

The Effect of Training Course Development of Green University Management in Campus, Energy, Waste, Water, Transportation and Education

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ABSTRACT

The purposes of this research were to develop training course of green university management in campus, energy, waste, water, Transportation and Education to be efficiency and effective, to study and compare environmental knowledge, attitude and volunteers before and after the training, to study and compare environmental knowledge, attitude and volunteers of undergraduate students with different gender and age. The sample were 40 undergraduate students of year 1-4 in Environmental Education program, Faculty of Environment and Resource Studies, Mahasarakham University in the academic 2016, by voluntary sampling. The tools used in the research were a training course, knowledge test about green university management, attitude test forwards green university management and environmental volunteer test. The statistics used in data analysis were frequency, percentage, mean, standard deviation, paired t-test, and F-test (One-Way MANOVA). The study found that the training course was the efficiency = 84.06/83.50. The effective index of the training course was 0.7346, showed that undergraduate students progressed in learning was 73.46%. There was difference of mean score of knowledge, attitude and environmental volunteers before and after the training statistically significant level. 05. After the training, there was difference of mean score of knowledge, attitude and environmental volunteers of students with different gender and year level statistically significant at the .05 level.

Keywords

Training course; Green university; knowledge; attitude; Environmental volunteers

Introduction

At present, universities in Thailand and abroad are focusing on effective management under the concept of participation in environmental preservation and energy saving. The use of resources is worthwhile promote the use of renewable energy. There is an integrated energy and environment into the teaching, research, and in all activities of the university. The emphasis on environmental issues is on the rise university of green which (UI Green Metric Ranking of World Universities) organized by University of Indonesia (UI). The purpose is to encourage universities around the world to adopt policies and set environmental management systems within the university to be sustainable and conducive to mitigating the effects of global warming with regard to energy conservation, good environmental management including green space and promoting the use of renewable energy. The criteria are based on the policy of development of a system of activities to promote the awareness and implementation of the system into full practice within the university [1]. University is social responsibility, especially for environmental protection, climate change, global warming and greenhouse conditions. It is a mission that a university must attach importance to as an educational institution with its students, faculty and staff including land, buildings, school buildings, laboratories public utility system knowledge and technology will be used to preserve the environment within the campus as well as being a model for environmental protection for the wider community and society. The most of the world's universities have taken this seriously. This is reflected in the vision and mission of the university. Then implement the action plan both in terms of protection solving problems related to the environment research and development to find new knowledge. It is used to maintain the environment to be of concrete and continuous quality.

The core of the green university is that it comes from the concept of sustainable development that focuses on three main areas: social, economic and environmental. The society will focus on the participation and development of people's quality of life. The economy is focused on the benefits to the majority and long-term continuity. The environmental focus is on the use of resources in a cost-effective manner, taking into account the environmental impact [2]. The green university rankings are conducted by the university of Indonesia or UI Green metric World University Ranking, which began in 2010. The evaluation criteria consists of 6 components 1. infrastructure planning 2. energy management and climate change 3. waste management 4. water management 5. transportation 6. education [3]. In each criterion will be detailed metrics and indicators, ranging from 2-7 points are defined clearly. It

is one of the mechanisms that promote the university's preservation of the environment and the creation of green university and is being used more widely in universities around the world.

In addition to the ethics of the study and the development of the study, there is the lack of a balance of natural resources and the environment because the needs of the students are not as limited as the natural resources are limited by the resources and luxury, including the environment to cause environmental issues and severe piling up. Mahasarakham University is a multi-disciplinary institute of higher education such as human resources and natural resources this is an important factor in the development and production of graduates can lead the local community and society to live under conditions that are constrained properly. The development of intellectual and moral ethics is a behaviour that results from learning system in the classroom and outside the classroom. Therefore, green universities are an important means of improving the quality of life. make life valuable and direct the students to have the desired behaviour by cultivating the moral basis resource conservation and energy saving in various ways.

