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## Opinions about Environmental Study Activities of Students at the Learning Center on Living Agriculture (LCLA), Praibueng Wittayakom School, Srisaket Province

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Heejung, K.<sup>1\*</sup> Pongsuk, P.<sup>2</sup> and Saduak W.<sup>3</sup>

<sup>1</sup> Jangsu Hanulso Agricultural Association, Jangsu-gun, Jeonrabukdo, Korea; <sup>2</sup> Department of Agricultural Education, King Mongkut's Institute of Technology Ladkrabang, Bangkok, Thailand; <sup>3</sup> Praibueng Wittayakom School, Srisaket province, Thailand.

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**Abstract** This study aimed to explore opinions about environmental study activities of students at the Learning Center on Living Agriculture (LCLA), Praibueng Wittayakom School, Srisaket province. A set of questionnaires was used for data collection administered with samples group of 391 students who were enrolled in Agriculture subject in academic year 2015 and practiced in LCLA. Obtained data were analyzed by using the Statistical Package to find frequency, percentage, mean, and standard deviation. Besides, t-test (Independent sample) was used for the hypothesis testing. Results of the study were as follows:

1. Most of the respondents were females (60.60%) and lower secondary school student (60.60%). About one-half of the respondents (51.40%) had grade point average for less than 2.97. Most of the respondents' parents (73.70%) were engaged in agriculture.
2. As a whole, the respondents had a high lived of opinions about environmental study activities at the LCLA ( $\bar{X}=3.61$ ) in terms of 4 aspects and another one aspect was found at a moderate level. Based on its details, the respondents had a highest level of their opinions in terms of the following: 1) Activities of the center make the respondents have good attitudes toward environmental maintenance in the school ( $\bar{X}=4.36$ ), 2) The center has appropriate atmosphere and environment contributing to the teaching and learning of environmental studies ( $\bar{X}=4.35$ ), 3) Activities in the center cause the occurrence of environmental skills ( $\bar{X}=4.23$ ), and 4) Obtained knowledge can be applied to daily life activities ( $\bar{X}=4.23$ ). However, "Local scholars extend knowledge about environmental of the community" was found at a low level ( $\bar{X}=2.30$ ).
3. As a whole, male and female respondents had a statistically significant difference at .01 of their opinions about environmental study activities at the LCLA. The difference in educational attainment, grade point average, and parent occupation of the respondents did not have an effect on the differences in opinions of respondents which did not conform to the hypothesis as set.
4. As a whole, male and female respondents had a statistically significant difference at .01 of their opinions about environmental study activities at the LCLA in terms of atmosphere, environmental condition, and relationships with the community.

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\* **Coressponding author:** Heejung, K.; **Email:** skyhj@naver.com

5. The difference in grade point average of the respondents had an affection on the difference in opinions about environment study activities at the LCLA with a statistical significance level at .01 in terms knowledge about environmental studies.

**Keywords:** Student opinions, Environmental studies, Environmental study activities, Learning Center on Living Agriculture (LCLA), Secondary school students

## **Introduction**

Environment crisis existing at present is caused by incorrect attitudes and practice of people toward the environment. Academics agree that short and long term problem solving about the environmental crisis must begin with the amendment of people attitudes toward the environment. This is because an attitude is a people toward the environment. Indeed, change in attitudes of people toward the environment must rely on knowledge and understanding about the environment. This can be a basis for the decision making about proper behaviors towards the environment. Decision making is a process which needs skills in problem solving about the environment and the prevention of the occurrence of new environmental problems. Thus, we need to review the value system and concepts of people towards the environment in order to develop people to avoid environmental deterioration. This must be the task of educational institutes and concerned personals/government and private agencies to help solve the problem. Huckle (1991) and Fien and Trainer (1993) agreed that to solve the problem must begin with man first. That is, man must understand and perceive values of the relationships between man and perceive and the environments so they will be willing to take care and protect the environment. Importantly, people must perceive that existing natural resources in the world have a limitation. Thus, they must conserve it and otherwise they will eventually destroy themselves. Therefore, the environmental studies management is essential to people to understand environmental problems and willing to solve the problems so that their livelihoods will be harmonious with the environment (Piamongsan, 2005).

