Int. J. Environ. Res., 5(4):951-960, Autumn 2011
ISSN: 1735-6865

Public Participation in Environmental Education Centers

Lahijanian, A.

Department of Environmental Management, Graduate School of the Environment and Energy, Science and Research Branch, Islamic Azad University (IAU) Tehran , Iran

Received 14 Aug. 2010; Revised 2 May 2011; Accepted 12 May 2011

ABSTRACT: This paper presents participation of faculties and Heads of Department (HODs) in environmental education. For this purpose 60 HODs/faculties from polytechnic colleges of Tamilnadu, India and 100 HODs/ faculties from Associate Degree Level Technical Institutions in Iran from civil engineering branch were selected. Several hypotheses were formulated to achieve certain objectives of the study. The results revealed that there are significances between Iranian and Indian HODs/faculty on arrangement of industrial visits/field trips for students; laboratory resources for practical works and also teaching environmental subjects. The results also show a good agreement on students undertaking project work on environmental topics, teaching prevention of pollution and protection of environment in theory classes and evaluation of environmental related programs.

Key words: Methodology, Teaching,Curricula, Environmentalism

INTRODUCTION

Content of technical education implies to components, elements, indicators related to environment. Integration of environmentalism issues could be effective on decreasing environmental crisis (Legault and Louise, 2000;Alizadeh and Pishgahifard, 2010; Hedjazi and Arabi, 2010; Clerveaux and Spence, 2010). The effects of technical education curriculum related to environment could result in creation of balances in the atmosphere, hydrosphere and lithosphere of the world environment that should be dealt with greatly endeavored to draw attention to the environmentalism problems of the different regions of the world (Matthias and Haulge, 1998). It engaged itself in supporting and implementing education programs to ameliorate the environment of the present generation (Marsha, 1984). The International Program on Man and Biosphere drew the attention of different nations for a need to evolve environmentalism education (Brady and Reidel, 1998). The United Nations Conference on the Human Environment held in1972 in Stockholm covers the problems of education, development of natural resources as well as problems of protection and conservation of environment (Saxena, 1996).

The African Regional Meeting on Environmentalism in Education at Brazzaville, Congo (1976); the Asian Regional Meeting on Environmental Education (EE) at Bangkok, Thailand (1976); the Arabic States Regional Program on EE at Kuwait (1976); the Latin American Regional Meeting at Bogota, Columbia (1976); the European Regional Meeting on EE at Helsinki, Finland (1977) have made important recommendations for the promotion of EE at all levels of education system (Bauer *et al.*, 2001).

The Intergovernmental Environmental Educational Program held in Tbilisi, USSR (1977) was very much concerned to formulate the recommendations at the national, regional and international levels for the promotion and development of environmentalism components (Lester and Schawartz, 1995). (Brown, 1992) defines "Education" as the field of effective stimulation and interaction for any unit of living things. Chalam (1998) states that the concept of "Stable development" was introduced in 1980, rooted in educational consideration. There fore, the pattern for development turned to an "equal development", "equal education", "better environment" which was concerned with a general view of educational distribution in the same framework of environment efficiency (Bassett and Bandhu, 1997). The present study aims at:

-Participation of teachers in Environmentalism in Education in polytechnics of India and institutions in Iran. (Census of Iran, 1995) and (Census of India, 2000).
-Investigation of problems faced by teachers in teaching environmental education in technical institutions in India and Iran.
-Investigation of participation HOD/in Environmentalism Education in India and Iran.

*Corresponding author E-mail: Lahijanian@hotmail.com

-To suggest ways by which Environmentalism in Education at polytechnics in India and associate level technical institutions in Iran can be improved.