However, the study is a learning process for the betterment of the people and society by the knowledge of the training to build the culture of the creative to maintain the progress of academic create a body of knowledge of the social environment for learning and supportive factors for people to continuously learn life [4]. So the university of green as the university of integrated conservation of energy and environment in the classroom for research and in all the activities of the university to work in an environment that is secure environment friendly and energy-saving a positive impact on the environment and communities to develop the area that is focused on the green university. It should have the trainees to knowledge to the students to develop that will be in accordance with the condition of the area and according to the environment in an environment is pleasant to facilitate a lifestyle that enhance the learning along with creating awareness and responsibility for the university of Maha Sarakham and environment of students and personnel the surrounding communities. Depending on how the university of green goal is to promote and develop the students to have ethics in conjunction with the development of the knowledge of the technical know the place in the society as a leader and the user based on the skills of managing the experience together and work as a team has the discipline and respect in the social health is both a body and wellbeing, see the value of the arts and culture, tradition of values and the conservation of the natural environment and the culture of love and pride in the financial institutions.

Mahasarakham university is the primary goal in the development to focus on the leading university of learning to social networking. Local university is a university of quality as the university of learning and a university of the community/local based on the good governance principle in the management of the coverage of the effectiveness of performance in the quality and development of the organization to a model of a university of happiness with the pleasant greenery and umbrellas dharma.

So the purposes of this researcher were to develop training course of green university management in campus, energy, waste, water, transportation and education to be efficiency and effective, to study and compare knowledge, attitude and environmental volunteers before and after the training and compare knowledge, attitude and environmental volunteers of students with gender and year level.

Methodology

Population and sample

1. The population used in this training were 341 undergraduate students of year 1-4 in Environmental Education program, Faculty of Environment and Resource Studies, Mahasarakham University.

2. The sample used in this training were 40 undergraduate students of year 1-4 in Environmental Education program, Faculty of Environment and Resource Studies, Mahasarakham University ; 14 male and 26 female by voluntary sampling.

The research tools and quality of tools

The researcher has built and evaluated the quality of the research tools, the procedure as follows:

1. The training course of Green university management.

1) Study the principles and methods for creating the training course of green university management from relevant documents, books and research to set the subject by focusing on the content corresponding to the green university management training course.

2) The researcher has developed a framework for the contents of training course of the green university management for experts to review and give advice, consisting.

3) Bring the training course of green university management to 5 experts.

4) Adopt the training course of green university management from expert assessment to analyse base on the average score of 3.50 or more as a criterion. It was found that there were the suitability of the training course of green university management at the mean (\bar{x}) = 3.97 and the standard deviation (S.D.)= 0.08 in the very reasonable level and the consistency value (IOC) = 0.85.

5) Improve the training course of green university management and applied to try out with undergraduate that were not a sample.

6) Adopt the training course of green university management to improve and complete for further data collection with the samples.

2. The tools used in the measurement and evaluation, including knowledge test, attitude test and environmentalvolunteers test are details as follows:

1) Study basic information from textbooks, relevant research papers to guide the creation of research tools.

2) Using data to create tools for measuring and evaluating results, including:

2.1) Knowledge test about green university management which is a select-and-answer option, there are 4 options, which are: A, B, C and D, 40 items choose only one correct answer. The criteria for a correct answer gave 1 point, the wrong answer gave 0 points, the criteria for interpreting the points are as follows : the average score is 0.00 - 7.99 means that the students are the least level of knowledge, the average score is 8.00 - 15.99 means that the students are a low level of knowledge, the average score of 16.00 - 24.99 means that students are moderate knowledge, the average score of 25.00 - 33.99 means that the students are at a high knowledge level and the average score of 34.00 - 40.00 means that students are at the highest knowledge level.

2.2) Attitude test green university management which is 30 items with the criteria for interpretation as follows: Average score 4.51 - 5.00 means students strongly agree, mean score 3.51 - 4.50 means students agree with mean score 2.51 - 3.50 mean students are not sure. Average score 1.51. - 2.50 means the student does not agree, the average score of 1.00 - 1.50 means the student strongly disagrees.

