

Research Article

Participation of Population for Environmental Management in Burapha University to Become Green University การมีส่วนร่วมของประชากรในการจัดการสิ่งแวดล้อมภายใน มหาวิทยาลัยบูรพาให้เป็นมหาวิทยาลัยสีเขียว

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Abstract

This research is a cross-sectional descriptive research, and the objective is to study the situation of the readiness of Burapha University (BUU) in environmental management to develop a green university, and to study the factors that relate to participation in environmental management of students and staff of BUU to the development of a green university. Data were collected from 936 samples selected by using random sampling and questionnaires were distributed via hardcopy and online. The data were analyzed using descriptive statistics and stepwise multiple regression analysis was used to analyze relationships and predictive power.

The results found that the policy of most work sectors that focused on environmental management leading to be green university was not yet comprehensive and clear, while some issues in the policies are consistent with the criteria of green university. As for the study of factors affecting participation in environmental management of BUU personnel towards the development of a green

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university, it was found that most of the staff were never aware of information and have an averagely good knowledge of green universities in terms of awareness of environmental management, green university criteria, and participation in environmental management. Being used to receive information about green university and knowledge of green university have negative positive influence on participation in environmental management to green university. Similarly, awareness of environmental management and green university criteria has positive influence on the participation in environmental management to green university. Besides, all mentioned factors are predicting the participation in environmental management of population in Burapha University to become a green university in a positive way with a statistical significance of 18.40 % at 0.05 level, as follows:

$$ZPAR = 0.23ZIN + 0.225ZAT - 0.151 ZK$$

Keywords: *Green University, Students, Populations, Knowledge, Awareness*

บทคัดย่อ

การวิจัยครั้งนี้เป็นการวิจัยเชิงพรรณนาแบบภาคตัดขวาง มีวัตถุประสงค์เพื่อศึกษาสถานการณ์ความพร้อมของมหาวิทยาลัยบูรพาในการจัดการสิ่งแวดล้อมสู่การพัฒนาเป็นมหาวิทยาลัยสีเขียวและเพื่อศึกษาปัจจัยที่มีความสัมพันธ์กับการมีส่วนร่วมในการจัดการสิ่งแวดล้อมของนิสิตและบุคลากรมหาวิทยาลัยบูรพาสู่การพัฒนาเป็นมหาวิทยาลัยสีเขียว เก็บข้อมูลกับกลุ่มตัวอย่าง จำนวน 936 ราย จากแบบสอบถามที่ส่งออกไป จำนวน 942 ชุด โดยสุ่มตัวอย่างแบบบังเอิญ แจกแบบสอบถามทางเอกสารและทางออนไลน์ และวิเคราะห์ข้อมูลโดยใช้สถิติเชิงพรรณนา วิเคราะห์หาความสัมพันธ์และอำนาจการทำนายโดยวิเคราะห์ถดถอยพหุคูณแบบขั้นตอน

