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Author(s)	KAMIHOGI, Akiharu; BESSHO, Katsuko; ASHIBE, Takahiro; YAMAZAKI, Ryo; SHIMOMURA, Yasuhiko; YAMAMOTO, Satoshi; MASUDA, Noboru
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A Study of Environmental Education at Recreational Facilities in Hyogo Prefecture

Akiharu KAMIHOGI, Katsuko BESSHO,* Takahiro ASHIBE,* Ryo YAMAZAKI,
Yasuhiko SHIMOMURA,* Satoshi YAMAMOTO,* and Noboru MASUDA

(Laboratory of Regional Landscape Planning; *Laboratory of Urban Landscape
Planning and Design, College of Agriculture, Osaka Prefecture University)

Abstract

The purpose of this study was to gain an understanding of issues concerning environmental education at recreational facilities in Hyogo Prefecture and to propose possible solutions. A questionnaire was sent to each facility which had the potential to run an education program to understand the content of activities, the status of instructors, and the types of facilities available for the program. 31 out of 68 facilities were found to be currently running education programs, and that the number of facilities providing such programs has been increasing in line with increased interest in environmental issues. However, the study showed that most programs were in the early stages of development, dealing with single entities such as plants and animals but not covering whole ecosystems.

Key Words: environmental education, education programs, recreational facilities

Introduction

As environmental problems have recently become a global issue, there has arisen a strong call for creating an environment in which people and nature coexist. For the creation of such an environment, it is necessary that people have a comprehensive understanding of nature. Environmental education is expected to play a key role in fostering this since it provides people with a better understanding of the living things around them (Yamagiwa, 1993; Kida, 1996). Environmental education is defined in this paper as education which nurtures people so that they become interested in and knowledgeable about the environment and environmental issues, develop a comprehensive understanding and awareness of the interaction between people and the environment, actively participate in efforts to create a better environment, and also take a responsible stance towards nature (Anonymous, 1997). Currently environmental education is provided primarily at parks, observation points, nature trails, garden paths, plazas, and sports and recreational facilities. However, it has been reported that some facilities have no environmental education

programs, and other facilities must work on personnel education and improve facilities so that they will become more suitable for their education programs (Hioki, 1994). In addition, it was suggested that, in developing environmental education programs, it is important to match the type of a program with learners' needs and requirements (Ogawara, 1990). Therefore, this study sought to understand issues concerning environmental education programs at recreational facilities in Hyogo Prefecture and to propose possible solutions. The current target types of the programs offered by individual subject facilities was assessed in this study.

Method

(1) Definition of an education program and the type of learning

In this study, an education program was defined as a program run by an individual facility with the primary objective of encouraging participants to become more interested in biotic aspects of nature, to obtain more accurate knowledge, to understand the ecosystem including people and nature, and to act in concert with the natural environment.

The objective of environmental education is to nurture people so that they are able to understand the environment and to study and act for the creation of a better environment. Therefore, it is important to offer a program appropriate to learners' needs, requirements and interests. For the purpose of this study, learning objectives were classified into the following four types of interests in nature: to become familiar with nature, to learn the names of animals and plants, to understand the mechanisms of ecosystems, and to act in concert with nature through such activities as raising animals and plants.

(2) Questionnaires

Questionnaires were distributed to 135 recreational facilities which had the potential to run environmental education programs in Hyogo Prefecture. They were selected from the following Japanese language sources (a-e).

- a) *Omoshiro Taiken Minshuku Deta - Norin Gyogyo Taiken Minshuku Ichiran* (Fun Experience at Japanese Inns - List of Japanese Inns Providing Experience in Agriculture, Forestry, or Fishing), *Zaidan Hojin Norin Gyogyo Taiken Kyokai*, 1997.
- b) *Furusato Daisuki Gaido - Kinki Shizen Kyuymura Gaido Mappu* (Guide for Countryside Lovers - Guide Map of Recreational Facilities in the Kinki Region), *Kinki Block Shizen Kyuymura Kyogikai*, 1995.
- c) *Rurubu Johoban Kinki 7, '96 Rurubu Hyogo* (Rurubu Information Kinki 7 : '96 Rurubu Hyogo Prefecture), Japan Travel Bureau, Inc., 1996.
- d) *Rurubu Johoban Keihanshin 3, '97-'98 Kansai Midori no Asobiba* (Rurubu Information on the Kyoto, Osaka and Kobe Region 3: '97-'98 Recreational Facilities with Greenery in the Kansai Region), Japan Travel Bureau, Inc., 1997.
- e) *Hyogo Kenritsu CSR Shisetsu Gaido Mappu* (Hyogo Prefectural CSR Facilities Guide Maps),

