

Behavior of Media Exposure and Participation in Environmental Activities of King Mongkut's University of Technology Thonburi Dormitory Students

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Abstract—The purposes of this research were 1) to investigate behavior of media exposure and participation in environmental activities of King Mongkut's University of Technology Thonburi (KMUTT) dormitory students, 2) to compare the correlation between faculties and participation in environmental activities of KMUTT dormitory students, and 3) to compare the correlation between media exposure and participation in environmental activities of KMUTT dormitory students. The tool used for collecting data was questionnaire. The research findings revealed that dormitory students were mostly exposed to the environmental media via public relations boards for general media and KMUTT dormitory media. Dormitory students were daily exposed to media via websites on the internet and weekly for other media. Dormitory students participation in the environmental activities was at high level ($\bar{X} = 3.65$) on an individual basis and was at medium level ($\bar{X} = 2.76$) on a collective basis. Faculties did not correlate with the participation in environmental activities of dormitory students at the .01 statistical level and media exposure via various media correlated with participation in environmental activities of dormitory students at the .01 statistical level.

Keywords—Dormitory Students, Environmental Activities Media Exposure, Participation.

I. INTRODUCTION

THAILAND realizes the importance of environmental protection and natural reservation as well as the life quality of Thai population. Therefore, it is stated in the 1978 Constitution of the Kingdom of Thailand Section 61 that the government shall maintain the balance of environments and destroy the pollutants which are detrimental for the health and safety of the citizen. In 1975, the government also passed the National Environmental Quality Promotion Act B.E. 2518 and the Office of the National Environment Commission was

established in the same year with the duty to analyze the status and the quality of the environment to set policies and plans about how to promote and support environmental reservation as well as how to solve the environmental problems [1].

People differ in their media exposure and there are many factors which affect their choice of media exposure. These factors include demands, attitudes, values, abilities, utilizations, experiences, habits, places and times. Such differences lie in the characteristics, the objectives and the demands of individuals.

Participation in environmental activities is considered important because at the present time the environmental conditions deteriorates gradually and it might increase if it is still ignored. Therefore, media are a good tool to distribute the information to the general public so that all concerned people will participate in environmental activities to reserve the nature. Common types of media are television, radio, newspaper and magazine. These media can help distribute the information to raise awareness of the environmental protection among readers.

King Mongkut's University of Technology Thonburi (KMUTT) has issued numerous plans and policies to develop the university according to the strategies (currently under the 10th plan for the period of 2007-2011). There are 6 major aims, one of which is to increase and make the best use of available natural resources [2]. Hundreds of activities have been held with the aim to develop the ecological dimension within the communities near the university as well as surrounding areas. KMUTT also established the Center for Energy Environment Safety and Health (known as EESH) to run a large number of green university projects and to encourage staff members as well as students to engage in activities related to energy and environment so that they can apply such practices elsewhere in a concrete manner. Furthermore, EESH offers ways to reduce the consumption of energy within buildings and departments on campus every year.

KMUTT Dormitory Office is also responsible for the energy conservation within dormitories and for instilling the conscious mind into KMUTT students since 2003. It is awarded the Best Office for Energy Conservation [3].

According to the reasons mentioned above, the researchers recognize the importance of the research into the behavior of media exposure and participation in environmental activities

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as well as the correlation between media exposure and participation in environmental activities by KMUTT dormitory students in order that the findings could be used to improve the development of media and activities about environment for KMUTT dormitory students in the future.

II. RESEARCH OBJECTIVES

- 1) To investigate behavior of media exposure and participation in environmental activities of KMUTT dormitory students
- 2) To compare the correlation between faculties and participation in environmental activities of KMUTT dormitory students
- 3) To compare the correlation between behavior of media exposure and participation in environmental activities of KMUTT dormitory students

III. EXPECTED OUTCOME

- 1) There would be findings about the behavior of media exposure and participation in environmental activities of KMUTT dormitory students.
- 2) Such findings would be used to plan for projects about how to distribute the information on environmental activities and how to instill a conscious mind into students in general.

IV. RESEARCH HYPOTHESES

- 1) KMUTT dormitory students from different faculties would show differences in their participation in environmental activities.
- 2) KMUTT dormitory students with different behaviors of media exposure would show differences in their participation in environmental activities.