MATERIALS & METHODS

Development of tools and procedure use in this research study are based on literature review, interaction with faculties of polytechnics, head of departments, and experts in the field. Tools used for the study were questionnaires (Best and khan, 2002). The samples identified, HODs/Faculties of polytechnic colleges in India and associate degree technical institutes of Iran. For the present study survey methodologies involving qualitative and quantitative techniques were used to achieve the objectives of the study (Lohani, 1984) (Agrawal, 1995). For the present study, HODs, faculty from the Civil Engineering Branch were considered. The questionnaire developed for collecting data from HODs/Faculty was administered on 60 HOD/Faculty from 15 polytechnic colleges of Tamilnadu, India and 100 HODs/Faculty from Associate Degree level Technical Institutions in Iran. Comparisons of the presence of Environmentalism-components in the Civil Engineering Curriculum of Governmental Polytechnic Colleges of Tamilnadu and Associate Degree level Technical Institutions of Iran were made with the help of content analysis technique. Purposive sampling technique was used at every stage for the preset study. (Blaikie, 2000). The researcher camped in the 15 polytechnic colleges of Tamilnadu for two to three days depending on the availability of the sample, and tools were administered personally.

The tools were administered on the identified samples of the study. The researcher with copies of printed questionnaires visited the sample polytechnic college of India and Associate Degree Level Technical Institution of Iran for data collection. First, an attempt was made to develop the first draft of the questionnaire with the help of supervisor, and from the experts in the field. Then the pilot study was carried out and the final drafts of the questionnaires were made ready to collect the data from the identified sample of the study.

This questionnaire consists of two parts namely: Personal data and the study area. In personal data information like, Name of the institute, Name of the Faculty, Sex, Educational qualification, Experience, Level of institute, (Degree/Diploma), Type of Institute (Govt./Autonomous/non-Autonomous), Location of the institute (Rural/semi urban/urban), and category of the institute (Unaided/Aided/Govt.) were considered. Further if the HOD/Faculty wishes to share more information on personal data, separate item named "Any other information" was also include. Therefore totally 10 items were included in this part. In the second part of the questionnaire items like, Study on Environmentalism in Education topics, Training of the faculty on Environmentalism in Education topics, Infrastructure to teach Environmentalism in Education topics, project work/record work on environmentalism related activities, Evaluation of the program were considered and further if HOD/Faculty wishes to share more information, a separate item named "Free comments and suggestions" was also considered in the questionnaire. Totally 13 items were considered in this part of the questionnaire. The incorporation of suggestions and recommendations through the pilot study and discussion with experts in the field paved the way for the final form of the questionnaires for the research study. Analyses of data were done which comprised both qualitative and quantitative methods of analysis. Content analyses of the Civil Engineering Curriculum of Diploma Level (Directorate of Technical Education, Tamilnadu) with respect to Environmentalism Components and Civil Engineering Curriculum of Associate Degree Level Technical Institutions were carried out for the purpose of comparisons. To establish the reliability of the used in the study tools, reliability co-efficient Alpha was calculated. This Alpha coefficient is known as Cronbach's Alpha coefficient which is the extension of the split half reliability measure (Alburg *et al.*, 1996) and is one of the standard ways of expressing test reliability (Mukherjee, 2000; Lindquist, 1990; Nagarajan and Srinivasan, 1994; and Andrew, 1996).

Table 1 shows the analysis of variance results for reliability analysis. The reliability coefficient comes out to be 0.6567 for 150 subjects which appear to be quite high. Eleven variables covered under the heading of "Environmentalism" for calculating this reliability coefficient. The statistics, t-test and F-test were used to verify the hypotheses (Atreya *et al.*, 1990). The analysis of variance (F test) is a convenient way to determine whether the means of more than two random samples are too attribute to sampling error (Chandra, 1998).