ผลการศึกษาสถานการณ์ความพร้อมของมหาวิทยาลัยบูรพาในการจัดการสิ่งแวดล้อมสู่การพัฒนาเป็นมหาวิทยาลัยสีเขียว พบว่า หน่วยงานตัวอย่างส่วนใหญ่มีนโยบายที่มุ่งเน้นในการจัดการสิ่งแวดล้อมนำสู่การเป็นมหาวิทยาลัยสีเขียวยังไม่ครอบคลุมและชัดเจน และมีเพียงบางประเด็นที่มีนโยบายที่สอดคล้องกับเกณฑ์ของมหาวิทยาลัยสีเขียวเท่านั้น ส่วนการศึกษาปัจจัยที่มีผลต่อการมีส่วนร่วมในการจัดการสิ่งแวดล้อมของประชากรในมหาวิทยาลัยบูรพาสู่การพัฒนาเป็นมหาวิทยาลัยสีเขียว พบว่า บุคลากรส่วนใหญ่ไม่เคยรับรู้ข้อมูลข่าวสาร และมีคะแนนเฉลี่ยอยู่ในระดับดีปานกลางด้านความรู้เกี่ยวกับมหาวิทยาลัยสีเขียว ความตระหนักเกี่ยวกับการจัดการสิ่งแวดล้อมและเกณฑ์ของมหาวิทยาลัยสีเขียว และการมีส่วนร่วมในการจัดการสิ่งแวดล้อม ทั้งนี้ การเคยได้รับข้อมูลข่าวสารเกี่ยวกับมหาวิทยาลัยสีเขียวและความรู้เกี่ยวกับมหาวิทยาลัยสีเขียว มีอิทธิพลทางบวกต่อการมีส่วนร่วมในการจัดการสิ่งแวดล้อมสู่การเป็นมหาวิทยาลัยสีเขียว เช่นเดียวกับความตระหนักเกี่ยวกับการจัดการสิ่งแวดล้อมและเกณฑ์มหาวิทยาลัยสีเขียวก็มีอิทธิพลทางบวกต่อการมีส่วนร่วมในการจัดการสิ่งแวดล้อมสู่การเป็นมหาวิทยาลัยสีเขียว นอกจากนี้ ทั้งการเคยได้รับข้อมูลข่าวสาร ความรู้และความตระหนักแล้วแต่เป็นปัจจัยร่วมกันทำนายการมีส่วนร่วมในการจัดการสิ่งแวดล้อมของบุคลากรในมหาวิทยาลัยบูรพาสู่การเป็นมหาวิทยาลัยสีเขียวในทางบวกได้อย่างมีนัยสำคัญทางสถิติที่ระดับ 0.05 ได้ร้อยละ 18.40 ดังได้รูปแบบสมการ ดังนี้

$$ZPAR = 0.23ZIN + 0.225ZAT - 0.151 ZK$$

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1. Introduction

At present, sectors in both state and higher education institutions of Thailand and abroad are interested in developing the organization to be more environment-friendly. The academic institutions throughout the world have promoted projects related to environmental conservation and focused to be Green University. This concept has been applied in universities in Thailand such as Mahidol University, Thammasat University, etc. To develop the institute to be a green university, it must induce the principles of integrating energy and environmental conservation into teaching, research, and in all activities to contribute to work in a safe condition of environmental friendly and energy saving, resulting in a positive effect on the environment and the community of the country (UI Greenmetric World University Ranking, 2012)

To develop successfully to green university, it would require participation in activities to identify a well-managed university. That included efficiency under the concept of participation in environmental conservation and energy saving, promoting good quality of life and safety in life and property for residents, efficient resources usage, promoting efficient use of alternative energy in various ways, and strengthening the economic condition of the university (Thaweesin, 2009). This agreed with Wattanatham and Rijirawanij (2015) who found that an institute to be a green university should have an action plan that consistent with needs of university staffs. Besides, the formulation of policies and practices to be a green university must hold on to the principle of participation of the internal population and surrounding communities, students, lecturer and staff

(Wattanatham & Rijirawanij, 2015). Therefore, one of the key factors for the development of a green university should take part in the principles of participation in sustainable development.

Burapha University (BUU) is one of the campus that was ranked as an environmentally friendly campus, being ranked as No. 18th of the country and 330th in the world. (UI Green Metric World University Ranking, 2015) BUU has a plan to develop the organization to be a green office which will promote to reduce energy consumption in all aspects. In addition, BUU also implemented activities and projects that were environmental friendly by joined with the community, such as foam reduction campaign by collaborating with Saensuk municipality, and bike cycling of three campuses to reduce global warming. These activities are in consistence with the criteria of green university. However, the implementation to be a green university needs to originate from policies, measures, planning, and projects of Burapha University, and to be implemented by strong participation of staffs and students. Nevertheless, there has not yet been a study of participation in environmental management of students and staff at BUU in the development of a green university. The researcher therefore was interested in studying the situation of the readiness of BUU to be a green university and factors influencing the participation of students and staff at BUU in environmental management to the development of a green university. This research used the participation principles of Cohen and Uphoff (1980, as cited in Srisiripornphan, 2005) and the findings will be used as a database to develop into a green university of BUU in the future.

