

## The Production of I-san Folk Songs to Promote the Natural Resources and Environmental Conservation

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**Abstract:** The environmental problems have currently been important issues that need to be solved through involvements of all parts. Educational institutes and communities are considered to be important for mechanisms to solve the problems. The production of I-san (Northeastern) folk songs to promote the conservation of natural resources and environment is an approach used to promote awareness toward the natural resources and environmental conservation of students and people in general. The purposes of this research were: to produce I-san folk songs and a training handbook; study the results of knowledge transfer about the environment of students through training classified by genders and years of study and investigate the satisfaction of villagers toward the knowledge transfer about the environment to promote knowledge, attitude and awareness about natural resources and environmental conservation through Pong Lang musical performance of students. The sample used in this research was 30 Mathayomsuksa 4-6 students of Srikaewprachasan School under the jurisdiction of Secondary Educational Service Area Office 28, Loengnoktha district, Yasothon province and 329 villagers in communities close to location of the school. The instruments used for data collection were: 13 I-san folk songs; a training handbook; a test of knowledge about natural resources and environmental conservation with 40 items, the difficulty between 0.20 and 0.80, the discrimination between 0.27 and 0.62 and the reliability for whole research of 0.87, a test of attitude toward the conservation of natural resources and environment with 20 items; a test of awareness concerning natural resources and environmental conservation with 70; 5-rating scale items, the discrimination between 0.20 and 0.91 and the reliability for whole paper of 0.98 and a questionnaire about the satisfaction of villagers toward the use I-san folk songs through Pong Lang performance of students to promote knowledge, attitude and awareness about the natural resources and environmental conservation. The statistics used for data analysis were mean, percentage, standard deviation, paired t-test and F-test (two-way MANCOVA). The research results revealed that the appropriateness of 13 I-san folk songs for the promotion of natural resources and environmental conservation of the people in Loengnoktha district, Yasothon province, evaluated by the experts was at the highest level. They were all consistent with the 4 years provincial development plan (2010-2013) of Yasothon province. The levels of knowledge, attitude and awareness about natural resources and environmental conservation of the students both in general and classified by genders and years of study were higher than those of before the training with statistical significance at the level of 0.05. However, there was no relationship between genders and years of study with knowledge, attitude and awareness about natural resources and environmental conservation. The satisfaction of the villagers toward I-san folk songs through I-san Pong Lang musical performance to promote knowledge, attitude and awareness about natural resources and environmental conservation of the students was generally at the highest level.

**Key words:** The production of I-san folk songs, natural resources and environmental conservation, training, musical performance, natural resources, knowledge

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### INTRODUCTION

Regarding the current environmental situation, one of the main problems we are facing is that about global warming including its effects such as floods, droughts,

bush fires, storms, land slide and other natural disasters. These phenomena continually occur and spread out to all parts or regions of the world. Many academics comment that the problems mostly come from the humans who are the main cause. From the situation mentioned

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before, one way to solve the problems which leads to sustainable solutions is the use of environmental education in solving the problems. Veeravatnanon (2003) stated that environmental education is the suggestions for people to obtain knowledge about the environment surrounded and also the environmental problems affecting them and to get involved in solving the problems. From the study about the philosophy of environmental education, aesthetics is one of its branches concerning beauty and arts. The contents of aesthetics involve theoretical beauty standards: aesthetical experience; art rules and regulations; the search of values according to the theory of beauty; beauty about the human perception; art, life and society and the phenomenon of natural beauty. The relevant principles and ideas of aesthetics can be used to create beautiful and impressive songs reflecting the beauty of nature and inner feelings that cause satisfaction, entertainment and pleasure with beautiful language composed in I-san folk music. The production of songs with familiar I-san dialect and music will produce appreciation and lead to the perception of value, love and protection of natural resources and surrounding environment (Chaiyongyot, 1995).

The main feature of folk songs in I-san region is in forms of Mo Lam, i.e., Lam Klom, Mo Lam Mu with the use of local musical instruments such as Khan, Sung, Pong Lang and Wot. Together with the songs, the musical instruments are performed in order to provide joy, fun, beauty and aesthetics of the country areas. The performance can help to promote harmony in society. The application of I-san folk songs to promote students and people in general with knowledge, attitude and awareness about environmental conservation is considered to be a mean to provide opportunity to bring the destroyed environment back to its normal condition. Thai society generally involves the relationship with communities or villages, relatives and kinship and kindness to each other. The way of Thai life comes from the learning experience of ancestors who incubated and practiced that way till it became the secured way of a community. Thai way of life has continued to be self-reliant and to facilitate the natural environment. Thai beautiful art and culture with local wisdom are unique. They are based on the principles of philosophy and beliefs full of strategies to provide people with peace and friendship with surrounding nature and environment.

