Promotion of tree ordination for community forest preservation for undergraduate

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Abstract
The purpose of this paper was to investigate and compare students' knowledge and attitude towards community's tree ordination before and after attending a tree-ordination promotional training. The sample were 30 undergraduate students majoring in Environmental Education at a university in the northeast of Thailand. The research tools were a tree-ordination knowledge manual, a tree-ordination knowledge test, and the attitude questionnaire. The statistics used for data analysis were frequency, percentage, means, standard deviation, and paired t-test. The results showed that before the promotional training, the students had the tree-ordination knowledge at the fair level. However, after the promotional training, their tree-ordination knowledge increased to the good level. When comparing the mean scores between before and after the intervention, it was found that the students' knowledge on tree ordination after the training was significantly higher than before the training at the significance level of .05. In terms of their attitude towards tree ordination, before the promotional training, the students' attitude was at the fairly agree level, but it changed to strongly agree level after the training. When comparing the mean score between before and after the training, it was found that the students had much more positive attitude after the training than before the training with the significance level of .05. It can be concluded that the designed tree-ordination promotional manual is effective and can be used as a tool for promoting tree ordination in a community.

Keywords: Tree ordination; local wisdom; forest preservation; eco-culture.

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1. Introduction

Culture means the ways of life of people in a community. Culture reflects the patterns of living life and it refers to all the creativities that human have invented including thoughts, values, beliefs, and bodies of knowledge. Holistically, culture means the path of human life that is related to the patterns of dinning, living, dressing up, working, relaxing, self-expressing, communicating and living community. Social identity also develops by the conjugation of the ways of living, values, culture and belief. Social belief affects the way people in the community interact. The belief in ghost is associated rather passively into the method of forest preservation. More specifically, it is held more universally among Thai that the forests and trees have their own guardian spirits. These spirits protect the forests from the intruders. Many worshipping activities such as feeding the ghost of water and feeding the ghost of mountain are implemented to deliver homage to those protective spirits. These activities bring to the people the sense of natural preservation. Another spiritually and environmentally-related exercise is ordaining forest. The inherent concept of this activity is similar to the principle of the ceremony called, “Suebchata Mair narm”, which literally means “to prolong the life of the river”. This Suebchata ceremony is also applied to human especially among those predicted to have entered a dreadful inauspicious time in life. It is believed to help people regain their strike of good luck and resume healthy living. Forest ordaining ceremony is performed by wrapping the monk’s Sarong–liked cloth around the trees. This conduct figuratively changes the status of the tree, gaining more respect as the monk is obeyed by the people. The ordaining of the forest shows how religious belief is used for the environment preservation. Making forest ordaining in the forest situated on upstream area is a wise way to protect the trees and help maintain the exudates of water sources to the rivers ramifying from that forest. Forest ordaining ceremony is an activity that lessens the severity of deforestation and set up a hope for Thailand in revitalizing the aging health of the forest (Wongchantra, 2010). In Ban Nongo village in Guntrawichai district, Mahasarakham province, there is a quick descending in the number of trees in the community forest due to smuggling habits. The villagers therefore performed forest ordaining ceremony hoping to exploit the sacred power of the spiritual ghost who is believed to be residing in the trees and forest to scare the smugglers away. Since most of the Thai people are innate with Buddhist preaching and having respect to the monks, the trees that have been ordained will never be cut. Tactically, the trees get protected via the integration of Buddhist preaching, the belief in ghost and supernatural powers (Natnari Chanchalard, 2015: Interview).

Faculty of Environment and Resource Studies is in charge of producing the future environmental scientists to serve the community. The faculty realized that the forest ordaining ceremony in Ban Nongo village was worthy for the students to experience and gain an insight into the core concept forest ordaining in the conservation of the environment. Accordingly, the first year environmental students were engaged in the promotion of the forest ordaining ceremony.

2. Research Objectives

- To study and compare the students’ level of knowledge on the forest ordaining in the community based on the eco-cultural technique.
- To study and compare the students’ level of attitude toward the forest ordaining in the community based on the eco-cultural technique.

