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Kids' ISO14000 Programme^{1,2,3} Environmental Education System for Children

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Abstract

As an environmental education programme system, Kids' ISO 14000 Programme started in 2000. Characteristics of this programme are (1) encourage children's awareness, (2) teaching of method of environmental management based on ISO 14001, and (3) networking of those children. The programme starts from the management of household, and then children work for their region, and finally make international collaboration work through network.

This programme is expanding rapidly in Japan. It is now expanding to Asia and other countries by translated workbook and systems.

The results from Kids' ISO 14000 Programme indicate its effectiveness in (1) increasing awareness of children and also of their family members, (2) reducing emission of carbon dioxide from household by 10-15 %, (3) enhancement of the effects of environmental education by combination of Kids' ISO 14000 Programme with other environmental education programme, such as nature observation, etc.

One of the characteristics of the international expansion system is Digitized On Demand Publication system, by which rapid diffusion of the workbook and other system can be done, through electronic system.

1. Introduction:

The global environmental issues, such as global warming, climate changes and water pollution, are the most important issues for human beings to survive. Since the major causes of those issues are attributed by the modern life style of human beings and their economic activities, it requires various changes of the life style and human activities for long time to resolve those environmental issues and to recover the nature.

This fact essentially involves environmental education of children from the childhood. After the world environmental summit at Johannesburg in 2002, UN plans to start "Decade of Education for sustainable development" for 2005-2015. It is evident that environmental education is now one of the keys for solution of the issues.

There are some environmental education systems in the world. Most of them are classified in two types, (1) experiences of good nature, and (2) teaching of the mechanisms of causes of environmental issues, and teaching of how to recover the nature.

It is good for children to experience what is good nature for human beings in their childhood. This makes grow of sensibility of children to the nature, and also it does not require any scientific knowledge. To understand the issues to recover the nature from the damage, children need to have scientific knowledge to some extent. One of the difficulties of environmental education of children is that the level of scientific

knowledge is limited.

The aim of “Kids’ ISO 14000 Programme” is for children to have confidence to live throughout their lives. This confidence leads to the survival of human beings. For this aim Kids’ ISO 14000 Programme has several special features in itself. For example, in this programme, 2 ways communication is taken by feedback system between the children and the instructors of the programme. The followings are more details description of the Programme.

One of the characteristics of Kids’ ISO 14000 Programme is Very Clear Results of the programme appeared, even in test run of this programme. Some of the results are also shown after.

2. Aims and Concept of “Kids’ ISO 14000” Programme

The aims of Kids’ ISO 14000 Programme are,

- (1) To make “strong children”,
- (2) To network those strong children.

“Strong children” means those who can take care of themselves by themselves. If the children have to take care by themselves, then they tend to behave, to listen to others, to encourage challenging new trials. Motivation of the children in this direction is their awareness. The strong children can decide by themselves, and start actions. Then, in the Kids’ ISO 14000 Programme, the children taught the method of management, which is the global standard for environmental management.

For these aims, Kids’ ISO 14000 Programme takes following 3 aspects in the basic concept,

1. Awareness of the child
2. Teaching of method of Environmental Management
3. Forming Domestic and International Networks

To start from the awareness of the child, instead of leading by giving knowledge to children, is characteristics of Kids’ ISO 14000 Programme. We believe when the child has confidence in their decision, then, they start to behave by considering of themselves. In Kids’ ISO 14000 Programme, the specially trained instructors, called “eco-kids instructor make evaluation of accomplishment of the children. The second step is to teach the method of the environmental management, based on ISO 14001 and its series, which is world environmental management system. Performance of the participation of the children is evaluated. In this programme, the children can learn how to improve their environmental situation by the environmental management method. Children start their practice of environmental management from their household, and extend their activities to the regions, and finally they challenge the global issues by networking with children in other countries, internationally.