With the importance of aesthetics as a part of environmental education philosophy, there are needs in using the aesthetic beauty of songs as a tool to link between humans who see natural beauty and the relationship with the environment. This can be done by putting both humans and the environment together as

one unit and allowing them to live friendly together. The researcher has therefore been interested in producing I-san folk songs to promote natural resources and environmental conservation for sustainable development:

- To produce I-san folk songs to promote the knowledge, attitude and awareness about natural resources and environmental conservation
- To study the results of knowledge transfer about the environment through the use of I-san folk songs to promote the knowledge, attitude and awareness about natural resources and environmental conservation of students classified by genders and years of study
- To investigate the satisfaction of villagers toward Pong Lang musical performance of students to promote the knowledge, attitude and awareness about natural resources and environmental conservation

## MATERIALS AND METHODS

### Sample

**Phase 1; the study of learning methods about environmental education through the use of I-san folk songs as a mean and the study of problems or issues concerning natural resources and the environment in the area of Yasothon province:** The sample used in Phase 1 was 5 village philosophers, 3 workers who were in the area of natural resources and environmental conservation, devoted their time to maintain and protect natural resources and the environment without any social position and were accepted by the local villagers; 3 experts who had ability to write songs and 300 students in Yasothon who surveyed the background knowledge, attitude and practice about natural resources and environmental conservation. They were all selected by purposive sampling.

**Phase 2; the promotion of natural resources and environmental conservation for the students in Yasothon:** The sample used in this phase was 30 students in Mathayomsuksa (secondary education) 4-6 (equivalent to grades 10-12) of Srikaewprachasan School under the jurisdiction of Secondary Educational Service Area Office 28 in Loengnoktha district, Yasothon province. The students applied to join the training on natural resources and environmental conservation. The requirements for the applicants were those who were interested in I-san folk songs and also in natural resources and environmental conservation and willing to attend the whole period of training about natural resources and environmental conservation.

**Phase 3; the promotion of natural resources and environmental conservation through I-san Pong Lang musical performance for the villagers in communities close to the location of Srikaewprachasan School:** The sample used in this phase was 329 villagers in communities close to the location of Srikaewprachasan School who were willing to attend I-san Pong Lang musical performance of the students to promote the natural resources and environmental conservation.

**Research instruments:** The instruments used in the study were as follows:

- The tools used in the experiments consisted of the plans to implement I-san folk songs to promote the knowledge, attitude and awareness about natural resources and environmental conservation
- 13 I-san folk songs and the training materials including a handbook, video tapes and cassette tapes

The tools used for data collection were as follows:

- A test of knowledge about natural resources and environmental conservation was used in form of a 4 multiple choice paper. Its main feature was that one point for a correct answer and no point for a wrong answer
- A test of attitude toward the folk songs concerning natural resources and environmental conservation was used in form of a questionnaire covering all areas about the folk songs. It was used to test the attitude of students toward the I-san folk songs through musical performance
- A test of awareness about natural resources and environmental conservation was constructed with 70 items of Likert's 5-rating scale
- A questionnaire about the satisfaction of villagers was designed with the use I-san folk songs through Pong Lang performance of students to promote knowledge, attitude and awareness about the natural resources and environmental conservation

**Hypothesis:** The levels of knowledge, attitude and awareness about natural resources and environmental conservation of students after the training on promotion of natural resources and environmental conservation using the knowledge transfer process about the environment through I-san folk songs are higher than those of before the training. The levels of knowledge, attitude and awareness about natural resources and environmental conservation of students with different

genders and years of study after the training on promotion of natural resources and environmental conservation using the knowledge transfer process about the environment through I-san folk songs are different.

#### **Procedures**

**Phase 1; the survey of environmental problems:** Surveyed the issues concerning environmental problems which were divided into problems about natural resources and environmental conservation and problems about social and cultural environment such as traditions, culture and historical places. The surveys were carried out through the study from villagers, village philosophers and workers who were in the area of natural resources and environmental conservation and devoted their time to maintain and protect natural resources and the environment without any social position. These workers also devoted themselves to conserve natural resources and the environment for their children to see the same things as at present. This agrees with the current situation to say that it is the establishment of sustainability of natural resources and environmental conservation for next generation. To carry out this stage, the Appreciation Influence Control (AIC) Technique was used. It is a technique or an approach to promote the members of an organization to learn together in activities and to work and develop together through the meetings. The meetings were organized for brain storming for an improvement concerning environmental problems existing in communities of the students. As the children of communities, the students have to perceive the problems and get involved in providing suggestions for solutions of the environmental issues in order to gain from all parts an agreement of each problem.