2.3) Environmental volunteers which is measure for green university management, 30 items, with the interpretation of the following criteria: mean score 2.51 - 3.00 means student participation is at a high level, mean score 1.51 - 2.50 means student participation. At the moderate level, the average score of 1.00 - 1.50 means that the student's participation is at a low level.

3) Take the measuring and evaluating tools to 5 experts for considering the consistency of the instruments used for research purposes to find: knowledge test, the index of item objective congruence was 0.93, attitude test, the index of item objective congruence was 0.91 and volunteers test, the index of item objective congruence was 0.86 which is greater than 0.50 indicated that all tests are correct for their content and purpose and can be used for data collection.

4) Take the measuring and evaluating tools to try out with the undergraduate students, that is not a sample to analyze the difficulty index, discrimination and reliability found that:

4.1) All of the knowledge tests had an available difficulty index level; the lowest 0.40 and the highest 0.80 using criteria for classifying high and low groups analysis of the discrimination to classify each item with a value of 0.20 and above found that all questions have discrimination at a valid level; 0.278 - 0.658. The reliability of the knowledge test using the α - Cronbach Coefficient method was found that there is a confidence factor of 0.913, indicated that all tests of knowledge comply with an acceptable value of 0.70 or higher, which can be used to collect data.

4.2) All of the attitude tests had available discrimination at a valid level; 0.550 – 0.854. The reliability of the attitude tests using the α - Cronbach Coefficient method was found that there is a confidence factor of 0.966, indicated that all tests of attitude tests comply with an acceptable value of 0.70 or higher, can be used to collect data.

4.3) All of the volunteers tests had available discrimination at a valid level; 0.254 – 0.839. The reliability of the volunteers test using the α - Cronbach Coefficient method was found that there is a confidence factor of 0.966, indicated that all tests of volunteers comply with an acceptable value of 0.70 or higher, can be used to collect data.

5) Revised the tools used for measurement and evaluation and make them complete to collect data with the sample.

Statistics used in research

1. Basic statistics were percentage, mean, and standard deviation.
2. The statistics used to determine the quality of the tool were consistency difficulty the power of classification and the whole confidence.
3. The statistics used to test hypotheses were Paired t-test and F-test (One-Way MANOVA) at statistically significant level .05.

Data collection and measurement

The detrainning course development of green university management in campus, energy, waste, water, transportation and education,there are steps in this phase as follows.

1. Basic information based on theoretical concepts and related research papers to create a tool to measure and evaluate.
2. Creating training course by setting the purpose and scope of content in the guide to link with green university information. The relationship between humans and green universities are divided into 7 activity unit each activity unit has contents related to the criteria for considering a green university the evaluation of knowledge during training. the content of the manual includes: unit 1 green university, unit 2 campus setting and infrastructure, unit 3 energy and climate change, unit 4 waste management, unit 5 water usage, unit 6 transportation, unit 7 education (As shown in table 1.)
3. The quality assurance toolkit consists of a course assessment form knowledge test, attitude test and environmental volunteerstest.
4. Try out knowledge test attitude test and environmental volunteers test to try out.

The training course of green university management in campus, energy and building, waste, water, transportation and education there are steps.

1. The purpose of the training determined in accordance with the contents of the training and background of the trainees. The aim is an important and valuable to the trainees can be implemented and developed effectively.
2. The training schedule for a period of 4 months.

3. Qualifications of trainees are 40 undergraduate students of year1-4 in Environmental Education program, Faculty of Environment and Resource Studies, MahasarakhamUniversity.

4. Training evaluation consists of assessing the achievement of the training, assessment of knowledge, attitude and volunteers.

Table 1.Schedule of training course of green university management in campus, energy, waste, water, transportation and education

No.	Training course	Hours
1	Recommended training course and pretest	3
2	Unit 1 green university	3
3	Unit 2 campus setting and infrastructure	3
4	Unit 3 energy and climate change	3
5	Unit 4 waste management	3
6	Unit 5 water usage	3
7	Unit 6 transportation	3
8	Unit 7 education	3
9	Training course summary and posttest	3
Total		27

Results

1. The training course found that the efficiency of the process (E_1) was 84.06% and the efficiency of the result (E_2) was 83.50%. Therefore, the efficiency of the training course of green university management was 84.06 / 83.50. as table 2.