7. System of Kids’ ISO 14000 Programme

The system consists of 4 levels, starting from

- ① Introductory level
- ② Primary level
- ③ Middle level
- ④ Highest level

a. Introductory level

Working period is set only for 2 weeks. Children, who receive workbooks in their schools, bring it to the home to work with their family member. The child takes leadership in their environmental management activity. This child follows the direction of the workbook of the introductory level. Firstly, the child take data of the daily consumption of their electricity, gas, water as well as amount of the

municipal waste in their house hold, to check their daily life.

Then, the child discuss with their family on what to do to improve their lifestyle. By trying to improve it, the children take data of those items again, and compare the date numerically, with which they took previously. This is the magic of the numerals. They can find the improvement easily. This enhances the awareness of the children to work harder on this line.

From the data of two weeks, children can know how much they could reduce emission of carbon dioxide in their household. It is important that children find themselves that they can do something to improve the global environmental issues, which is such a large scale. This gives children a great awareness, and lead to their confidence to live.

In the introductory level, the aim is to experience the children on the environmental management method. If it is longer than 2 weeks, then the children tired from the programme and tend to give-up. On the other hand, if it is too short, then, the data, which they took, cannot be the “data on the average daily life”.

The workbooks with which the children worked are collected in the school, and return to ArTech for reviewing and evaluation. The eco-kids-instructors in ArTech review and check the workbook, and evaluation sheets are return to the children with their workbooks. In the sheets the accomplishment of each children are evaluated. When the children read this evaluation sheet, the children become happy since their activities are recognized and they have some confidence of their activities on the environmental issues.

b. Primary level

After the Introductory level for experience, children challenge the primary level. In this level, children learn the environmental management method completely, including the management of the members.

Each child receive workbook of the primary level of Kids’ ISO 14000 Programme in the class, and they work in their home with their family for 8 weeks on environmental management of house hold. In this level, child learns how to rotate PDCA (Plan-Do-Check-Action) for 3 times. When they finish the work in the home, they send the workbook to ArTech for evaluation. If the evaluation is higher than 80 %, then the children are receive international certificate, which indicates the ability of the child in environmental management.

c. Middle level

In the middle level, children who have international certificates of primary level challenge on environmental management of the region where they live. They form a team, and decide a direction of improvement of environment of the region. They work for a year, and send their report to ArTech. ArTech evaluates the report, and when the report exceed a certain level, then, the member of the group receive the international certificate of middle level of Kids’ ISO 14000 Programme.

d. Highest level

The contents of the highest level of Kids’ ISO Programme are almost same as the middle level, except the working scheme is international collaboration among the children. They form groups of the children, and make a working plan, which contain an international exchange and collaboration. They work 2 years for this programme, and after evaluation of the report, when the evaluation of the work exceed a certain level, they receive international certificate of highest level.

8. International Certificates

International committee for Kids’ ISO 14000 Programme awards international

certificate. The award ceremonies have been held at United Nations University in Tokyo, Japan.



Award Ceremony of International Certificate Of Kids' ISO 14000 Programme at UNU.



International Certificate

The number of the children who awarded in the first year was 75, and in the second year were 174. The number of this year would exceed 600.

When the number increases, the award ceremonies will be held at international organizations in many countries.

9. Eco-Kids Instructor System

Evaluation of accomplishment of children in Kids' ISO 14000 Programme is one of the important characteristics of this programme. Fair evaluation and return of evaluation sheets to the children who participate this programme make the awareness of the child to fix permanently, and encourage them to challenge higher level of the programme.

10.1 Levels of Eco-Kids Instructors

In the present programme, so-called "eco-kids instructors" play the roles for evaluation and advisors. There are several levels of eco-kids instructors, which are shown in the table.

