extra Lectures	05	71%	02	50%	02	67%	06	43%
2	Time Managements	03	43%	03	75%	00	00%	04	29%
3	Use of transparencies for some units	02	29%	03	75%	02	67%	05	36%

Observation –

From the above table it is observed that to face the difficulties while using different teaching strategies for teaching EE the measures adopted by the teachers are as follows :

a) Extra lectures are taken by 71% B.Ed. college teachers, 50% Engineering college teachers, 67% Law college teachers & 43% Medical college teachers

b) Time management was done by 43% B.Ed. college teacher, 75% Engineering college teachers & 29% Medical college teachers.

c) Use of transparencies is done for some units by 29% B.Ed. colleges teachers, 75% Engineering college teacher & 67% Law college teachers & 36% Medical college teachers.

Interpretation -

It can be said that to face the difficulties while using different teaching strategies for teaching EE the measures adopted by the teachers are as follows :

a) Extra lectures are taken by majority (71%) B.Ed. college teachers, half of the (50%) Engineering college teachers, majority (67%) Law college teachers, few (43%) Medical college teachers

b) Time management is done by few (43%) B.Ed. college teachers, majority (75%) Engineering college teachers & very few (29%) Medical college teachers.

c) Use of transparencies is done for some units by very few (29%) B.Ed. colleges teachers, majority (75%) Engineering college teachers & majority (67%) law college teachers & few (36%) Medical college teachers.

Table No. 58

Problems faced by Teachers while Teaching EE Related components (If they had not studied environment component or not received any training.)

(Teachers questionnaire – Q.No.14)

Sr. No.	If you have not studied Environment component or not received any training then what problems arises while teaching EE related paper?	Colleges of Education (B.Ed.)		Colleges of Engineering (B.E.)		Colleges of Law (LL.B.)		Colleges of Medicine (M.B.B.S.)	
		7 Colleges 7 Teachers	%	3 Colleges 4 Teachers	%	3 Colleges 3 Teachers	%	3 Colleges 14 Teachers	%
1	Problems related to concept clarity	01	14%	00	00%	01	33%	00	00%
2	Problems related to practicals	01	14%	00	00%	00	00%	00	00%
3	Problems related to teaching	00	00%	00	00%	00	00%	00	00%
4	No Problems	05	71%	04	100%	02	67%	14	100%

Observation –

From the above table it is observed that problems faced by teachers while teaching EE Related paper, if they had not studied Environment component or not received any training are as follows –

14% B.Ed. college teachers, 33% Law colleges teachers to teach EE and EE related components face problems related to concept clarity.

14% B.Ed. college teachers who teach EE & EE Related components face problems related to practical and project work.

Interpretation –

It can be said that, very few (14%) B.Ed. colleges teachers few (33%) Law college teachers who teach EE & EE related subjects face the problems related concept clarity.

Very few (14%) B.Ed. College teachers who teach EE & EE related subjects face the problems related to practicals & Project work in EE.

Thus in this chapter the researcher has analysed the collected data in tables and interpretated it. In next chapter she has presented summary, findings and recommendations and topics for further study.