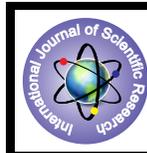


Experience Based Approach to Environmental Education for Secondary Teacher Education



Education

KEYWORDS : Experiential Learning; Teacher education; Environmental education

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ABSTRACT

Recognizing the need and importance of environmental education in India, recently several efforts have been made to develop curriculum and other support materials for introducing Environmental education at different levels of education. This implies that there is an urgent need of overall sensitization and awareness building of pre-service teachers about the environment and related issues. One of the barriers to environmental education activities at school level is the reluctance of support and lack of preparedness on part of the teachers. In this paper, the researchers seek to discuss the concept and different techniques of experiential learning approach that can be employed by teacher education institutions to impart environmental education. Kolb's Experiential Learning Theory has been explained in detail. The paper concludes with a note that Teacher education institutions should embrace new teaching learning approaches like experiential learning so that necessary skills are provided to pre-service teachers in Environmental Education.

INTRODUCTION

The academic and professional training of teachers has a direct and positive bearing on the quality of their performance and consequently on the achievement of students. As far as Environmental education in India is concerned, one of the serious issue is that teachers are not well equipped to deal with Environmental Education. The important role of teachers more specifically teacher educators, in cultivating and developing environmental education in formal education has been well documented in the UNESCO-UNEP International Environmental Education programme (Fien & Tilbury 1996). Three core issues emerged from the programme: (i) the important role that teachers have in providing quality environmental education; (ii) the need for teachers to have the knowledge and skills to teach environmental education; and (iii) the importance of innovative teaching and learning materials and strategies to bring about curriculum change.

The Supreme Court of India in 1999 mandated the teaching of environmental education across all years of formal schooling. In 2005 the National Curriculum Framework was released and also the National Council for Teacher Education released a new curriculum for teacher education with a clear emphasis on environmental education. Environmental Education is being compulsorily taught in most undergraduate institutions in India. This was achieved by direct action through the University Grants Commission (UGC). Most of the universities in India have introduced environmental education as one of the optional or elective papers at the B. Ed. Level. One of the goals of any teacher education programme thus, should be to develop competencies among pre service teachers in environmental education. However conventional teaching learning methods are being observed in Indian classrooms using lecture method and often students rely on rote memorization. Pre service teachers hardly get exposure to various teaching and learning techniques in environmental education.

Pre service teachers must be acquainted with the environment related issues and problems and equip them to analyse, evaluate and resolve them. To achieve this, the curriculum at B Ed level could be based on the three common aspects: Learning *about* the environment, learning *through* the environment and Learning *for* the environment by developing a genuine concern for and sensitivity towards its protection and preservation. Focus should be, not only on the knowledge aspect but largely on generating awareness, developing attitudes, values and skills, and promoting participation and action among pre service teachers. This can be done through Experiential learning approach as discussed.

REVIEW OF RELATED LITERATURE

Research into the use of experiential learning in the university classroom has shown that students' motivation and satisfaction are enhanced through active participation in learning (Bass and Byrne, 1993; Cranton, 1989). Sullivan and Rosin (2008) opined that the mission for higher education should be to bridge the gap between theory and practice and Bass (2012) suggests that to do this, the educational environment needs to intentionally create rich connections between the formal and experiential curriculums. Finlay (1996) developed a programme for second year Bachelor of Education secondary students at Australian Catholic University (NSW) called 'Community-based Experiential Learning for Student Teachers' (CELP) in which the researcher encouraged staff to adopt experiential education strategies and techniques to "inject the notion of enterprise" into the pre-service programme. As a result students became more self-directed because they functioned as 'co-learners' alongside experienced facilitator-teachers. Valli (1992) claims reflective practice leads to personal empowerment and this should be a central goal of professional teacher education. Research studies prove that experiential based learning is most suited for imparting Environmental education in teacher education institutions.

EXPERIENTIAL LEARNING APPROACH

There are different teaching-learning techniques for providing experience based education to students which may be either within the classrooms or outdoor experiences. Experiential learning is one such approach. The concept of experiential learning was first explored by John Dewey and Jean Piaget, among others. It was made popular by education theorist David A. Kolb, who, along with John Fry, developed the experiential learning theory. It is a kind of learning which occurs by doing or experiencing rather than hearing or reading about a particular topic. This approach encourages collaborative work wherein the students often engage in teamwork and develop the qualities of cooperation and adjustment much needed for reformation in higher education especially in teacher education. It attempts to create a connection between the learner and the content being taught by involving the student in reflection on his or her experiences. Often students memorize isolated pieces of information without understanding its practical application and chances of forgetting is more as time passes. In such a situation experiential learning can help in practical application, longer retention, in changing life styles and also helps in bringing the students and the teacher closer.

Andresen, Boud and Choen (2000) provide a list of criteria for experience-based learning.