Planned to write songs and to produce a training handbook. The songs were divided into 2 groups. In group 1, the folk songs were about the issues of natural resources and environmental conservation. In group 2, the folk songs were about the issues of social and cultural environment.

Recorded the I-san folk songs written by the researcher in both forms of cassette and video tapes. These materials were used to promote the knowledge, attitude and awareness about natural resources and environmental conservation in next stages.

**Phase 2; the promotion of knowledge, attitude and awareness about natural resources and environmental conservation for students through the training with I-san folk songs:** Promoted the knowledge, attitude and awareness about the natural resources and environmental conservation through the training of 30 students with 3

different years of study. The tests of knowledge, attitude and awareness of students about natural resources and environmental conservation were used before the training. I-san folk songs written by the researcher were used during the training. Tested the knowledge, attitude and awareness of students about natural resources and environmental conservation. After the completion of training, the same tests of knowledge, attitude and awareness about natural resources and environmental conservation were used again with the same group of students. They were used to check whether and how much the training can promote the knowledge, attitude and awareness of students about natural resources and environmental conservation.

**Phase 3; the use of I-san folk songs to promote the knowledge, attitude and awareness of the villagers about natural resources and environmental conservation through Pong Lang musical performance:** Used I-san folk songs written by the researcher from Phase 1 to promote the knowledge, attitude and awareness about natural resources and environmental conservation. The songs were given to the school's Pong Lang musical band and the band performed them during important festivals and events to promote the knowledge, attitude and awareness of villagers about natural resources and environmental conservation. Evaluated the satisfaction of the villagers toward the knowledge transfer about the environment through Pong Lang musical performance. This was carried out by using the questionnaire about the satisfaction.

**Data processing and analysis:** The efficiency for the tests of knowledge, attitude and awareness about natural resources and environmental conservation was analyzed by using item-total correlation, reliability of the whole study ( $r_w$ ) and Cronbach coefficient with the use of computer programs. The research hypotheses were tested as follows: Hypothesis 1 was about the levels of knowledge, attitude and awareness about natural resources and environmental conservation of students after the training on promotion of natural resources and environmental conservation using the knowledge transfer process about the environment through I-san folk songs are higher than those of before the training on promotion of natural resources and environmental conservation. It was statistically tested by using paired t-test.

According to the test of assumption of the Multi-variate Analysis of Variance: MANOVA in the areas of homogeneity of variance-covariance matrices (Box's M Method) homogeneity of variance (F-test) and homogeneity of regression slope (F-test), the results revealed that the data was consistent with the assumption. Hypothesis 2 was that the levels of

knowledge, attitude and awareness about natural resources and environmental conservation of students with different genders and years of study after the training on promotion of natural resources and environmental conservation using the knowledge transfer process about the environment through I-san folk songs are different. It was statistically tested by using F-test (two-way MANCOVA).

## RESULTS AND DISCUSSION

**Part 1; the study of contexts and conditions of the problems about natural resources and the environment of Yasothon province:** According to the strategies for the management and conservation of natural resources and the environment and also the objectives, goals and guidelines for the development of natural resources and the environment of Sikaew sub-district, Loengnoktha district, Yasothon province, there were needs for the promotion of natural resources and environmental conservation including water sources, mountains, forests and remaining community forests. The issues were summarized, grouped and used as guidelines for writing I-san folk songs to promote the awareness of students and people about the crisis of natural resources and the environment. Being a part of natural resources and environmental conservation was an issue used for the production of I-san folk songs to promote natural resources and environmental conservation.

The issues used were global warming; wastes; organic farming; water and river sources; way of life according to the principles of sufficiency economy; deteriorated natural resources; cutting trees, destroying forests and burning forests, sugarcanes and corncocks; fertilizers and chemicals; living within traditions and religious principles and promotion of tourism for nature study and conservation. These issues were studied and used for producing I-san folk songs to promote the natural resources and environmental conservation. The titles of those 13 songs were: Pong Lang Srikaew; Yasothon; Lam Phloen Srikaew; Kaw Khunkhaw Kaw Angnam; I-san; Lok Hon Yon Pai; Phukphan Saiyai; Mai Muan Wan Wan; Mi Pa Mi Fon Khon Mi Kin; Chom Pa Srikaew; Lam Thang Yaw (reliant nature); Lam Toey (vegetables and backyard garden) and Lae Lok Si Khiaw.