Table 1. Reliability Analysis-Scale Alpha for responses of HODs/Faculty

Analysis of Variance					
N	Mean	Variance	Standard deviation	No. of variables	*Alpha*
150	7.2733	5.0590	2.2492	11	0.6567

RESULTS & DISCUSSION

Findings related to responses of HOD/Faculty include:

1.There is no significant difference in the responses of HOD/Faculty of India and Iran on their study of environmental education in graduate and post graduate level

2.Factors which are found to be significantly higher in India are

- Text books for environmental subjects
- Presence of laboratory for teaching environmental topics

3.factors which are found to be significantly higher in Iran are

- Teaching environmental subjects
- Arrangement of Industrial visits/field trips
- Students undertake project work/record work on environmental topics
- Teaching prevention of pollution and protection of environment through theory classes
- Teaching through field studies
- Training programs attended on environmental education and management
- Organizing environmental education program in the institute

The output of the factor analysis of data on responses from the HODs/Faculty, results of hypotheses testing based on HODs/Faculty responses from India and Iran were presented. Qualitative analyses for a few specific items were also carried out and the results are presented.

A Varimax rotated principal components analysis was made using the data collected from HODs/Faculty. The component matrix is shown in Table 2.

Three components were extracted; the first component, internal resources and instructional strategies explained 28.3% of the total variance, the second content 22.6% of variance and the third external resources 12.2% of variance. The cumulative percentage of variance explained by these three components is 63.1%.

There is a significant difference in the responses of HODs/Faculty of polytechnic colleges from India and associate degree level technical institutions from Iran on study of environmental education in graduate and post graduate level.

Table 3 shows the details of responses of the HODs/Faculty from India and Iran. Since t-value is not significant, the hypothesis, "There is a significant difference in the responses of HODs/Faculty of polytechnic colleges from India and associate degree level technical institutions from Iran on study of environmental education in graduate and post graduate level" is rejected. It appears that there is no significant difference in the responses of HODs/Faculty from India and Iran on study of environmental education in graduate and post graduate level. Therefore it can be inferred that HODs and Faculty have studied environmentalism in technical education in graduate and post graduate level. There is a significant difference in the responses of HODs/Faculty of polytechnic colleges from India and associate degree level technical institutions from Iran on teaching environmental subjects.

Table 2. Rotated component matrix on responses from HODs/Faculty

	Component		
	1	2	3
Study of environmental education	-0.158	.226	0.710
Teaching environmental subjects	5.459E-2	0.763	0.208
Text books for environmental subjects	-0.709	0.284	-1.608E-02
Arranging industrial visit for students	0.373	-1.265E-02	0.728
Undertake project work on environmental topic	-9.980E-03	0.697	0.270
Presence of lab for teaching environment topics	-0.779	2.157E-02	0.274
Teaching prevention of pollution and protection of environment-field visits	0.177	0.857	-5.894E-02
Attending training programs on environment-field visits	0.757	0.287	0.214
Attended training programs on environmental education & management	0.406	0.532	-0.151
Organizing environmental education programs	0.790	0.298	0.176
Evaluation of success of environmental education programs	0.670	0.313	0.139
Eigen value	3.119	2.486	1.341
Percentage variance explained	28.3	22.6	12.2

Table 4 shows the details of responses of the HODs/Faculty from India and Iran. Since t-value is significant at 0.01 levels, the hypothesis, "There is a significant difference in the responses of HODs/ Faculty of polytechnic colleges from India and associate degree level technical institutions from Iran on teaching environmental subjects is retained. There is a significant difference in the responses of HODs/ Faculty of polytechnic colleges from India and associate degree level technical institutions from Iran on textbook for environmental subjects".

Table 5 shows the details of responses of the HODs/Faculty from India and Iran. Since t-table is significant at 0.01 levels, the hypothesis, "There is a significant difference in the responses of HODs/ Faculty of polytechnic colleges from India and associate degree level technical institutions from Iran on teaching environmental subjects" is retained. It appears from the responses of HODs/Faculty of India and Iran that there is significant difference in the provision for separate textbooks for teaching environment education and management to students. HODs and Faculty from India felt that there has been more provision for textbooks on Environmentalism in India than in Iran. There is a significant difference in the responses of HODs/Faculty of polytechnic colleges from India and associate degree level technical institutions from Iran on arrangement of industrial visits/field trips for students.