Table 2.The training course of green university management in campus, energy, waste, water, transportation and education(E_1 / E_2)

Effective training course	Full score	\bar{x}	S.D.	percent
Process efficiency (E_1)	40	33.62	2.33	84.06
Efficiency of results (E_2)	40	33.40	1.97	83.50

Performance of training course 84.06 / 83.50

2. Comparison of knowledge, attitude, and environmental volunteers on green university management in campus, energy, waste, water, transportation and education before and after training found that before the training, the students had mean score of knowledge the overall level at low (\bar{x} = 15.12) and after the training, the students had mean score of knowledge at high level (\bar{x} =33.40). Before the training, the students had mean score of attitude the overall level at agree (\bar{x} = 3.88) and after the training, the students had mean score of attitude agree level (\bar{x} =4.31).Before the training students had an average overall score of environmental volunteersat moderate (\bar{x} = 2.25) and after the training, students had mean score of environmental volunteers at a high level (\bar{x} = 2.75) When comparing found that after the training, students had mean score of knowledge, attitude and environmental volunteers more than before the training as table 3.

Table 3. Comparison of knowledge, attitude and environmental volunteers on green university management in campus, energy, waste, water, transportation and education before and after the training

List	Before training			After training			t	df	p
	\bar{x}	S.D.	Degree	\bar{x}	S.D.	Degree			
Knowledge (N=40)	15.12	2.95	Least	33.40	1.97	High	-42.985	39	.000*
Attitude (N=5)	3.88	0.29	Agree	4.31	0.28	Agree	-9.635	39	.000*
Environmental volunteers (N=3)	2.25	0.14	Moderate	2.75	0.12	High	-18.789	39	.000*

* statistical significance . 05

3. Comparison of knowledge, attitude and environmental volunteers found that there was difference of mean score of knowledge, attitude and environmental volunteers of students with different gender and year level statistically significant at the .05 level. as table 4 and 5.

Table 4. Comparison of knowledge, attitude, and environmental volunteers on green university management in campus, energy, waste, water, transportation and education of students with different gender.(Male/Female)

Test statistics	Value	Hypothesis df	Error df	F	P
Pillai's Trace	0.23	3.65	3.00	36.00	0.021*
Wilks' Lambda	0.76	3.65	3.00	36.00	0.021*
Hotelling's Trace	0.30	3.65	3.00	36.00	0.021*
Roy's Largest Root	0.30	3.65	3.00	36.00	0.021*

* There is a statistically significant level. 05.

Table 5. Comparison of knowledge, attitude, and environmental volunteers on green university management in campus, energy, waste, water, transportation and education of students with different year levels. (1-2-3-4)

Test statistics	Value	Hypothesis df	Error df	F	P
Pillai's Trace	0.34	1.54	9.00	108.00	0.14
Wilks' Lambda	0.66	1.68	9.00	82.89	0.10
Hotelling's Trace	0.49	1.79	9.00	98.00	0.07*
Roy's Largest Root	0.47	5.69	3.00	36.00	0.00*

* There is a statistically significant level. 05.

Discussions

1. The training course development of green university management in campus, energy, waste, water, transportation and education found that the efficiency of the training course is 84.06/83.50, which is higher than the 80/80 criterion set. The training course include the activities of lectures, discussions, discussions and exchanges following the concept of Wongchantra, P. [5] said that the system of transfer of knowledge of the environment has a system or method of concrete. There is a complete transmission model content providers convey media, media, time and place, target population and results of behaviour all knowledge transfer must be based on the content of knowledge. Because the nature of the content will lead to the use of equipment. The content is deep and wide educating a very deep need to be treated seriously touch and use tools. The time needed to practice is the most desirable, and the method of transmission is a key factor in bringing knowledge to the target population. This is consistent with the research Thammmarat, K., Khurukhot, J. and Somboonwathanakul, I. [6] has studied teaching development of foundation environmental science course using undergraduate handbook of Buriram Rajabhat University found that the efficiency of the process (E_1) was 83.93% and the efficiency of the result (E_2) was 91.81%, to teach for