V. RESEARCH SCOPE

The researchers conducted this research into the behavior of media exposure and participation in environmental activities of KMUTT dormitory students in the second semester of the academic year 2010.

VI. POPULATION AND SAMPLING GROUP

The population in this study was 1,332 students who lived in KMUTT dormitories at the time of this research. [3]

The sampling group in this research consisted of 308 KMUTT dormitory students. The sample size was determined using Taro Yamane's formula at the confidence level of 95% and the error level of .05. The sampling group was chosen through stratified sampling method.

VII. VARIABLES

Independent variables were the data about the population such as their gender, faculty, year, hometown, and social status.

Dependent variables were behavior of media exposure and participation in environmental activities.

VIII. RESEARCH METHODOLOGY

In this research, the researchers used the questionnaire on behavior of media exposure and participation in environmental activities of KMUTT dormitory students. This questionnaire

was developed out of the literature review, conceptual framework and related research works. Then it was examined by experts for the accuracy and the revision. The index of item objective congruence (IOC) of the questionnaire as assessed by the experts was at an appropriate level for all items (0.67–1.00). The questionnaire was then piloted with 30 KMUTT dormitory students, who would not be in the sampling group. The reliability of the questionnaire through Cronbach's alpha coefficient was = 0.817. This means that the questionnaire was highly reliable and it was suitable for the data collection with the sampling group. 308 copies of questionnaire were distributed and collected by the researchers themselves.

IX. RESEARCH FINDINGS

A. Information about the Sampling Group

The sampling group in this study consisted of 308 KMUTT dormitory students. The majority or 69.48% were female. 48.70% were aged between 18-19 years and 57.79% were engineering students. 52.60% were first year students and 31.82% came from central Thailand.

B. Behavior of Environmental Media Exposure Via Public Media

- 1) 70.13% of KMUTT dormitory students were exposed to internet and the most visited website was www.facebook.com
- 2) 48.70% of KMUTT dormitory students were exposed to radio channels once per week. The most frequent one was 93.0 Cool FM.
- 3) 37.66% of KMUTT dormitory students were exposed to television programs once per week. The most watched television program was Morning Story.

C. Behavior of media exposure via dormitory media

- 1) 83.77% of KMUTT dormitory students read dormitory noticeboard announcements once per week.
- 2) 70.13% of KMUTT dormitory students listened to dormitory radio once per week.
- 3) 65.58% of KMUTT dormitory students read dormitory LED scrolling messages 2 -3 times per week.
- 4) 57.79% of KMUTT dormitory students read news and activity announcements on KMUTT Dormitory Office website (<http://www.dorm.kmutt.ac.th/>) once per week.