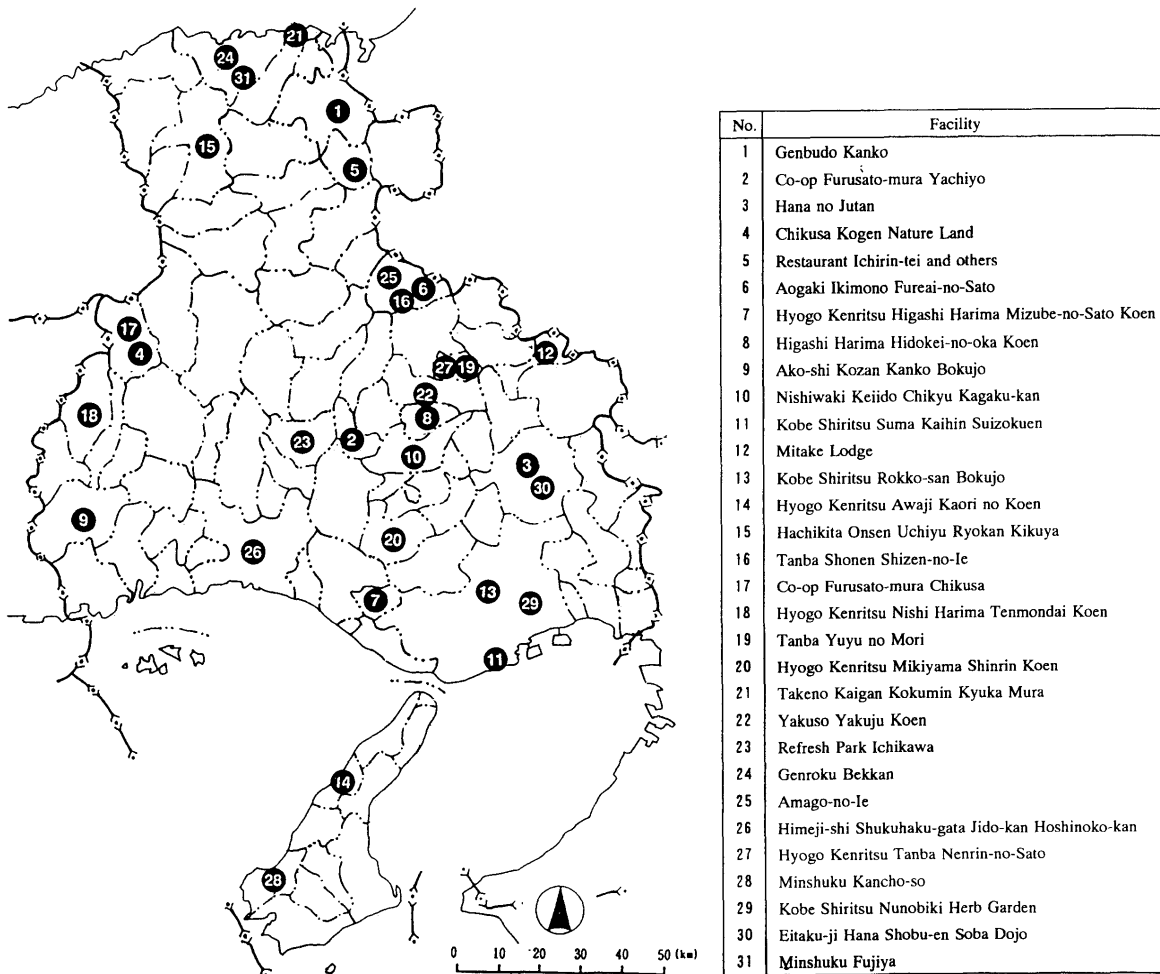


Fig. 1. Distribution of participant facility locations.

and materials on Co-op Kobe.

The questionnaire had items concerning the content of activities, the status of instructors, and the types of facilities available for the program.