**Part 2; findings from the comparative analysis of knowledge, attitude and awareness about the natural resources and environmental conservation of Mathayomsuksa students of Srikaewprachasan School under the jurisdiction of Secondary Educational Service Area Office 28:** The comparison of knowledge, attitude and awareness of students, in general and classified by genders and years of study, about the natural resources

Table 1: The comparison of knowledge of natural resources and environmental conservation of the students in general and classified by genders and years of study before and after the training through the use of I-san folk songs

Students	Full mark	n	Before training		After training		t-test	p-values
			$\bar{X}$	SD	$\bar{X}$	SD		
<b>Gender</b>								
Male	40	15	18.80 (40.00) <sup>1</sup>	2.56	35.53 (88.82) <sup>1</sup>	0.99	-24.888	0.000*
Female	40	15	19.26 (48.15) <sup>1</sup>	1.53	34.73 (86.82) <sup>1</sup>	1.38	-28.075	0.000*
<b>Years of study</b>								
4th	40	10	19.20 (48.00) <sup>1</sup>	2.78	35.40 (88.50) <sup>1</sup>	0.84	-17.914	0.000*
5th	40	10	17.80 (44.50) <sup>1</sup>	1.61	35.40 (88.50) <sup>1</sup>	1.57	-30.283	0.000*
6th	40	10	20.10 (50.20) <sup>1</sup>	0.87	34.60 (86.50) <sup>1</sup>	1.17	-31.982	0.000*
Total	40	30	19.03 (47.57) <sup>1</sup>	2.09	35.13 (87.82) <sup>1</sup>	1.25	-36.347	0.000*

<sup>1</sup>Refers to percentage; \*With statistical significance at the level of 0.05

and environmental conservation before and after the training through the use of I-san folk songs is shown in Table 1-5. From Table 1, it was found that the average score of knowledge after the training about natural resources and environmental conservation of students in general was at 87.82% of the full mark. The average score of their knowledge before the training was at 47.57% of the full mark. The level of knowledge about natural resources and environmental conservation after the training of students was higher than that of before the training with statistical significance at the level of 0.05. The levels of knowledge about natural resources and environmental conservation after the training of both male and female students were higher than those of before the training with statistical significance at the level of 0.05. The levels of knowledge about natural resources and environmental conservation after the training of Mathayomsuksa 4-6 students were higher than those of before the training with statistical significance at the level of 0.05.

From Table 2, it showed that the level of attitude toward natural resources and environmental conservation of the students in general after the training was higher than that of before the training with statistical significance at the level of 0.05. The levels of attitude toward natural resources and environmental conservation of male and female students after the training were at the high level ( $\bar{x} = 3.65$  and  $-3.60$ , respectively) and their average scores before the training were at the middle level ( $\bar{x} = 3.08$  and  $3.14$ , respectively). The levels of attitude toward natural resources and environmental conservation of male and female students after the training were higher than those of before the training with statistical significance at the level of 0.05. The levels of attitude toward natural resources and environmental conservation of Mathayomsuksa 4-6 students after the training were at the high level ( $\bar{x} = 3.62$ ,  $3.66$  and  $3.59$ , respectively) and their average scores before the training were at the middle level ( $\bar{x} = 3.06$ ,  $3.14$  and  $3.13$ , respectively). The levels of attitude toward natural resources and environmental conservation of Mathayomsuksa 4-6 students after the

Table 2: The comparison of attitude toward natural resources and environmental conservation of the students in general and classified by genders and years of study before and after the training through the use of I-san folk songs

Students	n	Before training		After training		t-test	p-values
		$\bar{X}$	SD	$\bar{X}$	SD		
<b>Gender</b>							
Male	15	3.08 <sup>1</sup>	0.14	3.65 <sup>2</sup>	0.11	-15.725	0.000*
Female	15	3.14 <sup>1</sup>	0.18	3.60 <sup>2</sup>	0.17	-17.071	0.000*
<b>Years of study</b>							
4th	10	3.06 <sup>1</sup>	0.16	3.62 <sup>2</sup>	0.11	-10.625	0.000*
5th	10	3.14 <sup>1</sup>	0.91	3.66 <sup>2</sup>	0.10	-11.948	0.000*
6th	10	3.13 <sup>1</sup>	0.22	3.59 <sup>2</sup>	0.20	-25.863	0.000*
Total	30	3.11 <sup>1</sup>	1.68	3.62 <sup>2</sup>	0.14	-21.153	0.000*

Table 3: The comparison of awareness both in general and individual stages toward natural resources and environmental conservation of the students in general before and after the training

Awareness (stage)	Before training (n = 30)		After training (n = 30)		t	p-values
	$\bar{X}$	SD	$\bar{X}$	SD		
Perception	2.47 <sup>1</sup>	0.13	4.21 <sup>2</sup>	0.38	-22.346	0.000*
Response	2.46 <sup>1</sup>	0.08	4.17 <sup>2</sup>	0.28	-35.826	0.000*
Value	2.45 <sup>1</sup>	0.13	4.18 <sup>2</sup>	0.33	-24.585	0.000*
Total	2.46 <sup>1</sup>	0.09	4.19 <sup>2</sup>	0.22	-37.073	0.000*