Literature Review

Green university meaning and definition

Green university is a sustainable development guide by AASHE (The Advancement of Sustainability in Higher Education) as organization that supports higher education institutions to provide sustainability education. The definition of sustainability education as guide addressed the relationship between humans, health, environment, social justice together with a stable, safe and a better world for people of all ages. One of the important goals is to promote sustainability values to manage higher education for more sustainability and lead to a transformation of a model of education that trains students to acquire knowledge and skills, and instill character traits that can face future sustainability challenges. This also Include promoting and pushing for higher education institutions to reduce greenhouse gas emissions and adjust corporate management to reduce global climate impacts. (UI Greenmetric World University Ranking, 2012)

The concept of green universities varies in numerous dimensions with the same goal: responding to conservation of nature and the environment. The ranking criteria of Green University are related to University of Indonesia (University of Indonesia, 2016) as one of the most recognized benchmarks around the world. The evaluation criteria consisted of six aspects as follows:

- 1) Location and facilities (15%) such as the location, size of the campus area and the proportion of green area in the campus.
- 2) Energy management and climate change (21%), e.g. efficient policy to reduce greenhouse gas emissions and the total amount of electricity used per year (KWH).

3) Waste management (18%) such as university recycling waste management, paper and plastic reduction policy.

4) Water management (10%) such as having a plan to conserve water consumption and the installation of water pipelines within the university.

5) Environmental friendly transportation management (18%), such as measuring the number of cars entering the campus per day, or transportation policy promoting the bicycles riding and pedestrian walkways in campus, etc.

6) Ability to educate the environment and sustainable development (18%), such as the number of courses related to environment and sustainability, number of research grants and academic achievements and publications in environment and sustainability.

Forms and characteristics of participation

Participation is one process that is important to the administration of the organization as well as the management of various activities or projects. Cohen and Uphoff (1980, as cited in Srisiripornphan, 2005) summarized four forms of participation as follows:

- 1) Participation in decision-making: starting from the first stage of the activity or project.
- 2) Participation in implementation: achieved from participation through resource support joining as administration collaboration, including joining forces and time spending to get involved.
- 3) Participation in benefits: may be personal or social benefits.
- 4) Participation in evaluation: involving control and audit of all activities and further adaptation to participation.

Theories of knowledge

Suratanokwikul and Ratchapantharak (2001, as cited in Supornpokee, 2012) summarized the theory of knowledge as follows:

1) Knowledge means understanding of something, possibly including the ability to apply it for a specific purpose.

2) Knowledge means what humans think, create, produce or believe, or truth that uses facts, ideas, or logic, and expresses in language, signs and various media by goals and objectives according to the maker or producer to give a meaning.

3) Learning means the result of experiences that people interacted with the environment after practice, including changing the amount of knowledge and changing behavior.

4) Body of knowledge means knowledge in various sciences, provided concepts, principles, methods from text or library accumulated that any people are interested in the science to learn. Knowledge arises in a particular area of interest from text, may be obtained from shared content of experiences or from data synthesis and analysis. The recipients will use occurred knowledge directly or adapt it to suit the situation and to benefit their work.

Awareness theory

Royal Society (2001) noted that awareness means clear knowledge. Wongthanom (2004) has summarized the meaning of awareness to include a person's consciousness that should always have a sense of the mind arising in the mind for a particular event that will be expressed by behavior.

Related Research

Buakhao and Petchanon (2012) studied policy providing and guidelines for green university of the Phatthalung campus of Thaksin University. The purpose of this study was to prepare a plan for Thaksin University campus development and to suggest guidelines for becoming a green university. There were six main indicators of the participation of people within and in the surrounding communities. They were good quality of life, safety of life and property to preserve the environment, energy saving efficiency, use of resources and of renewable energy, and the economic conditions of the university and surrounding communities. The results found that the Phatthalung campus of Thaksin University was able to formulate strategies/plans/projects to be a green university.

