

Restoration of coastal ecosystems and environmental educational programs in Osaka Bay area

Hiroshi KAWAI

Kobe University Research Center for Inland Seas

By the excessive changes of coastlines by reclamation and eutrophication of coastal water, the biodiversity in the northeastern Osaka Bay area (mainland-side) has considerably reduced. In order to improve the coastal environment, several attempts to restore the coastal ecosystem have been conducted in the area (e.g. construction of artificial tidal flat, uptake of nutrient salts by seaweed mariculture, etc.). In contrast, the coastal environment is relatively well conserved in Awaji Island (southwestern side), and rich biodiversity is found in the coasts. In order to understand the importance of coastal environmental conservations and the role of diverse restoration programs, it is essential to have knowledge on the two different environments. In order to provide such opportunities for students and citizens, Kobe University, International EMECS Center and Tokushima University have been collaborated to organize diverse environmental educational programs in Awaji Island (the Marine Site, KURCIS), and Omagasaki Port and Omaehama Beach in the innermost part of the Osaka Bay.

The comparative study on consciousness and behavior for environmental problems—based on questionnaire survey for students at Hiroshima University (Japan) and Fudan University (China)

Mieko DOI¹, Yun CHEN² & Tunekazu TODA³

¹ Graduate Student, Graduate School of Social Sciences, Hiroshima University, Hiroshima, 730-0053 Japan
*E-mail: doimieko@zd6.so-net.ne.jp

² Associate Professor, School of International Relations and Public Affairs, Fudan University, Shanghai 200433, China

³ Professor, Graduate School of Social Sciences, Hiroshima University, Hiroshima, 730-0053 Japan

Background: Environmental problems cover wide area from local-scale of living space to the global-scale scope. Most of them should be paid urgent and crucial concerns. The environmental education at academic schools is important for understanding and activities toward environmental problems. However, environmental education at elementary and

secondary schools usually emphasizes lecture and observation only. Even though children obtain knowledge through lecture and observation, it is very difficult to reflect those to the real activity toward environmental problems.

Objective: Environmental education can be defined as a study process with four stages such as: (1) Causing of concern, (2) Deepening of understanding, (3) Promotion of participation and problem-solving ability, (4) Real action. The aim of this study is to clarify important issues in order to construct effective process model of environmental education, which is explained above. Method: The questionnaire survey was done for university students at Hiroshima University (Japan) and Fudan University (China). The current state of consciousness and behavior of university students toward environmental problems are analyzed in both universities. The difference between universities is also examined. The objects and execution date of questionnaire surveys are as follows: (1) China, Fudan University (266 of samples) March, 2007. (2) Japan, Hiroshima University (228 of samples) June, 2007.

Major Results: In general, many of students in Fudan University have rather strong concern for environmental problems and their behavior is rather positive. Many of students in Hiroshima University also show strong concern for environmental problems. However, most students do not reflect to positive action for environmental problems. Some of concrete results are summarized as follows:

(1) For items related to familiar life such as "Power saving" and "Temperature setting and use time of the air conditioning in the room", answer patterns in both universities is nearly same. For the items of "Garbage" and "Water saving", nearly half of Japanese students answer "Always execute it", the positive answer could not obtained from many of students at Fudan University. (2) On the other hand, items related to activities for environmental preservation, different answer pattern could be obtained. Most students at Fudan University had a positive intention to participate in activities related to environmental preservation. In this aspect most of Japanese students at Hiroshima University had not clear attitude toward environmental preservation and their consciousness is not so clear. (3) Students in Japan are likely to have a concern with familiar problems related to daily life. Their "Environmental consciousness" is not necessarily low. However, it is not necessarily reflected to the