<sup>1</sup>Refers to middle ( $\bar{x} = 2.51-3.50$ ) and <sup>2</sup>Refers to high ( $\bar{x} = 3.51-4.50$ ); \*With statistical significance at the level of 0.05

training were higher than those of before the training with statistical significance at the level of 0.05. According to Table 3, it indicated that the average score of awareness both in general and individual stages toward natural resources and environmental conservation of the students in general after the training was at the high level ( $\bar{x} = 4.17-4.21$ ) and their average score before the training was at the middle level ( $\bar{x} = 2.45-4.47$ ). The levels of awareness both in general and individual stages toward natural resources and environmental conservation of the students in general were higher than those of before the training with statistical significance at the level of 0.05. From Table 4, it showed that the levels of awareness both in general and individual stages toward natural resources and environmental conservation of male and female students were higher than those of before the training with statistical significance at the level of 0.05. From Table 5, it showed that the levels of awareness both in

Table 4: The comparison of awareness both in general and individual stages toward natural resources and environmental conservation of male and female students before and after the training through the use of I-san folk songs

Awareness (stages)	Male						Female					
	Before training		After training		t-test	p-values	Before training		After training		t-test	p-values
	$\bar{X}$	SD	$\bar{X}$	SD			$\bar{X}$	SD	$\bar{X}$	SD		
Perception	2.48 <sup>1</sup>	0.13	4.39 <sup>2</sup>	0.39	-16.568	0.000*	2.46 <sup>1</sup>	0.12	4.04 <sup>2</sup>	0.28	-17.604	0.000*
Response	2.47 <sup>1</sup>	0.09	4.23 <sup>2</sup>	0.34	-21.231	0.000*	2.46 <sup>1</sup>	0.08	4.11 <sup>2</sup>	0.21	-35.595	0.000*
Value	2.46 <sup>1</sup>	0.13	4.29 <sup>2</sup>	0.36	-17.657	0.000*	2.45 <sup>1</sup>	0.14	4.08 <sup>2</sup>	0.27	-17.642	0.000*
Total	2.47 <sup>1</sup>	0.11	4.30 <sup>2</sup>	0.21	-28.197	0.000*	2.45 <sup>1</sup>	0.08	4.08 <sup>2</sup>	0.18	-28.486	0.000*

Table 5: The comparison of awareness both in general and individual stages toward natural resources and environmental conservation of Mathayomsuksa 4-6 students before and after the training through the use of I-san folk songs

Awareness (stages)	Mathayomsuksa 4						Mathayomsuksa 5						Mathayomsuksa 6					
	Before training		After training		t-test	p-values	Before training		After training		t-test	p-values	Before training		After training		t-test	p-values
	$\bar{X}$	SD	$\bar{X}$	SD			$\bar{X}$	SD	$\bar{X}$	SD			$\bar{X}$	SD	$\bar{X}$	SD		
Perception	2.50 <sup>1</sup>	0.16	4.39 <sup>2</sup>	0.31	-15.124	0.000*	2.47 <sup>1</sup>	0.10	4.15 <sup>2</sup>	0.49	-10.432	0.000*	2.45 <sup>2</sup>	0.12	4.10 <sup>2</sup>	0.26	-14.429	0.000*
Response	2.48 <sup>1</sup>	0.09	4.31 <sup>2</sup>	0.37	-15.600	0.000*	2.46 <sup>1</sup>	0.09	4.11 <sup>2</sup>	0.20	-31.432	0.000*	2.44 <sup>2</sup>	0.08	4.10 <sup>2</sup>	0.21	-28.601	0.000*
Value	2.47 <sup>1</sup>	0.16	4.32 <sup>2</sup>	0.38	-12.775	0.000*	2.43 <sup>1</sup>	0.12	4.28 <sup>2</sup>	0.31	-17.622	0.000*	2.47 <sup>2</sup>	0.13	3.96 <sup>2</sup>	0.16	-18.739	0.000*
Total	2.48 <sup>1</sup>	0.13	4.34 <sup>2</sup>	0.19	-23.641	0.000*	2.45 <sup>1</sup>	0.08	4.18 <sup>2</sup>	0.23	-21.758	0.000*	2.45 <sup>2</sup>	0.07	4.05 <sup>2</sup>	0.16	-22.827	0.000*

<sup>1</sup>Refers to middle ( $\bar{X} = 2.51-3.50$ ) and <sup>2</sup>Refers to high ( $\bar{X} = 3.51-4.50$ ); \*With statistical significance at the level of 0.05