TABLE I
PARTICIPATION IN ENVIRONMENTAL ACTIVITIES

| Participation in environmental activities | (\bar{X}) | S.D. | Participation Level |
|--------------------------------------------------------------------------------------|---------------|-------------|---------------------|
| Individual basis (You did...) | | | |
| 1. Unplug when not in use | 4.09 | 0.82 | High |
| 2. Turn off the light when leaving the room | 4.41 | 0.79 | High |
| 3. Turn off computer display when not in use | 3.86 | 1.01 | High |
| 4. Clean fans regularly | 3.36 | 0.99 | Moderate |
| 5. Use No. 5 energy rating appliance | 4.14 | 0.91 | High |
| 6. Reuse | 3.71 | 0.67 | High |
| 7. Iron a large amount of clothes | 3.34 | 1.14 | Moderate |
| 8. Use both sides of paper | 3.89 | 1.08 | High |
| 9. Open windows instead of using fans | 3.51 | 0.98 | High |
| 10. Pour used water on to trees | 3.45 | 1.15 | Moderate |
| 11. Never leave water run during laundry | 3.64 | 1.01 | High |
| 12. Never spray too much for ironing | 3.87 | 0.95 | High |
| 13. Use an appropriate amount of washing power | 3.99 | 0.91 | High |
| 14. Grow more plants on the shelf | 2.30 | 1.19 | Low |
| 15. Classify types of rubbish before throwing | 3.45 | 1.08 | Moderate |
| 16. Turn off the light when leaving the bathroom | 3.34 | 1.06 | Moderate |
| 17. Use stairs instead of lift | 3.08 | 1.12 | Moderate |
| 18. Turn off water tap when not in use | 4.32 | 0.87 | High |
| Average | 3.65 | 0.99 | High |
| Collective basis | | | |
| 19. Participate in an energy conservation campaign | 3.05 | 0.95 | Moderate |
| 20. Express an idea or suggestion about energy conservation | 3.05 | 1.07 | Moderate |
| 21. Donate personal effects to an energy saving project (clothes, paper, etc.) | 3.23 | 1.09 | Moderate |
| 22. Propose a project about energy conservation | 2.89 | 1.12 | Moderate |
| 23. Attend a meeting on energy conservation held by the Dormitory Office | 2.61 | 1.06 | Moderate |
| 24. Express an idea about any environmental activities to the Dormitory Office | 2.73 | 1.14 | Moderate |
| 25. Vote for a decision on any environmental activities held by the Dormitory Office | 2.67 | 1.12 | Moderate |
| 26. Work for any environmental activities held by the Dormitory Office | 2.65 | 1.10 | Moderate |
| 27. Help plan any environmental activities held by the Dormitory Office | 2.64 | 1.11 | Moderate |
| 28. Participate in any environmental activities held by the Dormitory Office | 2.58 | 1.02 | Moderate |
| 29. Keep track of any environmental activities held by the Dormitory Office | 2.69 | 1.13 | Moderate |
| 30. Make an assessment of any environmental activities held by the Dormitory Office | 2.76 | 1.10 | Moderate |
| 31. Be a leader in any environmental activities held by the Dormitory Office | 2.46 | 1.16 | Moderate |
| 32. Volunteer to look after the environment under any environmental activities | 2.58 | 1.18 | Moderate |
| Average | 2.76 | 1.10 | Moderate |

D. Participation in Environmental Activities

According to Table I, it was found that the participation in environmental activities of KMUTT dormitory students on an individual basis was at high level ($\bar{X} = 3.65$). The item with most respondents was about turning off the light when leaving the room ($\bar{X} = 4.41$). The participation on a collective basis was at moderate level ($\bar{X} = 2.76$) and the most frequent item was about donating personal effects to an energy saving project (clothes, paper, etc.) ($\bar{X} = 3.23$).

E. The Correlation between Faculties and Participation in Environmental Activities of KMUTT Dormitory Students

According to Table II, it was found that faculties did not

TABLE II
THE CORRELATION BETWEEN FACULTIES AND PARTICIPATION IN ENVIRONMENTAL ACTIVITIES OF KMUTT DORMITORY STUDENTS

| Analysis results | N | (\bar{X}) | SD | t | Sig |
|---------------------------|-----|---------------|------|--------|--------|
| Faculties - Participation | 308 | 1.28 | 1.69 | 13.245 | .774** |

** $p = .01$

F. The Correlation between Behavior of Media Exposure and Participation in Environmental Activities of KMUTT Dormitory Students

According to Table III, it was found that behavior of media exposure via various media correlated with participation in

environmental activities of KMUTT dormitory students at the .01 statistical level.

TABLE III
 THE CORRELATION BETWEEN BEHAVIOR OF MEDIA EXPOSURE AND PARTICIPATION IN ENVIRONMENTAL ACTIVITIES OF KMUTT DORMITORY STUDENTS

| Analysis results | N | \bar{X} | SD | t | Sig |
|--------------------------------------------|-----|-----------|------|--------|--------|
| Behavior of media exposure - Participation | 308 | 1.04 | 0.92 | 19.831 | .000** |

**p = .01

G. The Correlation between Behavior of Media Exposure As Classified By Type and Participation in Environmental Activities of KMUTT Dormitory Students

TABLE IV
 THE CORRELATION BETWEEN BEHAVIOR OF MEDIA EXPOSURE AS CLASSIFIED BY TYPE AND PARTICIPATION IN ENVIRONMENTAL ACTIVITIES OF KMUTT DORMITORY STUDENTS

| Media | Correlation | Sig. (2-tailed) |
|------------------------------|-------------|-----------------|
| Internet | .422** | .000 |
| Television | .143 | .071 |
| Radio | .169 | .077 |
| Newspaper | .056 | .437 |
| Magazine | .434** | .000 |
| Dormitory Office website | .503** | .000 |
| Public address announcement | .323** | .000 |
| Public relations noticeboard | .441** | .000 |
| LED scrolling message | .337** | .000 |