Eco-kids instructor level	Task	Certification
Level 1	<ul style="list-style-type: none"> ● Evaluation of introductory level 	<ul style="list-style-type: none"> ● Training course, and interview
Level 2	<ul style="list-style-type: none"> ● Evaluation of introductory level ● Regional management of introductory level ● Advisor for higher level ● Training of Level 1 	<ul style="list-style-type: none"> ● Training course, ● Evaluation of report ● Interview ● International Certificate by international committee
Level 3	<ul style="list-style-type: none"> ● Same as the above, ● Evaluation of reduction of emission of greenhouse gases 	<ul style="list-style-type: none"> ● Same as the above
Level 4	<ul style="list-style-type: none"> ● Same as the level 3 ● Training of Level 1, 2, 3 	<ul style="list-style-type: none"> ● Evaluation of report ● Interview

		● International Certificate by International committee
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10.2 Training course for Eco-Kids Instructors

Training courses for Eco-Kids Instructors have been open for public in Tokyo and several other cities in Japan.

The course consists of

- (1) The aims, systems, and general description of Kids' ISO 14000 Programme,
- (2) Roles of eco-kids instructors,
- (3) Workbooks,
- (4) Trainings on evaluation,
- (5) Deduction of results from the workbooks.

10. International Operation of Kids' ISO 14000 Programme

Since international networking is the one of the final goals of Kids' ISO 14000 Programme, translation into foreign languages and preparation of operation in foreign countries are being planned and some of them are being conducted.

11.1 English version:

Translation of the first test version of Japanese Introductory level of Kids' ISO 14000 Programme into English has been done in the fall of 2000. This has been used for,

- (1) Explanation of the programme to international organizations,
- (2) Introduction of this programme into foreign countries,
- (3) Base for translation into other foreign languages.

Now, revised version of English version in preparation, in which 3 years experience with Japanese experiences are taken into account.

From Nigeria in Africa, interest came to participate this programme, there.

11.2 French version

Production of French version is under consideration, since a French school near Paris is interested in participating Kids' ISO 14000 Programme.

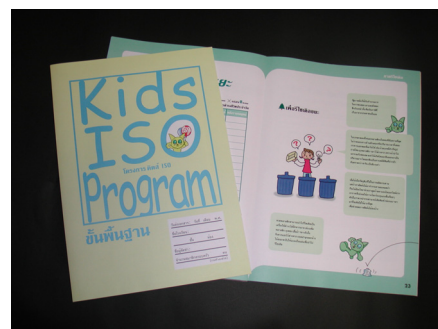
Interests from Algeria came in using French version in the school for environmental education in Algeria. This indicates if French version is produced, there are many possibilities to receive participation by many French speaking African countries.

11.3 Thai version

ArTech has done translation in Thai language, with support of Thai Embassy in Tokyo. It has been printed, and now it is being tested in the elementary schools in Thailand.

After this test run, modification will be made to fit to the culture in Thailand.

This test run would give us very important aspects with cultural diversity, which we have to take into account in the process of the globalization of the environmental education.



Thai version of workbook

11.4 Indonesian version

Indonesian NGO, called DIETCO is interested in running the Kids' ISO 14000 Programme, there, since local governments are interested very much in this environmental education programme. They made translation of the original test

English version into Indonesian by themselves. Support by UNESCO Indonesia has been expected.

11.5 Spanish version

A request on Spanish version from Columbia, in Latin America came to ArTech, Tokyo. One of the headquarters of ArTech, ArTech Latin America in Buenos Aires is considering translation into Spanish.

11.6 Other Language version

If English version is produced, then, translation from English into the other foreign language may be easier. This would lead Kids' ISO 14000 programme to spread into many other countries.

11. Some of the Results from Kids' ISO 14000 Programme

After initial operation of this programme for 3 years, many important results are coming out. Those results will be published in many academic papers, government reports, and elsewhere. Here, some of the results are presented.

12.1 Increase of participation

Once local governments, local education committees, or schools participated Kids' ISO 14000 Programme in their pilot school for testing, the programme spread through out the prefectures, cities, as well as the schools. This fact comes from the clear results from the programme. This influences on the provinces near by, and thus the number of the participation increases more and more. As the number of the participation increase, the number of eco-kids instructors increase.

