

# **FAMILY STRATEGIES FOR DEVELOPING ENVIRONMENTAL CONSERVATION BEHAVIORS IN THAI CHILDREN**

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## **Introduction**

At present, our society has increasingly been facing with several severe environmental problems. Some of these problems stem from various types of pollutions such as water, air, noise and garbage. All of these pollutions strongly affect our health. It is, therefore, necessary to improve our environment by raising public awareness and encouraging them to help solve these problems. The family can play an important role in cultivating our Thai children to have an environmental awareness. The children will gain a better understanding of environmental conservation taught in school if their parents help foster this issue at home as well.

## **Objectives of the Study**

1. To study the correlation among bio-social factors, psychosocial factors, behavior development factor and environmental conservation behaviors (ECB).
2. To examine patterns of activities for developing ECB in children at home.
3. To develop a handbook for parents and to study its effects on developing ECB in children through the handbook.

**Methods**

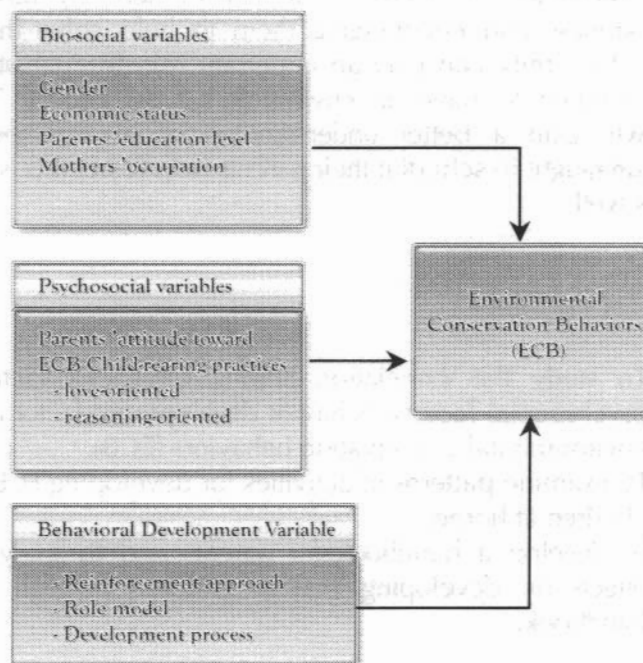
The research design consisted of 2 phases: phase 1 – survey research and phase 2 – research and development.

**Phase 1**

*Conceptual Framework*

A survey research was conducted to study the relationship among bio-social variables (gender, economic status, parents' education level and mothers' occupation), psychosocial variables (parents' attitude toward ECB, love-oriented and reasoning-oriented child-rearing practices), behavioral development variable and children's environmental conservation behaviors (ECB) as shown in figure 1.

**Figure 1:** Conceptual Framework of Phase 1



### *Participants*

The subjects comprised of 157 grade-2 students and their parents. The students were 75 males and 82 females. Nearly half of the parents received a bachelor's degree. About one-third of the family had the gross income around 10,000-30,000 baht and about one-third of the mothers were employees.

### *Instruments*

Questionnaires were used for children and their parents. The information collected consisted of bio-social variables (gender, economic status, parents' education level, and mothers' occupation), environmental conservation behaviors (ECB), psychosocial variables (parents' attitude toward ECB, love-oriented and reasoning-oriented child-rearing practices), and behavioral development variable.

### *Data analysis*

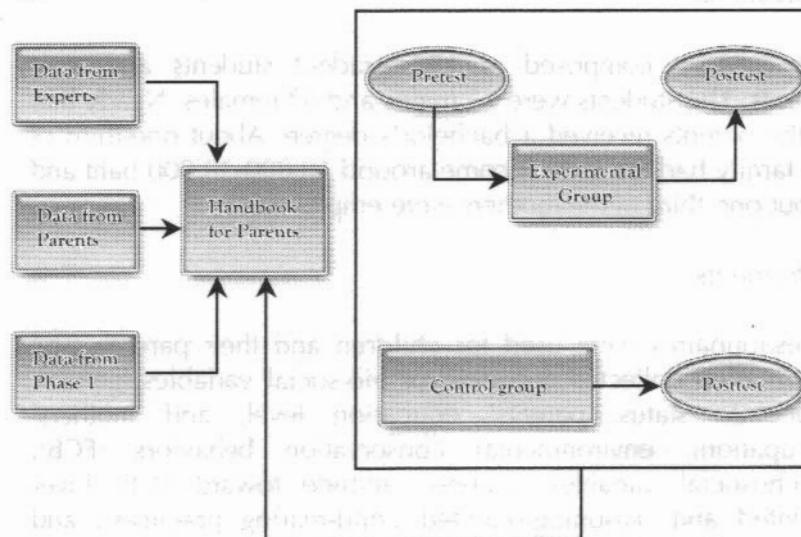
Percentage, mean, standard deviation, correlation and regression analysis were employed in this study.