undergraduates Buriram Rajabhat University. The efficiency is 80/80 as specified. This is consistent with the research Siripongouthomporn, P., Wongchantra, P. and Sali, B., [7] has studied the development model of village natural resource and environmental protected volunteer network in Mahasarakham. The research found that an analysis of the efficiency of the volunteer network for natural resource and environment conservation in the villages of Mahasarakham province. During the training and after training was 86.50/88.00, which is higher than the criteria set and this is consistent with the research Ekpornprasit, P. [8] has studied effects of activity model to encourage public mind among undergraduate students of King Mongkut's University of Technology Thonburi found that model of activities to promote volunteerism of students of King Mongkut's University of Technology Thonburi. There are elements, principles, objectives, contents, learning activities measurement and evaluation elements of learning volunteerism the principles of learning through various bases include mind, action, help, and happiness. The results of the activity model to promote volunteerism of King Mongkut's University students in the experimental group had the mean score of volunteer behavior before and the experiment was not different. Factors and conditions for the use of the activity model, such as university, faculty, and personnel, have contributed to the development of knowledge, attitude and volunteer skills contribute to the promotion of student volunteerism. In addition, the volunteers will be able to participate in the volunteer activities including evaluation and follow up. This is consistent with the research of Pangoen, S., Mingchai, Ch. & Chumsang, Ch. [9] has studied a development of a blended instructional model on soil water and forestry conservation, the results showed that a learning management plan that uses a blended teaching method is as effective as 87.31/92.08.

The index of the effectiveness of the training course is equal to 0.7346. This shows that undergraduate students in Environmental Education progress in learning was 73.46% showed that from the development of green management training activities using the training course generated from analysis, training manuals and related research papers, the information can be used as guidance and as a guide following the concept of Fongsri, P. [10] by evaluating the post-training program or environmental training, completing the evaluation process of the training program is critical to telling whether an activity or training course has been completed. Environmental education to achieve the objectives and goals set to improve and develop the process of environmental education and training is the most effective. This is consistent with the research of Wongchantra, P., Toomhome, P., Phansiri, Ch. & Junkawe, L. [11] has studied the development of green product training manual for students in Environmental Education, Mahasarakham University, the results showed that the training manual the index was equal to 0.8029 effectiveness of the training manual. The manual of green product training manual for students in environmental education, Mahasarakham University, had growth in learning 80.29%. This is consistent with the research of Wongchantra, P., Wongchantra, K., Kombusadee, T. & Punatung, Y. [12] has studied the promotion of waste bank management for undergraduate students in Environmental Education Programs, Mahasarakham University, the results showed that the effectiveness of promotion had an effectiveness index (E.I.) at 0.7500. This is consistent with the research of Wongchantra, P., Wongchantra, K., Boottarat, S. & Sanprasit, A. [13] has studied the training manual of recycle waste management for undergraduate students, Environmental Education programs, Mahasarakham University, the results showed that the effectiveness Index (E.I.) was equal to 0.6989. And this is consistent with the research of Nammai, K. & Cumrae, N. [14] has studied the development of training manual on water resources management in Mahasarakham Province, the results showed that Effectiveness Index (E.I.) is 0.635.

2. After the training, the students had mean score of knowledge about green university management in campus, energy, waste, water, transportation and education higher than before the training. The concept of Wangphanit, P. [15] said that when a person is conveyed a story from learning, training, training and being seen through various senses. This will allow you to know the facts or details of the story, which will be a person's experience, which will be accumulated and passed on to each other until it becomes knowledge. To measure memory, it is necessary to measure the ability to recall stories, facts, or experiences or to measure the remembrance of the experience. This is consistent with the research of Cumrae, N., Toomhome, P. & Momkuntod, S. [16] has studied the development of environmental friendly consumer training manual for undergraduate student Mahasarakham University, found that after the training, students' mean score of knowledge about eco-friendly consumption is higher than before the training. This is consistent with the research of Phakeewai, S. & Wongchantra, P. [17] has studied the development of environmental recreation camp activities for youth in Roi-Et province of Thailand, found that youths had higher knowledge of the environment after participating in the activities than before participating in the environmental recreation camp activities. This is consistent with the research of Wongchantra, P., Wongchantra, K., Junkaew, L., Sukngam, K., Ongon, S. & Kwaenthaisong, U. [18] has studied the learning activities of green university for environmental education undergraduate students. The results showed that after the learning activities, the samples had more knowledge average scores than before the learning activities. This is consistent with the research