Table 6: The comparison of knowledge, attitude and awareness about the natural resources and environmental conservation of students with different genders and years of study (two-way MANCOVA)

Source of variance	Learning results	Hypothesis df	Error df	F-test	p-values
Genders	3	3.000	22.000	4.324	0.015*
Years of study	3	6.000	46.000	0.492	0.811
Total	3	6.000	46.000	0.766	0.601

\*With statistical significance at the level of 0.05

general and individual stages toward natural resources and environmental conservation of Mathayomsuksa 4-6 students were higher than those of before the training with statistical significance at the level of 0.05. The comparison of knowledge, attitude and awareness about the natural resources and environmental conservation of students with different genders and years of study after the training through the use of I-san folk songs is shown in Table 6.

From Table 5, it was found that the learning results from training of students with different genders were different with statistical significance at the level of 0.05 while the learning results from training of students with different years of study were not different ( $p = 0.811$ ). There was no relationship between genders and years of study with the learning results after training with statistical significance ( $p = 0.601$ ).

After the univariate test, it was found that only the levels of awareness toward the natural resources and environmental conservation of the students with different genders were different with statistical significance at the level of 0.017 (Table 7) and the awareness of male students was higher than that of female students (Table 8).

Table 7: The comparison of knowledge, attitude and awareness about the natural resources and environmental conservation of students with different genders (Univariate test)

Variables	SOV	SS	df	MS	F-test	p-values
Knowledge	Contrast	4.800	1	4.800	3.032	0.094
	Error	38.000	24	1.583		
Attitude	Contrast	0.019	1	0.019	0.897	0.353
	Error	0.518	24	0.022		
Awareness	Contrast	0.369	1	0.369	8.406	0.008*
	Error	1.053	24	0.044		

Table 8: Mean and standard deviation of the awareness toward the natural resources and environmental conservation of students with different genders

Gender	$\bar{X}$	SD
Male	4.30	0.05
Female	4.08	0.05

**Part 3; the study of satisfaction of villagers toward the use of I-san folk songs through Pong Lang performance of students to promote knowledge, attitude and awareness about the natural resources and environmental conservation:** From Table 9, it was found that the general satisfaction of villagers toward the use I-san folk songs through Pong Lang musical performance of students to promote knowledge, attitude and awareness about the natural resources and environmental conservation was at the highest level. When considering individual items, 12 items were at the highest level. The 1st 3 items with highest means were the performance promoted the awareness, value and involvement about natural resources and environmental conservation, the production of I-san folk songs can promote love and protection of natural resources and the environment at community, regional, national and global levels and the

Table 9: The satisfaction of villagers toward the use I-san folk songs through Pong Lang musical performance of students to promote knowledge, attitude and awareness about the natural resources and environmental conservation

The use of I-san folk songs through Pong Lang musical performance	$\bar{X}$	SD	Level of satisfaction
The male and female singers had beautiful voice with nice tune, rhythm and emotion	4.84 <sup>1</sup>	0.40	Highest
The dancers showed appropriate style, movement, dancing, rhythm and unity	4.87 <sup>1</sup>	0.39	Highest
The musicians played correctly and appropriately according to tunes and rhythms of the songs	4.67 <sup>1</sup>	0.42	Highest
The costumes of singers, musicians and dancers were appropriate	4.83 <sup>1</sup>	0.40	Highest
The duration of performance was appropriate	4.49 <sup>2</sup>	0.45	High
The contents of I-san folk songs provided knowledge of natural resources and environment	4.87 <sup>1</sup>	0.39	Highest
The scene, stage and light and sound system were appropriate	4.48 <sup>2</sup>	0.41	High
The surroundings of Pong Lang musical performance facilitated the learning	4.80 <sup>1</sup>	0.41	Highest
The performance promoted attitude toward local community, intelligence and Thai culture	4.95 <sup>1</sup>	0.28	Highest
The knowledge from listening or the performance met the needs of community	4.96 <sup>1</sup>	0.26	Highest
The knowledge from the performance can be applied usefully into practice	4.48 <sup>2</sup>	0.28	Highest
The general satisfaction toward singers, musicians and dancers	4.94 <sup>1</sup>	0.26	Highest
The general satisfaction toward the process and steps of performance of I-san folk songs of Hak Na Sing Waet Lom Album	4.90 <sup>1</sup>	0.30	Highest
The performance promoted the awareness, value and involvement about natural resources and environmental conservation	4.47 <sup>2</sup>	0.19	High
The production of I-san folk songs can promote love and protection of natural resources and the environment at community, regional, national and global levels	4.97 <sup>1</sup>	0.20	Highest
Total	4.86 <sup>1</sup>	0.33	Highest

<sup>1</sup>Refers to highest ( $\bar{X} = 4.51-5.00$ ) and <sup>2</sup>Refers to high ( $\bar{X} = 3.51-4.50$ )

knowledge from listening or the performance met the needs of community, respectively. There were 3 items at the high level.