Table 6 shows the details of responses of the HODs/Faculty from India and Iran. Since t-value is significant at 0.01 level, the hypothesis, "There is a significant difference in the responses of HODs/ Faculty of polytechnic colleges from India and associate degree level technical institutions from Iran on arrangement of industrial visits/field trips for students" is retained. It appears from the responses of HODs/Faculty of India and Iran that the arrangement of industrial visits/field trips for students is significantly higher in Iran in than in India. There is a significant difference in the responses of HODs/ Faculty of polytechnic colleges from India and associate degree level technical institutions from Iran on students undertaking project work on environmental topics.

Table 3. t-Table for study of environmental education in graduate and post graduate level

Country	N	Mean	SD	Std. Error Mean	t-value	Sig. (2-tailed)
India	60	0.93	0.252	0.032	0.081	0.936
Iran	100	0.93	0.256	0.026		

Table 4. t-Table for teaching environmental subjects

Country	N	Mean	SD	Std. Error Mean	t-value	Sig. (2-tailed)
India	60	0.75	0.437	0.056	-2.715	0.008
Iran	100	0.92	0.273	0.027		

Table 5. t-Table for textbook for environmental subjects

Country	N	Mean	SD	Std. Error Mean	t-value	Sig. (2-tailed)
India	60	0.63	0.486	0.063	6.873	0.000
Iran	100	0.14	0.349	0.035		

Table 6. t-Table for arrangement of industrial visits/field trips

Country	N	Mean	SD	Std. Error Mean	t-value	Sig. (2-tailed)
India	60	0.58	0.497	0.064	-2.428	0.017
Iran	100	0.77	0.423	0.042		

Table 7 shows the details of responses of the HODs/Faculty from India and Iran. Since t-value is significant at 0.01 levels, the hypothesis, "There is a significant difference in the responses of HODs/ Faculty of polytechnic colleges from India and associate degree level technical institutions from Iran on students undertaking project work on environmental topics" is retained. It appears from the responses of HODs/Faculty of India and Iran that students undertaking project work/record work on environmental topics is significantly higher in Iran than in India. There is a significant difference in the responses of HODs/Faculty of polytechnic colleges from India and associate degree level technical institutions from Iran on laboratory resources for doing practical".

Table 8 shows the details of responses of the HODs/Faculty from India and Iran. Since t-value is significant at 0.01 levels, the hypothesis, "There is a significant difference in the responses of HODs/ Faculty of polytechnic colleges from India and associate degree level technical institutions from Iran on laboratory resources for doing practical" is retained. It appears from the responses of HODs/Faculty of India and Iran that presence of laboratory for teaching environmental topic is significantly higher in India than in Iran. Only 6% of the respondent HODs agreed that there were laboratory resources for doing practical on in Iran. There is a significant difference in the responses of HODs/Faculty of polytechnic colleges from India and associate degree level technical institutions from Iran on teaching prevention of pollution and protection of environment in theory classes.

Table 9 shows the details of responses of the HODs/Faculty from India and Iran. Since t-value is significant at 0.01 levels, the hypothesis, "There is a significant difference in the responses of HODs/ Faculty of polytechnic colleges from India and associate degree level technical institutions from Iran on teaching prevention of pollution and protection of environment in theory classes" is retained. It appears that teaching of prevention of pollution and protection of environment through theory class is significantly higher in Iran than in India. There is a significant difference in the responses of HODs/Faculty of polytechnic colleges from India and associate degree level technical institutions from Iran on teaching prevention of pollution and protection of environment through field studies".