3. Research Hypothesis

The students’ scores on Knowledge and Attitude in the post-test should be higher than their counterparts in the pre-test.

4. Research Methodology

Data was collected in Ban Nongo village, Kokphra Sub-district, Guntrawichai District, Mahasarakham Province. The supporting area is the Faculty of Environment and Resource Studies, Mahasarakham University.
5. Population and sample

Two groups of population were engaged in this research:

- Villager population consisted of 313 villagers from Ban Nongo village.
- Student population consisted of 103 of the first year students majoring in the Environmental Sciences from Mahasarakham University.

Specific random method was used to select three villagers, each was a representative from the community leader, the local scholar, and the villager, from Ban Nongo village to be the informants of the research. Thirty of the first years students majoring in the environmental sciences volunteered to join the program.

6. Research Working Phases

Phase 1: Field Survey. This was conducted between September to October, 2015.
Phase 2: Designing of the Disseminating Tools. This phase was appointed between October to November, 2015.
Phase 3: Dissemination of the data on Environmental Science during the months November to December, 2015.

7. Research Methodology

This research was developed via with the Quasi Experimental Research discipline. The participants in the experimenting group were asked to complete the pre-test and the post-test questions before and after the promotion of the project to capture a description about their levels of knowledge and attitude as shown in Table 1 (Boonchom Srisa-ard, 2000).

<table>
<thead>
<tr>
<th>Group</th>
<th>Pre-test</th>
<th>Experiment</th>
<th>Post-test</th>
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<tr>
<td>E</td>
<td>O₁</td>
<td>X</td>
<td>O₂</td>
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Symbols and abbreviations
- E = Experimental group
- O₁ = Pre-test
- O₂ = Post-test
- X = The promotion of the forest ordain

8. Research Instrument

The tool used for collecting the data about the forest ordaining was the interview form. Tools for knowledge dissemination consisted of the manual for the promotion of forest ordaining in the community, and the brochures. Knowledge test form and Attitude test form were used as tools for evaluation.

9. Data Collection

The data collection was done in three working phases,
- Phase 1: Studying the forest ordaining ceremony,
- Phase 2: Designing the tools, and
- Phase 3: Disseminating of data
10. Statistics for Data Analysis

The information was analyzed by using the following statistics.

- Basic statistics consisted of frequency, percentile, mean, and standard deviation.
- Statistics to test the quality of the research tools were IOC, reliability, discrimination, and level of difficulty.
- The research hypothesis was tested against the Paired-t-test with the significant level of .05.

11. Results

The levels of knowledge about the forest ordaining in the pre-test and the post-test. Before the promotion of the forest ordaining, the students' knowledge score was averaged at 9.13 which was equivalent to a “Fair” level of knowledge. After the promotion of the forest ordaining, the score was tested at 16.16 which was equal to the “Very Good” level of knowledge. The knowledge level observed in the post-test score was significantly higher than the pre-test score at the level of .05. The levels of attitude toward the forest ordaining in the pre-test and the post-test. Prior to the promotion of the forest ordaining project the students’ attitude score was averaged at 2.68 which was equal to the “Agree” level of attitude. The number was observed at 2.90 in the post-test which was also equal to the “Agree” level of attitude. The statistic comparison showed however that the post-test attitude score was higher than the pre-test counterpart with the significance at the level of .05.

12. Discussion

After thirty of the environmental students attended the forest ordaining promotion project, their level of knowledge and attitude were tested and the results lead to the following discussion. The results of knowledge evaluation before and after the promotion of the forest ordaining project based on the eco-cultural method.