Jarenpanit (2015) studied the application of participation public policy processes in the development of green universities at Phibunsongkhram Rajabhat University, Phitsanulok Province. The results of the study demonstrated the process of public policy formulation. This was a form of policy making from the bottom up through the process of building a policy network between groups or various sectors and exchange of knowledge management.

Methodology

This study is a cross sectional descriptive study to explain factors affecting the participation of Burapha University's population composed of students and staff. They serve as important factors in environmental management to be a green university.

The total study population consisted of three groups: 1,641 teaching staffs, 1,995 support personnel, and 37,884 undergraduate and graduate students. The total number of populations equals to 41,520 peoples (Burapha University, 2015).

Sample group in the study were students and staff in Burapha University calculated as sample size by using the following formula of Cohen (1977, as cited in Jirawatkul, 2004) at 95% confidence level, and 5% error was allowed:

$$N = \frac{N\sigma^2 Z_{\alpha/2}^2}{d^2 (N-1) + \sigma^2 Z_{\alpha/2}^2}$$

N = sample size

α = Error in characteristics of population

Z = Confident coefficient

σ^2 = The variance of the result variable used to calculate the sample size.

d = Relative error

e = Precision of the estimation

N = 41,520

σ = 0.79

$Z_{\alpha/2}$ = 1.96

d = 0.05

The samples were calculated to be 942 persons consisting of 856 student samples and 86 staff samples as proportionated by ratio of populations in Burapha University, using a standard deviation of 0.79 according to the research of Infahsaeng and Phanchana (2011). The samples were selected accidentally in the university library, and their willingness to participate in this research was secured before collecting data. The researchers also located the samples in each student's club if more samples were needed.

The questionnaire as a research tool was developed from the past studies, related theories, regulations, work plans, and rules of the UI GreenMetric World University Ranking 2015 by QS Top University (2015). The questionnaire was divided into 5 parts:

Part 1: General Information including gender, year, faculty of study, and age. Both open and closed question types were used.

Part 2: Questions to ask for awareness of the policies, criteria, information, projects and activities related to the green university through various communications such as university website, Facebook, university broadcast, etc.

Part 3: Questions to measure knowledge of environmental management to development as a green university, using 10 questions worth 2 score each, totaling the full score of 20 points. The answers were dichotomized as yes/no. The acquired scores were categorized into 3 levels according to Bloom criteria (Bloom, 1968, cited in Kijpreedaborisuth, 2010) as follows:

level	criteria
Good level	80 % or more
Moderate level	60-79 %
Low level	Less than 60%

Part 4: Questions to measure awareness of environmental management to the development of green university by using 10 rating-scale questions, with a 90 full score. The answers

were provided as 5 choices from strongly agree to strongly disagree, and categorized into 3 levels as follows:

level	criteria
Very good	during 77 - 90 points
Moderately good	during 67 - 76 points
Poor level	during 0 - 66 points

Part 5: Questions to measure participation in environmental management to the development of green university by using rating-scale questions with a 20 full score. The answers

were dichotomized into 2 choices of ever/never participated. A total score of 20 points was divided into 3 levels as follows:

level	criteria
Very good	during 15 - 25 points
Moderately good	during 7 - 10 points
Poor level	during 0 - 6 points

2. As for the tool quality inspection, data from phase 1 study was taken to compare with the criteria of UI GreenMetric World University Ranking 2016 by University of Indonesia (2016) to set the participation criteria for students and staff to be a green university. The questionnaire was evaluated by three experts to assess the validity of the content before being used. The results of the experts' assessment were calculated for the Index of Congruency (IOC). Usable questions must have IOC score more than 0.50. The researchers later tried out the revised questionnaire with populations at Sriracha Campus of Kasetsart University, Chonburi Province and acquired 0.94 value of Cronbach's Alpha Coefficient.