Table 10 shows the details of responses of the HODs/Faculty from India and Iran. Since t-value is significant at 0.01 levels, the hypothesis, "There is a significant difference in the responses of HODs/ Faculty of polytechnic colleges from India and associate degree level technical institutions from Iran on teaching prevention of pollution and protection of environment through field studies" is retained. It appears from the responses of HODs/Faculty of India and Iran on teaching prevention of pollution and

Table 7. t-Table for students undertaking project work/record work on Environmental topics

Country	N	Mean	SD	Std. Error Mean	t-value	Sig. (2-tailed)
India	60	0.60	0.494	0.064	3.103	0.002
Iran	100	0.83	0.378	0.038		

Table 8. t-Table for presence of laboratory for teaching environment topics

Country	N	Mean	SD	Std. Error Mean	t-value	Sig. (2-tailed)
India	60	0.080	0.403	0.052	12.918	0.000
Iran	100	0.06	0.239	0.024		

Table 9. t-Table for teaching prevention of pollution and protection of environment through theory class

Country	N	Mean	SD	Std. Error Mean	t-value	Sig. (2-tailed)
India	60	0.75	0.437	0.056	3.958	0.000
Iran	100	0.98	0.141	0.014		

protection of environment through field studies is significantly higher in Iran than in India. In case of India only 13% of the HODs/Faculty agreed that they use field studies. There is a significant difference in the responses of HODs/Faculty of polytechnic colleges from India and associate degree level technical institutions from Iran with regard to training programs attended on environmental education and management".

Table 11 shows the details of responses of the HODs/Faculty from India and Iran. Since t-value is significant at 0.01 levels, the hypothesis, "There is a significant difference in the responses of HODs/ Faculty of polytechnic colleges from India and associate degree level technical institutions from Iran with regard to training program attended on environmental education and management" is retained. It appears from the responses of HODs/Faculty of India and Iran that the HODs/Faculty of Iran attend more training program on environmental education and management than HODs/Faculty of India. Only 28% of the respondents HODs/Faculty responded positively that they attend training program on environmental education on management. There is a significant difference in the responses of HODs/ Faculty of polytechnic colleges from India and associate degree level technical institutions from Iran with regard to organizing environmental education program in institutions".

Table 12 shows the details of responses of the HODs/Faculty from India and Iran. Since t-value is significant at 0.01 levels, the hypothesis, "There is a significant difference in the responses of HODs/Faculty of polytechnic colleges from India and associate degree level technical institutions from Iran with regard to organizing environmental education program in institutions" is retained. It appears from the responses of HODs/Faculty of India and Iran, HODs/ Faculty from Iran organize more environmental education programs in their institutions, which comes under environmentalism than HODs/Faculty of India. There is a significant difference in the responses of HODs/ Faculty of polytechnic colleges from India and associate degree level technical institutions from Iran on evaluation of the environmental related program.

Table 13 shows the details of responses of the HODs/Faculty from India and Iran. Since t-value is significant at 0.01 levels, the hypothesis, "There is a significant difference in the responses of HODs/ Faculty of polytechnic colleges from India and

Table 10. t-Table for teaching prevention of pollution and protection of environment through field visits

Country	N	Mean	SD	Std. Error Mean	t-value	Sig. (2-tailed)
India	60	0.13	0.343	0.044	11.691	0.000
Iran	100	0.82	0.386	0.039		

Table 11. t-Table for with regard to training program attended on environmental education and management

Country	N	Mean	SD	Std. Error Mean	t-value	Sig. (2-tailed)
India	60	0.28	0.454	0.059	7.265	0.000
Iran	100	0.80	0.402	0.040		

Table 12. t-Table for with regard to organizing environmental education program in polytechnics/institutes

Country	N	Mean	SD	Std. Error Mean	t-value	Sig. (2-tailed)
India	60	0.08	0.279	0.036	13.283	0.000
Iran	100	0.80	0.402	0.040		

Table 13. t-Table for evaluation of success of environmental related program

Country	N	Mean	SD	Std. Error Mean	t-value	Sig. (2-tailed)
India	60	0.33	0.475	0.061	7.461	0.000
Iran	100	0.86	0.349	0.35		

associate degree level technical institutions from Iran on evaluation of the environmental related program" is retained. It appears from the responses of HODs/ Faculty from Iran evaluate the success of environmental education program more often than that of HODs/ Faculty of India.