ofJunkaew, L., Wongchantra, P. &Bunnaen, W. [19] has studied the effects of environmental education learning activities using area-based learning in KhokHin Lad community forest in Maha Sarakham, Thailand. The results showed thatafter the learning activity, the students have a knowledge average score of KhokHin Lad community forest (Huai Kha Khang watershed forest) was higher than before the learning activity ($p > .05$).

After the training, the students had mean score of attitude toward green university management in campus, energy, waste, water, transportation and education after training is higher than before training. The students' attitude was significantly increased following the concept of Sunthornsanee, S. [20] said that a person's attitude is defined as the complexity of a person's feelings, cravings, fears, beliefs, biases, or prejudices in order to be ready to act on one's personal experiences. Inclination to practice anything in a good way or against an environment that will come in one way or another and to prepare or be ready to respond following the concept ofPhantong, Phalusuk, D. [21] said that it says that a general attitude refers to a person's idea of something broadly, such as an optimistic view of the world all the pessimists will look at what they face in a bad way. This is consistent with the research ofSiriwatthanamichai, N. and Kurukodt, J. [22] has studied the development of organic farming promoting manual for agriculturists of Ban NongtokpanTambonNongtokpan, Amphoe Yang Talat, Kalasin province. The results of the study showed that after the training farmers had more attitudes than before the training. This is consistent with the research ofKurukodt, J., Toomhome, T. &Pumsunthia, J. [23] has studied the development of waste management manual for the Environmental Education students in the Faculty of Environment and Resource Studies, Mahasarakham University. The results showed that after the training, the students who received the training had more attitude towards waste management than before the training with statistical significance at the level .05. This is consistent with the research ofBoonserm, W., Wongchantra, P. & Sali, B. [24] has studied the development of environmental activities conservation using green poem for students of Environmental Education program. The results showed that after the activity, the students had the average score on the attitude of using poetry for environmental conservation higher than before activity.

After thetraining, the students had mean score of environmental volunteersabout green university management in campus,energy, waste, water, transportation and education higher than before the training. The development of training activities, the trainees have learned by creating consciousness, the skill in practice. The activity is the subject of the participants make the participants active in the activity having the intention to do things. The results are good. Therefore, the training activities are activities that give participants more knowledge before training following the concept of Yimwilai, Ch. [25] said that public consciousness means public consciousness that implies knowledge, mind, intelligence and public responsibility towards society, lawfulness rules and regulations of society as a whole and the organization that they belong to, striving to strictly adhere to rules and laws and following the concept ofKhamsichan, W. [26] said that public consciousness refers to the thought processes and characteristics of the person being treated. There is a process at the individual level, going public, loving and feeling public ownership want to do more than get it from the public. This is consistent with the research of Wongchantra, P. et al., [27] has studied the development of environmental volunteer spirit for high school students, found that after the training, the students had a mean score of environmental volunteerhigher than before the training. This is consistent with the research of Nakaphong, K., Tiangkamol, N. &Khunboonjun, E. [28]has studied the model of solid waste management trough the PAIC process,found that after the training, public health volunteers had more public awareness on environmental conservation and solid waste management than before the training. And this is consistent with the research ofSookngam, K., Wongchantra, P.&Bunnaen, W.[29] has studied the effect of environmental education training course in soil, water and forest conservation on the concept of the King Rama IX of Thailand, the results showed that after the training, the students had a higher mean score on environmental volunteerism than before the training with statistical significance at the level .05.