3. Data were collected from 936 samples during lunch breaks and in the evening after

class with 20 minutes to interview. Data were analyzed via computer software packages using descriptive statistics such as frequency distribution, percentage, mean, standard deviation, and Stepwise Multiple Regression Analysis at a significant level of 0.05.

Findings

Most of the samples were students as (n=892, 99.36 %), consisting the most of freshmen (n=325, 34.70 %) and the least of seniors (n=127, 13.60 %), while the staffs accounted for 4.70% (n=44). Most of the respondents were female (76.20%), and come from the Faculty of Management and Tourism, Faculty of Humanities and social science, Faculty of Law and Political Science and Faculty of Engineering.

About factors to related green university, most of the samples (77.10%) did not receive information about green universities while and only 22.90% of them received information. Information received the most was news about green universities (52.30%), followed by activities and projects related to green campus (46.70%). They identified receiving information from online media the most (24.80%), followed by website of BUU (21.00%).

As for knowledge about green universities, more than 90% of the samples answered correctly in terms of waste management

process (91.40%), followed by the indicator of being green university (90.70%). The least correct answers of less than 30% involved recycling of waste (28.30%), criteria of green university mentioned in courses of the curriculum in each faculty (27.40%), and websites about university general information as a measure of being a green university (27.10%).

The samples had knowledge in the average level as 12.20 points from a full score of 20 points. The knowledge levels were presented in Table 1.

Table 1 Number and percentage of sample classified by knowledge level

knowledge level	number	percentage
Very good level	346	37.00
Moderate level	54	57.70
Less Level	50	5.30

Note: Mean score = 12.2 standard deviation = 1.8 minimum = 6.0 maximum = 18 full = 20

As for the awareness of environmental management and green university criteria, it was found that more than 90% of the sample strongly agreed and agreed with most of the questions: when class was over, lights and air condition should be turned off completely (95.60%), followed by the use of paper on both sides as the way to reduce tree cutting (93.40%), reusing treated water for watering plants on campus as part of assisting of to be a green university (92.80%), and when facing damaged faucet

on campus, it should be notified to related staff immediately. The samples least agree with the following questions: the sustainable environment management in the university was beneficial (44.60%), and going up and down by stairs from floor to floor instead of using the elevator did not waste time (51.20%).

Most of the sample had an average awareness of 71.90% from a full score of 90 points. The number of samples with three awareness levels was shown in Table 2.

Table 2 Number and percentage of sample classified by awareness

knowledge level	number	percentage
Very good level	16	17.10
Moderate level	59	63.00
Less level	186	19.90

Note: Mean score = 71.9 standard deviation = 5.7 minimum = 53 maximum = 87 full = 90

Participation in environmental management to be green university was divided into four aspects: participation in planning, participation in thinking, participation in activity, and participation in the evaluation. The study results revealed that the majority of them were more involved in the aspect of activity than in other aspects; that is, walking up and down instead of using elevators (81.80%), followed by travelling

by university shuttle bus instead of private vehicle to travel in campus (75.70%). The aspect with the least participation was participation in the evaluation.

Most of the samples had a moderate participation score of 8.30 points from a full score of 23 points. The classification of participation levels were shown in Table 3.

Table 3 Number and percentage of samples classified by participation

knowledge level	number	percentage
Very good level (11 - 25 %)	86	9.20
Moderate level (7 - 10 %)	209	65.10
Less level (0 - 6 %)	641	25.70

Note: Mean score = 8.3 standard deviation = 2.6 minimum = 3 maximum = 17 full = 23

Situation of BUU's readiness for environmental management to develop into a green university by all six aspects.

1) Location and facility: each group of the samples was prepared in terms of the campus area used for planting trees, gardens, lawns, as well as the area used for grass planting. This was readiness in budget related to environmental protection and sustainability. It was provided for 3% of the total budget. But it was found that there was no faculty of sample located in forest area.

2) Energy management and climate change: It was found that all sample sectors had changed with some renewable energy and found that there were campaigns for projects to reduce energy consumption and most of the projects have been implemented. The content that not yet found in this study was

the policy on renewable energy usage and the policy to reduce the amount of greenhouse gas emissions.