Environmental study activities in the school are determined in all levels of the curricular program, particularly on lower and upper secondary school level. The 1999 and 2002 National Educational Education Act. puts the important on learners as child center. The Section 22 indicates that all learners have a capability to learn and develop themselves and they were considered the most important. In addition, Section 24 reveals that the teaching /learning facilitation and preference of the learners as well as individual differences. The teaching /learning facilitation must be based on the integration of various aspects of knowledge and actual situations for effective learning. Besides, it must put the importance on the ethics, virtue, responsibility, and desired behaviors. The

teacher must be encouraged to facilitate appropriate classroom atmosphere and teaching media which can be part of classroom research for effecting learning and development (Office of the Basic Education Commission of Thailand, 2004: 1). The LCLA of Praibueng Wittayakom School, Srisaket Province has facilitated integrated agriculture particularly on agriculture and environment. Such as vegetable and fruit residue management so as to be the feed for earthworm.

Therefore, it can be seen that the facilitation of agricultural and environmental study activities is essential for learners development as well as environmental important and conservation. The teaching/learning facilitation at the LCLA of Praibueng Wittayakom School is one way to develop human resource to conserve and take care of the environment. Besides, the learner can apply what they have learned from the center to their daily life activities. Therefore, the study on opinions about environmental study activities at the LCLA of Praibueng Wittayakom School can contribute to effective learning based on integrated teaching/learning facilitation.

### ***Objective of the Study***

Specifically, this study aimed to explore opinions about environmental study activities of students at of Praibueng Wittayakom School, Srisaket province.

### ***Scope and Delimitation of the Study***

1. The population in the study consisted of 580 students who were enrolled in Agriculture subject, Praibueng Wittayakom School, Academic year 2015. The Simple random sampling was used for select of 391 students who were train in the LCLA (67.41%). They were classified into group on the basis of educational attainment: 1) Lower secondary school students (291 persons) and 2) Upper secondary school students (178 persons)

#### **2. Variables**

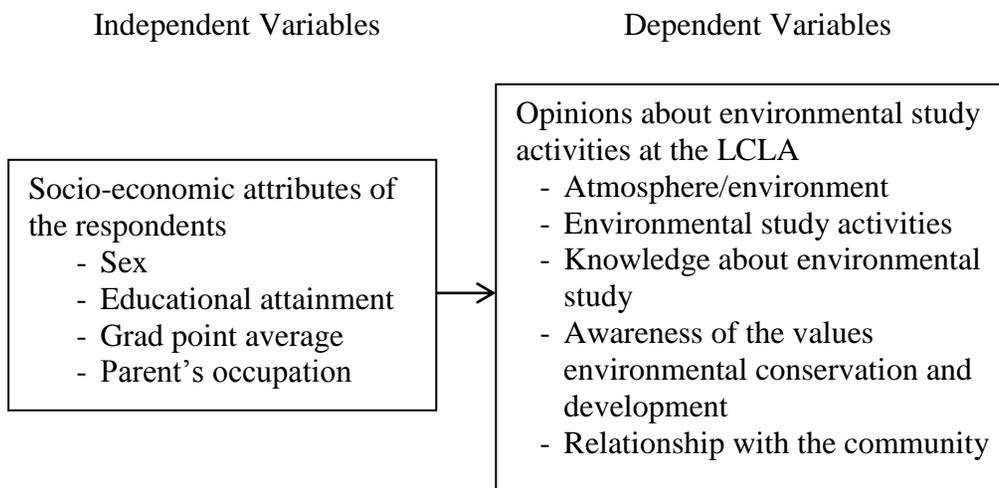
2.1 Independent Variables included sex, educational attainment, grad point average, and parent's occupation.

2.2 Dependent Variables included Opinions about environmental study activities at the LCLA, Praibueng Wittayakom School.

3. The content on opinion about environment study activities at the LCLA comprised 5 aspects as follows: 1) Atmosphere and environment of the LCLA, 2) Environmental study activities, 3) Knowledge about environmental study,

- 4) Awareness of the values environmental conservation and development, and
- 5) Relationship with the community.

### ***Conceptual Framework***



**Fig. 1.** Conceptual framework of the study

### **Research Methodology**

1. A set of questionnaire was used for data collection administered with 391 students at Praibueng Wittayakom School, Srisaket province. The questionnaire consisted of 3 parts as follows:

- Part 1. Socio-economic attributes of the respondents
- Part 2. Opinions of the respondents about environmental study activities at the LCLA of Praibueng Wittayakom School
- Part 3. Suggestions of the respondents

2. The questionnaire was checked by 5 specialists based on correctness and consistency (IOC=0.85). This 5 rating scale questionnaire and a level of opinions were computed by using the equation of width of the interval of the interval = the highest score – the lowest score/a number of intervals and the obtained distance of each interval = 0.80 (Roengprapan, 2000: 30) were:

Score	Mean span	Level of opinions
5	4.21 – 5.00	highest
4	3.41 – 4.20	high
3	2.61 – 3.40	Moderate
2	1.81 – 2.60	Low
1	1.00 – 1.80	Lowest

3. Data were collected from the students by the researcher after being granted by the school director.

4. The statistical Package was used for data analysis which included frequency, percentage, mean, and standard deviation. Also, t-test (Independent simple) was used for comparing the difference.