- The goal of experience-based learning involves something

- personally significant or meaningful to the students.
- Students should be personally engaged.
- Reflective thought and opportunities for students to write or discuss their experiences should be ongoing throughout the process.
- The whole person is involved, meaning not just their intellect but also their senses, their feelings and their personalities.
- Students should be recognized for prior learning they bring into the process.
- Teachers need to establish a sense of trust, respect, openness, and concern for the well-being of the students.

According to Kolb (1984), students' experiences have an important place in the learning process, because individuals learn as a result of their own lives and experiences. He put forward Experiential learning theory that defines learning as "the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping and transforming experience"

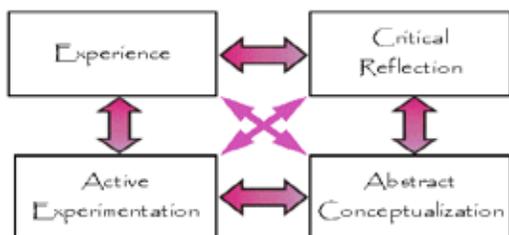
Kolb's Experiential Learning Theory presents a cycle of four elements

Concrete experience is a stage of learning that is centered on *feeling*, the learner is in a learning situation and gains new experiences by interacting with one's environment in other terms experience based approach to learning that relies for a large part on judgments based on feelings, discussion and feedback with peer groups and teachers.

Reflective observation is a tentative, impartial and reflective approach to learning. This stage is centered on careful observation of others or to develop observations about their own experience. A learner reflect and try to understand reality from one's own or others experiences

Abstract conceptualization is a conceptual approach to learning that involves wherein the learner apply logical thinking and constructs his/her that often results in logical evaluation

Active experimentation is an active, doing approach to learning that relies heavily on experimentation. The learner takes decisions or solves problems based on new Knowledge. At this stage is able to apply the knowledge to new situations.



Source: Kolb, D. A. (1984)

METHODS THAT CAN BE EMPLOYED

Preparing pre-service teachers for environmental education requires successful use of different methods of experiential learning. Apart from traditional lecture method, some experiential methods that can be infused in teacher education for environmental education are discussed as follows.

Field Visits

Students get an opportunity to observe and experience the natural environment thereby helps in changing their attitude and behavior through investigative process. The teachers have a great role to play wherein the students must be facilitated in problem

solving and relational thinking skills.

Field Surveys

Survey is one of the best methods to analyze the natural conditions as it is. Pre-service teachers should be taught how to conduct surveys outside the classrooms in natural settings which can be done individually or in groups which also gives the experience of teamwork and collaboration.

Group discussions

Class room discussions or panel discussions should be a part of teaching learning process where the pupil teachers exchange their ideas getting an opportunity to analyze, clarify doubts and arrive at valid conclusion on environmental issues.

Situation analysis

In this method a situation is created by the teacher based on any environmental issue and pupil teachers are asked to find solutions or remedies. This a very useful method to create environmental awareness, to inculcate necessary skills required for comparing, decision making and prioritizing opinions and also to develop environmental ethics.

Environmental Games

Pre-service teachers should be taught how to conduct Environmental Games like Quizzes, Word puzzles, Card games etc so that besides learning the art of conducting environmental games can also help in creating awareness among them.

CONCLUSION

The nature of the environmental education itself stresses the importance of commitment from teachers to involve him/her self and make students to involve in the environmental related actions. Opportunities should be provided to pre-service teachers to practice different teaching techniques so that in real teaching situations are able to discharge their duties efficiently in the area of environmental education. Teacher education institutions should embrace new teaching learning approaches like experiential learning so that necessary skills are provided to pre-service teachers in Environmental Education for their professional development and quality teaching.

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REFERENCES

1. Andresen, L., Boud, D., & Cohen, R., 2000. Experience-Based Learning, in Foley, G., Understanding Adult Education and Training, second edition, Allen & Unwin, Sydney.
2. Baslow, R, & Byrne, M. (1993). Internship expectations and learning goals. Journalism Educator, 47(4), 48-54.
3. Bass, R. (2012, March/April). Disrupting ourselves: The problem of learning in higher education. EDUCAUSE Review, 47(2).
4. Cantor, J. (1995). Experiential learning in higher education: Linking classroom and community. (Report No. 7). Washington, DC: The George Washington University, Graduate School of Education and Human Development.
5. Fein, J. & Tilbury, D. (1996). Learning for a Sustainable Environment: An Agenda for Teacher Education in Asia and the Pacific. Bangkok: UNESCO-PROAP
6. Finlay, B. (1996). Community based experiential learning for student teachers: facilitating enterprise education through cooperative initiatives between university and community/workplace. Presented at the second UNESCOCEID International Conference Re-engineering Education for Change, Bangkok.
7. Kolb, D. A. (1984). Experiential learning: Experience as the source of learning and development. Englewood Cliffs, NJ: Prentice-Hall
8. Valli, L. (1992). *Reflective teacher Education; cases and critiques*. State University of New York Press. XV(1). Paris, UNESCO.