F-14: An integrated approach in applying environmental education programmes at tertiary level

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Economic stability of the country depends on well-planned economic development programme. Environmental aspects become increasingly important in planning development programmes. Tertiary education, among other forms develops human resources required for implementing these programmes. The task of nurturing consciousness is an important undertaking in addressing environmental problems. Teaching problems arising from environmental pollution and possible measures for mitigation are expected to be introduced in undergraduate teaching programmes through an integrated method.

An inter-university survey was conducted in 1996 and 1997 to evaluate current methods of teaching environmental sciences. Findings revealed that 60% of current programmes do not have a practical component. Available courses are optional, therefore the majority of students do not follow them.

A different approach in teaching of environmental pollution was designed. This method based on 3As and 3Rs concept is shown in figure 1. Teaching-aids were prepared to enhance awareness of benefits of a cleaner environment, better laboratory practices and safety symbols. Traditional way of arranging glassware and chemicals in a laboratory was identified as a source of pollution. A modified laboratory design contributed to reduce cost of chemicals, waste generation and users' exposure to chemicals. Experiments were designed to teach better management of resources by recycling of reagents and rendering toxic chemicals. A computer database and a booklet on polymeric materials were designed as reference sources for students.

The proposed integrated approach focuses on real-world problems, makes students to learn environmental problems, to identify key causal factors and to design solutions after drawing conclusions.

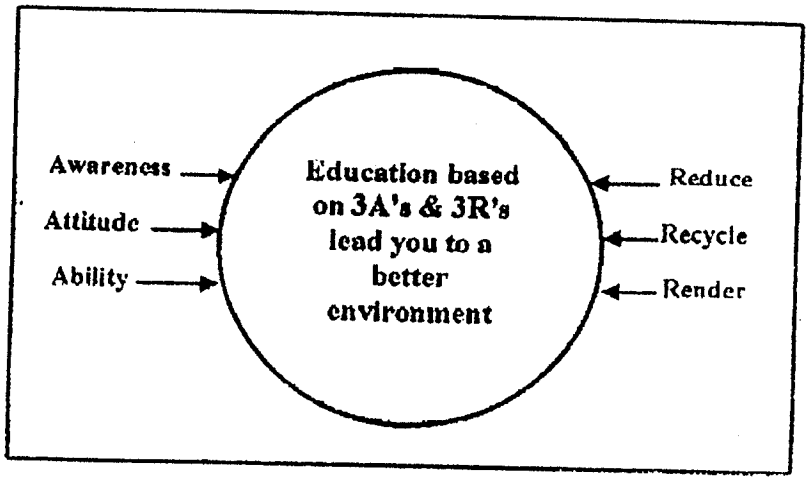

Figure 1 – Concept of 3A's and 3R's

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