3) Waste management in sectors: it was found that the sample sectors had not only campaigned for waste sorting. Some toxic waste was also stored and listed and sent to the municipal waste disposal. Most of the waste were disposed of in the trash together with general waste bins waited to be disposed of by the municipality and partially recycled. As for the discharge of wastewater, it was found that the majority of the sample group had pre-treated it in the section and delivered the treatment in the centralized treatment system before it was discharged. As for the policy to reduce paper and plastic usage, it was found that most of them was not implemented concretely.

4) Water shade management: all of the sample sectors had no projects in this aspect.

5) Environmental friendly transportation management: it was found that the sample sectors did not have a policy to restrict cars usage and motorcycles in the sector. There was no policy to limit or reduce parking space in the sector and there was no policy on using sidewalks and cycling.

6) As for the ability to provide environmental education and sustainable development: it was found that there were some research, training and activities implementation in the sector of samples. Also there was some club or organization partly related to the environment. For website related to the environment, it was found that sectors of sample did not have a website or communication channel related to the environment on the part of the sector.

Factors affecting the participation in environmental management of populations in Burapha University towards the development of a green university

Stepwise multiple regression was used to investigate factors affecting participation in environmental management of BUU towards the development of a green university, and analyze the relationships and predict the participation in environmental management. The predicting variables consisted of gender and awareness of information about being a green university, knowledge of green universities and awareness of environmental management and green university criteria while the dependent variable was participation in environmental management to lead to green universities. Since it was found that none of the predicting variable pair had a correlation higher than 0.85, there was no problem of multicollinearity. The result was shown in Table 4.

Table 4 Stepwise multiple regression analysis of variables affecting participation in environmental management of Burapha University personnel towards the development of a green university

Statistical predictor	B	S.E.	Beta	t	Sig	F	p
Constant	8.594	1.722		4.937	≤0.0001	16.23	0.0001
Information (IN)	0.610	0.110	0.230	4.316	≤0.0001		
Knowledge (K)	0.150	0.020	0.225	5.623	≤0.0001		
Awareness (AT)	-0.281	0.095	-0.151	-2.665	≤0.008		
R=0.453, R ² =0.194, Adj R ² =0.184, Dubin Watson = 1.777							

Remark	B	= Regression coefficient
	S.E.	= Standard error of measurement
	Beta	= Standard regression coefficient
	t	= Beta significance test values
	Sig	= t significance test values
	F	= Partial regression coefficient
	p	= Significant values of F
	R	= Coefficient of correlation
	R ²	= Multiple coefficient of variation
	Adj R ²	= Adjustable multiplication coefficient
	Dubin Watson	= Statistical values for testing the independence of error, regression coefficients.

According to Table 4, the results found that being used to receive information, knowledge of green universities, and awareness of environmental management and green university criteria, were common factors for participation in environmental management of populations in Burapha University towards the development of a green university at the statistical significance of 0.05. That is, being used to received information was the factor that most influences the participation in environmental management of populations in Burapha University towards the development of a green university (Beta = 0.230), followed by knowledge of green

universities (Beta = 0.225) respectively, while the awareness of environmental management and Green University criteria had negative coefficients (Beta = -0.151). These 3 variables were able to forecast the participation in environmental management of populations in Burapha University towards the development of a green university by 18.40% (Adj R² = 0.184, F = 16.23, $p < 0.0001$). The equation to forecast the participation in environmental management of populations in Burapha University towards the development of a green university by the multiple regression was as follows:

The equation in form of raw scores as $PAR = 8.594 + 0.610 IN + 0.150 AT - 0.281 K$

The equation in form of standard scores as $ZPAR = 0.23 ZIN + 0.225 ZAT - 0.151 ZK$

PAR = Participation in environmental management of populations in Burapha University
to become green university

IN = Used to receive information

K = Knowledge of Green University

AT = Awareness of environmental management and Green University criteria

According to the equation, it was found that populations who received more information by 1 unit would increase their participation in environmental management of Burapha University towards the green university by 0.23. If knowledge of a green university increases as 1 unit, this will increase the participation of populations in environmental management in Burapha University to the green university as 0.225. However, if the awareness of environmental management and green university criteria increases by 1 unit, it will lead the participation in environmental management of populations in Burapha University to a green university to decrease as -0.151.