The appropriateness for the use of I-san folk songs to promote natural resources and environmental conservation of students and people of Loengnoktha district was at the highest level. Those 13 songs which were consistent with 4 years Provincial Development Plan (2010-2013) of Yasothon province consisted of: Pong Lang Srikaew; Yasothon; Lam Phloen Srikaew; Kaw Khunkhaw Kaw Angnam; I-san; Lok Hon Yon Pai; Phukphan Saiyai; Mai Muan Wan Wan; Mi Pa Mi Fon Khon Mi Kin; Chom Pa Srikaew; Lam Thang Yaw; Lam Toey and Lae Lok Si Khiaw. All titles of the songs were in relation to the strategy for the management and conservation of natural resources and the environment and also the objectives, goals and guidelines for the development of natural resources and the environment of Yasothon province, especially the issues of natural resources and the environment which needed to be solved. The issues included shallow water sources for agriculture and consumption, deteriorated soil, toxic substances from chemicals, pesticide residues, low prices of agricultural products such as Thai Hom Mali rice and cassavas, the change of attitude and social value of local people according to social trend of materialism, repeating droughts and floods in many areas, forest invasion and reclaim and destroyed tourist spots without improvement (YIPAC, 2010). As the appropriateness for the use of I-san folk songs was at the highest level, this reflects the intention and effort in studying the needs of people about natural resources and environmental conservation and the management and conservation of natural resources and the environment in order to produce

the folk songs and a training handbook. Furthermore, the research results as mentioned before came from expertise in writing songs together with better understanding about contexts of written songs. The understanding about those contexts can be utilized in writing songs to stimulate students and people in general to love their own hometown and to protect natural resources and the environment in their own community.

After the completion of folk songs, the songs were examined by the experts who had experiences about writing songs and provided suggestions about the application of environmental education principles into practice to conserve the natural resources and the environment. In addition, the I-san folk songs created were piloted through the internal broadcastings of school and village under the scope of research. They were also broadcasted at the community radio station. This mean made villages easily get an access to. Regarding the results from the questionnaire during the pilot stage, it was found that the I-san folk songs were well accepted by the people.

This was evaluated through the calls made to the community radio station asking for the songs. The students could remember well the words and rhythm of the songs. These results agreed with the principles for writing songs of Khunnawut who stated that in writing songs, the song writer should know the principles for writing which are systematic and clear including the layout of its components. The 5 principles for writing songs are attractive beginning, interesting and clear contents, word saving with no confusion, listeners think that the songs are their own ones and impressive ending. The findings agree with Mangkang (2006) who studied the development of training syllabus on strategy for

establishing an involvement with communities for school administrators under the projects of Her Royal Highness Princess Maha Chakri Sirindhorn. The procedures of this research and development were: the study and analysis of basic information as a study for the preparation of essential basic information; the development of a training syllabus; the test of efficiency of the training syllabus and the improvement of the training syllabus.

The levels of knowledge, attitude and awareness about the natural resources and environmental conservation of the students in general and classified by genders and years of study were higher than those of before the training with statistical significance at the level of 0.05. However, there was no relationship between genders and years of study with knowledge, attitude and awareness about natural resources and environmental conservation.

The results are like this because I-san folk songs and their training handbook are considered as learning innovations which are interesting. Students can easily understand the issues hidden in words of the songs. Moreover, I-san folk songs are also well related to the contexts of students in terms of language used. The researcher used language which was easy to understand with no need of further explanation. The tunes and rhythms of the music were suitable for all target groups. The knowledge about the natural resources and environmental conservation was able to be transferred through these songs. This method is recognized as an aesthetics which is very sensitive. It has been accepted that when someone like a song, they will appreciate and remember it forever.

This agrees with Jutha (2001) who stated that the learning transfer will influence personal learning because the learners can bring the old knowledge back to relate with the new one. This type of transfer will help us learn new lessons faster. The activities during training transferred to students were therefore impressive. During the training, students involved in many interesting activities which promoted knowledge, positive attitude and awareness leading to the appropriate practices about natural resources and environmental conservation. This principle is similar to a principle of learning theory that mentions about the belief of attitude. It believes that attitude is a kind of habit from learning through the use of relationship process.