As for the content of activities, questions about the following three topics were asked: the date of establishment of the program, objects and materials used in the program, and the learning level to be achieved. Items about the instruction staff asked the number of instructors involved and their employment staffs (full-time, part-time, and volunteer). The questionnaire also asked about the kinds of facilities available for the program.

A questionnaire was sent to each subject facility marked return by March 1998. Sixty eight facilities (50.4% of the subjects) effectively responded to the questionnaire, and the data of 31 facilities offering environmental education programs were analyzed. The locations of those facilities, eighteen of which are public facilities, are shown in Fig. 1.

Results and Discussion

(1) Content of activities

Fig. 2 shows the establishment date of the programs. One facility started its program in the 1960s, 3 facilities in the 1970s, 7 facilities in the 1980s, and 17 facilities (55%) in the 1990s. These results suggest that environmental education programs appeared in the 1960s, when the general public became aware of various environmental problems such as pollution and urban-related problems, that they gradually increased in number in the 1970s and the 1980s, as people called for more amenities after pollution became less problematic, and that they boomed in the 1990s, when people became more concerned about global environmental problems and the Ministry of Agriculture, Forestry and

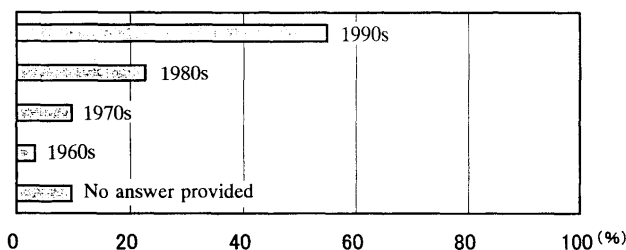


Fig. 2. Establishment of education programs.

Fisheries institutionalized subsidized programs for nature-oriented tourism.

Fig. 3 shows the subjects of study used in the programs. Plants are the most common subjects with trees and flowering plants studied by seventeen facilities (55%) each. Fish come in next with 12 facilities (39%). Insects and wild birds are studied at 10 facilities (32%) each. Small animals are not studied as much with only 6 facilities (19%) dealing with them. There are only a few facilities which systematically dealt with the subjects as parts of whole ecosystems.

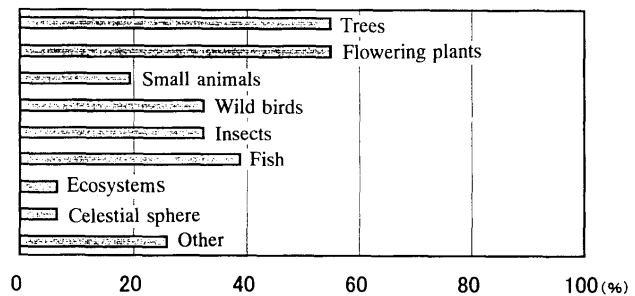


Fig. 3. Subjects of study.

Fig. 4 shows that the learning type to be attained. While more facilities set their program goals at having participants become familiar with nature (9 facilities, 29%) and learn the names of animals and plants (7 facilities, 23%), there are also some more advanced programs which aim to have participants understand the mechanisms of ecosystems (5 facilities, 16%), and interact with nature through such activities as raising animals and plants (5 facilities, 16%). It should be noted that environmental education programs have been improving. A typical example for each learning type is shown in Fig. 5.

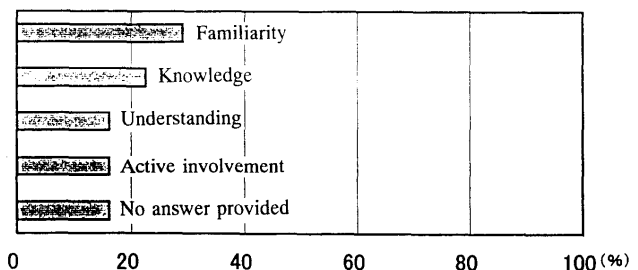


Fig. 4. Target learning types.

(2) Instructors

Fig. 6 shows the number of instructors per



Fig. 5. A typical example for each learning type.

facility. 23 out of 31 facilities (74%) had instructors. 23% of the facilities studied had 2 instructors. The majority (58%) had 1 to 3 instructors. The greatest number of instructors at one facility was 10. In general, most facilities had few instructors.