CONCLUSION

As curriculum implementation is a team work involving Principals, HOD, Faculty & Students, the study highlighted their role and responsibilities to give the shape to successful implementation of environmentalism in technical education. The study enabled the identification of recommendations to Principals/Technical administrators of Faculty/HOD of India and Iran.

Comments for India

- Environmental related topics should be included in all branches of engineering.
- It is essential to educate the public. So as a firs step, a compulsory project must be prescribed for the students and environmental education camps in addition to the theory subject should be organized.
- Environmental management is one of the most important and necessary course now a days due to the imperative need for pollution preventing. Course on Green-house-effect, Acid rain, CFC problem, Ways of industrial waste disposal, should be conducted even for the public.
- Awareness and attitude towards environment should be included in diploma courses.
- Contamination exist every where in all the states of Water, Air and Land. It is better to protect them. In modern technology we are developing pro-active measures to prevent industrial pollution. Prevention of pollution must be a continuous process. We have to further educate all to safeguard environment in such way that future generation also enjoy it. Frame laws to punish the people who spoil the environment.
- To control air pollution:

1.Use less smoke producing fuel in automobiles
2.Avoid of polytheisms covers

- To control water pollution

1. Sewage water pipe must be laid well below drinking water pipe
2.Proper drainage system must be formed

- Collaboration must be initiated to promote environmentalism education programs.
- Appropriate teaching and training programs and materials for their use must be developed in order to implement environmentalism education programs in technical institutions.
- All sections of human society must be exposed to some form, of environmentalism education for arousing their awareness, sensitivity and perception of environmentalism problems and thereby motivate them to get involved in worthwhile environmentalism action programs.
- Volunteers from NGOs should be trained in environmentalism education in order to equip them to carry out their work on correct lines.
- All educational institutions should be mobilized to undertake some kind of environmentalism education.
- Pedagogic methodology for environmentalism education must be developed in a scientific manner.
- The consumer association and environmentalism architects together set up environmentalism exhibition.
- Government and private institutions disseminate ideas relating to the development of the environment in its broadest sense.
- Books related to training and development on environmentalism issues should be brought out in large numbers. New arrivals on environmentalism issues should be brought to the notice of Faculty, HODs and Principals.
- To procure necessary material and equipment to develop learning resources, to prepare policy for the institutions to develop and use learning resources.
- To organize non formal education for lie public on environmentalism.
- Environmentalism instruction must integrate cultural, social and development needs and appropriate technologies for environmentalism development.
- Environmentalism policy must conform to other related policies on human settlement, land and water, conservation and environmentalism development.
- Health authorities should give priority to environmentalism health. They should prepare plans and schemes for preventive measures against environmentalism issues and implement them conscientiously. They should also undertake environmentalism health education.
- To gather information related to innovations in the technical field as well as in the field of institutional development, to design strategies to implement environmentalism innovations in the institution.
- Allot the budget of the institute to concentrate on environmentalism and to improve it.
- To conduct environmentalism awareness programs for all institutional members.

- Pollution of water, air and industrial waste are caused by industrial effluents and exhaust gas released by the automobiles. Government need to exercise perfect control over the industries and vehicles.