A relationship will occur when a stimulus appears at the same time and the same place. Similar to the study of music subject with grade A, a person will be happy, like it and want to study the subject again. Regarding I-san folk songs created, after the students listened to them more often, they felt like to listen again and to sing along too. The research results revealed that the levels of

knowledge, attitude and awareness about natural resources and environmental conservation of the students with different genders and years of study after the use of I-san folk songs and the training were not different. They indicated that both genders and years of study did not affect the perception, attitude and awareness about natural resources and environmental conservation.

This is because when the students with different genders and years of study gained knowledge through the folk songs and the training, they all had the same thought that the problems of natural resources and the environment equally involve all people, no matter they are males, females or Mathayomsuksa 4-6 students with however, different responsibility and awareness. They however have to see the problems as holistic and do not separate them into parts. This approach agrees with a principle of environmental education (UNESCO, 1996). Additionally, the satisfaction of villagers toward the use of I-san folk songs through Pong Lang musical performance to promote the knowledge, attitude and awareness about natural resources and environmental conservation was at the highest level. This finding resulted from several factors or contexts. They were for example, the male and female singers had beautiful voice with nice tune, rhythm and emotion. The dancers showed appropriate style, movement, dancing, rhythm and unity. The musicians played correctly and appropriately according to tunes and rhythms of the songs. The costumes of singers, musicians and dancers were appropriate.

The duration of performance was appropriate. The contents of I-san folk songs provided knowledge of natural resources and environment. The scene, stage and light and sound system were appropriate. The surroundings of Pong Lang musical performance facilitated the learning. The performance promoted attitude toward local community, intelligence and Thai culture. The knowledge from listening or the performance met the needs of community.

The knowledge from the performance can be applied usefully into practice. The process and steps of performance of I-san folk songs of Hak Na Sing Waet Lom Album in general were highly appropriate and the performance promoted the audiences the awareness, value and involvement about natural resources and environmental conservation. To summarize, the knowledge transfer through the production of I-san folk songs can promote the people with love and protection of natural resources and the environment at community, regional, national and global levels. The findings about satisfaction were consistent with the concept about satisfaction of Katz (1960).



## CONCLUSION

The appropriateness for the use of I-san folk songs to promote knowledge, attitude and awareness of students and people of Loengnoktha district about the natural resources and environmental conservation was at the highest level. Those 13 songs used were: Pong Lang Srikaew; Yasothon; Lam Phloen Srikaew; Kaw Khunkhaw Kaw Angnam; I-san; Lok Hon Yon Pai; Phukphan Saiyai; Mai Muan Wan Wan; Mi Pa Mi Fon Khon Mi Kin; Chom Pa Srikaew; Lam Thang Yaw; Lam Toey and Lae Lok Si Khiaw. The levels of knowledge, attitude and awareness about the natural resources and environmental conservation of students classified by genders and years of study were generally higher than those of before the training with statistical significance at the level of 0.05. There was no relationship between genders and years of study with knowledge, attitude and awareness about the natural resources and environmental conservation. The general satisfaction of villagers toward the use I-san folk songs through Pong Lang musical performance of students to promote knowledge, attitude and awareness about the natural resources and environmental conservation was at the highest level.

## RECOMMENDATIONS

- Schools should create their own learning innovations similar to the creation of songs in this research which are appropriate to the environment of local community of students in order to promote learning and protection of their hometown leading to a sustainable development
- Schools should establish an environmental education network for students at school level as a network for natural resources and environmental conservation and also a starting point for higher levels
- The community should support the establishment of a love forest network for youths together with the neighboring or other communities with similar idea in order to exchange experiences about arranging activities for youths in the community

### **Recommendations for future research:**

- This research is the starting point for the creation of I-san folk songs to promote the natural resources and environmental conservation. This idea can be used as a guideline for producing songs in other regions with their own dialects which are good for better communication and understanding in promoting knowledge, attitude and awareness about natural resources and environmental conservation

- There should be a study of factors affecting the knowledge of forest conservation and restoration or a study of other factors relating to the knowledge, attitude and awareness about natural resources and environmental conservation. The factors are for example, ethical reasoning, social models and behaviors concerning the perception of environmental news
- There should be a study of knowledge, attitude and awareness about natural resources and environmental conservation with a sample of other levels of study
- Qualitative research techniques should be used with a study of awareness toward natural resources and environmental conservation in other areas with villagers, village philosophers, local wisdoms and local people in order to find out about guidelines to promote involvements in natural resources and environmental conservation in the future

## ACKNOWLEDGEMENTS

Special thank is extended to my supervisor, Dr. Prayoon Wongchantra (Chairman of the Doctoral Dissertation Committee) for his continual support, guidance and director throughout this study to Assistant Professor Dr. Banyat Sali (Member of the Doctoral Dissertation Committee) for his useful advice and support.

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