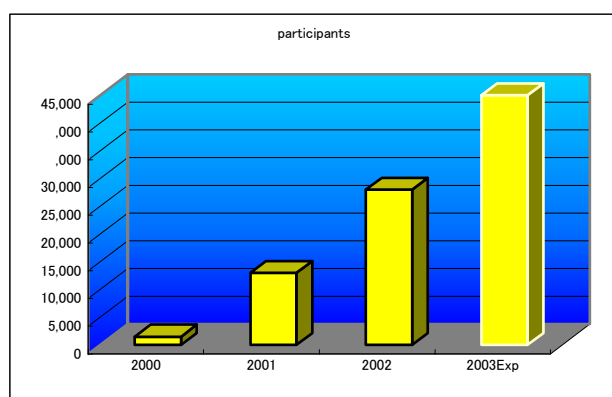


Fig. 1 Participation to Kids' ISO 14000 Programme increases year by year.

12.2 Increase of Environmental Awareness of the children and also their family members

As shown in the Figure, environmental awareness of 80 % of the children, who participated, increased. This means that this programme has great effectiveness as an environmental education tool.

A research programme of Sugunami-ku, in which this increased environmental

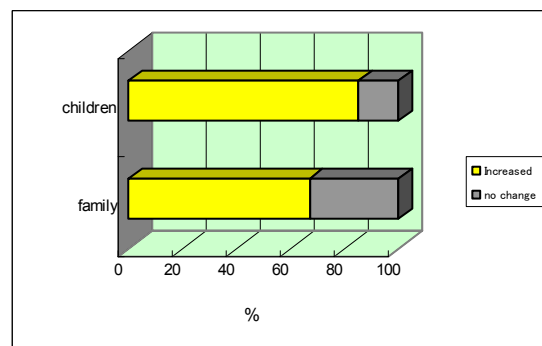


Fig.2 Environmental awareness of children and family member change by Kids' ISO 14000 Programme

awareness persists more than 3 months, also confirms this.

It is interesting to find that environmental awareness of 60 % of their family members are also increased. This indicates that the approach from the children to the adult can be effective in environmental education.

12.3 Reduction of Emission of Greenhouse Gases from Household

Children work with their family member in their home to reduce consumption of electricity, gases, and water as well as production of municipal of waste. As the results, calculating from the reduction of each item, total reduction of emission of carbon dioxide from household are deduced. As shown in Figure, it is amazing to find that by leadership of children, they could reduce the emission by more than 10 %.

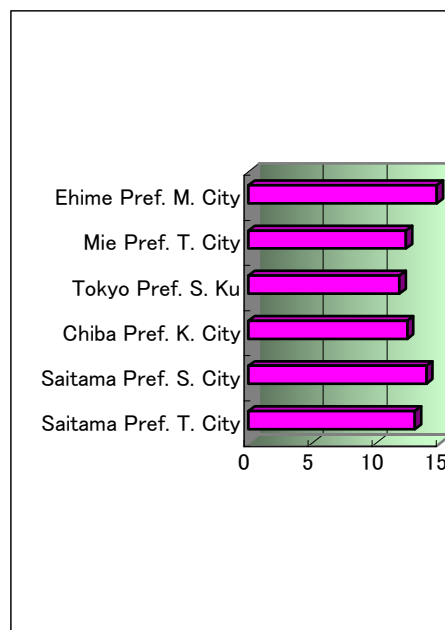


Fig.3 Children showed that their leadership could reduce the green hose gases from house hold in many cities.

13. Conclusion

First 3 years practice of Kids' ISO 14000 Programme in Japan demonstrated its effectiveness as an environmental education system for sustainable development. It is now expanding Asia and other countries to find its effectiveness, internationally.

One of the characteristics of the international expansion system is Digitized On Demand Publication system, by which rapid diffusion of the workbook and other system can be done, through electronic system.

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