## **Phase 2**

### *Conceptual Framework*

The second phase was research and development design. The handbook was developed from three sources of data. The experiment was conducted and studied for the effects of developing ECB of children through the use of the handbook. All these processes were shown in figure 2.

**Figure 2:** Conceptual Framework of Phase 2



### *Participants*

The sample at this stage consisted of 15 parents of the 5 students with the highest scores of ECB from each school in phase 1 and 260 grade-2 students and their parents from 3 schools. The children were divided into 2 groups – 121 students in the experimental group and 137 in the control group.

### *Instruments*

There were 3 sets of research instrument employed at this stage. The first one was an interview with the parents of the 15 students to collect the strategies they used for developing ECB in their children. The other 2 sets of questionnaire were employed to collect data from the parents of 2260 students to measure two variables: students' ECB perceived by their parents, and parents' attitudes toward child-rearing practice on ECB before and after experimental period.

The handbook was then developed after the first set of questionnaire was analyzed. Together with the data retrieved from phase 1 and the opinions of the experts in child behavioral development. The handbook was designed with the following strategies:

1. To provide environment and atmosphere in the family gearing towards economizing and conserving resources by means of
  - disciplines as agreed upon by all family members
  - parent-child interactions that promote analytical thinking and environmental awareness
2. To set good examples for the children and reinforce role model
3. To instigate and encourage children to acquire the desired behaviors towards environmental conservation.

The content of this handbook consisted of 5 topics: 1) Electricity, 2) Water consumption, 3) Rubbish management, 4) Paper consumption, and 5) General environment caring. Besides the scope of the content mentioned above, the structure inside this handbook comprised as follows: 1) Expected behaviors relating to 5 topics, 2) Activities schedule plan (7 weeks), and 3) Parents' roles affecting their children's ECB along with 12 various activities in 5 topics. Each topic consisted of 2-4 activities, and evaluation forms for parents to check or record their children's behaviors. They must evaluate before starting the first activity and after finishing the last activity of each topic.

Finally, within each activity there were 5 main questions (or subtopics): 1) How important is it? 2) What to be taught? 3) How to teach? 4) The children's roles and 5) Assessment of behavior.

#### *Data analysis*

Mean, standard deviation and *t-test* for independent and dependent samples were employed in this study.

## **Results**

### **Phase 1**

It was found that there were positively significant correlations among ECB and student's gender (.22), parents' attitudes toward ECB (.14), love-oriented child-rearing practice (.20), reasoning-oriented child-rearing practices (.20) and behavioral development (.18).

However, there was a negative significant correlation between ECB and parents' education level.

In addition, these variables-gender, reasoning-oriented child-rearing practice and parents' education level could account for 13.4% of ECB.

### **Phase 2**

No significant difference was found in ECB and parents' attitude toward ECB between the experimental and control groups. However, the parents in the experimental group reported that their children enjoyed the activities in the handbook, that the handbook facilitated them to teach positive environmental behaviors, and that it provided an also invaluable guideline for ECB's development.

## **Conclusion**

This research showed that the important variable in psychosocial factors affecting children's ECB were love-oriented child-rearing practices, reasoning-oriented child-rearing practices, attitude toward developing ECB, and behavioral development process.

It was found that gender, reasoning-oriented child-rearing practice and parents' education level could account for 13.4% of ECB.

Parents need to be aware of the importance of children's ECB genuine and consistent development. The handbook could be a great guideline for parents to acquire strategies to develop children's ECB.

## **Discussion**

From the findings it is evident that there was a relationship among psychosocial variables (parents' attitude toward ECB, and child-rearing practice - both love-oriented and reasoning-oriented), behavioral development variable, and ECB of children. This indicates the importance of parents' roles as great impact on children's behaviors; and it was a crucial evidence that led to the necessity of enhancing or developing parents' roles. According to these research findings, there was a correlation between gender and parents' education level toward ECB. Furthermore, the female students had ECB higher than the males.

The education of level had a negative correlation. This means that parents with high education level might have not been involved with their children more closely because of other priorities.

Although, we could not find the difference of ECB in children after the application of the handbook; the handbook was accepted as an essential tool. Finally, the more campaign about this issue should be going on in order to have more cooperation between homes and schools.

## **Recommendations**

We hope that this kind of handbook should be promoted more aggressively at school level. Wider distribution to parents could also be increased. Moreover, the school might use this handbook to provide activities together with parents' involvement. In addition, further study should be conducted and developed for more activities for various ages children and for parents from different economic and educational background.

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