## Results of the Study

### *Socio-economic attributes of the respondents*

**Table 1.** Socio-economic attributes of the respondents

Items	Frequency (n = 391)	Percentage (%)
Sex		
Male	154	39.40
Female	237	60.60
Educational attainment		
Lower secondary school students	237	60.60
Upper secondary school students	154	39.40
Grad point average		
Higher than 2.97	190	48.60
Lower then 2.97	201	51.40
Parent's occupation.		
Agriculture	288	73.70
Others	103	26.30

According to table 1, it was found that most of the respondents (60.60%) were females and lower secondary school students. About one-half of the respondents (51.40%) had grade point average for less than 2.97. Beside, most of the respondents parents (73.70%) were engaged in agriculture.

### *Opinions of the respondents about environmental study activities at the Learning Center on Living Agriculture (LCLA)*

Based on the 5 aspects of the content of environmental study activities, as a whole, the respondents had a high level of opinions ( $\bar{x}=3.61$ ). Based on it details, however, 4 aspects were found at a high level but 1 aspect was found at a moderate level as shown in table 3. That was, the following the highest mean score of each aspects were shown: 1) Atmosphere and environmental condition of the center were suitable for teaching/learning activities on environmental studies ( $\bar{x}=4.35$ ), 2) Activities at the center make students have good attitudes toward environmental conservation in the school ( $\bar{x}=4.36$ ) and make them have environmental skills ( $\bar{x}=4.23$ ), 3) Obtain knowledge can be applied to daily life activities ( $\bar{x}=4.23$ ), 4) The respondents will extend knowledge about environment to other people in the community ( $\bar{x}=4.11$ ), and 5) The respondents will extend knowledge about environment to other people in the community ( $\bar{x}=3.38$ ).

**Table 2.** Opinions of the respondents about environmental study activities at the LCLA of Praibueng Wittayakom School

Items	Level of opinions (n = 391)		
	$\bar{x}$	S.D.	Description
1. Atmosphere and environment of the LCLA			
1.1 Appropriate atmosphere/environment condition	3.95	1.041	high
1.2 Suitable for environmental study learning	4.35	.684	Highest
1.3 Suitable for self-learning	3.81	1.125	high
1.4 Appropriate and adequate teaching media/equipment /and convenience facilities	3.56	1.084	high
1.5 Promote learning and awareness of the important of convenience	4.11	.899	high
2. Environmental study activities			
2.1 Diverse environmental activities	3.09	1.053	moderate
2.2 Safe environmental activities	4.02	.908	high
2.3 Interesting and appropriate with a learning level of the respondents	4.13	.846	high
2.4 Promote the occurrence of environmental learning of the respondents by themselves	3.65	1.022	high
2.5 Sequencing of agriculture activities is	2.99	.963	moderate

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consistent with environmental activities			
2.6 Agricultural activities are consistent with actual practice on environmental activities	4.06	.680	high
2.7 Promote environmental learning	4.13	.748	high
2.8 The activities cause the occurrence of environment skills	4.23	.753	Highest
2.9 The activities make the respondents have good attitudes toward environmental conservation in the school	4.36	.663	Highest
2.10 The activities make the respondents realize on the importance of environment	4.02	.847	high
3. Knowledge about environmental study			
3.1 Obtain from activities appropriate with age of the respondents	4.12	.797	high
3.2 Obtain from diverse environmental study activities	3.94	.909	high
3.3 Obtain through media having various channels in the center	2.91	.912	moderate
3.4 Novelty and up-to-date	3.85	1.092	high
3.5 Can be applied to daily life activities	4.23	.744	Highest
4. Awareness of the values environmental conservation and development			
4.1 Environmental knowledge makes the respondent truly understand about the environment, knowledge what is right and what is wrong	3.20	.974	high
4.2 The respondent perceives importance and benefits of the school and the community environment	3.79	1.048	high
4.3 Knowledge and activities related to environment make the respondent loves beauty of the nature and environment of the school and the community	4.01	.931	high
4.4 The respondent is concerned about environmental deterioration	3.92	.771	high
4.5 The respondent will begin to conserve the environment by him/herself first	4.11	.809	high