Comments for Iran

- To negotiate with industries and other organizations for conducting short term environmentalism training programs by experts for faculty in academic institutions, and colleges.
- To organize inter-class, local, district and inter-institutional classes.
- To involve various agencies like public, electricity board, municipal cooperation, industries etc. in the construction of curriculum, for environmentalism and in curriculum implementation.
- Panel discussions on the media and its impact may organize by the NGO's to present systematically various aspects of environmentalism problems and their solutions including protecting environmentalism.
- To achieve the effective development o f environmentalism education, full advantage must be taken from newspapers, to spread effectively the environmentalism awareness among the masses. Newspapers should be requested to play a more active role in publicizing amongst illiterate people the problems of environment, environmental degradation, environmental protection and planning.
- Number of workshop, group discussions, regarding pollution content and environmental impact assessment are to be conducted in all sorts of educational courses to create the pollution control awareness.
- To create more environmental awareness in younger generation by conducting seminars. Some different programs can be conducted to save environment from pollution.
- To conduct environment training program, special lecturers to the students, and seminal about pollution control, need to be arranged.
- Improving the syllabus and project work in environmental field.
- Awareness among students can be created through exhibition, seminars etc.
- Revision of curriculum and development of technician education must be oriented towards environmental engineering and pollution control. The consequences of not adopting pollution control. The consequences of not adopting pollution control technologies in developed countries shall have to be explained to enlighten the importance of pollution control.
- Syllabus can be revised by giving more importance to field visit and practical exposure. Subject can be made much more practical.
- Pre-service training programs for teachers should be strengthened with environmentalism components not only in content but also in methodology. Further appropriate teaching-learning strategies, need to be developed.
- Appropriate techniques of teaching like observation, demonstration, experimentation, discussion groups, panel discussion, workshops, seminar, field visit, and study tour related environmentalism should implement.
- To stimulate and facilitate the exchange of information it is necessary to develop and inventory of institutions and colleges delivering programs in environmentalism education.
- There is an urgent need for text books and teaching aids for environmentalism education programs for Associate Degree Level technical institutions.
- Authoritative books an environmental protection as well as materials such as case studies, photographs, charts, maps, slides, films and other-audio-visual aids on environmentalism problems is necessary.
- In planning environmentalism education curricula, due consideration and perspective should be given to resource depletion, conspicuous consumption, pollution generation etc.

Specific suggestions given by, HODs and faculty for improving environmentalism in technical education

- Principals of polytechnic colleges of India recommended inclusion of environmentalism in technical education in all regions of India. Specific needs of each geographical area should be considered.
- Principals of polytechnic colleges of India emphasized to have separate books related to training and development on issues in Environmentalism
- Principals of polytechnic colleges of India emphasized the importance to incorporate the subject to Environmentalism at all level s of education systems.
- Principals of polytechnic colleges of India were in favor of including topics of Management of Environmentalism in Management courses.
- Principals of the Associate Degree Level Technical Institutions of Iran recommended more involvement of experts from industries and professionals in the design and development of curriculum on Environmentalism.
- Principals of Associate Degree Level Technical Institutions recommended flexible curriculum in Environmentalism.
- Principals of Associate Degree Level Technical Institutions in Iran desired to have sufficient support from the Media viz. News papers, Televisions, Films and Magazines to promote Environmentalism.

- HODs/Faculty of India recommended including the following topics in the Environmental Engineering and pollution control subject of Diploma Level Civil Engineering branch.
  - Fundamentals of Environmental Science
  - Ecological Balance
  - Environmental Management
  - Attitude towards Environment
  - Environmental Standards
  - Environmental Laws
  - Sustainable Development
  - Unit operation problems in Waste Water Engineering
- HODs and Faculty from Associate Degree Level Technical Institutions from Iran recommended to include the following topics of Environmentalism in Civil Engineering at Associate Degree Level; sources of pollution in detail-demonstration and its effects-importance of Trees-relation between population and pollution-sustainable development-environmental loss- environmental standards- ecological balance.

REFERENCES

Agrawal, A. (1995). Environmental Education, The state of India's Environment. Centre for Science and Environment. New Delhi Press.

Alburg.A, et al. (1996). The Impact of population growth on well-being in developing countries. Berlin: Springer.

Alizadeh, E. and Pishgahi Fard, Z . (2010). The Position of Environmental Threats in Creating Different Models of Regional Integration, Int. J. Environ. Res., **4(3),** 541-548,Summer 2010.

Andrew, P. D. (1996). Conservation and biodiversity. New York: Scientific American Press.

Atreya, B.D. Mishra A.K. (1990). A study in the area of adapting science and technology environmental education to changing society and the Diversity of needs (UNESCO Sponsored), research paper. New Delhi, NCERT. P.12.