**p = .01

According to Table IV, it was found that the behavior of media exposure as classified by type of KMUTT dormitory students correlated with their participation in environmental activities. The correlations were the Dormitory Office website (r = .503), Public relations noticeboard (r = .441), magazine (r = .434), Internet (r = .422), LED scrolling message (r = .337), and public address announcement (r = .323) at the .01 statistical level.

X. DISCUSSION

Behavior of media exposure and participation in environmental activities of KMUTT dormitory students revealed the following interesting aspects to be discussed.

Dormitory students were most exposed to news about environment on the public relations noticeboard as well as to other general media of the dormitory. Students read news on the internet everyday as they were exposed to other kinds of media for only once a week. The website which gained the most attention from students about environmental news was www.facebook.com because internet [4] is a way to get access to everybody in the world at the same time. Using internet for the new generation is expanding and dormitory students are provided with internet LAN and Wi-Fi in all their dormitory

buildings.

Dormitory students showed high participation level for environmental activities on an individual basis. As for the collective basis, their participation was at moderate level because most dormitory students participated in environmental activities, especially the ones which affected them directly for example turning off the light when leaving the room or unplugging when not in use. As for participation in environmental activities on a collective basis, dormitory students showed a little interest as a number of students were interested in environmental activities held by the Dormitory Office such as project about donation of personal effects (clothes, paper, etc.) and conservation campaign [5].

The correlation between faculties and participation in environmental activities of KMUTT dormitory students showed that faculties did not correlate with the participation in environmental activities of dormitory students at the .01 statistical level. This complies with Reeder William [6] in that any person or any group of people will participate in any activities according to their individual benefits. The activities need to provide certain purposes which are aimed to give or protect the benefits towards such person or such group of people. Moreover, participation in activities can be affected by the promotion or the motivation which can be made.

The correlation between behavior of media exposure and participation in environmental activities of dormitory students showed that media exposure via various media correlated with participation in environmental activities of dormitory students at the .01 statistical level. This complies with the research by [7] in that exposure to environmental management system information via television correlated with the knowledge about environmental management system. Exposure to news about environment from television, newspaper, magazine and public address announcement within the area of company correlated with participation in environmental management system. This finding is also similar to the research by [8] in that the majority of the sampling group showed moderate level of media exposure, knowledge and participation in energy conservation activities. They also showed positive attitudes and recognition towards energy conservation at high level. There was a positive correlation among media exposure, knowledge, attitude and participation in energy conservation.

XI. SUGGESTIONS

A. Suggestions from the research findings

- 1) The research findings revealed that the behavior of media exposure via general media and KMUTT dormitory media was at the highest level. The most frequent channel was public relations noticeboard. As for the internet, students prefer www.facebook.com the most. Therefore, the Dormitory Office could provide information and news about environmental activities on their website and create their own facebook for such activities to gain attention form dormitory students about environmental activities.
- 2) The research findings revealed that participation in environmental activities on an individual basis was at high level and participation in environmental activities on a

collective basis was at moderate level. Therefore, the Dormitory Office could plan more projects or activities to instill a conscious mind into students on a collective basis.

- 3) The research findings revealed that faculties did not correlate with participation in environmental activities. Therefore, the information about environmental activities could be provided on a collective basis such as classifying types of rubbish before throwing and 4R activities (Reduce, Reuse, Recycle and Repair).

B. Suggestions for Further Research

- 1) There should be a study into the correlation among knowledge, awareness, attitude, behavior of media exposure and participation in environmental activities of KMUTT dormitory students.
- 2) There should be a study into the development of behavior of media exposure and participation in environmental activities of KMUTT dormitory students.

APPENDIX

Samples of environmental activities and media held in King Mongkut's University of Technology Thonburi, Bangkok, Thailand.



Fig. 1 Dormitory Office website



Fig. 2 Public address announcement



Fig. 3 PR noticeboard



Fig. 4 LED scrolling message

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