3. There was difference of mean score of knowledge, attitude and environmental volunteers towards green university management in campus, energy, waste, water, transportation and education of students with different gender. The results of this research indicated that different sexual characteristics have a significant effect on perceptual differentiation. Following the concept of Witchawut, Ch.[30] said that education and learning must have memory involved and in the study of memory, learning is often involved as well. Following the concept of Chaisi, W. [31] said that attitudes arise from seeing, being familiar, experimenting, which is a direct experience and hearing, hearing, seeing pictures or reading about things but never saw and tried with the real ones myself. This is considered an indirect experience because attitude is a matter of awareness, hence, a person may not have an attitude towards what he has not experienced, directly or indirectly. Following the concept ofWarunpitikun, Y. [32] mention a person

with a public consciousness that devotion and dedication is required, civil rights must be consistent with social responsibility a person not only obeys their rights but must act in order to help provide services to others to develop society too. This is consistent with the research of Sripuna, S., Srikhao, M. & Sanunworakiat, R. [33] has studied the construction and development of tourism website media for environmental conservation in Sukhothai Historical Park, the results showed that ravelers of different genders have different knowledge of environmental conservation. This is consistent with the research of Kaling, M. [34] has studied the proposed guidelines for administration of safety, occupational health, and environment in hospital under the Ministry of Public Health : a case study of Songkhla hospital, the results showed that the samples with different genders had different knowledge and understanding of safety, occupational health and environment. This is consistent with the research of Sookngam, K., Wongchantra, P. & Bunnaen, W. [29] has studied the effect of environmental education training course in soil, water and forest conservation on the concept of the King Rama IX of Thailand, the results showed that the students of different genders have knowledge about soil, water and forest conservation according to the king's science and volunteer environment is different.

There was difference of mean score of knowledge, attitude and environmental volunteers of students with different year level. Because of the learning from the training, students learn together in a group, so learning effectively. Following the concept of Timphanphong, R. [35] said that knowledge is the person who learns and understands the lesson the lessons are kept in their memory for a short period of time, the accumulation of permanent lessons will gradually occur. The relatively permanent memorization of the lesson is preserved until the content is meticulous and accurate, but there will be some changes new situations in which the collected knowledge is required will be applied. The lessons will be used based on the accumulated content and the memorial lessons will be applied in new situations. Following the concept of Suntonsani, S. [36] gave the meaning of attitude as follows; 1) the complexity of a person's feelings, cravings, fears, convictions, bias or prejudice in order to create a person's readiness to act on something based on that person's experience, 2) the inclination to act against something for good or against the environment that will come in any way, 3) being prepared or ready to respond. Following the concept of Nithatpattana, K. et.al. [37] said that public consciousness is the same word as social consciousness, means mutual awareness and consideration or consider others who are in the same relationship with themselves. This is consistent with the research of Phaeng, Ch. et.al. [38] has studied the participation of students in sustainable environmental development: a case study of Mahamakut Buddhist University students Lanna campus, the results showed that students with different years of study contribute differently to developing a sustainable environment. This is consistent with the research of Phra Thangthong, U. & Teepaung, A. [39] has studied the using lives follow sufficiency economy philosophy of the student of industrial technology faculty Pibulsongkramrajabhat university Phitsanulok, the results showed that students of different years have different lives according to the sufficiency economy philosophy. This is consistent with the research of Khamta, J. & Warintornnuwat, S. [40] has studied a study of virtue and morality of students Faculty of Business Administration at Thai-Nichi Institute of Technology, the results showed that students studying at different year levels have different overall morals and ethics. This is consistent with the research of Chongchanil, N., Nopakun, S. & Pochakaparipa, J. [41] has studied the factors affecting the public mind of Saint Louis College students, the results showed that there is a different public mind of students with different years overall.

Conclusion

The study found that the training course was the efficiency = 84.06/83.50. The effective index of the training course was 0.7346, showed that undergraduate students progressed in learning was 73.46%. There was difference of mean score of knowledge, attitude and environmental volunteers before and after the training statistically significant level. 05. After the training, there was difference of mean score of knowledge, attitude and environmental volunteers of students with different gender and year level statistically significant at the .05 level.

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