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4.6	The respondent will suggest friends or other to conserve the environment	2.95	1.129	moderate
5. Relationship with the community				
5.1	The community participates in environmental study activities	2.79	.938	moderate
5.2	Local scholars extend knowledge about the environment in the community	2.30	.891	lowest
5.3	The respondent extend knowledge about the environment to other people in the community	3.38	1.096	high
5.4	Educational tour and participation in environment activities around the school	2.63	1.037	moderate
5.5	Knowledge and experience related to environment of the respondent can solve environmental problems in the community	2.76	1.206	moderate

**Table 3.** Opinions about environmental study activities based on 5 aspects at the LCLA of Praibueng Wittayakom School

Items	Level of opinions (n = 391)		
	$\bar{x}$	S.D.	Description
1. Atmosphere and environment of the LCLA	3.95	0.48	high
2. Environmental study activities	3.86	0.39	high
3. Knowledge about environmental study	3.80	0.35	high
4. Awareness of the values environmental conservation and development	3.66	0.42	high
5. Relationship with the community	2.77	0.53	moderate
Total	3.61	0.21	high

***Compairision of the Respondent Opinions about Environmental Study Activities at the Learning Center on Living Agriculture (LCLA)***

Based on the comparison of opinions about environmental study activities at the LCLA of the respondents having different socio-economic attributes, results of the study revered the following:

1) As a whole, the female and male respondents had a statistically significant difference at .01 in their opinions about environmental study activities in term of atmosphere/ environmental condition and relationships

with the community. This was consistent with the hypothesis as set as show in table 4.

2) The respondents having the difference in educational attainment had no statistically significant difference in term of opinions about environmental study activities. However, this was consistent the hypothesis as set as show in table 5.

3) The respondents having the difference in grade point average, as a whole, had no statistically significant difference in term of opinions about environmental study activities and it was not consistent the hypothesis as set. Based on its details, however, there was a statistically significant difference at .01 in term of knowledge about environmental studies. (Table 6)

4) The respondents whose parents having the difference in occupation had no statistically significant difference in their opinions about environmental study activities which was not consistent with the standard as set. (Table 7)

**Table 4.** The respondents having the difference in sex

Items	Male (n =154)		Female (n =237)		t	P
	$\bar{x}$	S.D.	$\bar{x}$	S.D.		
1. Atmosphere and environment of the LCLA	3.81	0.46	4.04	0.48	-4.78**	0.00
2. Environmental study activities	3.89	0.37	3.85	0.40	0.94	0.34
3. Knowledge about environmental study	3.78	0.37	3.82	0.34	-0.81	0.41
4. Awareness of the values environmental conservation and development	3.62	0.37	3.68	0.44	-1.50	0.13
5. Relationship with the community	2.55	0.45	2.90	0.53	-6.70**	0.00
Total	2.53	0.18	3.66	0.31	-6.01**	0.00

\*\*Statistically significant level at 0.01

**Table 5.** The respondents having the difference in educational attainment

Items	Low high school (n =237)		Upper high school (n =154)		t	p
	$\bar{x}$	S.D.	$\bar{x}$	S.D.		
	1. Atmosphere and environment of the LCLA	3.94	0.46	3.96		
2. Environmental study activities	3.85	0.39	3.88	0.39	0.74-	0.45
3. Knowledge about environmental study	3.79	0.37	3.82	0.33	0.75-	0.44
4. Awareness of the values environmental conservation and development	3.68	0.40	3.63	0.45	0.94	0.34
5. Relationship with the community	2.77	0.53	2.75	0.54	0.35	0.72
<b>Total</b>	<b>3.61</b>	<b>0.21</b>	<b>3.61</b>	<b>0.22</b>	<b>0.15-</b>	<b>0.87</b>

**Table 6.** The respondents having the difference in grade point average

Items	Higher than 2.97 (n =201)		Lower then 2.97 (n =190)		t	p
	$\bar{x}$	S.D.	$\bar{x}$	S.D.		
	1. Atmosphere and environment of the LCLA	3.94	0.50	3.97		
2. Environmental study activities	3.84	0.42	3.89	0.36	-1.20	0.23
3. Knowledge about environmental study	3.87	0.31	3.74	0.38	3.69**	0.00
4. Awareness of the values environmental conservation and development	3.67	0.44	3.65	0.39	0.32	0.74
5. Relationship with the community	2.82	0.54	2.71	0.52	1.97	0.06
<b>Total</b>	<b>3.63</b>	<b>0.21</b>	<b>3.59</b>	<b>0.21</b>	<b>1.59</b>	<b>0.11</b>