With regard to the level of knowledge, it was showed that the students’ levels of knowledge before the and after the promotion of the forest ordaining were at a “Fair” and a “Very Good” level, respectively. Students exhibited higher level of knowledge on the post-test which signifies that the promotion of the forest ordaining via the eco-cultural system was able to increase the students’ knowledge and practical concepts of the tree ordaining. In retrospect, the systematic promotional plan of the ordaining of the forest and its promotional tools designed to navigate to the project’s objectives should be primary factors leading to the higher knowledge score on the post-test. Moreover, higher post-test score should be the consequence of the promotional technique under which the student participants were introduced to the working concepts of the forest ordaining via the assistance of informative medium such as brochures and PowerPoints. Singseewo (2011) said that introducing the environmental studies’ contents to the students should employ effective approaches to ensure a successful transmission of the information to the targeted group. Different approaches should be selectively integrated into the presentation of the contents to for optimal learning achievement. By its nature, the environmental studies is made interdisciplinary. Many concepts are integrated in teaching process aiming for the learners master holistic view in learning while fully participating in conducting their own learning. Wungpanich (1983) explained that when people are encouraged to use multi-sensory in their learning they can better deepen their understanding about the facts and details of the topics under focus. Moreover, the results of this learning can last longer and be crystalized as learning experience. Many researches have investigated the promotion of the eco-culture in the environmental studies. As articulating to the findings in this research, a number of researches of this kind found that the students’ level of knowledge in the post-test were higher than in the pre-test. The examples of the research works whose findings are echoing to the finding of this research are listed; an investigation of the promotion of the forest conservation via the culture of forest ordaining in a community by Unratueg

(2013), a conservation of Pakmek plants by Rojanathiwat (2013), a study on the making of bio-compost tea from food wastes by Wongponsagorn (2015), a study on the promotion of the use of the manual for the White Plumeria planting for the conservational and decorative purposes by Sidachomphu (2015), the promotion of the kaffir lime planting for conservational and home consumption purposes among the environmental students by Chayong, (2014), The promotion of the planting of local bananas for conservational purpose among the undergraduate environmental students by Wannapapho (2015), The promotion of decomposing the bio-garbage with earth warmys by P Satjanun (2013), and the promotion of the deteriorated soil in a village by Piwkhoa (2013).

The results of attitude evaluation before and after the promotion of the forest ordaining project based on the eco-cultural method. The attitude score tested after the promotion of the forest ordaining via the eco-cultural method was found higher than the pre-test score, with the averaged pre-test and post-test scores of 2.68 and 2.90, respectively. This shows that the promotion of the forest ordaining based on the eco-culture method was able to make the students to gain better attitude and understanding on the process of the forest ordaining. The increasing attitude score observed here should be resulted from the environmental study technique that was implemented via integrative techniques and from the teaching method that learning was set under different interactive activities. Wongchantra (2010) explained that environmental studies is the transmission of body of knowledge to help the learners attain positive attitude and engage in the solving the environmental problems. The environmental studies is integrative approach that should be promoted for a life-long learning. It makes use of the current environmental conditions for the making of a better future. The environmental studies employs a problem based learning in which the learners have to collaborate with their peers in finding solutions for the existing problems. The final ends of the learning should be to equip the learners with environmental concerns and positive attitude to solving environmental problem. Suwan (1978) said attitude is the feeling of like or dislike, agree or disagree on matters or objects or behaviors of the individuals. The positive or negative attitude that a person has on a particular matter directs the pattern of behaviors that the person reacts, which may be, positively, negatively or even neutrally, on the matter. The behavior that one performs on the given situation directly represents the attitude that the person has on the matter. There are a number of researches which reveal that the attitude score on the post-test is higher than that observed on pre-test. Many of the research works also support that the promotion of the environmental studies makes the learners gain positive attitude via the integrative teaching method. The examples of this kinds of research are; The application of the manual for the promotion of the galangal planting for home use and conservation purposes by Boonbumroong (2014), The promotion of the community forest conservation by Worasut (2013), The preservation of the Heet Sibsong Kong Sibsi tradition for environmental culture conservation by Junkaew (2013), The promotion of the school forest preservation by Kongkum (2014), and the promotion of the forest conservation in the village spiritual shrine area by Tosook (2013).

13. **Suggestions**

13.1. **Suggestions on the research application**

The manual for the promotion of the knowledge and attitude on the ordaining of the forest should be disseminated to interested persons. There should be more promotion to make people be aware of the importance of forest conservation.

13.2. **Suggestions for future research**

The future research should investigate the connection between the forest ordaining and its effectiveness in environmental conservation.

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