Conclusion and Discussion

1. Regarding the readiness of BUU for environmental management to develop a green university, it was found that most of the sectors did not have a policy on environmental management to develop to be green university. Consequently, the development of such projects was reduced to a few operators and the project related to environmental management that have been carried out continuously is cleaning the education building area in various events. Thus, if there is clear environmental policy announced to staffs and students, it may result better in the development of the university to become a green university (Samsuwan & Danteravanich, 2012).

For the situation of the readiness of Burapha University for environmental management to develop to be a green university in all 6 aspects of UI Greenmetric World University Ranking 2013 criteria, BUU was found to have 6 aspects of readiness, but it still does not cover the criteria for each green university (UI Greenmetric World

University Ranking 2013). Developing green areas of the university must hold onto the 3E principles: Environment, Economics equity, and Education (Seesai, 2015) and should adopt the concept of an ecological university to apply to the resources available in the university by incorporate it into the university development strategy, such as improving public spaces to increase green spaces. In addition, knowledge about energy and environmental conservation should be added to the courses, teaching, research, as well as related academic services through the participation of populations in the university or surrounding community (Atthaphut & Thanakulwiroje, 2013). This would make BUU's readiness in environmental management to develop to be a green university.

2. The study on factors affecting the participation in environmental management of BUU populations to the development of a green university revealed that gender and years have no relationship and cannot predict the participation in environmental management of BUU populations towards the development of a green university. Since in university today, there is a promotion of equality allowing everyone in BUU to have the right and freedom to participate in various activities and projects organized in the organization on a voluntary basis. Therefore, the participation that takes place was not different across genders and years of study. Kaewkong (2018) also mentioned that gender had no effect on participation in university activity.

Being used to receive information about green university is related to and able to predict the participation in environmental management of BUU populations. This is because those who have received much information would participate in various activities organized by the

university. The frequent reception of information creates a stimulus, leading to perception and passion to get involved in various activities. So, the university should increasingly distribute information to stimulate perception so that it may have a stimulating effect on expression (Suwansaeng, 1997).

Moreover, knowledge of Green University was positively correlated with and able to predict the participation in environmental management of BUU populations. In this aspect, old and new knowledge people gained during participating in various related activities are more likely to bring knowledge about environmental management. Populations can also join as members of various groups/clubs at both external and internal levels of the university.

The awareness of environmental management at the university was negatively correlated with and was able to predict the involvement in environmental management of BUU populations. That is, the populations with low awareness would be involved in environmental management. This may be because awareness is a feeling that arises in a state of mind from thinking about something, but it does not mean that it can be remembered or memorized. Therefore, using activities or projects related to environmental management on a regular basis instead of merely inform them via PR efforts may be the way to increase participation.

Suggestion

1. Since Burapha University lacks clear relevant policies and some sector did not have a policy on this issue, so the clear policy should be set and announced at both all sectors and university level to reach the staffs and students.

2. Most of the staffs and students lack knowledge and awareness about green university. So they should be educated through online media, since it was the easiest and most convenient channel for information distribution. Providing knowledge and awareness about environmental management to be green university would lead to more participation.

3. The university administrators of Burapha University should support the participation of the population all sectors in all activities that would able to develop Burapha University to be a sustainable green university and share the benefits that will receive with all sectors of the population as well.

4. The university administrators of Burapha University need to recruit more academic and administrative support for development of a green university from external agencies in both the public and private sectors.

5. In the next research, samples may be expanded to cover 3 groups: a group of lecturers who are academic personnel, group of officers who are support personnel, and administrator group namely the dean, vice-chancellor, who are personnel in administration and policy, because each group gets different roles in environmental management to develop into a green university.

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