\*\*Statistically significant level at 0.01

**Table 7.** The respondents having the difference in parent's occupation

Items	Agriculture (n =288)		Others (n =103)		t	p
	$\bar{x}$	S.D.	$\bar{x}$	S.D.		
1. Atmosphere and environment of the LCLA	3.97	0.51	3.90	0.39	1.13	0.25
2. Environmental study activities	3.84	0.37	3.92	0.43	-1.58	0.11
3. Knowledge about environmental study	3.82	0.35	3.75	0.35	1.70	0.09
4. Awareness of the values environmental conservation and development	3.64	0.44	3.70	0.35	-1.29	0.19
5. Relationship with the community	2.78	0.54	2.73	0.51	0.69	0.49
Total	3.61	0.22	3.60	0.19	0.35	0.72

## Conclusions and Discussion

According to the study on student opinions about environmental study activities at the LCLA of Praibueng Wittayakom School, Srisaket province, the following were interesting issued to be concluded and discussed:

1. As a whole, student opinioned about environmental study activities at the center based on 5 aspects, it was found at a high level ( $\bar{x}$ =3.61). Based on it details, however, there were 4 aspects found at a highest level and another 1 aspect found at a low level. This included the following: 1) The environment study activities made the respondent had good attitudes toward the conservation of the school environment ( $\bar{x}$ =4.36), 2) Atmosphere and environment condition were suitable for environmental study teaching and learning ( $\bar{x}$ =4.35), 3) The environment study activities made the respondent had environmental skills ( $\bar{x}$  =4.23), and 4) Obtained knowledge could be applied to daily life activities ( $\bar{x}$  =4.23). All of these implied that the respondents participating in the environmental study activities at the center obtained basic knowledge and skills in environmental studies. This might be because the teaching/learning activities of Agriculture subject at the LCLA were consistent with the environmental study activities such as agricultural garbage disposal management, the center environment management, and garbage sorting in the center.

In addition, the student respondents would be interested in the activities when they had good attitudes toward environmental study activities and

conservation until they applied it to their daily life activities. This conforms to a study of Tinnungwattana (2008 : abstract) which found that after the learner has learned the model development on the facilitation of environment study in the school, he was knowledgeable in environmental study and able to participated in environmental conservation. The conforms to a study of Palmer and Neal, (1994) as cited in Piamongsan (2005: 6) which revealed that environment studies was a process making the occurrence of the awareness of the values, skill development, and good attitudes on the relationships between man, culture, and their bio-environment. Besides, environmental studies helped the learner had skills on the decision-making conclusion in various aspects related to the quality of environment. This also conformed to a study of Chinatakhun (2004: 53) which claimed that extra-curricular programs were not only supplement knowledge but also help the learner to have good attitudes and enjoy his favorite pastime activities.

2. As whole, the respondents had a moderate level of their opinions about environmental study activities in term of relationship with the community. This might be because the LCLA provided activities which the community had few opportunities to participate in it. This conformed to a study of Sriuttha (1999: abstract) which found that problems encountered on the relationships or coordination with the community was at a moderate level. This was in the case of the environmental study activities in middle size secondary school in Khonkaen province.

3. The female and male respondents had statistically significant difference in their opinions about environmental study activities. This implied that males and females had different opinions about it. It might because there were diverse environmental study activities provided by the center. Some of the activities might be appropriate with male respondents whereas same might be not. Some of the activities were consistent with plant cultivation or livestock domestication in the center. This might be not preferred by the female respondents due to its hard task or sanitary matter.

4. The female and male respondents had statistically significant difference in their opinion about environmental study activities in terms of atmosphere and environmental condition and relationships with the community. This might be because the female respondents were sensitive than the male respondent so they put the importance on relationships with the community differently.

5. The respondents having the difference in grade point average had statistically significant difference in their opinion about environmental study activities in terms of environment studies. This might be because those having a higher grade point average give attention to their study and knowledge about

environment than those having a lower grade point average who had a tendency to be interested in vocational profession.

## **Recommendations**

1. Based on results of the study, the following were suggestions:

1.1 The LCLA should make a plan on activities providing an opportunity for the community and local scholars to participate in the activities. This might make students be interested in learning more than ever.

1.2 It should the provision of educational tour for the community to join as well as participation in environmental activities around the school or the community.

1.3 Sequencing of agricultural activities at the center must be consistent with environmental activities more than even.

2. Suggestions for future research

2.1 It should have the investigation on the development of integrated agricultural activities at the LCLA which must be consistent with environmental study activities. This can make the center be a perfect learning source.

2.2 It should have the investigation source of a guideline for the construction of relationships with the community for developing the facilitation of environment studies.

2.3 It should have the investigation of the preparation of the environmental study curricular program by using the LCLA as the base.

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