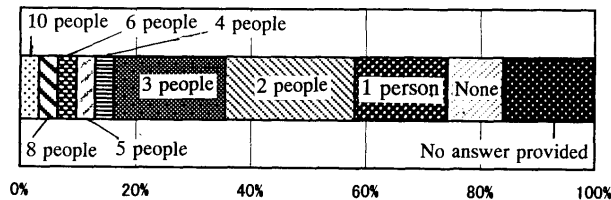


Fig. 6. Number of instructors per facility.

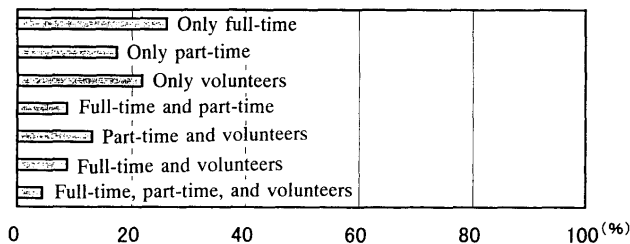


Fig. 7. Composition of instruction staff.

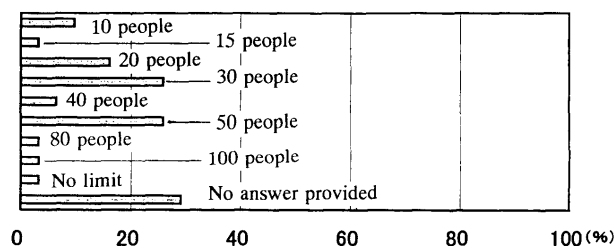


Fig. 8. Number of participants per program.

Fig. 7 shows the composition of the instruction staffs. 6 facilities (26%) had only full-time employees as instructors, 5 facilities (22%) had only volunteers while 4 facilities (17%) had only part-time employees. The relatively high percentage of volunteers and part-time employees showed that there were not enough full-time employees to run the programs, and that volunteers and part-time employees played an important role.

As shown in Fig. 8, most programs had 20 to 50 participants per program. This suggests that one of the future challenges of education program providers may be to improve their instruction systems. Such improvements will be accomplished by having enough instructors to deal with large numbers of participants, or by adopting a team-teaching method and other methods suitable for large group instruction.

(3) Types of facilities

Fig. 9 shows the types of facilities. There are

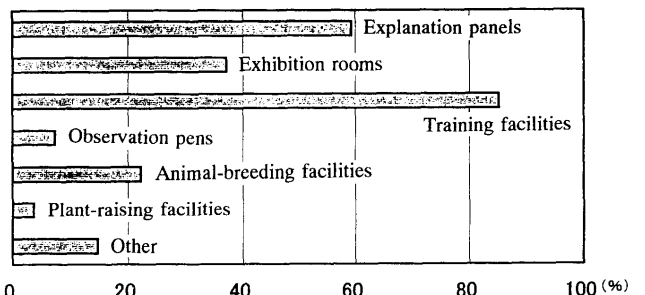


Fig. 9. Types of facilities.

two kinds of facilities for education programs: those requiring an instructor's guidance such as lecture rooms, and those encouraging visitors to discover and learn on their own such as displays with explanation panels and self-guiding trails. Both kinds of facilities need to be improved to provide better programs. The study results showed that a satisfactory number of facilities (23 facilities, 85%) had the former kind of facilities while fewer facilities provided explanation panels (16 facilities, 59%) and exhibition rooms (10 facilities, 37%).

Conclusion

The study results revealed that the number of facilities offering environmental education had been increasing in tandem with interest in environmental issues although not many facilities (31 out of 68 surveyed) were running education programs in Hyogo Prefecture at the time of this survey. Considering social trends, people will probably place more hopes on environmental education at recreational facilities. People will seek better ways to make use of their leisure time at home and in their communities because of the introduction of a five-day school week in 2002. Additionally, this expectation is backed by the need to make use of the human resources of older people and to encourage their active participation in social activities, and by a trend of encouraging life-long education. However, this study showed that most programs were in the early stages of development, dealing with single entities such as plants and animals without covering whole ecosystems. In conclusion, the following four suggestions are made for better environmental education at

recreational facilities. Facilities should 1) improve their outdoor areas in accordance with regional characteristics, the location and learning objectives, 2) develop and improve activities in such a way that makes the most use of the outdoor areas, 3) hire, educate and train enough instructors to run those activities, and 4) establish educational program management systems.

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