Bandhu. D (1997) Environmental education. New Delhi: Indian Environment Press.

Bassett, W. H. (1997). Hand book of Environmental Education IN Institution. London: Chapman Press.

Bauer, D. (2001). The Development process for an institutional in Environmental Conservation program. London, Willy press.

Begon, W.D., and Mortimer, M. (1991). Population ecology. Oxford: Blackwell publication.

Blaikie, N. (2000). Designing social research. USA: Black Well Publishers Inc. 12-58-128-277.

Bradott, R. (2001). The environment and sustainable development, London: Zed books, Open University Press.

Brady, D. (1998). Values, the environment and technical education. Proceedings of the National Seminar on Better World Environment through Engineering Education and Management. 148-153

Brown, L. (1992). Saving the planet: How to shape an environmentally sustainable global economy, London: London Publications.

Brown, L. (1995). Who will feed of Environment: Wake up call for a small planet? New York Press.

Cain, S.A. (1990). Foundations of plant. New York: Heffner Publishing Co.

Census of India. (2000). Registrar general and census commissioner of India. New Delhi: Government of India.

Census of Iran. (1995). Statistical center of Iran, Tehran. pp 203.

Chalam, K. S. (1994). Cost implication of the implementation of environmental education. University News. April 25 Issue. 1994. 6-9.

Chandra, R. (1998). Need for environmental education in colleges. Paper Presented at Workshop on Health, Disease and Environment. New Delhi. p 6

Chatwal, G. R. (1998). Encyclopedia of environmental education analysis. All Volumes. New Delhi: Anmol Publications , 120-122.

Clerveaux, V. and Spence, B. (2009). The Communication of Disaster Information and Knowledge to Children Using Game Technique: The Disaster Awareness Game (DAG), Int. J. Environ. Res., **3(2),** 209-222, Spring 2009.

Haulage, M. (1998), "Education and technology," Elsevier Applied Science Publishers London and New York. 182-183.

Hedjazi, Y., and Arabi, F. (2009). Factors Influencing Non Government Organizations' Participation in Environmental Conservation, Int. J. Environ. Res., **3(1),** 129-136, Winter 2009.

Legault, D.B. and Louise, M. R. (2000). The impact of an environmental education program on learner's knowledge, attitudes, motivation and behaviors. : New York University Press.

Leisinger, K and Schmitt, K. (1994). All our people. Island press. 350p.

Lester, R. B. (1995). Wake-up call for a small planet. New York: Norlan Press.

Leisinger, K and Schmitt, K. (1994). All our people. Island press. 350p.

Lester, R. B. (1995). Wake-up call for a small planet. New York: Norlan Press.

Lindquist, E. F. (1990). Statistical analysis in educational research. Boston: Houghton Company.

Lohani, B. N. (1984). Environmental quality control. New Delhi: South Asian Publishers.

Marsha, G.P. (1984). Man and nature. (Physical geography as modified by human action). New York: Charles Publication.

Matthias, P. N. (1998). Imperative environmental education. Proceedings of the National Seminar on Better World Environment through Engineering Education and Management. Chennai: TTTI.

Mukherjee, P. N. (2000). Methodology in social research. New Delhi: Sage Publications.

Matthias, P. N. (1998). Imperative environmental education. Proceedings of the National Seminar on Better World. Environment through Engineering Education and Management. Delhi Press.

Nagarajan, K., and Srinivasan, R. (1994). Research methodology in education. Madras: Ram Publishers.

Rao, A. (2001). Environmental Indian school education. The Journal of Progressive Educational Herald. 37-41.

Reidel, C. (1998). interdisciplinary Environmental approaches, research paper, Costa Mesa: California, Education Media Press.

Saxena, A.B. (1996). *Environmental Education*. National Psychological Corporation. Research paper. Delhi University Press.

Schawartz, J. (1995). The impact of state capacity on environment of Environmental policies: The case of India, research paper. The Journal of Environment and development.